

3.7.1 Number of collaborative activities with other institutions/ research establishments/industry for research and academic development of faculty and students during the year							
3.7.1.1: Total number of Collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year							
Sl. No.	Title of the collaborative activity	Title of the collaborative activity	Number of the participant	Year of collaboration	Duration	Nature of the activity	Link to the relevant document
1	Memorial University of Newfoundland, Newfoundland & Labrador, Canada	Memorial University of Newfoundland, Newfoundland & Labrador, Canada	36	2020	25-02-20	Faculty and students exchange programs, research and development participation	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
2	College of Agriculture and Natural Resources, National Chung Hsing University (NCHU), Taiwan	College of Agriculture and Natural Resources, National Chung Hsing University, Taiwan	31	2020	24-07-20	Faculty and students exchange programs, research and development participation	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
3	Society for Promotion of Science & Technology in India (SPSTI)	Society for Promotion of Science & Technology in India (SPSTI)	27	2020	11-08-20	Academic collaboration	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
4	National Highway Authority of India	National Highway Authority of India	31	2020	29-10-20	Academic collaboration	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
5	Dr. Avinash Kaur (Professor Retd.), Amritsar	Dr. Avinash Kaur (Professor Retd.), Amritsar	32	2020	21-10-20	Academic collaboration	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
6	Centre for Science and Environment, New Delhi	Centre for Science and Environment, New Delhi	24	2020	09-12-20	Faculty and students exchange programs, research and development participation	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
7	Nanak Singh Novelist Memorial Trust, Amritsar	Nanak Singh Novelist Memorial Trust, Amritsar	22	2020	14-12-20	Academic collaboration	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
8	Cities Forum, London	Cities Forum, London	41	2020	30-12-2020	Advisory, Research And Knowledge Support For Sustainability In The Built Environment	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
9	CTIF Global Capsule, Denmark (CGC)	CTIF Global Capsule, Denmark (CGC)	33	2020	15/2/2021	Teaching, Research and Training Collaboration	https://drive.google.com/file/d/1s6YdJ1H5rtKvwmP5IUVRFok-AAUk157K/view?usp=sharing
10	Photosynthetic Response of Plants Under Different Abiotic Stresses: A Review	State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; Department of Botany, DAV University, Sarmastpur, Jalandhar, Punjab 144012, India; School of Land and Food, University of Tasmania, Hobart, TAS, Australia; Department of Environment Education, Government College of Commerce and Business Administration, Chandigarh, 160047, India; Mehr Chand Mahajan D.A.V. College for Women, Chandigarh, 160036, India; School of Bioengineering & Biosciences, Lovely Professional University, Punjab, 144411, India; Plant Stress Physiology Laboratory, Department of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Crop Science and Biotechnology, Dankook University, Chungnam, South Korea; Centre for Life Sciences, Central University of Jharkhand, Brambe, Ranchi, India; Department of Zoology, DAV University, Jalandhar, 144012, India	19	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071095169&doi=10.1007%2fs00344-019-10018-x&partnerID=40&md5=2513d90cbf991bdd9f428f44bc5d4040
11	Phenolic composition, antioxidant potential and health benefits of citrus peel	P.G. Department of Biotechnology, Khalsa College, Amritsar, Punjab 143002, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080030419&doi=10.1016%2fj.foodres.2020.109114&partnerID=40&md5=084782d686509045a09c0a6fa16f2415
12	The role of brand community identification and reward on consumer brand engagement and brand loyalty in virtual brand communities	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India; School of Management Studies, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad, India; College of Business Administration, Prince Sultan University, Riyadh, Saudi Arabia; Montpellier Business School, France; Tallinn University of Technology, Estonia; Department of Strategy & Management/Center for Service Innovation, NHH Norwegian School of Economics, Owen G. Glenn Building, 12 Grafton Road, Private Bag 92019, Auckland, 1142, New Zealand	4	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075966545&doi=10.1016%2fj.tele.2019.101321&partnerID=40&md5=3c93dd0d3fdab6e459f96ea7e472ba9e

13	Chromium bioaccumulation and its impacts on plants: An overview	State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; School of Bioengineering & Biosciences, Lovely Professional University, Punjab, 144411, India; School of Land and Food, University of Tasmania, Hobart, TAS 7005, Australia; State Higher Education Department, Jammu and Kashmir, 180001, India; Mehr Chand Mahajan D.A.V. College for Women, Chandigarh, 160036, India; Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India	10	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078220922&doi=10.3390%2fplants9010100&partnerID=40&md5=023490fc9e64b34fb9c01561ef89a44
14	Remediation techniques for removal of heavy metals from the soil contaminated through different sources: a review	Department of Soil Science, Punjab Agricultural University, Ludhiana, Punjab, India; Department of Zoology, Khalsa College Amritsar, Amritsar, Punjab, India; Department of Soil and Water Conservation, Government of Punjab, Bathinda, Punjab, India; Department of Agricultural Chemistry and Soil Science, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076789520&doi=10.1007%2fs11356-019-06967-1&partnerID=40&md5=4ba99df9ccf9b0aa7a8b3fe1272f7681
15	Development of new hybrid model of discrete wavelet decomposition and autoregressive integrated moving average (ARIMA) models in application to one month forecast the casualties cases of COVID-19	Guru Nanak Dev University College, Narot Jaimal Singh, Pathankot, Punjab 145026, India; Department of Mathematics, I.K. Gujral Punjab Technical University Punjab 144603, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Mathematics, Sri Guru Angad Dev College, Khadoor Sahib, Tarn Taran, Punjab 143117, India; Department of Mathematics, Lovely Professional University Punjab 144411, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084536150&doi=10.1016%2fj.chaos.2020.109866&partnerID=40&md5=fb70fa604d5997fb3ba9fdbdc4e11a36
16	Nitric oxide-mediated regulation of oxidative stress in plants under metal stress: a review on molecular and biochemical aspects	State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; GreenUPorto – Sustainable Agrifood Production Research Centre, Biology Department, Faculty of Sciences of University of Porto, Porto, 4169-007, Portugal; Department of Botany, DAV University, Jalandhar, 144012, India; School of Land and Food, University of Tasmania, Hobart, TAS, Australia; Department of Environment Education, Government College of Commerce and Business Administration, Chandigarh, 160047, India; Department of Botany, M.C.M.D.A.V. College for Women, Chandigarh, India; Plant Physiology and Biochemistry Laboratory, Department of Botany, School of Biosciences and Biotechnology, Baba Ghulam Shah Badshah University, Rajouri, 185234, India; Plant Stress Physiology Laboratory, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India	13	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85069910443&doi=10.1111%2fj.pppl.13004&partnerID=40&md5=36338bc3412fea961d14df600d384dc4
17	Assessment of heavy-metal pollution in three different Indian water bodies by combination of multivariate analysis and water pollution indices	Department of Botany, DAV University, Jalandhar, Punjab, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Geography, Instituto de Geomorfología y Suelos, University of Málaga, Málaga, Spain	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077584736&doi=10.1080%2f10807039.2018.1497946&partnerID=40&md5=ad4a1644b9c7064561679d670a36bf57
18	A Bolasso based consistent feature selection enabled random forest classification algorithm: An application to credit risk assessment	Department of computer science and engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076548638&doi=10.1016%2fj.asoc.2019.105936&partnerID=40&md5=6c1ce323ff7d0f76ab32334acb4bb49b
19	Influence of microwave roasting on chemical composition, oxidative stability and fatty acid composition of flaxseed (Linum usitatissimum L.) oil	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; P.G. Department of Biotechnology, Khalsa College, Amritsar, Punjab 143002, India; Eastern Regional Research Center, Agricultural Research Service, United States Department of Agriculture, 600 East Mermaid Lane, Wyndmoor, PA 19038, United States	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084472362&doi=10.1016%2fj.foodchem.2020.126974&partnerID=40&md5=4091f62bd6f0001f7a936199dc632f00
20	Smart Monitoring and Controlling of Government Policies Using Social Media and Cloud Computing	Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar, India; Emerging Market Research Center (EMaRC), School of Management, Swansea University, Swansea, United Kingdom; Departement of Computer Science, Guru Nanak Dev University, Amritsar, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India; Amman University College for Banking and Financial Sciences, Al-Balqa Applied University, Amman, Jordan; Emerging Market Research Center (EMaRC), School of Management, Swansea University, Swansea, United Kingdom	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064614751&doi=10.1007%2fs10796-019-09916-y&partnerID=40&md5=1d14963cd89d1f059ff989932b9856e6

21	Antioxidant compounds from microbial sources: A review	ICAR-Central Soil Salinity Research Institute, Karnal, India; Department of Biosciences, Manipal University Jaipur, Jaipur, 303007, India; Microbial Technology Laboratory, Department of Microbiology, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076108360&doi=10.1016%2fj.foodres.2019.108849&partnerID=40&md5=840775a8f087f7236e515b81603fc442
22	Microbiota in vaginal health and pathogenesis of recurrent vulvovaginal infections: A critical review	Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078677362&doi=10.1186%2f12941-020-0347-4&partnerID=40&md5=45115ffa5c8b125467c7aa5e0399b7b7
23	MIPs for commercial application in low-cost sensors and assays – An overview of the current status quo	Sensor Engineering Department, Faculty of Science and Engineering, Maastricht University, P.O. Box 616, Maastricht, 6200 MD, Netherlands; Department of Chemistry, Guru Nanak Dev University, UGC-Centre for advanced studies-1, Amritsar, 143005, India; School of Engineering, Newcastle University, Merz Court, Newcastle Upon Tyne NE1 7RU, United Kingdom	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092020048&doi=10.1016%2fj.snb.2020.128973&partnerID=40&md5=aae3895fd7d55cf3a3d5e995c023461a
24	Study of ARIMA and least square support vector machine (LS-SVM) models for the prediction of SARS-CoV-2 confirmed cases in the most affected countries	Guru Nanak Dev University College, Narot Jaimal Singh, Pathankot, Punjab, India; Department of Mathematics, I.K. Gujral Punjab Technical University Punjab, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Mathematics, Sri Guru Angad Dev College, Khadoor Sahib, Tarn Taran, Punjab, India; Department of Mathematics, Lovely Professional University Punjab, India; Guru Nanak Dev University College, Verka, Amritsar, Punjab, India; Centre for Fire, Explosive and Environment Safety (CFEES), Defence Research and Development Organisation (DRDO), Timarpur, Delhi 110054, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087723718&doi=10.1016%2fj.chaos.2020.110086&partnerID=40&md5=66b264aa83e2cdf820ade2764dc33753
25	Pollution assessment and spatial distribution of roadside agricultural soils: a case study from India	Department of Botany, DAV University, Jalandhar, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Laboratory of Remote Sensing and GIS, Department of Soil Science, University of Tehran, Karaj, Iran; Punjab Remote Sensing Centre, Ludhiana, Punjab, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079822295&doi=10.1080%2f09603123.2019.1578865&partnerID=40&md5=55533e56fdf129a23c2e45af2ca4d6b2
26	Chemodosimeters for optical detection of fluoride anion	Department of Chemistry, Center for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143005, India; School of Chemistry and Biochemistry, Thapar Institute of Engineering and Technology, Patiala, Punjab, India; Department of Chemistry, Center for Advanced Studies, Panjab University, Chandigarh, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075993933&doi=10.1016%2fj.ccr.2019.213138&partnerID=40&md5=7c0a9e8519891a623983bc27816079a9
27	Emerging trends in clinical implications of bio-conjugated silver nanoparticles in drug delivery	Department of Chemistry, University of Petroleum & Energy Studies, Dehradun, 248007, India; Department of Chemistry, Uttarakhand University, Dehradun, 248007, India; UGC Sponsored Centre for Advanced Studies, Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Chemistry, Lovely Professional University, Phagwara, 144411, India; School of Pharmacy, Suresh Gyan Vihar University, Jagatpura, Jaipur 302 017, India; School of Pharmaceutical Sciences, Shoolini University, Bajhol, Sultanpur, Solan, Himachal Pradesh 173 229, India; Department of Life Sciences, School of Pharmacy, International Medical University, Bukit Jalil, Kuala Lumpur, 57000, Malaysia; School of Pharmacy and Pharmaceutical Science, Ulster University, County Londonderry, Coleraine, Northern Ireland BT52 1SA, United Kingdom; Discipline of Pharmacy, Graduate School of Health, University of Technology Sydney, Sydney, NSW 2007, Australia; Priority Research Centre for Healthy Lungs, Hunter Medical Research Institute (HMRI) & School of Biomedical Sciences and Pharmacy, University of Newcastle, Callaghan, NSW 2308, Australia	12	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079016647&doi=10.1016%2fj.colcom.2020.100244&partnerID=40&md5=da471464dfbdd7d674eefe35a0d5ba02
28	A review of ecological risk assessment and associated health risks with heavy metals in sediment from India	Department of Botany, Government Degree College, Ramban, Jammu 182144, India; State Key Laboratory of Subtropical Silviculture, Zhejiang Agriculture & Forest University, Hangzhou, 311300, China; Department of Botany, University of Jammu Jammu and Kashmir 180006, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Soil Erosion and Degradation Research Group, Department of Geography, University of Valencia, Valencia, 46010, Spain	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083333691&doi=10.1016%2fj.iisrc.2020.03.012&partnerID=40&md5=243fdb342bfd33992b126704086a8235

29	Magnetic, elastic, dielectric, microwave absorption and optical characterization of cobalt-substituted nickel spinel ferrites	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, 143005, India; Advanced Analytical Laboratory, Andhra University, Visakhapatnam, 530003, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081651820&doi=10.1016%2fj.mseb.2020.114513&partnerID=40&md5=c43b0f4acbf6dbc35cd70750da7081d2
30	Can twitter analytics predict election outcome? An insight from 2017 Punjab assembly elections	Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar, India; Emerging Market Research Center (EMaRC), School of Management, Swansea University, Swansea, United Kingdom; Department of Computer Science, Guru Nanak Dev University, Amritsar, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077716854&doi=10.1016%2fj.gig.2019.101444&partnerID=40&md5=42b3392c2131a7cef4c7c9441b1c3a61
31	Quantitative assessment of exposure of heavy metals in groundwater and soil on human health in Reasi district, Jammu and Kashmir	Department of Physics, DAV College, Katra Sher Singh, Amritsar, Punjab 143001, India; Department of Physics, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab 144011, India; Department of Chemistry, Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143001, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064849188&doi=10.1007%2fs10653-019-00294-7&partnerID=40&md5=f583fc5be3d1fe6e606066419dfc75a9
32	A chaotic and stressed environment for 2019-nCoV suspected, infected and other people in India: Fear of mass destruction and causality	Deptt. of Computer Science, GNDU, India; Deptt. of CSA, DAV University, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082922632&doi=10.1016%2fj.ajp.2020.102049&partnerID=40&md5=465078b381a6401c447e76c9b5a6aea6
33	Role of Rutin Nanoemulsion in Ameliorating Oxidative Stress: Pharmacokinetic and Pharmacodynamics Studies	Department of Pharmacy, School of Medical and Allied Sciences, K. R. Mangalam University, Gurgaon, Haryana, India; Department of Clinical Pharmacy and Pharmacology, RAK College of Pharmaceutical Sciences, RAK Medical and Health Sciences University, United Arab Emirates; Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, India; Department of Pharmacology, College of Clinical Pharmacy, Imam Abdulrahman Bin Faisal University, P.O.BOX 1982, Dammam, 31441, Saudi Arabia; Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, India; Department of Pharmaceutical Technology, Meerut Institute of Engineering and Technology Uttar Pradesh, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079064542&doi=10.1016%2fj.chemphyslip.2020.104890&partnerID=40&md5=5ab1b0295b2b4643544e7d88e1f8e0d2
34	Oat starch: Physico-chemical, morphological, rheological characteristics and its applications - A review	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Energy and Environmental Science, Chaudhary Devi Lal University, Sirsa, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082016683&doi=10.1016%2fj.iibiomac.2020.03.083&partnerID=40&md5=b78f75c7246fd6a914a941af89af63fc
35	Proximate composition, amino acid profile, pasting and process characteristics of flour from different Tartary buckwheat varieties	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar 143005, Punjab, India; P.G. Department of Biotechnology, Khalsa College, Amritsar 143002, Punjab, India; Eastern Regional Research Center, Agricultural Research Service, United States Department of Agriculture, 600 East Mermaid Lane, Wyndmoor, PA 19038, United States	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077311092&doi=10.1016%2fj.foodres.2019.108946&partnerID=40&md5=d2a88eac3d8a0f8a5cec4fc0e363381f
36	Physical, structural and thermal properties of composite edible films prepared from pearl millet starch and carrageenan gum: Process optimization using response surface methodology	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Amity Institute of Food Technology, Amity University Noida Uttar Pradesh, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076541051&doi=10.1016%2fj.iibiomac.2019.09.111&partnerID=40&md5=f27177a77658e3288cb6cb2149ef80c1
37	Variability in chemical composition and antimicrobial activity of Tagetes minuta L. essential oil collected from different locations of Himalaya	Academy of Scientific and Innovative Research, New Delhi, India; Agrotechnology of Medicinal, Aromatic and Commercially Important Plants Division, CSIR-Institute of Himalayan Bioresource Technology, (Council of Scientific and Industrial Research), Post Box No. 6, Palampur, 176 061, India; Biotechnology Division, CSIR- Institute of Himalayan Bioresource Technology, (Council of Scientific and Industrial Research), Post Box No. 6, Palampur, HP 176 061, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Natural Product Chemistry and Process Development Division, CSIR- Institute of Himalayan Bioresource Technology, (Council of Scientific and Industrial Research), Post Box No. 6, Palampur, HP 176 061, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083304971&doi=10.1016%2fj.indcrop.2020.112449&partnerID=40&md5=9f16ec09895ce83755269790cf957839

38	Uracyl-coumarin based hybrid molecules as potent anti-cancer and anti-bacterial agents	School of Pharmaceutical Sciences, MVN University, Palwal, HR-121105, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, PB-143005, India; Department of Medicinal Chemistry, School of Pharmacy, Virginia Commonwealth University, Richmond, VA 23219-1540, United States; EMC Group of Hospital, Green Avenue, Amritsar, PB-143001, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077153843&doi=10.1016%2fj.jscs.2019.12.001&partnerID=40&md5=442f99d670725210e52bc585fedc03af
39	Composition dependent magnetic and microwave properties of exchange-coupled hard/soft nanocomposite ferrite	School of Physics & Materials Science, Thapar Institute of Engineering & Technology, Patiala, 147004, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072622225&doi=10.1016%2fj.jallcom.2019.152391&partnerID=40&md5=fc41836efad94033a75ba547c330e449
40	Current scenario of Pb toxicity in plants: Unraveling plethora of physiological responses	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Department of Botany, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara, Punjab, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, China	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85067683607&doi=10.1007%2f398_2019_25&partnerID=40&md5=4499043cf1484ac3670ecaa50e8b8f58
41	MoSe2Crystalline Nanosheets for Room-Temperature Ammonia Sensing	Department of Physics, Guru Nanak Dev University, Amritsar Punjab, 143005, India; Department of Physics, Assam University, Silchar, 788011, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094858312&doi=10.1021%2facsanm.0c02011&partnerID=40&md5=5fc4c330bb5f5527b34bef3cd8c7b5e3
42	Performance evaluation of 6.4 Tbps dual polarization quadrature phase shift keying Nyquist-WDM superchannel FSO transmission link: Impact of different weather conditions	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Department of Physics, Anna University, University College of Engineering, Ramanathapuram, 623513, India; College of Engineering and Technology, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083091078&doi=10.1016%2fj.aej.2020.03.031&partnerID=40&md5=e4604b42fb8c52b4c709ed3aafffffd6
43	Hydrothermally synthesized MoS2-multi-walled carbon nanotube composite as a novel room-temperature ammonia sensing platform	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089139855&doi=10.1016%2fj.apusc.2020.147373&partnerID=40&md5=27feabc9843f35caf430628a0865c041
44	Psychological fear and anxiety caused by COVID-19: Insights from Twitter analytics	Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, India; Emerging Market Research Center (EMaRC), School of Management, Swansea University, Swansea, United Kingdom; Department of Computer Science, Guru Nanak Dev University, Amritsar, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087932869&doi=10.1016%2fj.aip.2020.102280&partnerID=40&md5=64e3ec1db167cb5c216d119937a54b1a
45	Brassinosteroids Regulate Functional Components of Antioxidative Defense System in Salt Stressed Maize Seedlings	Plant Stress Physiology Laboratory, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; School of Bioengineering & Biosciences, Lovely Professional University, Jalandhar, Punjab 144 411, India; PG Department of Botany, Hans Raj Mahila Maha Vidyalaya, Jalandhar, Punjab 144008, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082863861&doi=10.1007%2fs00344-020-10097-1&partnerID=40&md5=21c484f9e91ac173a7673b9a5c9ead3f
46	Development of high-speed FSO transmission link for the implementation of 5G and Internet of Things	Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074524642&doi=10.1007%2fs11276-019-02166-5&partnerID=40&md5=46c687c137bfa9a6cd43265674388408
47	A critical review on toxicity of cobalt and its bioremediation strategies	Department of Botany, Giani Kartar Singh Memorial College, Urmur, Tanda, 144212, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botany, Doaba College, Jalandhar, 144004, India; Department of Agriculture, Khalsa College, Amritsar, Punjab 143005, India; Department of Botany, Government Degree College, Ramban, Jammu 182144, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096580904&doi=10.1007%2fs12452-020-3020-9&partnerID=40&md5=7ff5ed194b8a5c9ab8492b967aff61e6
48	A dual-responsive anthrapyridone-triazole-based probe for selective detection of Ni ²⁺ and Cu ²⁺ : A mimetic system for molecular logic gates based on color change	Department of Bionanotechnology, Hanyang University, Ansan, 155-88, South Korea; Department of Chemistry, UGC Center for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076245549&doi=10.1016%2fj.dvepig.2019.108092&partnerID=40&md5=cc7120efeb302b7ca6ff95b9a54340cc

49	Performance Comparison of Different Modulation Schemes in High-Speed MDM Based Radio Over FSO Transmission Link Under the Effect of Atmospheric Turbulence Using Aperture Averaging	Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074460626&doi=10.1007%2fs11277-019-06886-x&partnerID=40&md5=aca6977b8c20be7ef12280368a75af8f
50	Investigation of a competent non-toxic Bi ₂ O ₃ -Li ₂ O-CeO ₂ -MoO ₃ -B ₂ O ₃ glass system for nuclear radiation security applications	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Physics, Guru Nanak Dev University College Verka, Amritsar, Punjab, 143501, India; Department of Physics, Faculty of Science, Ataturk University, Erzurum, 25240, Turkey	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086725455&doi=10.1016%2fj.inoncrysol.2020.120235&partnerID=40&md5=8014b245b1d7c510e96bf9565ec1c11e
51	Synthesis, anti-plasmodial and cytotoxic evaluation of 1H-1,2,3-triazole/acyl hydrazide integrated tetrahydro-β-carboline-4-aminoquinoline conjugates	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Medicine, University of California, San Francisco, CA, United States	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075398599&doi=10.1016%2fj.bmcl.2019.126810&partnerID=40&md5=365bf8138ae4a35ab23deeb39bb00416
52	Xanthine oxidase inhibitors: patent landscape and clinical development (2015–2020)	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091009075&doi=10.1080%2f13543776.2020.1811233&partnerID=40&md5=8b833a35b5864397bc55d5a4bb943a2b
53	A novel anthrapyridone diamine-based probe for selective and distinctive Cu ²⁺ and Hg ²⁺ sensing in aqueous solution; utility as molecular logic gates	Department of Bionanotechnology, Hanyang University, Ansan, 155-88, South Korea; Department of Chemistry, UGC Center for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085583225&doi=10.1016%2fj.dvepig.2020.108522&partnerID=40&md5=5b15c4e5c77520b537ca07f720cc2480
54	Structural and optical characterization of Eu and Dy doped CaWO ₄ nanoparticles for white light emission	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Hard X-ray Applications Laboratory, SUS, Raja Ramanna Centre for Advanced Technology, Indore, 452013, India; Homi Bhabha National Institute, Anushakti Nagar, Mumbai, 400094, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083677939&doi=10.1016%2fj.ialcom.2020.154804&partnerID=40&md5=4653690a9c6e241c81018308ab0e6d96
55	The Rising Number of COVID-19 Cases Reflecting Growing Search Trend and Concern of People: A Google Trend Analysis of Eight Major Countries	Department of CSA, DAV University, Jalandhar, India; Department of CS, GNDU, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084964763&doi=10.1007%2fs10916-020-01588-5&partnerID=40&md5=7cf6a8968554d42c8a3d5740d8322191
56	5G ready optical fog-assisted cyber-physical system for IoT applications	Department of Computer Science and Engineering, Khalsa College of Engineering and Technology, C Block Ranjit Avenue, Amritsar, Punjab, India; Department of Computer Science and Engineering, Central University of Himachal Pradesh Dharamshala, Dist. Kangra, Himachal Pradesh, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087667940&doi=10.1049%2fiet-cps.2019.0037&partnerID=40&md5=96da8073dfd8421f7e520a8b2c0ca557
57	X-band shielding of electromagnetic interference (EMI) by Co ₂ Y barium hexaferrite, bismuth copper titanate (BCTO), and polyaniline (PANI) composite	Department of Physics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Physics, Faculty of Science, Federal University Dutse, P.M.B. 7156, Dutse, Jigawa State, Nigeria; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Analytic Division and Centralised Instrument Facility, CSIR-Central Salt and Marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar, India; Department of Mathematics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Electronics and Communication, Guru Nanak Dev University, Amritsar, 143005, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078472065&doi=10.1016%2fj.immm.2020.166433&partnerID=40&md5=d4ff8086e0d3749ff294f41f8b964e34
58	Impact of solidification on micromeritic properties and dissolution rate of self-nanoemulsifying delivery system loaded with docosahexaenoic acid	School of Pharmaceutical Sciences, Lovely Professional University, Phagwara, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Faculty of Pharmacy, Tishk International University, Erbil, Iraq; Department of Pharmaceutics, JSS College of Pharmacy, JSS Academy of Higher Education and Research (Deemed to be University), Ooty, India; Department of Pharmacology, Chitkara College of Pharmacy, Chitkara University, Rajpura, India	19	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082409489&doi=10.1080%2f03639045.2020.1742143&partnerID=40&md5=6995db90dc3843b0cf9fb2e5cab5bc63
59	A high-speed long-haul wavelength division multiplexing-based inter-satellite optical wireless communication link using spectral-efficient 2-D orthogonal modulation scheme	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076757364&doi=10.1002%2fdac.4293&partnerID=40&md5=7a6fd39d9a4dc57c0becbae55fe22561

60	A novel method to classify bearing faults by integrating standard deviation to refined composite multi-scale fuzzy entropy	Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Electronics and Communication Engineering, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Information Technology, IIT Allahabad, India; Discipline of Mechanical Engineering, Indian Institute of Technology, Indore, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077517328&doi=10.1016%2Fj.measurement.2019.107441&partnerID=40&md5=2365abca7ffc71af8e597d966950f5
61	Near-IR discriminative detection of H2S and Cysteine with 7-nitro-2,1,3-benzoxadiazole-perylene diimide conjugate in water, live cells and solid state: Mimicking IMP, INH and NOR/OR complimentary logic	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Environmental and Botanical Sciences, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Chemical Sciences, IK Gujral Punjab Technical University, Kapurthala, Punjab 144601, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074226954&doi=10.1016%2Fj.jphotochem.2019.112151&partnerID=40&md5=523dc05c8c8df3da8d64fb6f31d9a941
62	CSR disclosure in developing and developed countries: a comparative study	University school of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086176347&doi=10.1108%2FJGR-04-2019-0043&partnerID=40&md5=e15a5af39e13db6ad4ac2be8d1b033b8
63	Performance Analysis of Modified AODV Routing Protocol with Lifetime Extension of Wireless Sensor Networks	Computer Science Engineering and Technology, I. K. Gujral Punjab Technical University, Kapurthala, 144603, India; Department of Computer Science, Khalsa College of Engineering and Technology, Amritsar, 143001, India; Panjab University SSG Regional Centre, Hoshiarpur, 146021, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078796355&doi=10.1109%2FACCESS.2020.2965329&partnerID=40&md5=99e466df8b07f891335df3fa856eb7d8
64	Analysis of enhancement in gamma ray shielding proficiency by adding WO3 in Al2O3-PbO-B2O3 glasses using Phy-X/PSD	P.G. Department of Physics, Khalsa College, Amritsar, 143002, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; P.G. Department of Physics, Lyallpur Khalsa College, Jalandhar, 144001, India; Tissue Engineering Research Group, Department of Anatomy, Royal College of Surgeons in Ireland, Dublin 2, D02YN77, Ireland	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85101076464&doi=10.1016%2Fj.imrt.2020.10.020&partnerID=40&md5=816ba849b10478f90c970e4264e26866
65	Surface characterization and tribological performance analysis of electric discharge machined duplex stainless steel	Mechanical Engineering Faculty, Perm National Research Polytechnic University, Perm, 614000, Russian Federation; Mechanical Engineering Department, Khalsa College of Engineering and Technology, Amritsar, 143001, India; Mechanical Engineering Department, Beant College of Engineering and Technology, Gurdaspur, 143521, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092736645&doi=10.3390%2Fmi11100926&partnerID=40&md5=9e2452e5efc8388a7d3ef29ef934cf71
66	Perylene diimide dye threaded with dual-react able sites for detection of H2S and Hg2+: Diagnostic kit and cell imaging	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083578843&doi=10.1016%2Fj.dyepig.2020.108448&partnerID=40&md5=4ccbb2b760dc29321786f7aefb96aec
67	Thiophene derivatives: A potent multitargeted pharmacological scaffold	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Pharmaceutical Chemistry, Khalsa College of Pharmacy, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083330529&doi=10.1002%2Fjhet.3990&partnerID=40&md5=5887b03b167a36f2100cdec2544aa4d7
68	Room temperature high performance ammonia sensor using MoS2/SnO2 nanocomposite	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089147767&doi=10.1016%2Fj.matpr.2020.01.208&partnerID=40&md5=0add15e45437d8a8a186873d33b7581e
69	Performance Comparison of 2 × 20 Gbit/s-40 GHz OFDM Based RoFSO Transmission Link Incorporating MDM of Hermite Gaussian Modes Using Different Modulation Schemes	Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073992904&doi=10.1007%2Fs11277-019-06750-y&partnerID=40&md5=12f30f33f1402c30d14d467884e784f0
70	Ultra-high capacity long-haul PDM-16-QAM-based WDM-FSO transmission system using coherent detection and digital signal processing	Department of EEE, PSG College of Technology, Coimbatore, India; Department of EEE, SRM University, Chennai, India; Department of BME, KPR Institute of Engineering and Technology, Coimbatore, India; Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Department of ECE, Satyam Institute of Engineering and Technology, (IKG-PTU, Kapurthala), Amritsar, India; Shaheed Bhagat Singh State Technical Campus, (IKG-PTU, Kapurthala), Ferozepur, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094884812&doi=10.1007%2Fs11082-020-02616-x&partnerID=40&md5=7b8aca721ce58e1715de8ecd8472b218
71	Magnetic characterization of Nickel-Zinc spinel ferrites along with their microwave characterization in Ku band	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086067981&doi=10.1016%2Fj.jmmm.2020.167052&partnerID=40&md5=1d691fdf971f1877da99b6ea9914aa3b
72	Luliconazole vesicular based gel formulations for its enhanced topical delivery	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Microbiology, Government Medical College, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074730906&doi=10.1080%2F08982104.2019.1682602&partnerID=40&md5=c94548e92b630ede44388acc56562ac0

73	Ultra-sensitive electrochemical sensors based on self-assembled chelating dithiol on gold electrode for trace level detection of copper(II) ions	Department of Chemistry, Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081259543&doi=10.1016%2fj.snb.2020.127935&partnerID=40&md5=f448e036bf1f33fe63fc1400a586d1f9
74	Cloud-Fog based framework for drought prediction and forecasting using artificial neural network and genetic algorithm	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070805526&doi=10.1080%2f0952813X.2019.1647563&partnerID=40&md5=954870e9e83dc6fb2078a488a5d57c54
75	Growth of bone like hydroxyapatite and cell viability studies on CeO ₂ doped CaO–P ₂ O ₅ –MgO–SiO ₂ bioceramics	Physics Department, GNDU, Amritsar, India; Biotechnology Department, GNDU, Amritsar, India; Botanical and Environmental Sciences Department, GNDU, Amritsar, India; NGHRI, PU, Chandigarh, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076832112&doi=10.1016%2fj.matchemphys.2019.122352&partnerID=40&md5=b56c2ff9e6f1fa5eb3f3af00bc35473c
76	Modeling and Performance Analysis of 400 Gbps CO-OFDM Based Inter-satellite Optical Wireless Communication (IsOWC) System Incorporating Polarization Division Multiplexing with Enhanced Detection	Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074502634&doi=10.1007%2fs11277-019-06870-5&partnerID=40&md5=05d0208188224d83a98e6bf603aebbee
77	Butanol Extract of <i>Tinospora cordifolia</i> Ameliorates Cognitive Deficits Associated with Glutamate-Induced Excitotoxicity: A Mechanistic Study Using Hippocampal Neurons	Medical Biotechnology Lab, Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074006558&doi=10.1007%2fs12017-019-08566-2&partnerID=40&md5=25aa0cd78e55d18f2882ed4414ad51c5
78	4x20Gbit/s-40GHz OFDM based radio over FSO transmission link incorporating hybrid wavelength division multiplexing-mode division multiplexing of LG and HG modes with enhanced detection	Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087658496&partnerID=40&md5=65cddc97a6b9f5d39a8b156b23913312
79	40Gbit/s-80GHz hybrid MDM-OFDM-multibeam based RoFSO transmission link under the effect of adverse weather conditions with enhanced detection	Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084355208&partnerID=40&md5=e9db7b05fb7bd895c46b531f77388e70
80	Thiazole-5-carboxylic acid derivatives as potent xanthine oxidase inhibitors: design, synthesis, in vitro evaluation, and molecular modeling studies	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; TERI-Deakin Nanobiotechnology Centre, The Energy and Resources Institute, TERI Gram, Gual Pahari, Gurugram, Haryana 122001, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074712522&doi=10.1007%2fs00044-019-02461-y&partnerID=40&md5=7b27df90c9c083a83d96fc3fefec90f
81	Bimetallic Implanted Plasmonic Photoanodes for TiO ₂ Sensitized Third Generation Solar Cells	Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084394291&doi=10.1038%2fs41598-020-64653-6&partnerID=40&md5=5c9670d47a38ab89f1a100dafa591d23
82	Solubilization of hydrophobic drugs clozapine and oxcabazepine in the lower and higher molecular weight pluronic mixed micelles-a physicochemical, In vitro release and In vitro anti-oxidant study	Department of Chemistry, UGC-Centre for Advanced Studies-I, Guru Nanak Dev University, Amritsar, 143005, India; Manchester Metropolitan University, Faculty of Science and Engineering, Division of Chemistry and Environmental Science, John Dalton Building, Chester Street, Manchester, M15GD, United Kingdom; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; School of Engineering, Newcastle University, Merz Court, Newcastle upon Tyne, NE17RU, United Kingdom; Department of Polymer Science and Engineering, University of Massachusetts, Amherst, United States	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089386578&doi=10.1016%2fj.molliq.2020.113816&partnerID=40&md5=c06972afe62dc74514f25e90c94162f3
83	Development, characterization, and biocompatibility of zinc oxide coupled starch nanocomposites from different botanical sources	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; School of Bioengineering and Food Technology, Shoolini University of Biotechnology and Management Sciences, Baijhol, PO Sultanpur, Distt. Solan, HP 173229, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086735701&doi=10.1016%2fj.iibiomac.2020.06.125&partnerID=40&md5=a974721d589c5df2bffe2138545a0bed
84	Comparison of structural, physical and optical properties of Na ₂ O-B ₂ O ₃ and Li ₂ O-B ₂ O ₃ glasses to find an advantageous host for CeO ₂ based optical and photonic applications	P.G. Department of Physics, Khalsa College, Amritsar, 143002, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; P.G.Department of Physics, Lyallpur Khalsa College, Jalandhar, 144001, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087592365&doi=10.1016%2fj.inoncrsolv.2020.120268&partnerID=40&md5=da308c9e97a313a1ac22195b2f6053a5
85	Design, synthesis, and anti-proliferative evaluation of 1: H-1,2,3-triazole grafted tetrahydro-β-carboline-chalcone/ferrocenylchalcone conjugates in estrogen responsive and triple negative breast cancer cells	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; School of Molecular and Cell Biology, University of the Witwatersrand, Private Bag 3 Wits-2050, Johannesburg, South Africa; School of Chemistry and Physics, University of KwaZulu-Natal, P/Bag X54001 Westville, Durban, South Africa	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087789238&doi=10.1039%2fd0i00879f&partnerID=40&md5=268087849bfb83c403d8b9198f1cb92

86	Biocontrol potential of chitinases produced by newly isolated Chitinophaga sp. S167	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department cum National Centre for Human Genome Studies and Research, Panjab University, Chandigarh, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086356189&doi=10.1007%2fs11274-020-02864-9&partnerID=40&md5=70dea5e522cb32b4e3712cb937685ba1
87	Discovery and Expression of Thermostable LPMOs from Thermophilic Fungi for Producing Efficient Lignocellulolytic Enzyme Cocktails	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department Engineering Technology, Biotechnology Program, College of Technology, University of Houston, Houston, TX 77004, United States; Center for Structural and Functional Genomics, Concordia University, 7141 Sherbrooke Street West, Montreal, QC H4B 1R6, Canada	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075950672&doi=10.1007%2fs12010-019-03198-5&partnerID=40&md5=732fe6f19fddf98de59ba3f69cf3edec
88	Determinants of farmers' decision to adopt solar powered pumps	University Business School, Guru Nanak Dev University, Amritsar, India; Punjab School of Economics, Guru Nanak Dev University, Amritsar, India	4	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078902322&doi=10.1108%2fIJESM-04-2019-0022&partnerID=40&md5=e7c15d60026ac3abf4dce8247fdcd5a7
89	Using miRNAs as diagnostic biomarkers for male infertility: Opportunities and challenges	Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084167321&doi=10.1093%2fmolehr%2fgaa016&partnerID=40&md5=c2c66fbbd6aee17baad23595d72de8d3
90	Structure of bismuth tellurite and bismuth niobium tellurite glasses and Bi2Te4O11 anti-glass by high energy X-ray diffraction	Department of Physics, Guru Nanak Dev University, Amritsar- Punjab, 143005, India; Deutsches Elektronen-Synchrotron DESY, Notkestrasse 85, Hamburg, 22607, Germany	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083374512&doi=10.1039%2fd0ra01422b&partnerID=40&md5=c47efbdbaaf94df31466dc7e4b644013
91	A perylene diimide-based near-IR ratiometric sensor for detection of Cu2+ ions: Ensemble for discrimination of CN- and S2- ions	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143 005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079689571&doi=10.1039%2fc9ay02726b&partnerID=40&md5=10891d5ffa2bba74e5aa11505429b5c7
92	Antioxidant, antiproliferative and apoptosis-inducing efficacy of fractions from cassia fistula l. Leaves	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; School of Pharmaceutical Sciences, Lovely Professional University, Punjab, 144411, India; Natural Product Chemistry and Process Development division, CSIR-IHBT, Palampur, 176061, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; Department of Agriculture, Food and Environment, University of Pisa, Pisa, 56124, Italy; Interdepartmental Research Center Nutrafood "Nutraceuticals and Food for Health", University of Pisa, Pisa, 56124, Italy; CIRSEC, Centre for Climatic Change Impact, University of Pisa, Pisa, 56124, Italy; Department of Plant Physiology, Faculty of Agrobiological and Food Resources, Slovak University of Agriculture, Nitra, 94976, Slovakia; Department of Botany and Plant Physiology, Faculty of Agrobiological, Food and Natural Resources, Czech University of Life Sciences, Prague, 16500, Czech Republic	12	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079873474&doi=10.3390%2fantiox9020173&partnerID=40&md5=297b46d8fcc1cd95d3571705892f349a
93	Remote monitoring of physical and mental state of 2019-nCoV victims using social internet of things, fog and soft computing techniques	Deptt. of CSA, DAVU, Jalandhar, India; Deptt. of CS, GNDU, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086721690&doi=10.1016%2fj.cmpb.2020.105609&partnerID=40&md5=9978ef34d94ed87f788fbb962d45fd2
94	Diversity in Grain, Flour, Amino Acid Composition, Protein Profiling, and Proportion of Total Flour Proteins of Different Wheat Cultivars of North India	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Technology, Eternal University, Baru Sahib, Himachal Pradesh, India; Multidisciplinary Research Unit, Government Medical College, Amritsar, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091414372&doi=10.3389%2ffnut.2020.00141&partnerID=40&md5=9c5a58f3dafa6dc4a4fc0357436456d
95	Solid-state fermentation of lentil (Lens culinaris L.) with Aspergillus awamori: Effect on phenolic compounds, mineral content, and their bioavailability	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Energy and Environmental Sciences, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Technology and Nutrition, Lovely Professional University, Jalandhar, India; Department of Biotechnology, Chaudhary Devi Lal University, Sirsa, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087991711&doi=10.1002%2fleg3.37&partnerID=40&md5=d4df5005ab6bdcec5c87448055196c22

96	Perylene diimides: Will they flourish as reaction-based probes?	Department of Chemistry, Ugc Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India; Department of Chemistry, Mg Dav College, Bathinda, 151001, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089675671&doi=10.1039%2fd0ay00966k&partnerID=40&md5=effbcc9d472370ac8ca65c5ea117cb04
97	Photoredox-Mediated Synthesis of Functionalized Sulfoxides from Terminal Alkynes	AcSIR and Natural Product Microbes, CSIR, Indian Institute of Integrative Medicine, Jammu, Jammu and Kashmir, 180001, India; Department of Chemistry, University of Kashmir, Srinagar, Jammu and Kashmir, 190006, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087725871&doi=10.1021%2facs.orglett.0c02055&partnerID=40&md5=147844769a2e8b81f3ab2db214ea2845
98	Simultaneous measurements of radon, thoron and their progeny for inhalation dose assessment in indoors of Srinagar, J&K, India	Department of Physics, University of Kashmir, Srinagar, J&K 190006, India; Radiation Safety Systems Division, Health Physics Division, Bhabha Atomic Research Centre, Trombay, Mumbai 400085, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085744313&doi=10.1007%2fs10967-020-07233-2&partnerID=40&md5=cc3a429b26e287e2865451b2dc5fc125
99	A conceptual framework for identifying key employee branding dimensions: A study of hospitality industry	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085565563&doi=10.1016%2fj.jik.2019.08.003&partnerID=40&md5=8ac0c065f988ee33f4ac3d17bf7b52c6
100	A Broad Temperature Active Lipase Purified From a Psychrotrophic Bacterium of Sikkim Himalaya With Potential Application in Detergent Formulation	Biotechnology Division, CSIR-Institute of Himalayan Bioresource Technology, Palampur, India; Academy of Scientific and Innovative Research (AcSIR), CSIR-Institute of Himalayan Bioresource Technology, Palampur, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087666757&doi=10.3389%2ffbioe.2020.00642&partnerID=40&md5=762bf8ddb21548b07812c3e0bde4b314
101	Synthesis of single phase MgTiO3 and influence of Sn4+ substitution on its structural, dielectric and electrical properties	Department of Electronic Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074433494&doi=10.1016%2fj.jallcom.2019.152679&partnerID=40&md5=c9945090a187a18ce5410cab0811ab5d
102	Ag ion implanted TiO2 photoanodes for fabrication of highly efficient and economical plasmonic dye sensitized solar cells	Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India; Thin Film Devices Section, Technical Physics Division, Bhabha Atomic Research Centre, Mumbai, 400 085, India; National Physical Laboratory, New Delhi, 110012, India; Inter University Accelerator Centre, New Delhi, 110 0067, India	10	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077306089&doi=10.1016%2fj.cplett.2019.137070&partnerID=40&md5=a90fc5fb7453b410d4bf018de1e58bd5
103	Quality controlled ECG data compression based on 2D discrete cosine coefficient filtering and iterative JPEG2000 encoding	Department of Electronics and Communication Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar, PIN: 144011, India; Department of Electronics and Communication Engineering, Dumka Engineering College, Dumka, Jharkhand PIN: 814101, India; Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, PIN: 144007, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075858218&doi=10.1016%2fj.measurement.2019.107252&partnerID=40&md5=d8edb55b37039d9f8c92954c0ba399a
104	Solid-state fermentation of pearl millet with Aspergillus oryzae and Rhizopus azygosporus: effects on bioactive profile and DNA damage protection activity	Department of Food Science & Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of Biotechnology, Chaudhary Devi Lal University, Sirsa, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; National Centre for Integrated Pest Management, Pusa Campus, New Delhi, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073962948&doi=10.1007%2fs11694-019-00277-3&partnerID=40&md5=48691fe4293c1e79090497a9da24d98
105	Opposition-based Harris Hawks optimization algorithm for feature selection in breast mass classification	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Gurdaspur, Punjab 143521, India; Department of Computer Science and Engineering, DAV University, Jalandhar, Punjab 144012, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083671082&doi=10.1080%2f09720502.2020.1721670&partnerID=40&md5=b2e003f3e0c3c40c09e368973dfa2c2f
106	A sensitive H2S sensor using MoS2/WO3 composite	Department of Physics, Guru Nanak Dev University Amritsar143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089154808&doi=10.1016%2fj.matpr.2019.12.104&partnerID=40&md5=52feec32c367a7638b1c4b711dfc7495
107	Modeling and performance evaluation of underwater wireless optical communication system in the presence of different sized air bubbles	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096409595&doi=10.1007%2fs11082-020-02638-5&partnerID=40&md5=e98f9784cc5121dbbea1da0a93f7224e
108	Functional, thermal and rheological behavior of fenugreek (Trigonella foenum-graecum L.) gums from different cultivars: A comparative study	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Food Technology and Nutrition, Lovely Professional University, Jalandhar, India; Department of Energy and Environmental Sciences, Chaudhary Devi Lal University, Sirsa, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085394166&doi=10.1016%2fj.ijbiomac.2020.05.094&partnerID=40&md5=45089638395f189222f294bab60bbf41

109	Recent advances in the catalytic synthesis of 3-aminoxindoles: An update	Post-Graduate Department of Chemistry, Khalsa College Amritsar, Punjab, India; Department of Chemistry, U.G.C. Centre of Advance Study-II, Guru Nanak Dev University, Amritsar Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087468231&doi=10.1039%2fd0ob00777c&partnerID=40&md5=1679d134bb907c05ecb74600eb9006a0
110	Performance analysis of mode division multiplexing based free space optics system incorporating on-off keying and polarization shift keying under dynamic environmental conditions	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079369261&doi=10.1007%2fs11276-020-02275-6&partnerID=40&md5=0093c559d576618c8bf22dd9e6eb1305
111	Modifying the dough mixing behavior, protein & starch digestibility and antinutritional profile of minor millets by sprouting	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076582709&doi=10.1016%2fj.ijbiomac.2019.10.225&partnerID=40&md5=de9693511a6d1a67b0449412dbc46479
112	Deep learning based drought assessment and prediction framework	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India; Department of Computer Science & Informatics, Central University of Himachal Pradesh, Dharamshala, Himachal Pradesh, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082534032&doi=10.1016%2fj.ecoinf.2020.101067&partnerID=40&md5=904db73ff5c44aaddffd70cb2aa10bc7
113	Electricity nanogenerator from egg shell membrane: A natural waste bioproduct	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India	4	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079732038&doi=10.1080%2f15435075.2020.1727482&partnerID=40&md5=32545dbf641eb36d0ba38764928f8e28
114	Ion-acoustic cnoidal waves with the density effect of spin-up and spin-down degenerate electrons in a dense astrophysical plasma	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078091667&doi=10.1515%2fzna-2019-0140&partnerID=40&md5=e746e9da02f1e784a8e825bd72a68c47
115	Pyridanthrone-based chromo-fluorogenic amphiphiles for selective CN- detection and their bioimaging application	Department of Bionanotechnology, Hanyang University, Ansan, 155-88, South Korea; Department of Human Genetics, Guru Nanak Dev University, Punjab, Amritsar-143005, India; Department of Chemistry, University of Wisconsin-Madison, Madison, WI 53706, United States; Department of Chemistry, UGC Center for Advanced Studies, Guru Nanak Dev University, Punjab, Amritsar-143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075788006&doi=10.1016%2fj.snb.2019.127396&partnerID=40&md5=557a9a092ab8c93df3392feb07cc7e38
116	A multifunctional peryleneimide-based dual-analyte chemodosimeter for specific and rapid detection of H2S and Pd0 in water, biofluids, live cells and solid state	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Department of Chemical Sciences, IK Gujral Punjab Technical University, Kapurthala, 144601, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075349624&doi=10.1016%2fj.iphotochem.2019.112189&partnerID=40&md5=2516724e55931951fe29c8fc62bdfee
117	COVID-19 and Chinese Global Health Diplomacy: Geopolitical Opportunity for China's Hegemony?	Department of South and Central Asian Studies, School of International Studies, Central University of Punjab, Bathinda, Punjab, India; Department of Law, Guru Nanak Dev University, Regional Campus, Jalandhar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092519508&doi=10.1177%2f0976399620959771&partnerID=40&md5=30f850a80476b0ffccd0b9f421283da5
118	Hybrid molecules based on 1,3,5-triazine as potential therapeutics: A focused review	UGC-Sponsored Centre for Advanced Studies, Department of Chemistry, Guru Nanak Dev University, Amritsar, India; Department of Chemistry, University of Petroleum & Energy Studies, Dehradun, India; Department of Chemistry, Uttarakhand University, Dehradun, India; Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, Yarmouk University, Irbid, Jordan; School of Pharmacy, Suresh Gyan Vihar University, Jaipur, India; School of Pharmaceutical Sciences, Shoolini University of Biotechnology and Management Sciences, Solan, India; Chitkara College of Pharmacy, Chitkara University Punjab, India; Departamento de Organica, facultad de Quimica y de Farmacia, Pontificia Universidad Catolica de Chile, Santiago, Chile; Department of Pharmacy, Faculty of Pharmaceutical Sciences, University of Sao Paulo, Brazil; School of Pharmacy and Pharmaceutical Science, Ulster University, Coleraine, United Kingdom; Department of Life Sciences, School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia; Discipline of Pharmacy, Graduate School of Health, University of Technology Sydney, Sydney, NSW, Australia; Priority Research Centre for Healthy Lungs, Hunter Medical Research Institute (HMRI) & School of Biomedical Sciences and Pharmacy, University of Newcastle, Callaghan, NSW, Australia; Centre for Inflammation, Centenary Institute, Royal Prince Alfred Hospital, Sydney, NSW, Australia	14	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087217639&doi=10.1002%2fddr.21704&partnerID=40&md5=ca5706403ff54b99f1befbf41fe52923

119	Plant Cyclophilins: Multifaceted Proteins With Versatile Roles	Department of Biotechnology, Guru Nanak Dev University, Amritsar, India; Department of Bioinformatics, Hans Raj Mahila Maha Vidyalaya, Jalandhar, India; William Harvey Heart Centre, Queen Mary University of London, London, United Kingdom	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095704133&doi=10.3389%2fjpls.2020.585212&partnerID=40&md5=e8b79803821576529a12be388b933ba4
120	A review on morpho-physiological traits of plants under phthalates stress and insights into their uptake and translocation	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085352844&doi=10.1007%2f10725-020-00625-0&partnerID=40&md5=3cbf2d86d5dbbf1a0ff5dcde2556db0b
121	Phenolic compounds in potato (<i>Solanum tuberosum</i> L.) peel and their health-promoting activities	P.G. Department of Biotechnology, Khalsa College, Amritsar, Punjab 143002, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073769540&doi=10.1111%2fjifs.14361&partnerID=40&md5=34c3476fd6fb9b052f70f36cdca772
122	Biochemical markers for prolongation of the acute stress of triclosan in the early life stages of four food fishes	Aquatic Toxicology Lab, Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Plant Stress Physiology Lab, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A & F University, Hangzhou, 311300, China	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078069684&doi=10.1016%2fj.chemosphere.2020.125914&partnerID=40&md5=3f181fd814884559e86a14110b1310d
123	2-(2'-Hydroxyphenyl)benzothiazole derivatives: Emission and color tuning	Department of Chemistry, UGC Centre of Advanced Study, Guru Nanak Dev University, Amritsar, 143 005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077916572&doi=10.1016%2fj.dyepig.2020.108198&partnerID=40&md5=8c08010353b3397da9c823528133abb0
124	Structural and electrical characterization of semiconducting xCuO-(100-x)TeO2 glasses	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Centre for Energy Research, Konkoly-Thege street 29-33, Budapest, 1121, Hungary	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081381238&doi=10.1016%2fj.inoncrsol.2020.119884&partnerID=40&md5=2be955a63c6047570e6979ca5e2c103
125	Advanced lightweight multi-factor remote user authentication scheme for cloud-IoT applications	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85061369768&doi=10.1007%2fs12652-019-01225-1&partnerID=40&md5=a54c9a92dfa98e959e3510c3fd6a52c2
126	Ten years of disaster management and use of ICT: a scientometric analysis	Guru Nanak Dev University, Regional Campus, Gurdaspur, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073929772&doi=10.1007%2fs12145-019-00408-w&partnerID=40&md5=a9732069ad4ac03dcdbce6bf7d37bdfce
127	An epigrammatic status of the 'Azole'-based antimalarial drugs	Department of Chemistry, University of Petroleum and Energy Studies, Dehradun, 248007, India; Department of Chemistry, Uttarakhand University, Dehradun, 248007, India; UGC Sponsored Centre for Advanced Studies, Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083236511&doi=10.1039%2fc9md00479c&partnerID=40&md5=e25524a9fcca887e30bd4ebd62430a8d
128	Anti-nociceptive and anti-inflammatory effect of imperatorin: evidences for involvement of COX-2, iNOS, NFκB and inflammatory cytokines	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074052650&doi=10.1080%2f00207454.2019.1667789&partnerID=40&md5=6831449b67b9500ed239a2a43ba1251f
129	Effect of gamma irradiation on thermoluminescence studies of LiF:Sm ³⁺ , Dy ³⁺ +nanophosphor	Department of Applied Sciences, I.K. Gujral Punjab Technical University, Kapurthala, India; Swami Premanand Mahavidyalaya, Mukerian, India; Beant College of Engineering and Technology, Gurdaspur, India; Government Degree College Boys, Kathua, India; Department of Physics, Guru Nanak Dev University, Amritsar, India; Centre for Materials Science and Engineering, National Institute of Technology Hamirpur, Hamirpur, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085272234&doi=10.1680%2fjimmr.18.00101&partnerID=40&md5=ddfca468b36ce002d152c1be607d4d9a
130	Seed priming with jasmonic acid counteracts root knot nematode infection in tomato by modulating the activity and expression of antioxidative enzymes	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Indian Institute of Integrative Medicine (CSIR-IIIM), Council of Scientific and Industrial Research, Canal Road, Jammu, 180 001, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Botany and Microbiology, College of Science, King Saud University, Riyadh, 11451, Saudi Arabia; Department of Botany, S.P. College SrinagarJammu and Kashmir 190001, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077838947&doi=10.3390%2fbiom10010098&partnerID=40&md5=99e21d6e4ab2f3057beb55653f515240
131	Monitoring geothermal springs and groundwater of Pir Panjal, Jammu and Kashmir, for radon contamination	Department of Physics, University of Kashmir, Hazratbal, J&K 190006, India; Radiation Safety Systems Division, Health Physics Division, Bhabha Atomic Research Centre, Trombay, Mumbai, 400085, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094180821&doi=10.1007%2fs10967-020-07451-8&partnerID=40&md5=f2c4582a577e7bba162c7237f81f5332

132	Psychological trauma among the healthcare professionals dealing with COVID-19	MYAS GNDU Department of Sports Sciences and Medicine, Guru Nanak Dev University, Amritsar, India; Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087308829&doi=10.1016%2fj.ajp.2020.102241&partnerID=40&md5=8bd530222c024beefb3c5cfeaa457d4d
133	An Improved Task Allocation Strategy in Cloud using Modified K-means Clustering Technique	I. K. Gujral Punjab Technical University, Kapurthala, Punjab, India; Khalsa College of Engineering & Technology, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080085778&doi=10.1016%2fj.eij.2020.02.001&partnerID=40&md5=38a9f494478e9f5a68f9739b3ac8d3d7
134	Kidney bean (<i>Phaseolus vulgaris</i>) starch: A review	Department of Food Science and Technology, Chaudary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bhatinda, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089259975&doi=10.1002%2fleg3.52&partnerID=40&md5=6666e478ba04f4ba2dd0e99a971a6e81
135	Cadmium Accumulation Potential of Brassica Species Grown in Metal Spiked Loamy Sand Soil	Department of Soil Science, Punjab Agricultural University, Ludhiana, India; Department of Soil and Water Conservation, Government of Punjab, India; Department of Zoology, Khalsa College Amritsar, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084258145&doi=10.1080%2f15320383.2020.1758031&partnerID=40&md5=5f6347626584158247bcb1ede99289a
136	Thermosensitive injectable hydrogel containing carboplatin loaded nanoparticles: A dual approach for sustained and localized delivery with improved safety and therapeutic efficacy	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, 143005, India; Cancer Pharmacological Division, CSIR-Indian Institute of Integrative Medicine, Jammu, 180001, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086923405&doi=10.1016%2fj.iddst.2020.101817&partnerID=40&md5=0d98e4933802e4a3be78600d1ec2833d
137	An innovative approach of priming lignocellulosics with lytic polysaccharide mono-oxygenases prior to saccharification with glycosyl hydrolases can economize second generation ethanol process	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082507479&doi=10.1016%2fj.biortech.2020.123257&partnerID=40&md5=c79c05b4f6c0ad39d1c6dfce77d422f
138	Role of nanocarriers in photodynamic therapy	Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, 110062, India; Department of Pharmaceutics, Faculty of Pharmacy, King Abdulaziz University, Jeddah, Saudi Arabia; Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab 143001, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084354086&doi=10.1016%2fj.pdpdt.2020.101782&partnerID=40&md5=a8da9886ffad1c2982197c38455968a9
139	Comparative evaluation of physicochemical, nutritional and molecular interactions of flours from different cereals as affected by germination duration	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077245975&doi=10.1007%2f11694-019-00364-5&partnerID=40&md5=06a8affa574439453f80b856aba5b321
140	Antimicrobial Colloidal Complexes of Lysozyme with Bio-Based Surface Active Ionic Liquids in Aqueous Medium	Department of Chemistry, UGC-Centre for Advance Studies - II, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084379763&doi=10.1021%2facs.jpbc.0c00339&partnerID=40&md5=46ad43b4429b84392199e3b65937e88f
141	Animal Hair-Based Triboelectric Nanogenerator (TEENG): A Substitute for the Positive Polymer Layer in TEENG	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Electronics Technology, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081635510&doi=10.1007%2f11664-020-08031-y&partnerID=40&md5=d1ab0069828170a98939f09762fed56e
142	Antibiofilm, antiproliferative, antioxidant and antimutagenic activities of an endophytic fungus <i>Aspergillus fumigatus</i> from <i>Moringa oleifera</i>	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082745814&doi=10.1007%2f11033-020-05394-7&partnerID=40&md5=13cb0c8e58f7528f81a82cb6cc35d841
143	Structure, optical and electrical properties of sol-gel derived Zn _{1.5} xSn _{1.5} -xO ₄ nanostructured films for optoelectronic applications	Semiconductors Laboratory, Department of Physics, DAV University, Jalandhar, 144012, India; Department of Physics and Astronomy, Botswana International University of Science and Technology (BIUST), Palapye, Botswana; Department of Physics, GND University, Amritsar, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079882803&doi=10.1016%2fj.tsf.2020.137871&partnerID=40&md5=d373167e1c70010972eec02cc10e44fd
144	Hybrid binary Sine Cosine Algorithm and Ant Lion Optimization (SCALO) approaches for feature selection problem	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India; Department of Computer Science and Engineering, DAV University, Jalandhar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081383020&doi=10.1142%2fS2047684119500210&partnerID=40&md5=e3522130a3cdb3508df8512f296c4c6

145	Quantifying reusability of software components using hybrid fuzzy analytical hierarchy process (FAHP)-Metrics approach	Department of PGP, Indian Institute of Management, Amritsar, Punjab 143105, India; Department of Electronics & Communication Engineering, Guru Nanak Dev University, RC, Jalandhar, Punjab 144007, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076830637&doi=10.1016%2fj.assoc.2019.105997&partnerID=40&md5=8b52f90818568bdb949b9601afabbd4c
146	Electromagnetic Wave Absorption Properties of La-Doped Strontium M-Type Hexagonal Ferrite in a 18–40 GHz Frequency Range	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073945571&doi=10.1007%2fs11664-019-07594-9&partnerID=40&md5=ffd473a55bcff131bd789466a0ad24c3
147	Tartaric Acid Mediated Cr Hyperaccumulation and Biochemical alterations in seedlings of Hordeum vulgare L.	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botany, DAV University, Jalandhar, 144012, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064053860&doi=10.1007%2fs00344-019-09959-0&partnerID=40&md5=26cad00250fd0fcaa65d84496fc64ba7
148	Functionalized Naphthalimide-4-aminoquinoline Conjugates as Promising Antiplasmodials, with Mechanistic Insights	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Medicine, University of California, San Francisco, CA 94115, United States; Department of Industrial Chemistry, Federal University of Oye-Ekiti, Oye, 371104, Nigeria; School of Chemistry and Physics, University of KwaZulu-Natal, Durban, Westville, 4000, South Africa	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078398218&doi=10.1021%2facmedchemlett.9b00521&partnerID=40&md5=5fe16dccc1124cb48bd099bbdbbee6e8
149	Structure of strontium tellurite glass, anti-glass and crystalline phases by high-energy X-ray diffraction, reverse Monte Carlo and Rietveld analysis	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Deutsches Elektronen-Synchrotron DESY, Notkestrasse 85, Hamburg, 22607, Germany; Department of Chemistry and Process and Resource Engineering, University of Cantabria, Santander, 39005, Spain	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079571761&doi=10.1107%2fS2052520620000025&partnerID=40&md5=523849bd2a51e56bf43536034447b62a
150	A Fog-Cloud based cyber physical system for Ulcerative Colitis diagnosis and stage classification and management	Baba Gulam Shah Badshah University, Rajouri, J&K, India; Guru Nanak Dev University, Regional Campus Gurdaspur Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075315081&doi=10.1016%2fj.micpro.2019.102929&partnerID=40&md5=4f5eeb968db38edd7f94ba4dc5d1a86c
151	Contamination of vegetables with heavy metals across the globe: hampering food security goal	Department of Environmental Sciences, Chandigarh University, Mohali, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071427282&doi=10.1007%2fs13197-019-04053-5&partnerID=40&md5=a463bc17e299cf425800d03b49419a13
152	Orbital hybridization-induced band offset phenomena in Ni: XCd1-xO thin films	Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi, 110067, India; Condensed Matter Theory Group, Department of Physics and Astronomy, Uppsala University, Box 516, Uppsala, 77120, Sweden; Department of Physics, Guru Nanak Dev University, Amritsar, India; South Ural State University, Chelyabinsk, 454080, Russian Federation	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077403879&doi=10.1039%2fc9nr05184h&partnerID=40&md5=e87e5b4ce8ffcd0192017d2d06c65216
153	A structural equation modeling analysis of factors driving customer purchase intention towards solar water heater	University Busiess School, Guru Nanak Dev University, Amritsar, India; Mittal School of Business, Lovely Professional University, Phagwara, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089383486&doi=10.1108%2fSASBE-05-2020-0069&partnerID=40&md5=c01eafa4c91071b693f6d0312267d232
154	Internet of Things (IoT) and Deep Neural Network-Based Intelligent and Conceptual Model for Smart City	GNDU Regional Campus, Jalandhar, India; R&D Center of Simulation and Virtualization, Duy Tan University, Danang, Viet Nam; Graduate School, Duy Tan University, Danang, Viet Nam	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075688196&doi=10.1007%2f978-981-32-9186-7_30&partnerID=40&md5=bfb84819cb00c11decf1acac5a1c45a1
155	Structural, magnetic, dielectric, microwave absorption, and optical characterization of Ni 0.1Co 0.9(MnZr) xFe 2 - 2 xO 4/ Ba ySr 1 - yFe 12O 19 nanocomposites	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; School of Physics and Materials Science, Thapar University, Patiala, Punjab 147004, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075357397&doi=10.1007%2fs10854-019-02564-7&partnerID=40&md5=93892e35e360d35a7fe1b7e57c09b64a
156	Prospecting the antimicrobial and antibiofilm potential of Chaetomium globosum an endophytic fungus from Moringa oleifera	Microbial Technology Laboratory, Department of Microbiology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095836052&doi=10.1186%2fs13568-020-01143-y&partnerID=40&md5=906d830c434294d38481a3da04558ad3
157	Biomarkers for the toxicity of sublethal concentrations of triclosan to the early life stages of carps	Aquatic Toxicology Lab, Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Plant Stress Physiology Lab, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A & F University, Hangzhou, 311300, China	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092548198&doi=10.1038%2fs41598-020-73042-y&partnerID=40&md5=b92416572776138cfcca53d3fe2009ef
158	Telomere Maintenance Genes are associated with Type 2 Diabetes Susceptibility in Northwest Indian Population Group	Human Genetics Research Group, School of Biotechnology, Shri Mata Vaishno Devi University, Katra, J&K 182320, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083477571&doi=10.1038%2fs41598-020-63510-w&partnerID=40&md5=5614ad371d0326c4997c4a2f4e96defe
159	A novel approach for particle swarm optimization-based clustering with dual sink mobility in wireless sensor network	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, 144007, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089703359&doi=10.1002%2fdac.4553&partnerID=40&md5=505f5ea2828f4e7a58039ddc3f5e545a

160	Investigation of 340-Gbps terrestrial FSO link incorporating spectral-efficient DP-QPSK-PolSK hybrid modulation scheme	Guru Nanak Dev University, Department of Engineering and Technology, Regional Campus, Jalandhar, Punjab, India; Optiwave System Inc., Ottawa, Ontario, Canada; North-Eastern Hill University, Department of Electronics and Communication Engineering, Shillong, Meghalaya, India; University College of Engineering, Department of Physics, Ramanathapuram Campus, Tamil Nadu, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097345768&doi=10.1117%2f1.OE.59.11.116106&partnerID=40&md5=5fef95bd5a4874db167107001bba0662
161	Foliar application of 24-epibrassinolide improves growth, ascorbate-glutathione cycle, and glyoxalase system in brown mustard (<i>Brassica juncea</i> (L.) Czern.) under cadmium toxicity	Department of Biology, College of Science and Humanities, Prince Sattam bin Abdulaziz University, Al-Kharj, 11942, Saudi Arabia; Plant Stress Physiology Lab, Department of Botanical and Environment Sciences, Guru Nanak Dev University, Amritsar, 43005, India; Department of Pharmacognosy, College of Pharmacy, Prince Sattam bin Abdulaziz University, Al-Kharj, 11942, Saudi Arabia; Department of Botany, Faculty of Science, University of Agriculture Faisalabad, Faisalabad, 38000, Pakistan; Botany and Microbiology Department, College of Science, King Saud University, Riyadh, 11451, Saudi Arabia; Department of Botany, S.P. College Srinagar, Srinagar, Jammu and Kashmir 190001, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095567031&doi=10.3390%2fplants9111487&partnerID=40&md5=9fcac5cc74128333f77922bdb1b3c86
162	Hydrothermally synthesized heterostructures of In ₂ O ₃ /MWCNT as acetone gas sensor	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089390031&doi=10.1016%2fj.sna.2020.112240&partnerID=40&md5=63300127b2b07406f7a321e078c49de4
163	New coumarin-benzotriazole based hybrid molecules as inhibitors of acetylcholinesterase and amyloid aggregation	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	11	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089340222&doi=10.1016%2fj.bmlc.2020.127477&partnerID=40&md5=2eef282f77b4ebd508b342e262a7369e
164	Effect of cross-linking on physico-chemical, thermal, pasting, in vitro digestibility and film forming properties of Faba bean (<i>Vicia faba</i> L.) starch	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085038895&doi=10.1016%2fj.jbiomac.2020.05.014&partnerID=40&md5=07fb056843b535fc36a55c6c76f52dae
165	Association analysis of polymorphisms in LEP (rs7799039 and rs2167270) and LEPR (rs1137101) gene towards the development of type 2 diabetes in North Indian Punjabi population	Department of Human Genetics, Guru Nanak Dev University (GNDU), Amritsar, Punjab 143 005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086470317&doi=10.1016%2fj.gene.2020.144846&partnerID=40&md5=6cdc185ba1d1ef09a31b1e991d508a4f
166	Structural, optical, dielectric and transport properties of ball mill synthesized ZnO–V ₂ O ₅ nano-composites	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083526647&doi=10.1016%2fj.molstruc.2020.128261&partnerID=40&md5=9f16eef6e30a16549c1c4c04bdab7e62
167	Insights into the role of streptomycetes hydrogenans as the plant growth promoter, photosynthetic pigment enhancer and biocontrol agent against <i>Meloidogyne incognita</i> in <i>Solanum lycopersicum</i> seedlings	Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Botany and Microbiology Department, College of Science, King Saud University, Riyadh, 11451, Saudi Arabia; Department of Botany, S.P. College Srinagar, Jammu and Kashmir 190001, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093901175&doi=10.3390%2fplants9091109&partnerID=40&md5=5d7acc60e7566a054cf5e2c035a1a97b
168	Examination of hemocompatibility and corrosion resistance of electrical discharge-treated duplex stainless steel (DSS-2205) for biomedical applications	Department of Mechanical Engineering, Khalsa College of Engineering and Technology, Amritsar, 143001, India; Department of Mechanical Engineering, Beant College of Engineering and Technology, Gurdaspur, 143521, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089850934&doi=10.1007%2fs00339-020-03940-5&partnerID=40&md5=951e5962503af67c57d5c2ee520b06b0
169	Antiproliferative and apoptogenic effects of <i>Cassia fistula</i> L. n-hexane fraction against human cervical cancer (HeLa) cells	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Post Graduate Department of Botany, Khalsa College, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086093242&doi=10.1007%2fs11356-020-08916-9&partnerID=40&md5=3ee7fb1d38cc364dfdbd9e87a3a6682b
170	Photoluminescence and thermal properties of trivalent ion-doped lanthanum tellurite anti-glass and glass composite samples	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084605518&doi=10.1016%2fj.ilumin.2020.117375&partnerID=40&md5=27b699327a4d8cd341e74b10cfd6e35e
171	<i>Tinospora cordifolia</i> attenuates high fat diet-induced obesity and associated hepatic and renal dysfunctions in rats	Medical Bio Medical Biotechnology Laboratory, Department of Biotechnology, Guru Nanak Dev University, Amritsar, 143005, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084353399&doi=10.1016%2fj.phanu.2020.100189&partnerID=40&md5=36a05f8c5ddbeee46b88b59ac1ba2738

172	Enhanced hydrolysis of hydrothermally and autohydrolytically treated sugarcane bagasse and understanding the structural changes leading to improved saccharification	Guru Nanak Dev University (GNDU), Grand Trunk Road, Amritsar, Punjab 143005, India; São Carlos Institute of Physics, University of São Paulo, Av. Trabalhador São-carlense, 400, Parque Arnold Schimidt, São Carlos, SP 13566-590, Brazil	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086712622&doi=10.1016%2fj.biombioe.2020.105639&partnerID=40&md5=58eadfd69bec6cf1a11e7a7e0ad013a5
173	Structural, thermal and optical characterization of co-existing glass and anti-glass phases of xLa ₂ O ₃ -(100-x)TeO ₂ and 2TiO ₂ -xLa ₂ O ₃ -(98-x)TeO ₂ systems	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Chemistry and Process & Resource Engineering, University of Cantabria, Cantabria, Santander 39005, Spain	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084574975&doi=10.1016%2fj.inoncrs.2020.120117&partnerID=40&md5=10c2737c6f2404202fa1302bb77fe3e6
174	Synthesis and structural characterization of alumina nanoparticles	Department of Physics, Guru Nanak Dev University, Amritsar, India; Department of Chemistry & Biochemistry, Florida State University, Tallahassee, FL, United States	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084860852&doi=10.1080%2f01411594.2020.1765245&partnerID=40&md5=ca1c63249d9e2a68e1d49c2f6d49695a
175	Changes in chemical properties and oxidative stability of refined vegetable oils during short-term deep-frying cycles	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; P.G. Department of Biotechnology, Khalsa College, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081030234&doi=10.1111%2ffifpp.14445&partnerID=40&md5=eef0fd0ad5c6e44ad0f5daf81064bbb8
176	Complex permittivity, complex permeability and reflection loss of Co-Zr substituted La-Sr hexaferrites in 18–40 GHz frequency range	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078685488&doi=10.1016%2fj.immm.2020.166456&partnerID=40&md5=9c56009b48b0a7f06a08a1acbfd794ea
177	Soil properties changes earthworm diversity indices in different agro-ecosystem	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Post Graduate Department of Zoology, Khalsa College, Amritsar, Punjab, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084411858&doi=10.1186%2fs12898-020-00296-5&partnerID=40&md5=ac01924f0309af62462cc8dfff35814c
178	Optical fog-assisted cyber-physical system for intelligent surveillance in the education system	Department of Computer Science & Engineering, Khalsa College of Engineering & Technology, Amritsar, India; Department of Computer Science & Engineering, Central University of Himachal Pradesh, Dharmshala, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083858911&doi=10.1002%2fcae.22240&partnerID=40&md5=e3899250451f37d0d4fa10621e8a9414
179	Synthesis and: In vitro anti-proliferative evaluation of naphthalimide-chalcone/pyrazoline conjugates as potential SERMs with computational validation	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; School of Molecular and Cell Biology, University of Witwatersrand, Private Bag 3, Johannesburg, Wits, 2050, South Africa; School of Chemistry and Physics, University of Kwazulu Natal, P/Bag X54001, Westville, Durban, 4000, South Africa	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084301248&doi=10.1039%2fdr0a1822h&partnerID=40&md5=1819911ce0d021a1733c654cc12fee22
180	Tailoring of Electromagnetic Absorption in Substituted Hexaferrites from 8.2 GHz to 12.4 GHz	Department of ECE, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab, India; Department of ECE, Lovely Professional University, Phagwara, Punjab, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Physics, Electronics and Space Science, University School of Sciences, Gujarat University, Ahmadabad, Gujarat, India; School of Materials Science and Engineering, University of Science and Technology, Beijing, 100083, China; Department of Physics, University of Memphis, Memphis, TN, United States; Department of ECE, Indian Institute of Technology Roorkee, Roorkee, India; Department of Physics, (LOCEM), Federal University of Ceará (UFC), Pici Campus, Fortaleza, Ceara, Brazil; Department of ECE, CT Institute of Engineering and Management Technology, Jalandhar, Punjab, India	11	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070805163&doi=10.1007%2fs11664-019-07498-8&partnerID=40&md5=c65f1a58a94e151d0ec547c59e9151c8
181	Molecular Design and Synthesis of Ivermectin Hybrids Targeting Hepatic and Erythrocytic Stages of Plasmodium Parasites	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143 005, India; Instituto de Medicina Molecular, Faculdade de Medicina da Universidade de Lisboa, Av. Prof. Egas Moniz, Lisboa, 1649-028, Portugal	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081153199&doi=10.1021%2facs.imedchem.0c00033&partnerID=40&md5=f9029184524b63b480e604b36133ed17
182	Cloud-Centric IoT-Based Green Framework for Smart Drought Prediction	Department of Computer Science and Engineering, Guru Nanak Dev University, Gurdaspur, 143521, India; Department of Computer and Informatics, Central University of Himachal Pradesh, Dharamshala, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079819321&doi=10.1109%2fjiot.2019.2951610&partnerID=40&md5=7d09aa3b0c3bd760cc1b1cd4c7e38d11
183	Effect of rhododendron arboreum leaf extract on the antioxidant defense system against chromium (VI) stress in vigna radiata plants	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Zoology Department, College of Science, King Saudi University, Riyadh, 11451, Saudi Arabia; Botany and Microbiology Department, College of Science, King Saudi University, Riyadh, 11451, Saudi Arabia; Department of Botany, S.P. College, Srinagar, 190001, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079071969&doi=10.3390%2fplants9020164&partnerID=40&md5=8bd6d1e2ab552d1474d1e31ffd7e5fbb
184	Fog-Cloud centric IoT-based cyber physical framework for panic oriented disaster evacuation in smart cities	Department of Computer Science and Engineering, Guru Nanak Dev University Regional Campus, Gurdaspur, PB, India; Department of Computer Science and Informatics, Central University of Himachal Pradesh, Dharamshala, HP, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089402399&doi=10.1007%2fs12145-020-00481-6&partnerID=40&md5=53a7617b4cb212ac02648249a46bc378

185	Heavy nucleus acoustic periodic waves in a degenerate relativistic magneto-rotating quantum plasma	Department of Physics, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088835156&doi=10.1080%2f17455030.2020.1798561&partnerID=40&md5=6212f8bf9b8aefa591351ebbd5d3a475
186	5-Nonyloxytryptamine oxalate–embedded collagen–laminin scaffolds augment functional recovery after spinal cord injury in mice	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086119842&doi=10.1111%2fvnvas.14279&partnerID=40&md5=13fd5a65beff5e48d8dd34bcf5b268e8
187	Design, synthesis, heme binding and density functional theory studies of isoindoline-dione-4-aminoquinolines as potential antiplasmodials	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Medicine, University of California, San Francisco, CA 94143, United States; Department of Pharmaceutical Chemistry, University of KwaZulu-Natal, Durban, 4000, South Africa; Department of Industrial Chemistry, Federal University of Oye-Ekiti, Nigeria; School of Chemistry and Physics, University of KwaZulu-Natal, Westville, Durban, 4000, South Africa	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079248004&doi=10.4155%2ffmc-2019-0260&partnerID=40&md5=81a26700d8100876b558a10aaf59a913
188	Synthesis, structures, and novel antimicrobial activity of silver(I) halide complexes of imidazolidine-2-thiones	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, 143 005, India; Departamento de Quimica Inorganica, Facultad de Farmacia, Universidad de Santiago, Santiago, 15782, Spain; Department of Chemistry, Keene State College, Keene, NH 03435-2001, United States	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075425113&doi=10.1016%2fj.poly.2019.114235&partnerID=40&md5=c6e8a120aeb3b824f0bc75f03648c40e
189	MRR and surface morphological analysis of electrical-discharge-machined Co-Cr alloy	I.K. Gujral Punjab Technical University, Kapurthala, India; Department of Mechanical Engineering, Khalsa College of Engineering and Technology, Amritsar, India; Department of Mechanical Engineering, Beant College of Engineering and Technology, Gurdaspur, India	3	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089845042&doi=10.1680%2fjemmr.19.00034&partnerID=40&md5=37bcdadafdbd2177f0ffb6fb046f413e
190	Overcoming the dissolution rate, gastrointestinal permeability and oral bioavailability of glimepiride and simvastatin co-delivered in the form of nanosuspension and solid self-nanoemulsifying drug delivery system: A comparative study	School of Pharmaceutical Sciences, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Pharmaceutics, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Ooty, Nilgiris, Tamil Nadu, India; Centre of Excellence in Nanoscience & Technology, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Ooty, Nilgiris, Tamil Nadu, India; Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak, Haryana 124001, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; School of Pharmacy, International Medical University, Bukit Jalil, Kuala Lumpur, 57000, Malaysia; Department of Chemical Pathology, School of Pathology, Faculty of Health Sciences and National Health Laboratory Service, University of the Free State, Bloemfontein, South Africa; Discipline of Pharmacy, Graduate School of Health, University of Technology Sydney, Australia	18	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091368259&doi=10.1016%2fj.iddst.2020.102083&partnerID=40&md5=1dcd05dd2b8dba449f00d12974c30a28
191	Effects of annealing temperature on structural and photoluminescence properties of Eu, Dy and Sm doped CaWO4 nanoparticles	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Centre for Energy Research, Konkoly-Thege Street 29-33, Budapest, 1121, Hungary	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089287059&doi=10.1016%2fj.ceramint.2020.07.211&partnerID=40&md5=85b2a316c16af7cb6a6a48ae8ee68dc2
192	Amphiphilic ionic liquid induced fusion of phospholipid liposomes	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096152031&doi=10.1039%2fd0cp04014b&partnerID=40&md5=66b1938ef5fb2f331a23a62640b2be27
193	5-aminolevulinic acid regulates Krebs cycle, antioxidative system and gene expression in Brassica juncea L. to confer tolerance against lead toxicity	Department of Botanical and Environmental Science, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Agriculture, Food and Environment, University of Pisa, Via del Borghetto 80, Pisa, I-56124, Italy; CIRSEC, Centre for Climatic Change Impact, University of Pisa, Via del Borghetto 80, Pisa, I-56124, Italy; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091226772&doi=10.1016%2fj.ibiotec.2020.09.004&partnerID=40&md5=6972716c75c3ee8e7087ae8a708b2091

194	Design of 3.84 Tbps hybrid WDM-PDM based inter-satellite optical wireless communication (IsOWC) system using spectral efficient orthogonal modulation scheme	Department of ECE, Sri Krishna College of Technology, Coimbatore, 641042, India; Department of ECE, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, India; Department of EEE, SRM University, Chennai, India; Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077708081&doi=10.1007%2fs12652-020-01691-y&partnerID=40&md5=9a1935d83eb7977c02f026471cb5b96c
195	Physico-chemical characterization and topological analysis of pathogenesis-related proteins from Arabidopsis thaliana and Oryza sativa using in-silico approaches	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India; CSIR-Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092062862&doi=10.1371%2fjournal.pone.0239836&partnerID=40&md5=6a247b0718eb415788d6b847056c5d2c
196	India fights COVID-19	MYAS-GNDU Department of Sports Sciences and Medicine, Guru Nanak Dev University, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089769462&doi=10.1037%2fra000615&partnerID=40&md5=50cd41580949cb552d074db87f06004b
197	Design, synthesis and biological evaluation of novel indolinedione-coumarin hybrids as xanthine oxidase inhibitors	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	10	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088607280&doi=10.1007%2fs00044-020-02589-2&partnerID=40&md5=ce30a5d35f506038cc9a7a5ed9fd5c57
198	Revisiting the role of relationship benefits in online retail	Department of Commerce and Business Management, Guru Nanak Dev University, Amritsar, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074438523&doi=10.1108%2fJIMP-03-2019-0186&partnerID=40&md5=8bd4d870057072c1123f958203d35755
199	Nonplanar ion acoustic waves in dusty plasma with two temperature electrons: Application to Saturn's e ring	Sikh National College, Banga, 144505, India; Department of Physics, Dav University, Jalandhar, 144012, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090088122&doi=10.1063%2f5.0013015&partnerID=40&md5=905231c01b5c875311024b4b6e291e69
200	Purification and characterization of salvanolic acid B from Streptomyces sp. M4 possessing antifungal activity against fungal phytopathogens	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083883042&doi=10.1016%2fj.micres.2020.126478&partnerID=40&md5=d4cf68b6f0179ba244077e6c79456dea
201	Photophysical behavior of heme group: Unfolding of hemoglobin and myoglobin in the presence of Gemini surfactants of different molecular architectures	Department of Chemistry, Natural and Applied Sciences, University of Wisconsin - Green Bay, 2420 Nicolet Drive, Green Bay, WI 54311-7001, United States; Nanotechnology Research Laboratory, College of North Atlantic, Labrador CityNL A2V 2K7, Canada; Department of Chemistry, Khalsa College, G. T. Road, Amritsar, Punjab 143002, India; Department of Chemistry, B.B.K. D.A.V. College for Women, Amritsar, Punjab 143005, India; School of Chemistry, Faculty of Basic Sciences, Shoolini University, Solan, HP 173212, India; Department of Environmental Sciences, Central University of Himachal Pradesh, TAB Shahpur, Dist. Kangra, Himachal Pradesh 176206, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083447942&doi=10.1016%2fj.iibiomac.2020.04.008&partnerID=40&md5=dbb8479b65de1fb15325e205c58ecdf
202	Field-Induced Single Molecular Magnetism and Photoluminescence in Rare Cocrystals of Isomorphous Lanthanide(III) Coordination Compounds with Fully Substituted Pyridine-4-carboxamide Ligand	Department of Chemistry, Ugc Sponsored-Centre for Advanced Studies-II, Guru Nanak Dev University, Amritsar, 143005, India; Institut des Sciences Chimiques de Rennes, Umr 6226 Cnrs, Université de Rennes 1, Rennes Cedex, 35042, France	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087290975&doi=10.1021%2fac.inorgchem.0c01134&partnerID=40&md5=e870e633b47a8a5b3c60313eea4a2e70
203	Effect of co-substitution of Zn ²⁺ /Zr ⁴⁺ on Surface Morphology, Structure and Magnetic Properties of BaZn _x Zr _{1-x} O ₁₉	Department of Chemistry, UGC Center for Advanced Studies-II, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Analytical and Environmental Science Division and CIF, CSIR-Central Salt and Marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar, Gujarat 364002, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086360317&doi=10.1088%2f1742-6596%2f1531%2f1%2f012097&partnerID=40&md5=de75d0f38ff52e007e9ccc6130e84088
204	A VANET-IoT based Accident Detection and Management System for the Emergency Rescue Services in a Smart City	Guru Nanak Dev University RC, Department of Computer Science and Engineering, Jalandhar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093114924&doi=10.1109%2fICRITO48877.2020.9198010&partnerID=40&md5=50cc5c0f85f9287d80692910a7936a58
205	Energy-Efficient IoT-Fog-Cloud Architectural Paradigm for Real-Time Wildfire Prediction and Forecasting	Guru Nanak Dev University Regional Campus Gurdaspur, Gurdaspur, 143521, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086065498&doi=10.1109%2fJYST.2019.2923635&partnerID=40&md5=2a4874f032e707968d1e147233a7aa26
206	Cloud-assisted green IoT-enabled comprehensive framework for wildfire monitoring	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India; Department of Computer Science and Engineering, Lovely Professional University, Phagwara, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074000271&doi=10.1007%2fs10586-019-02981-7&partnerID=40&md5=3a61833471bbfa481db0f21dea67dc84

207	Corporate governance and underpricing of small and medium enterprises IPOs in India	Department of Commerce, Faculty of Arts and Social Sciences, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082180518&doi=10.1108%2FCG-08-2019-0259&partnerID=40&md5=11bcc5edc43a9ba1980274cc181e4c59
208	Sol-gel derived strontium-doped SiO ₂ -CaO-MgO-P ₂ O ₅ bioceramics for faster growth of bone like hydroxyapatite and their in vitro study for orthopedic applications	Department of Physics, Guru Nanak Dev University, Amritsar, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079092329&doi=10.1016%2fj.matchemphys.2020.122763&partnerID=40&md5=aeab8cae71320a4e7c21e4517b130817
209	Phase structure evolution, crystal structure refinement, morphology, and electro-optical properties of heat-treated Ca _{0.9} Ni _{0.1} Cu _{2.9} La _{0.1} Ti ₄ O ₁₂	Department of Physics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Physics, Faculty of Science, Federal University Dutse, P.M.B. 7156, Dutse, Jigawa State, Nigeria; Department of Science Education, Faculty of Arts and Education, Bauchi State University, Gadau, P.M.B. 65, Itas/Gadau, Bauchi State, Nigeria; Analytic Division and Centralised Instrument Facility, CSIR-Central Salt and Marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Polymer and Processing Engineering, Indian Institute of Technology Roorkee, Saharanpur Campus, Saharanpur, U. P. 247001, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076211753&doi=10.1016%2fj.ceramint.2019.11.213&partnerID=40&md5=5fbc35f724c0665cb52d41591bd9e844
210	Near-IR oxime-based solvatochromic perylene diimide probe as a chemosensor for Pd species and Cu ²⁺ ions in water and live cells	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143 005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083429609&doi=10.1039%2fc9pp00487d&partnerID=40&md5=09233401cd7f3ab289d3e144589468b7
211	Comparative study of physicochemical and functional properties of flours from kidney bean (<i>Phaseolus vulgaris</i> L.) and green gram (<i>Vigna radiata</i> L.) cultivars grown in Indian temperate climate	Department of Food Science & Technology, University of Kashmir, Srinagar, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097769475&doi=10.1002%2fleg3.11&partnerID=40&md5=44256f871cd7e2eed98d004514d08afd
212	Effect of buckwheat incorporation on batter fermentation, rheology, phenolic, amino acid composition and textural properties of idli	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; P.G. Department of Biotechnology, Khalsa College, Amritsar, Punjab 143002, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077943618&doi=10.1016%2fj.lwt.2020.109042&partnerID=40&md5=41a0f149eb7722b07badfb55344b67
213	A novel starch from <i>Pongamia pinnata</i> seeds: Comparison of its thermal, morphological and rheological behaviour with starches from other botanical sources	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076544453&doi=10.1016%2fj.jbiomac.2019.10.033&partnerID=40&md5=ede077092bfe1bbf3c6e13dc530715a9
214	Diagnosis of cardiac arrhythmia using swarm-intelligence based metaheuristic techniques: A comparative analysis	Dept. of Comp. Sc., GNDU Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098963700&doi=10.4108%2feai.22-9-2020.166357&partnerID=40&md5=0c53d538f4edc5cb4ef2865a93c766e8
215	Anti-neuroinflammatory potential of <i>Tylophora indica</i> (Burm. F) Merrill and development of an efficient in vitro propagation system for its clinical use	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India; Amity Institute of Biotechnology, Amity University, Haryana, India	9	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082328163&doi=10.1371%2fjournal.pone.0230142&partnerID=40&md5=436f10f6fa11aef98cfefa48fbc9548f
216	Factors affecting customers' attitude towards solar energy products	University Business School, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079176089&doi=10.1504%2fjIBR.2020.104819&partnerID=40&md5=be40a7cd2473fc347df631bbff75690
217	Exoproteome profile reveals thermophilic fungus <i>Crassiparpon thermophilum</i> (strain 6GKB; syn. <i>Corynascus thermophilus</i>) as a rich source of cellobiose dehydrogenase for enhanced saccharification of bagasse	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Faculty of Applied Medical Sciences, Lovely Professional University, Jalandhar-Delhi Highway, Phagwara, Punjab 144411, India; Centre for Structural and Functional Genomics, Concordia University, 7141 Sherbrooke Street West, Montreal, Quebec H4B 1R6, Canada	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075987286&doi=10.1016%2fj.biombioe.2019.105438&partnerID=40&md5=6d6c13741100517c8af9d7fac19f89f5
218	Assessment of alpha glucosidase inhibitors produced from endophytic fungus <i>Alternaria destruens</i> as antimicrobial and antibiofilm agents	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075360145&doi=10.1007%2fs11033-019-05145-3&partnerID=40&md5=d8de7d0228c09521e6c1a6660d430840
219	X-Band Microwave Analysis and Characterization of Zinc Substituted Nickel Ferrites Prepared by Sol-Gel Citrate Route	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074697253&doi=10.1007%2fs11664-019-07694-6&partnerID=40&md5=ffe61ac7da716a00b8e0760efb98e632

220	Synthesis and the study of structural, thermal and optical properties of (100-x)Bi ₂ O ₃ -x(BaO-TiO ₂) glass system	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Physics, Vasavi College of Engineering, Ibrahimbagh, Hyderabad, 500031, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091654086&doi=10.1016%2fj.jilleo.2020.165646&partnerID=40&md5=0d5abee64aba8aef6f7ae952f700b2ac
221	Reactive oxygen species generating and scavenging systems play critical role in conferring leaf spot disease resistance in <i>Withania somnifera</i> (L.) Dunal	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Senior Principal Scientist, CSIR-IHBT, Palampur, Himachal Pradesh 176061, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090021789&doi=10.1016%2fj.indcrop.2020.112889&partnerID=40&md5=d670a4dae5f96990685ccd7c85f9f7b7
222	Impact of ultrasonication on functional and structural properties of Indian wheat (<i>Triticum aestivum</i> L.) cultivar starches	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, Hr, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Pb, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089535206&doi=10.1016%2fj.jbiomac.2020.08.013&partnerID=40&md5=15d8a4155440636964915fae49a2b524
223	A photocatalytic ensemble HP-T@Au-Fe ₃ O ₄ : Synergistic and balanced operation in Kumada and Heck coupling reactions	Department of Chemistry, Ugc Sponsored Centre for Advanced Study-II, Guru Nanak Dev University, Amritsar Punjab, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096589988&doi=10.1039%2fd0gc02082f&partnerID=40&md5=086ae75e6bd16e1f1e16e3892115b07c
224	Design and synthesis of 4-Aminoquinoline-isoindoline-dione-isoniazid triads as potential anti-mycobacterials	Department of Chemistry, Guru Nanak Dev University, Amritsar 143005, Punjab, India; Institut de Recherche en Infectiologie (IRIM) de Montpellier, CNRS, UMR 9004, Université de Montpellier, France; INSERM, IRIM, Montpellier, 34293, France; School of Chemistry and Physics, University of KwaZulu-Natal, P/Bag X54001, Westville, Durban, South Africa	9	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091995853&doi=10.1016%2fj.bmcl.2020.127576&partnerID=40&md5=896b22d6ee0d741b5c84ba8edc559b08
225	Performance analysis of high speed backward compatible TWDM-PON with hybrid WDM-OCDMA PON using different OCDMA codes	Department of Electronics and Communication Engineering, Punjabi University, Patiala, Punjab, India; Department of Electronics and Communication Engineering, Guru Nanak Dev University Regional Campus, Gurdaspur, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093980192&doi=10.1007%2fs11082-020-02597-x&partnerID=40&md5=b6e8a29217b8c965ad6e1c67177b82c0
226	Evaluating metabolic potential of <i>Thauera</i> sp. M9 for the transformation of 4-chloroaniline (4-CA)	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091917404&doi=10.1016%2fj.bcab.2020.101768&partnerID=40&md5=6b011a4985ee7f2a93bc7e049ff3fa6
227	The neuroplasticity marker PSA-NCAM: Insights into new therapeutic avenues for promoting neuroregeneration	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090718595&doi=10.1016%2fj.phrs.2020.105186&partnerID=40&md5=d22301710e4432d57e1c635dfeea6a7b
228	Comprehensive analysis of crystal structure, optical and luminescent behavior of Fe doped MgO nanophosphors	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088923281&doi=10.1016%2fj.jilleo.2020.164742&partnerID=40&md5=7a6ce05f475665a7656a64b0cd505541
229	A high-speed radio-over-free-space optics link using wavelength division multiplexing-mode division multiplexing-multibeam technique	Department of ECE, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, India; Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088656795&doi=10.1016%2fj.compeleceng.2020.106779&partnerID=40&md5=b99b44f2d688904cd95b8ffa77a75063
230	A 2 × 40 Gbps Mode Division Multiplexing Based Inter-satellite Optical Wireless Communication (IsOWC) System	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085052217&doi=10.1007%2fs11277-020-07483-z&partnerID=40&md5=7cd12c5324f4076a9c7557217361b5c2
231	Protective role of <i>Phyllanthus fraternus</i> in alloxan-induced diabetes in rats	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, 143005, India; Department of Pathology and Laboratory Medicine, University of Ottawa, Faculty of Medicine, Ottawa, ON, Canada	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079903823&doi=10.1016%2fj.jaim.2019.09.008&partnerID=40&md5=d4b6bf91057e8f7b3fadee9440762ead
232	Secretome analysis of <i>Talaromyces emersonii</i> reveals distinct CAZymes profile and enhanced cellulase production through response surface methodology	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Center for Structural and Functional Genomics, Concordia University, 7141 Sherbrooke Street West, Montreal, Quebec H4B 1R6, Canada	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084863470&doi=10.1016%2fj.indcrop.2020.112554&partnerID=40&md5=12b3a6375290ed9b71a1871532dd520b

233	Resveratrol-loaded folate targeted lipoprotein-mimetic nanoparticles with improved cytotoxicity, antioxidant activity and pharmacokinetic profile	Department of Pharmaceutics, Jan Nayak Ch. Devi Lal Memorial College of Pharmacy, Sirsa, Haryana 125055, India; I. K. Gujral Punjab Technical University, Jalandhar, Punjab, India; Amity Institute of Pharmacy, Amity University, Sector-125, Noida, 201313, India; Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, 110062, India; Amity Institute of Molecular Medicine & Stem Cell Research (AIMMSCR), Amity University, Sector-125, Noida, 201313, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084331386&doi=10.1016%2fj.msec.2020.111016&partnerID=40&md5=5507891d8acf7995cd3d7ebacba01c7
234	Antioxidant characterization and in vitro DNA damage protection potential of some Indian fenugreek (<i>Trigonella foenum-graecum</i>) cultivars: effect of solvents	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083786556&doi=10.1007%2f13197-020-04380-y&partnerID=40&md5=d5a8c12b5f865a7274b2cf618d5ed4ba
235	Antioxidant Phytoconstituents From <i>Onosma bracteata</i> Wall. (Boraginaceae) Ameliorate the CCl ₄ Induced Hepatic Damage: In Vivo Study in Male Wistar Rats	Department of Botanical Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Indigenous Education and Research Centre, James Cook University, Townsville, QLD, Australia; Department of Biotechnology, Ambala, India; Tartu, Estonia; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090388010&doi=10.3389%2ffphar.2020.01301&partnerID=40&md5=2baca12b45a10a6ad64c8e0e4a6d3e34
236	Stage of development of a country and CSR disclosure – the latent driving forces	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085705607&doi=10.1108%2fjllma-03-2020-0068&partnerID=40&md5=fa4cc153878ca1dad88cc57ec2bc4ed
237	Fabrication and analysis of piezoelectricity in 0D, 1D and 2D Zinc Oxide nanostructures	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084840884&doi=10.1016%2fj.ceramint.2020.04.283&partnerID=40&md5=737b9baa958368fa2343ee51e1dca90f
238	A stilbazolium dye-based chromogenic and red-fluorescent probe for recognition of 2,4,6-trinitrophenol in water	Department of Chemistry, Centre for Advanced Studies, Guru Nanak Dev University, Amritsar Punjab, India; School of Chemistry and Biochemistry, Thapar Institute of Engineering and Technology, Patiala Punjab, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087781683&doi=10.1039%2fd0j00489h&partnerID=40&md5=b4eb59677205846a34f8f2b39e54793f
239	<i>Butea monosperma</i> (Lam.) Taub. Bark fractions protect against free radicals and induce apoptosis in MCF-7 breast cancer cells via cell-cycle arrest and ROS-mediated pathway	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Department of Biology, S.D. College, Barnala, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85054588308&doi=10.1080%2f01480545.2018.1497051&partnerID=40&md5=70d63591dd4927f35b50ef343e5f6fa4
240	Understanding Phase Segregation Using Rietveld Analysis and the Dielectric, Ferroelectric Properties of Ba(1-x)Ca _x TiO ₃ Solid Solutions	Material Science and Characterization Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Analytical and Environmental Science Division and CIF, CSIR-Central Salt and Marine Chemical Research Institute, Bhavnagar, Gujarat 364002, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084130375&doi=10.1007%2fs11664-020-08150-6&partnerID=40&md5=d1ac443c115037e68cea2fbc6d2c44d2
241	(Ba _x Mg _{1-x}) (Ti _{0.95} Sn _{0.05})O ₃ (x = 0.025, 0.05, 0.075 and 0.1) solid solutions as effective Ku-band (12.4–18 GHz) shielders	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081662318&doi=10.1016%2fj.ceramint.2020.03.057&partnerID=40&md5=fe5c5a0604f8e9fb13e1e4edfb5ce988
242	In-vitro antioxidant, antimutagenic and cancer cell growth inhibition activities of <i>Rhododendron arboreum</i> leaves and flowers	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; College of Pharmacy, King Saud University, Riyadh, Saudi Arabia; Zoology Department, College of Science, King Saud University, Riyadh, Saudi Arabia; Botany and Microbiology Department, College of Science, King Saud University, Riyadh, Saudi Arabia; Department of Botany, S. P. College, Srinagar, Jammu and Kashmir, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079554472&doi=10.1016%2fj.sjbs.2020.01.030&partnerID=40&md5=cae507514b99aef95a773e7cb7750a28
243	5GAuNetS: an autonomous 5G network selection framework for Industry 4.0	ECE Department, GNDU RC, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074706925&doi=10.1007%2fs00500-019-04460-y&partnerID=40&md5=78d896f9cf92725a9a869e550ff4bb7
244	In Silico Studies and in Vivo MAO _A Inhibitory Activity of Coumarins Isolated from <i>Angelica archangelica</i> Extract: An Approach toward Antidepressant Activity	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala, 147002, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087770501&doi=10.1021%2facsomega.0c00887&partnerID=40&md5=44d5c173a30fc4e9d6e0646aea14d2c1

245	Synchrotron-based VUV excitation-induced ultrahigh quality cool white light luminescence from Sm-doped ZnO	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143001, India; Centre for Nanoscience and Nanotechnology, Panjab University, Chandigarh, 160014, India; InterUniversity Accelerator Centre, Aruna Asaf Ali Marg, New Delhi, 110067, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086620640&doi=10.1364%2fOL.395393&partnerID=40&md5=402a60426d36637dfc73ad1ac4054be9
246	QoS-aware energy-efficient task scheduling on HPC cloud infrastructures using swarm-intelligence meta-heuristics	Department of Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, 143005, India; Department of Computer Science, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091098950&doi=10.32604%2fCMC.2020.010934&partnerID=40&md5=54626ab39ecc4912f94bd124e87bac1f
247	Effect of porous medium and copper heat sink on cooling of heat-generating element	Laboratory on Convective Heat and Mass Transfer, Tomsk State University, Tomsk, 634050, Russian Federation; Department of Mathematics, Davangere University, Shivagangothri, Davangere, 577007, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086010560&doi=10.3390%2fen13102538&partnerID=40&md5=8a413981a7cf5c9ff480ba0b698fb43
248	Study of the magnetic, electrical and magneto-dielectric properties and dielectric relaxation in 0.8BiFeO ₃ -0.2BaO-8SrO-2TiO ₃ solid solution	Department of Physics, Baba Farid College (Affiliated to Punjabi University, Patiala), Bathinda, Punjab 151001, India; Multifunctional Materials Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Electronics and Communication Engineering, CT Institute of Technology, Jalandhar, Punjab 144026, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082804368&doi=10.1016%2fj.solidstatesciences.2020.106193&partnerID=40&md5=e9864505a0ebfdf62f37f7758b39c6b8
249	Potential carcinogenic and non-carcinogenic health hazards of metal(loid)s in food grains	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; CSIRO Land and Water, Environmental Contaminant Mitigation and Biotechnology Program, Waite Campus, Waite Rd, Urrbrae, SA 5064, Australia; Department of Zoology, Khalsa College Amritsar, Amritsar, Punjab, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081913551&doi=10.1007%2fs11356-020-08238-w&partnerID=40&md5=41d41d0eba2b457da58b835201746ccc
250	An endophytic <i>Penicillium oxalicum</i> isolated from <i>Citrus limon</i> possesses antioxidant and genoprotective potential	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078632611&doi=10.1111%2fjam.14553&partnerID=40&md5=df86098ebdfae04e86be565ffc852afa
251	Hydration characteristics, structural effects and the taste quality of some polyhydroxy compounds in aqueous solutions of nicotinic acid (vitamin B ₃) at (288.15–318.15) K	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075902332&doi=10.1016%2fj.foodchem.2019.125861&partnerID=40&md5=2adadc9c0dcd4cd4a403fd824f04b04d
252	Diallyl phthalate-triggered oxidative stress in <i>Spirodela polyrhiza</i> L. Schleiden: physiological effects and role of antioxidant defence system	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070602514&doi=10.1007%2fs13762-019-02491-4&partnerID=40&md5=5f457d74a93051c80da3c93b411939a7
253	Ameliorative potential of <i>Argyrea speciosa</i> against CCl ₄ -induced neuropathic pain in rats: Biochemical and histopathological studies	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, 143005, India; Department of Pathology and Laboratory Medicine, University of Ottawa, Faculty of Medicine, Ottawa, Ontario, Canada	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075826307&doi=10.1016%2fj.jep.2019.112399&partnerID=40&md5=5f521c8467679d98f135a025f12e018
254	Elucidation of Interactions between L-Ascorbic Acid and Mixed Micellar Aggregates of Catanionic {Sodium Dodecylsulfate + Cetyltrimethylammonium Bromide} Surfactants via Physicochemical and Spectroscopic Studies	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070504514&doi=10.1002%2fjst.12328&partnerID=40&md5=0656aa4fc8f4264fb8a5c69a5194116c
255	Aqueous colloidal systems of bovine serum albumin and functionalized surface active ionic liquids for material transport	Department of Chemistry, UGC-Centre for Advance Studies-II, Guru Nanak Dev University, Amritsar, 143005, India; Bhabha Atomic Research Centre, Solid State Physics Division, Mumbai, 400085, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079824585&doi=10.1039%2fc9ra05549e&partnerID=40&md5=5cdf8a0a41ad5a1246b2e9eb73114d0f
256	Functionalized Iron Oxide-Metal Hybrid Nanoparticles for Protein Extraction from Complex Fluids	University of Wisconsin-Green Bay, Green Bay, WI, United States; Chandigarh University, Gharuan, India; Khalsa College, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078672540&doi=10.1021%2facs.iecr.9b06150&partnerID=40&md5=ef3c688f24a8d4434f4f46c9f29899d3

257	Concentrated aqueous dispersions of low-defect few-layer thick graphene using surface active ionic liquid for enhanced enzyme activity	Department of Chemistry, University Grants Commission (UGC), Centre for Advanced Studies-II, Guru Nanak Dev University, Punjab, Amritsar, 143005, India; Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University, 744 Motooka, Nishi-ku, Fukuoka, 819-0395, Japan	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85101060924&doi=10.1039%2fd0ma00159g&partnerID=40&md5=1989da696d7ae87489597ce0ed1dbde6
258	Room temperature ammonia sensing using MoSe2 nanostructures	Department of Physics, Guru Nanak Dev University Amritsar143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090046493&doi=10.1016%2fj.matpr.2019.12.130&partnerID=40&md5=f6006205c0faf1b8ab766ced62f03153
259	Impact of celebrity endorser as in-store stimuli on impulse buying	University Business School, Guru Nanak Dev University, Amritsar, Punjab, India; Member of Teaching Staff (Marketing), UNSWACT, Australia	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088087390&doi=10.1080%2f09593969.2020.1781229&partnerID=40&md5=4c48b3d0410a8f7d8a1e65e36784b4f3
260	Ligand conjugated targeted nanotherapeutics for treatment of neurological disorders	Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, 110062, India; Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Pharmaceutical Technology, Meerut Institute of Engineering and Technology Uttar Pradesh, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086792936&doi=10.2174%2f1381612826666200417141600&partnerID=40&md5=b1b2f096f38fb206779390bef3663cd7
261	E-service Quality: Development and Validation of the Scale	Indian Institute of Management, Rohtak, Haryana, India; University Business School (UBS), Guru Nanak Dev University (GNDU), Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084845372&doi=10.1177%2f0972150920920452&partnerID=40&md5=82bcd7556a68f1eb25d6d5ea01ce8dfb
262	A New Scale to Capture the Multidimensionality of Celebrity Image	University Business School, Guru Nanak Dev University, Amritsar, Punjab, India; UNSW, Canberra, Australia	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084823580&doi=10.1177%2f0972150920919599&partnerID=40&md5=f02bc9b0689994449e66af6f102e5d01
263	A cost-effective high-capacity OFDM based rofso transmission link incorporating hybrid SS-WDM-MDM of hermite gaussian modes	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084346927&partnerID=40&md5=7240019497b56c113a1a4af3b91eeeb4
264	Association of XRCC1, XRCC2 and XRCC3 gene polymorphism with esophageal cancer risk	Human Cytogenetics Laboratory, Department of Human Genetics, Guru Nanak Dev University, Amritsar, India; Department of Surgery; Department of Pathology, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India; Department of Radiotherapy, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082672329&doi=10.2147%2fCEG.S232961&partnerID=40&md5=4d364693196a79e18a5ba3cf8305f8ce
265	An intelligent framework for monitoring dengue fever risk using LDA-ANFIS	Department of Computer Science and Informatics, Central University of Himachal Pradesh, Dharamshala, HP, India; Department of Computer Science and Engineering, Guru Nanak Dev University Regional Campus, Gurdaspur, PB, India; Department of Computer Science, Guru Nanak Dev University, Amritsar, PB, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079155215&doi=10.3233%2fAIS-200547&partnerID=40&md5=8ac151d0aedb39b0217c8be32dd80a14
266	Heavy metal concentration and mutagenic assessment of pond water samples: A case study from India	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Botany and Environmental Science, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078271405&doi=10.15244%2fjioes%2f103449&partnerID=40&md5=8b6c807c18f16cec56fbad6987cd6365
267	A pursuit to design highly sensitive fullerene-based sensors: adsorption and dissociation phenomenon of toxic sulfur gases on B40 fullerene	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077028378&doi=10.1007%2fs00894-019-4279-x&partnerID=40&md5=e7127105d107d12d454fcd94ee5a876
268	Histochemical and physicochemical studies reveal improved defense in tomato under Cd stress with rhizobacterial supplementation	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India; Chair of Climate Change, Environmental Development and Vegetation Cover, Department of Botany and Microbiology, College of Science, King Saud University, Riyadh, 11451, Saudi Arabia; Department of Botany and Microbiology, King Saud University, Riyadh, KSA, Saudi Arabia; Department of Botany, S.P. College Srinagar, Jammu, Kashmir, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075388835&doi=10.1007%2fs11104-019-04356-8&partnerID=40&md5=21a77b22f483ce96a0e61e20dbdeda51
269	The enigmatic sperm proteins in mammalian fertilization: An overview	Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099073066&doi=10.1093%2fbiolre%2fioaa140&partnerID=40&md5=f2ae5bc59a30078760e0581feeca0c51

270	Bioactive potential of endophytic fungus <i>Chaetomium globosum</i> and GC-MS analysis of its responsible components	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094903574&doi=10.1038%2fs41598-020-75722-1&partnerID=40&md5=f4be511e001ca0f01a05a218b1be8e55
271	Amalgamating Isatin/Indole/Nitroimidazole with 7-chloroquinolines via azide-alkyne cycloaddition: Synthesis, anti-plasmodial, and cytotoxic evaluation	Department of Chemistry, Guru Nanak Dev University, Amritsar, India; Department of Chemistry, DAV College, Amritsar, India; Department of Medicine, University of California, San Francisco, CA, United States	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087174232&doi=10.1111%2fcbdd.13738&partnerID=40&md5=c9636e29a2a247904b7d9af251babb18
272	A meta-analysis of mannose-binding lectin gene polymorphisms with the risk of recurrent vulvovaginal infections	Department of Molecular Biology & Biochemistry, Guru Nanak Dev University, Amritsar, India; Department of Information Technology, University of Turku, Turku, Finland; Department of Human Genetics, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083280382&doi=10.1038%2fs41598-020-63261-8&partnerID=40&md5=ae3f6af5d535b5e9002f32026bd22836
273	Mixed-Phase TiO ₂ Nanotube-Nanorod Hybrid Arrays for Memory-Based Resistive Switching Devices	Functional Nanomaterials Research Laboratory, Department of Physics, Doon University, Dehradun, Uttarakhand, 248001, India; Department of Applied Physics, Delhi Technological University, Rohini, Delhi, 110042, India; Institute of Materials Research and Engineering, A STAR (Agency for Science, Technology and Research), 2 Fusionopolis Way, Innovis, No. 08-03, Singapore, 138634, Singapore; Department of Chemistry, Doon University, Dehradun, Uttarakhand, 248001, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Physics, SRM University-AP, Amaravati, 522502, India; School of Engineering and Innovation, The Open University, Milton Keynes, MK7 6AA, United Kingdom; Center for Nanofibers and Nanotechnology, Mechanical Engineering Department, Singapore, 117576, Singapore	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096147312&doi=10.1021%2facsanm.0c01648&partnerID=40&md5=8b4f668d1dc853f442ae0ac2c8886d58
274	Temperature and isospin dependence of the level-density parameter in the A=110 mass region	Nuclear Physics Division, Bhabha Atomic Research Centre, Mumbai, 400085, India; Homi Bhabha National Institute, Mumbai, 400094, India; Guru Nanak Dev University, Amritsar, 143005, India; Physics Department, Faculty of Science, M.S. University of Baroda, Vadodara, 390002, India	12	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096118491&doi=10.1103%2fPhysRevC.102.054605&partnerID=40&md5=9423c2a394547a073e2aa469abb54579
275	Improvement in classification accuracy and computational speed in bearing fault diagnosis using multiscale fuzzy entropy	Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Discipline of Mechanical Engineering, Indian Institute of Technology, Indore, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092778919&doi=10.1007%2fs40430-020-02671-1&partnerID=40&md5=498d5b2545395c315507b13d09fcf94c
276	Design, Synthesis, In Silico Analysis, and Structural Study of 4,6-Dimethyl-2-(3-(p-tolylxy)propoxy)nicotinonitrile Fleximer	Department of Chemistry, Physical Sciences, Mizoram University, Aizawl, Mizoram 796004, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090436891&doi=10.1002%2fcrat.202000100&partnerID=40&md5=0d65f2f09d86ab370b1345b59af0c786
277	Structure elaboration of isoniazid: synthesis, in silico molecular docking and antimycobacterial activity of isoniazid-pyrimidine conjugates	Department of Chemistry, UGC Centre of Advance Study-II, Guru Nanak Dev University, Amritsar, 143 005, India; South African Medical Research Council Drug Discovery and Development Research Unit, Department of Chemistry and Institute of Infectious Disease and Molecular Medicine, University of Cape Town, Rondebosch, 701, South Africa	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074757962&doi=10.1007%2fs11030-019-10004-1&partnerID=40&md5=00715cac07d6dbe256a799fd5ab5bfff6
278	An intelligent user-RAT association for 5G enabled Smart Grid	Guru Nanak Dev University Regional Campus, Department of Engineering and Technology, Jalandhar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096589030&doi=10.1109%2fGUCON48875.2020.9231264&partnerID=40&md5=066c3d3a6027ac13ec8e397415cc20e8
279	One-pot sustainable preparation of sunlight active ZnS@graphene nano-composites using a Zn containing surface active ionic liquid	Department of Chemistry, University Grants Commission (UGC) Centre for Advanced Studies-II, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Earth Resources Engineering, Faculty of Engineering, Kyushu University, 744 Motooka, Nishi-ku, Fukuoka, 819-0395, Japan; Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University, 744 Motooka, Nishi-ku, Fukuoka, 819-0395, Japan	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092630856&doi=10.1039%2fd0na00486c&partnerID=40&md5=5af4fb710ba8940884c1982d3490d8f0

280	Structural and optical characterization of Er-doped CaMoO ₄ down-converting phosphors	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Physics, Lovely Professional University, Phagwara, Punjab, 144411, India; School of Physics and Materials Science, Thapar Institute of Engineering and Technology, Patiala, Punjab, 147004, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092426552&doi=10.1107%2F52052520620011397&partnerID=40&md5=1a3f9f0f808339dca24356f4ecc0817a
281	Protective Effect of Esculetin, Natural Coumarin in Mice Model of Fibromyalgia: Targeting Pro-Inflammatory Cytokines and MAO-A	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088028697&doi=10.1007%2Fs11064-020-03095-y&partnerID=40&md5=517083b9e62c8f90be0604f6dfb94d0
282	Comparing the capabilities of transfer learning models to detect skin lesion in humans	Department of Electronics Engineering, Bharati Vidyapeeth (Deemed to be) University, College of Engineering Pune, Pune, India; System Dynamics Lab, Discipline of Mechanical Engineering, Indian Institute of Technology Indore, Indore, India; Government MGM Medical College Maharaja Yashwantrao Hospitals–MYH, Indore, India; Machinery Fault Diagnostics and Signal Processing Laboratory, Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, India; Discipline of Electrical Engineering, Indian Institute of Technology Indore, Indore, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087660405&doi=10.1177%2F0954411920939829&partnerID=40&md5=7b924f3e06d2eb76f0c734e4af653338
283	Analysis of phase segregation using rietveld refinement in and magnetic properties of Mn doped BCT solid solutions	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; UGC-DAE Consortium for Scientific Research, R-5 Shed, BARC, Mumbai, 400085, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086717872&doi=10.1016%2Fj.physb.2020.412299&partnerID=40&md5=42505fea63787bb7bae1b7594b84fea5
284	Development of mitochondrial replacement therapy: A review	Department of Zoology, Khalsa College Amritsar Punjab 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Central University of Himachal Pradesh, India; Department of Zoology, Guru Nanak Dev University Amritsar Punjab 143005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090599136&doi=10.1016%2Fj.heliyon.2020.e04643&partnerID=40&md5=bf2031c767451ea755963ef8553bf639
285	Molecular characterization and antimicrobial susceptibility of bacterial isolates present in tap water of public toilets	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089808446&doi=10.1093%2Finthealth%2Fihz074&partnerID=40&md5=2037f59de4663316a5e8f1c15649cd3
286	Investigating diversity and impact of the popularity metrics for ranking software packages	Department of Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, India; Department of Computer Science, Guru Nanak Dev University, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082926210&doi=10.1002%2Fsmr.2265&partnerID=40&md5=d5f3d0e86c3c288260797cb0efb0f485
287	Vitamin E TPGS based palatable, oxidatively and physically stable emulsion of microalgae DHA oil for infants, children and food fortification	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Cancer Pharmacology Division, CSIR-Indian Institute of Integrative Medicine, Jammu, Jammu & Kashmir, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Pathology, Government Medical College, Amritsar, Punjab, India; Department of Orthopaedics, Government Medical College, Amritsar, Punjab, India; Department of Pharmacy, Central University of Rajasthan, Ajmer, Rajasthan, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85068561545&doi=10.1080%2F10932691.2019.1634587&partnerID=40&md5=58f3d9a04330b0884d6cf0a39c27d24
288	Investigation of antiplasmodial efficacy of lupeol and ursolic acid isolated from Ficus benjamina leaves extract	Department of Pharmaceutical Sciences, IKG Punjab Technical University, Kapurthala, India; Department of Pharmacognosy, Khalsa College of Pharmacy, Amritsar, India; Department of Pharmacognosy and Phytochemistry, SBS College of Pharmacy, Tarn Taran, India; PG Department of Chemistry, Khalsa College Amritsar, Punjab, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85059508868&doi=10.1080%2F14786419.2018.1540476&partnerID=40&md5=d8e1e9b667c9c80c677d43c2d9583850
289	"Metal-free" fluorescent supramolecular assemblies for distinct detection of organophosphate/organochlorine pesticides	Department of Chemistry, UGC Sponsored Centre of Advanced Studies-II, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095679991&doi=10.1021%2Facsomega.0c02315&partnerID=40&md5=b33ac73e94b34100073a812df5a95b76
290	Two-dipole and three-dipole dispersion coefficients for interaction of alkaline-earth-metal atoms with alkaline-earth-metal atoms and alkaline-earth-metal ions	Department of Physics, Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, 247667, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091841557&doi=10.1103%2FPhysRevA.102.022817&partnerID=40&md5=b738b5bf58e50f2869f244219f621477
291	Effect of ellagic acid on the larvae of Spodoptera litura (Lepidoptera:Noctuidae) and its parasitoid Bracon hebetor (Hymenoptera: Braconidae)	Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086594967&doi=10.1016%2Fj.aspen.2020.05.008&partnerID=40&md5=e0e6c9e8744486c7ccb2402f96b4109de

292	Effect of europium concentration on gamma ray exposed thermoluminescence behaviour of LiF: Sm ³⁺ , Dy ³⁺ , Eu ³⁺ nanophosphor	Research Scholar I.K. Gujral Punjab Technical University, Kapurthala, Punjab, India; Swami PremanandMahavidyalaya, Mukerian, Punjab 144211, India; Beant College of Engineering and Technology, Gurdaspur, Punjab, India; Government Degree College Boys, Kathua, J&K, India; Department of Physics, G.N.D.U. Amritsar, Punjab, India; Centre for Materials Science and Engg., NIT HamirpurHimachal Pradesh 177005, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085269137&doi=10.1016%2fj.jilleo.2020.164965&partnerID=40&md5=655e101ce23e0253f65b4d231ec8cf4e
293	A study on physicochemical, antioxidant and microbial properties of germinated wheat flour and its utilization in breads	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081407317&doi=10.1007%2fs13197-020-04311-x&partnerID=40&md5=4f9ae6849801e374248b70b4bd20bfd3
294	IC-SMART: IoTCloud enabled Seamless Monitoring for Alzheimer Diagnosis and Rehabilitation SysTem	Guru Nanak Dev University, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076468996&doi=10.1007%2fs12652-019-01534-5&partnerID=40&md5=0184e19a4e11896ffd53a56cbec616fe
295	Stereoselective C-3 alkylation of trans-3-phenylsulfonyl-β-lactams with organic halides to access C-3 substituted β-lactams using sulfonyl moiety as an activating group	Department of Chemistry, Panjab University and Centre of Advanced Studies in Chemistry, Chandigarh, UT 160014, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086678872&doi=10.1016%2fj.tetlet.2020.152098&partnerID=40&md5=8f973c2ab1b8205bdfc13522878db097
296	Over-expression of Osmotin (OsmWS) gene of Withania somnifera in potato cultivar 'Kufri Chipsona 1' imparts resistance to Alternaria solani	Department of Biotechnology, TIFAC-Centre of Relevance and Excellence in Agro and Industrial Biotechnology (CORE), Thapar Institute of Engineering & Technology, Patiala, 147001, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084848481&doi=10.1007%2fs11240-020-01847-w&partnerID=40&md5=89b9f99ad22cb63a54fe72d5cb6eb6f
297	Crystal structure refinement, optical properties, dielectric response, and impedance spectroscopy of Ni ²⁺ -Co ²⁺ substituted bismuth copper titanate (BCTO)	Department of Physics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Physics, Faculty of Science, Federal University Dutse, P.M.B. 7156, Dutse, Jigawa State, Nigeria; Department of Applied Physics, Z.H. College of Engineering and Technology, Aligarh Muslim University, Aligarh, 202002, India; Department of Mathematics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Chemistry, Guru Nanak Dev University, Amritsa, 143005, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082015995&doi=10.1016%2fj.matchemphys.2020.122933&partnerID=40&md5=34b4a800bf36b28c45dfd63485047087
298	Performance analysis of 160 Gbit/s single-channel PDM-QPSK based inter-satellite optical wireless communication (IsOWC) system	Department of EEE, PSG College of Technology, Coimbatore, India; Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081555981&doi=10.1007%2fs11276-020-02287-2&partnerID=40&md5=2e8c688a1e9fed0deb4cd4e7d832c31
299	Magnetic ion oxidation state dependent magnetoelectric coupling strength in Fe doped BCT ceramics	Material Science and Characterization Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; UGC-DAE Consortium for Scientific Research, R-5 Shed, BARC, Mumbai, 400085, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086181806&doi=10.1039%2fd0ra00969e&partnerID=40&md5=0ea0147509b1a5e7d30b09ddf7558a51
300	Effect of heat treatment on thermal and mechanical stability of NaOH-doped xanthan gum-based hydrogels	Department of Physics, Panjab University, Chandigarh, 160014, India; Department of Physics, G.G.D.S.D. College, Haryana, Hoshiarpur, 144208, India; Department of Physics, D.A.V. College, Amritsar, 143001, India; Department of Physics, D.A.V. College, Jalandhar, 144008, India; Department of Chemistry, Khalsa College, Amritsar, 143005, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084704943&doi=10.1007%2fs10008-020-04641-y&partnerID=40&md5=0104ea659d4adf26ad259604b81a1435
301	Rare earth-tuned oxygen vacancies in gadolinium-doped tin oxide for selective detection of volatile organic compounds	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Faculty of Chemical Technology, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083516140&doi=10.1007%2fs10854-020-03379-7&partnerID=40&md5=ba3c60626e3e5ab167f4e305c1572a6f
302	Thermal and microwave synthesized SPIONs: Energy effects on the efficiency of nano drug carriers	School of Nano Sciences, Central University of Gujarat, Sector 30, Gandhinagar, Gujarat 382030, India; School of Life Sciences, Central University of Gujarat, Sector 30, Gandhinagar, Gujarat 382030, India; Chemistry Division, Bhabha Atomic Research Centre, Mumbai, 400085, India; Solid State Physics Division, Bhabha Atomic Research Centre, Mumbai, 400085, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081128576&doi=10.1016%2fj.msec.2020.110792&partnerID=40&md5=67d0dbab4b662930d2638f9305b7cd82

303	Cloud resource management using 3Vs of Internet of Big data streams	Department of Computer Science and Engineering, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85067060101&doi=10.1007%2fs00607-019-00732-5&partnerID=40&md5=50a8392b618452a64f8c55fccbeae261
304	Novel enterocin E20c purified from Enterococcus hirae 20c synergised with β -lactams and ciprofloxacin against Salmonella enterica	Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084277019&doi=10.1186%2fs12934-020-01352-x&partnerID=40&md5=2befd407a0e73141df31a4dbb6084288
305	Structural transformation and room temperature ammonia sensing properties of TiS2 nanostructures	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094857482&doi=10.1007%2fs42452-020-2647-x&partnerID=40&md5=0522ed9484881814bb998766075f3d53
306	Disentangling the reputation – performance paradox: Indian evidence	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079732827&doi=10.1108%2fjibr-02-2018-0081&partnerID=40&md5=3a9a898e8fa1f04e076831de01e52052
307	Therapeutic potential of brassinosteroids in biomedical and clinical research	Plant Stress Physiology Lab, Department of Botanical and Environment Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Bio-organic and Biological Chemistry, Kharkiv National Medical University, Kharkiv, 61000, Ukraine; State Key Laboratory of Subtropical Silviculture, Zhejiang A&F University, Hangzhou, 311300, China; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Agriculture, Food & Environment, University of Pisa, Via del Borghetto 80, Pisa, 56124, Italy; Interdepartmental Research Center Nutrafood “Nutraceuticals and Food for Health”, University of Pisa, Via del Borghetto 80, Pisa, 56124, Italy	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083384428&doi=10.3390%2fbiom10040572&partnerID=40&md5=63a8ef0545c339f6834b22ceab981c09
308	20Gbit/s-40 GHz OFDM based LEO-GEO Radio over Inter-satellite optical wireless communication (Ro-IsOWC) system using 4-QAM modulation	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078424329&doi=10.1016%2fj.iileo.2020.164295&partnerID=40&md5=2e1581d3e5e05ec4d87585dfdaf92a83
309	The Match-up Between Celebrity Associations and Product Type	Faculty in Economics and Business, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074966005&doi=10.1177%2f0973258619875604&partnerID=40&md5=ec127865b09e1875f3e57c6a42ddc33c
310	Verilog-A modeling of a silicene-based p–n junction logic device: simulation and applications	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, 144007, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074557270&doi=10.1007%2fs10825-019-01410-7&partnerID=40&md5=4a6b09e68bb3148916554d1aec08778f
311	Sustainable Supply Chain Activities and Financial Performance: An Indian Experience	Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074043318&doi=10.1177%2f0972262919863189&partnerID=40&md5=f57589d3ccc70eb997aabbcad55afb8
312	Bicritical states in a vertical layer of fluid under two-frequency temperature modulation	Department of Mathematics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Mathematics, Panjab University, Chandigarh, 160014, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082094759&doi=10.1103%2fPhysRevE.101.023109&partnerID=40&md5=b587463e6efd96daf0dfde272fde1d27
313	Nonlinear Stability of Natural Convection in an Inclined Fluid Layer	Centre for Advanced Study in Mathematics, Panjab University Chandigarh, Chandigarh, India; Department of Mathematics, Guru Nanak Dev University Amritsar, Amritsar, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078854213&doi=10.1007%2fs40819-020-0780-2&partnerID=40&md5=a47dd080bdc1adb94a1a52edd68b417f
314	Efficient microwave synthesis, functionalisation and biocompatibility studies of SPION based potential nano-drug carriers	School of Nano Sciences, Central University of Gujarat, Sector 30, Gandhinagar, Gujarat, India; School of Life Sciences, Central University of Gujarat, Sector 30, Gandhinagar, Gujarat, India; FCIPT, Institute for Plasma Research, GIDC, Sector 25, Gandhinagar, Gujarat, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071855044&doi=10.1007%2fs13204-019-01153-8&partnerID=40&md5=818ff8c796c0a498d0b04ed7536250ea
315	Molecular targets in cancer prevention by 4-(methylthio)butyl isothiocyanate - A comprehensive review	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Biochemistry, Sri Guru Ram Das University of Health Science, Amritsar, 143005, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076531387&doi=10.1016%2fj.lfs.2019.117061&partnerID=40&md5=df72185c0a85b8c70814ad9774260c9c
316	Modification of the lead molecule: Tryptophan and piperidine appended triazines reversing inflammation and hyperalgesia in rats	Department of Chemistry, Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076530309&doi=10.1016%2fj.bmc.2019.115246&partnerID=40&md5=8347e091e32505cd224ba2257db290b5

317	Drug delivery through nose: A noninvasive technique for brain targeting	School of Pharmaceutical Sciences, Lovely Professional University, Phagwara, Punjab, India; Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, Telangana, India; Division of Cyclotron and Radio-pharmaceutical Sciences, Institute of Nuclear Medicine and Allied Sciences, Timarpur, Delhi, India; Khalsa College of Pharmacy, Amritsar, Punjab, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090256306&doi=10.4103%2Fjrtps.JRTPS_59_19&partnerID=40&md5=4c0f857bfd17a89ff99fdc53dcab60fc
318	Characterization of M-type barium hexaferrite synthesized using potatoes as natural fuel	Department of Chemistry, Ugc Center for Advanced Studies-II, Guru Nanak Dev University, Amritsar Punjab, 143005, India; Analytical and Environmental Science Division and Cif, CSIR-Central Salt, Marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar Gujarat, 364002, India; Department of Physics, Guru Nanak Dev University, Amritsar Punjab, 143005, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090027381&doi=10.1016%2Fj.matpr.2019.12.056&partnerID=40&md5=b2b880bff7002cb7d9a2c3df6c7400bc
319	Di-n-butyl phthalate-induced phytotoxicity in hordeum vulgare seedlings and subsequent antioxidant defense response	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085307534&doi=10.32615%2Fbp.2019.095&partnerID=40&md5=75557e437a0bd00441397f1947d4fef
320	Comparative analysis of native and defatted flour from hard, extraordinarily soft, and medium-hard wheat varieties for protein solvation, pasting, mixing, and dough rheological behavior	Dept. of Food Science and Technology, Guru Nanak Dev Univ., Amritsar, 143005, India; Div. of Genetics, Indian Agricultural Research Inst., New Delhi, 110012, India; Dept. of Food Science and Technology, MMICM & BM (HM), Maharishi Markandeshwar (Deemed to be Univ.) Mullana, Ambala, Haryana 133203, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077021418&doi=10.1111%2F1750-3841.14944&partnerID=40&md5=258bdc3effaf9cf8cc0c712620044964
321	First principles investigation on armchair zinc oxide nanoribbons as uric acid sensors	Electrical and Computer Engineering Department, Concordia University, Montreal, Canada; Department of Electronics and Communication Engineering, Regional Campus, Guru Nanak Dev University, Jalandhar, Punjab, India; Applied Science Department, National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh, India; Department of Electronics and Electrical Engineering, Lovely Professional University, Phagwara, Punjab, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076458238&doi=10.1007%2Fs00894-019-4243-9&partnerID=40&md5=8e7767fb1ad86854b8298515ad620f65
322	Inhibition of post-mortem fish muscle softening and degradation using legume seed proteinase inhibitors	P.G. Department of Biotechnology, Khalsa College, Amritsar, Punjab 143002, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070985542&doi=10.1007%2Fs13197-019-04044-6&partnerID=40&md5=f5e563710b1e7f90d3f05edac0931751
323	Amide Tethered 4-Aminoquinoline-naphthalimide Hybrids: A New Class of Possible Dual Function Antiplasmodials	Department of Chemistry, Guru Nanak Dev University, Amritsar, Pin 143005, India; Unité Parasitologie et Entomologie, Département Microbiologie et Maladies Infectieuses, Institut de Recherche Biomédicale des Armées, Marseille, 13234, France; Aix Marseille Univ, IRD, SSA, AP-HM, VITROME, Marseille, 13234, France; IHU Méditerranée Infection, Marseille, 13234, France; Centre National de Référence du Paludisme, Marseille, 13234, France; School of Chemistry and Physics, University of KwaZulu-Natal, P/Bag X54001, Westville, Durban, 4000, South Africa	10	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097823164&doi=10.1021%2Facsmedchemlett.0c00536&partnerID=40&md5=1674c2ec5cc279b93fc14c72d3cdd671
324	Cylindrical and spherical ion acoustic shock waves with two temperature superthermal electrons in dusty plasma	Sikh National College, Banga, 144505, India; Department of Physics, DAV University, Jalandhar, 144012, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096960433&doi=10.1140%2Fepjd%2F2020-10316-0&partnerID=40&md5=5c27d46c668b17e0704af12f054b2aa1
325	Antagonistic effects of EDTA against biochemical toxicity induced by Cr(VI) in Hordeum vulgare L. seedlings	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botany, Government Degree College Ramban, Jammu, 182144, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096601782&doi=10.1007%2Fs12298-020-00908-w&partnerID=40&md5=4a048aeadd5ec0c016cdfbacc6d08afc
326	From ayurvedic folk medicine to preclinical neurotherapeutic role of a miraculous herb, Tinospora cordifolia	Medical Biotechnology Laboratory, Department of Biotechnology, Guru Nanak Dev University, Amritsar, 143005, India; Current Address: Mood Disorders and Suicide Research Lab, Department of Psychiatry, University of Illinois at Chicago IL 60612, United States	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094968125&doi=10.1016%2Fj.neuint.2020.104891&partnerID=40&md5=a4287102e8d476df80bc59da907c5d0a
327	Development, characterization and evaluation of nanocarrier based formulations of antipsoriatic drug "acitretin" for skin targeting	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090228462&doi=10.1016%2Fj.ijddst.2020.102010&partnerID=40&md5=d07594b678842e86c4dd516263dcb56c
328	Synthesis of novel benzocoronene tetracarboxdiimides for fluorescent imaging of latent fingerprints	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India	1	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089673856&doi=10.1016%2Fj.jphtchem.2020.112824&partnerID=40&md5=53b966bdd387e41eed644952af8a24e2
329	Hydro-meteorological hazards and role of ICT during 2010-2019: A scientometric analysis	Department of Computer Science and Engineering, Guru Nanak Dev University Regional Campus Gurdaspur, Punjab, 143521, India; Department of Computer Science and Informatics, Central University of Himachal Pradesh, Dharamshala, 176215, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089455437&doi=10.1007%2Fs12145-020-00495-0&partnerID=40&md5=f7bacf178bc41e692978b7dd3afc54dc

330	Post-infectional changes associated with the progression of leaf spot disease in <i>Calotropis procera</i> Aiton	Department of Botany, DAV University, Sarmastpur, Jalandhar, 44012, India; Department of Botany, Giani Kartar Singh Memorial Government College Urmur, Tanda, Hoshiarpur, 144212, India; Faculty of Agricultural Sciences, DAV University, Sarmastpur, Jalandhar, 144012, India; Department of Botany, Government Degree College, Ramban, Jammu, 182144, India; State Key Laboratory of Subtropical Silviculture, Zhejiang A & F University, Hangzhou, China; Department of Botanical and Environmental Science, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botany, Doaba College, Jalandhar, 144004, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088987320&doi=10.1016%2fj.pmpp.2020.101519&partnerID=40&md5=7f983db0bf60c2c80874da3d6996f1ad
331	Breather Structures and Peregrine Solitons in a Polarized Space Dusty Plasma	Department of Physics, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097413475&doi=10.3389%2ffphy.2020.602229&partnerID=40&md5=17494d5f62e4bf4c541d19de62165817
332	Optimization of extraction conditions of <i>Angelica archangelica</i> extract and activity evaluation in experimental fibromyalgia	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Department of Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092502192&doi=10.1111%2f1750-3841.15476&partnerID=40&md5=5e1180bc9e0bd936324d36c8f55db6d6
333	Plant growth regulators: a sustainable approach to combat pesticide toxicity	School of Bioengineering and Biosciences, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Botany, S.P College, Cluster University, Srinagar, Kashmir 190005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092193045&doi=10.1007%2fs13205-020-02454-4&partnerID=40&md5=a8887e9160f76a2b8212fbd22ce5357c
334	Zingerone produces antidiabetic effects and attenuates diabetic nephropathy by reducing oxidative stress and overexpression of NF- κ B, TNF- α , and COX-2 proteins in rats	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Department of Pathology & Laboratory Medicine, Faculty of Medicine, University of OttawaON, Canada	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090840849&doi=10.1016%2fj.iff.2020.104199&partnerID=40&md5=0bb562c9fbcae3605867ec4bb088bbff
335	Artificial Intelligence-Based Model for Drought Prediction and Forecasting	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, 143521, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090318417&doi=10.1093%2fcomin%2fbx2105&partnerID=40&md5=d286e0f2246c44b51a0fe2b4c4fe7f50
336	Enhanced room temperature ferromagnetism in Cr and Fe co-doped SnO ₂ nanoparticles synthesized by sol-gel method	Department of Applied Sciences, Punjab Engineering College (Deemed to be University), Chandigarh, 160012, India; Amity Institute of Applied Sciences, Amity University, Noida, 201303, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089421570&doi=10.1016%2fj.vacuum.2020.109635&partnerID=40&md5=33ab0e52ede1c3d5cea145685627de1a
337	Augmenting network lifetime for heterogenous WSN assisted IoT using mobile agent	I. K. Gujral Punjab Technical University, Kapurthala, 144603, India; Khalsa College of Engineering and Technology, Amritsar, 143001, India; Panjab University SSG Regional Centre, Hoshiarpur, 146021, India	3	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087778991&doi=10.1007%2fs11276-020-02422-z&partnerID=40&md5=b8083fbc09e8e984bc31c76329d3914d
338	Kinetic, rheological and thermal studies of flaxseed (<i>Linum usitatissimum</i> L.) oil and its utilization	Department of FST, Chaudhary Devi Lal University, Sirsa, India; Department of FST, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of FST, Guru Nanak Dev University, Amritsar, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084064543&doi=10.1007%2fs13197-020-04434-1&partnerID=40&md5=cc47d397e86883d3fc4548a49073d956
339	Optical-lattice-based Cs active clock with a continual superradiant lasing signal	Department of Electronics, State Key Laboratory of Advanced Optical Communication Systems and Networks, Peking University, Beijing, 100871, China; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing, 100190, China; University of Chinese Academy of Sciences, Beijing, 100049, China; Atomic, Molecular and Optical Physics Division, Physical Research Laboratory, Navrangpura, Ahmedabad, 380009, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093983514&doi=10.1103%2fPhysRevA.102.041101&partnerID=40&md5=d35b0380aa1b6a3592033279d713974e
340	Comprehensive Analysis of Band Gap and Nanotwinning in Cd _{1-x} Mg _x QDs	Department of Nanoscience and Materials, Central University of Jammu, Jammu, 181143, India; Department of Chemistry and Chemical Sciences, Central University of Jammu, Jammu, 181143, India; Department of Chemistry, Guru Nanak Dev University, Amritsar Punjab, 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095123910&doi=10.1021%2facsc.cgd.0c00851&partnerID=40&md5=cf89322323f4918afcca67a72aba10ab

341	X-Band Microwave Absorption in Nd ³⁺ -Substituted Mg-Cd Spinel Ferrites Synthesized under Microwave Sintering	Department of Physics, Yashwantrao Chavan Institute of Science (Autonomous), Satara, India; Department of Physics, Bharati Vidyapeeth Matoshree Bayabai Shreepatrao Kadam Kanya Mahavidyalaya, Kadegaon, India; Department of Physics, Kusumtai Rajarambapu Patil Kanya Mahavidyalaya, Uran Islampur, 415409, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India; Department of Electronics, Shivaji University, Kolhapur, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092100371&doi=10.1109%2FTMAG.2020.3014057&partnerID=40&md5=7f4a14f4888fc7faa3e2bd930f92c87d
342	Temperature-Dependent Cationic Doping-Driven Phonon Dynamics Investigation in CdO Thin Films Using Raman Spectroscopy	Atmospheric Plasma Division, Institute for Plasma Research, Gandhinagar, Gujarat, 382 428, India; Condensed Matter Theory Group, Dept. of Physics and Astronomy, Uppsala University, Box 516, Uppsala, 75120, Sweden; Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India; Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi, 110 067, India; Homi Bhabha National Institute, Mumbai, Maharashtra, 400 094, India; RDS College, Muzaffarpur, Bihar, 842 002, India; Applied Materials Physics, Department of Materials and Engineering, Royal Institute of Technology (KTH), Stockholm, S-100 44, Sweden	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092026251&doi=10.1021%2facs.jpcc.0c06632&partnerID=40&md5=a2618712880a4667bdadaea8f03c42dc
343	Physico-chemical and textural (sensorial and electromyographic) evaluation of idlis formulated with brown rice and pearl millet flours	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087504001&doi=10.1007%2fs11694-020-00534-w&partnerID=40&md5=5425399a6a59e8228c2d907e8848103f
344	Quantification of phenolic acids and antioxidant potential of wheat rusks as influenced by partial replacement with barley flour	Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India; Department of Food Science and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda, India; Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083498675&doi=10.1007%2fs13197-020-04410-9&partnerID=40&md5=0a0d212a02e5479df6d0b5ffaf418d2b
345	In situ preparation of a nanocomposite comprising graphene and α -Fe ₂ O ₃ nanospindles for the photo-degradation of antibiotics under visible light	Department of Chemistry, University Grants Commission (UGC), Centre for Advanced Studies-II, Guru Nanak Dev University, Amritsar-Punjab, 143005, India; Department of Earth Resources Engineering, Faculty of Engineering, Kyushu University, 744 Motooka, Nishiku, Fukuoka, 819-0395, Japan; Analytical and Environmental Science Division and Centralized Instrument Facility, CSIR-Central Salt and Marine Chemicals Research Institute, G. B. Marg, Bhavnagar-Gujarat, 364002, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093646728&doi=10.1039%2fd0i03190a&partnerID=40&md5=ead592e4f132d0bf45a8e3c98d10dcb7
346	Phenazine-Based Donor Acceptor Systems as Organic Photocatalysts for "metal-free" C-N/C-C Cross-Coupling	Department of Chemistry, UGC Centre of Advanced Study, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092154925&doi=10.1021%2facs.joc.9b03407&partnerID=40&md5=d8466f7c64c70f8ea933ecfbc3640e96
347	Analysis of pairing phase transition in S n -isotopes within semiclassical approach	Department of Physics, Guru Nanak Dev University, Amritsar, 143 005, India; Nuclear Physics Division, Bhabha Atomic Research Centre, Mumbai, 400 08, India; Homi Bhabha National Institute, Training School Complex, Mumbai, 400 094, India; UM-DAE Centre for Excellence in Basic Sciences, Mumbai, 400 098, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095430048&doi=10.1142%2fS0218301320500718&partnerID=40&md5=2fba00efc34f0a533deb4ddb058d57a2
348	Van der Waals coefficients of the multi-layered MoS ₂ with alkali metals	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Atomic, Molecular and Optical Physics Division, Physical Research Laboratory, Navrangpura, Ahmedabad, 380009, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092470342&doi=10.1088%2f1402-4896%2fabae20&partnerID=40&md5=bbb299a195b6f8fdc01d78de80a440a0
349	Characteristics of spatiotemporal dynamics of a quadruple Gaussian laser beam in a relativistic ponderomotive magnetized plasma	Department of Physics, Guru Nanak Dev University (GNDU), Amritsar, Punjab 143005, India; Regional Institute of Education, Bhubaneswar, 751022, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091851411&doi=10.1364%2fIOSAB.388470&partnerID=40&md5=512f739fd78a4bcd95b52a8360ece73f
350	N-acetylgalactosaminyltransferase: A potential target for colorectal adenocarcinoma	UGC Sponsored Center for Advanced Studies, Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Chemistry, Uttaranchal University, Arcadia Grant, Dehradun, 248007, India; Department of Chemistry, University of Petroleum and Energy Studies, Energy Acres, Dehradun, 248007, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091527409&doi=10.4155%2ffmc-2020-0137&partnerID=40&md5=c3c20351ec14a0a62703dd2d8c7f7f73

351	Marker-trait association identified candidate starch biosynthesis pathway genes for starch and amylose–lipid complex gelatinization in wheat (<i>Triticum aestivum</i> L.)	National Agri-Food Biotechnology Institute (NABI), Sector-81, SAS Nagar, Mohali, Punjab 140 306, India; Department of Food Science and Technology, Guru Nanak Dev University (GNDU), Amritsar, Punjab 143005, India; CSIR-Institute of Himalayan Bioresource Technology, Palampur, 176061, India; Department of Plant Sciences, School of Basic Sciences, Central University of Punjab, Bhatinda, Punjab 151001, India; Indian Institute of Wheat and Barley Research (IIWBR), Kunjpora Road, Karnal, Haryana 132001, India	13	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090286231&doi=10.1007%2fs10681-020-02688-6&partnerID=40&md5=678a4a7d1be32d18506527a1d97d3c0f
352	In Silico Characterization of a Unique Plant-Like “Loopful” GH19 Chitinase from Newly Isolated Chitinophaga sp. YS-16	Department of Biotechnology, Guru Nanak Dev University Amritsar, Punjab, India; Department of Research and Development, Biotechnology, Uttaranchal University, Dehradun, India; Department Cum National Centre for Human Genome Studies and Research, Panjab University, Chandigarh, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085004566&doi=10.1007%2fs00284-020-02022-2&partnerID=40&md5=4830ab764a152df47f0d305a6c963700
353	Diagnosis of bearing faults using multi fusion signal processing techniques and mutual information	Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat 382 007, India; Machinery Fault Diagnostics Laboratory, Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096642437&partnerID=40&md5=5e15c037fb88b3bc9dd625668dc291c9
354	Improved Magnetic and Microwave Properties of La-Substituted Barium Hexaferrite Screen-Printed Thick Films	School of Physics and Materials Science, Thapar Institute of Engineering & Technology, Patiala, Punjab 147004, India; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085062465&doi=10.1007%2fs10948-020-05494-2&partnerID=40&md5=a55431836016557d060784b2af6f0e7
355	An Experimental Evaluation of Link Outage Due to Beam Wander in a Turbulent FSO Link	Department of Electronics Technology, GNDU, Amritsar, 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083789007&doi=10.1007%2fs11277-020-07333-y&partnerID=40&md5=cb698366c58dbe49aa4a95740a7686d
356	Differential effects of performance-enhancing drugs ‘Methamphetamine’ and ‘hCG’ on ex-vivo cultured primary blood mononuclear cells of male athletes	MYAS-GNDU Department of Sports Sciences and Medicine, Guru Nanak Dev University, Amritsar, Punjab 143005, India; ACBR, University of Delhi, Delhi, India; SGT University, Gurugram, Haryana, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081588205&doi=10.1007%2fs43440-020-00066-6&partnerID=40&md5=981cb4d8eb4db6a18edc72f36d13a88d
357	Fabrication and investigation of zinc oxide nanoflowers-based piezoelectric nanogenerator	Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089020619&doi=10.1049%2fiet-cds.2019.0138&partnerID=40&md5=6bf6ba6c064f745bb5e402fb3b1b76ad
358	Fault Diagnosis of Ball Bearing Using Hilbert Huang Transform and LASSO Feature Ranking Technique	Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, 382007, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087076585&doi=10.1088%2f1757-899x%2f841%2f1%2f012006&partnerID=40&md5=4fd5bc347e77177ae882e2538db03ca8
359	Something more than graphene-Futuristic two-dimensional nanomaterials	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, 144 007, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087129671&doi=10.18520%2fcs%2fv118%2fi11%2fi656-1671&partnerID=40&md5=28ad983271f0fa666da45f20d4f0f6bd
360	Comparative Analysis of Neutron, Proton, Alpha and Beta Radiation Shielding Parameters of PES and PVDC	Department of Physics, Guru Nanak Dev University College Verka, Amritsar, Punjab 143005, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086410299&doi=10.1088%2f1742-6596%2f1531%2f1%2f012003&partnerID=40&md5=734db28bdadee167ae00b45db56058a3
361	Impact of Post Cloud Computing Paradigms on IoT	Guru Nanak Dev University, Dept of Computer Engineering and Technology, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093106774&doi=10.1109%2fCRIT048877.2020.9197963&partnerID=40&md5=1368091f64af7a7e1bc7b0fb3d99e2f8
362	Enhanced performance analysis of a hybrid spectrum sliced-wavelength division multiplexing-mode division multiplexing-orthogonal frequency division multiplexing based radio-over-free space optics	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Gurdaspur, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	3	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086068926&doi=10.1002%2fett.3897&partnerID=40&md5=c29a4fec64379a7b18996b8709c16ef6
363	Enhanced oral bioavailability and anti-diabetic activity of canagliflozin through a spray dried lipid based oral delivery: a novel paradigm	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Molecular Biology and Biochemistry, Molecular Microbiology Lab, Guru Nanak Dev University, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Department of Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala, 147002, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079218150&doi=10.1007%2fs40199-020-00330-3&partnerID=40&md5=43284f73dc09e36ba5f231be3001c646

364	Modeling and performance investigation of 4 × 20 Gbps underwater optical wireless communication link incorporating space division multiplexing of Hermite Gaussian modes	Department of ECE, Sri Krishna College of Technology, Coimbatore, India; Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Department of Electronics and Communication Engineering, St. Joseph's College of Engineering, OMR, Chennai, 600119, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084190319&doi=10.1007%2fs11082-020-02380-y&partnerID=40&md5=33502f510ec0c3115f81e1881cfd23f
365	Spatiotemporal evolution of Gaussian laser pulse in weakly relativistic magnetized cold quantum plasma	Department of Physics, DAV University, Sarmastpur, Jalandhar 144301, India; Research Scholar IKG Punjab Technical University, Jalandhar, 144603, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081259016&doi=10.1016%2fj.jleo.2019.163137&partnerID=40&md5=ffb066e8030a8cc6ebe20aa5b5ea71d3
366	Influence of sprouting on phenolic composition and starch characteristics of lentil and horse gram	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076374693&doi=10.1111%2fjifs.14423&partnerID=40&md5=37cb6cd8b81ab82b28eb8120537370a4
367	Preliminary studies of the effect of doping of chromium oxide in SiO ₂ -CaO-P ₂ O ₅ bioceramics for bone regeneration applications	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, 143005, India; Department of Molecular Biology & Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077646628&doi=10.1016%2fj.saa.2019.118000&partnerID=40&md5=07f0d5567e5417664064e49c3bd6d251
368	Analysis of uric acid adsorption on armchair silicene nanoribbons: a DFT study	Department of Electrical and Computer Engineering, Concordia University, Montreal, Canada; Department of Electronics and Communication Engineering, Guru Nanak Dev University Regional Campus, Jalandhar, Punjab, India; Applied Science Department, National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh, India; Department of Electronics and Electrical Engineering, Lovely Professional University, Phagwara, Punjab, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080146282&doi=10.1007%2fs00894-020-4313-z&partnerID=40&md5=d14f9ca667842b876cc9f9f820bbab81
369	Sulforaphane Attenuates Aβ Oligomers Mediated Decrease in Phagocytic Activity of Microglial Cells	Department of Biotechnology, National Institute of Pharmaceutical Education and Research – Ahmedabad, Gandhinagar 382355, Gujarat, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar 143005, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078442571&doi=10.1016%2fj.neuroscience.2020.01.002&partnerID=40&md5=4c6717b8ed1633e7c9709ac8228fcd0c
370	Cadmium stress responses in Brassica juncea L. Plants through histochemical and qualitative approaches	Department of Botany, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara-Punjab, 144411, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar-Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086166453&partnerID=40&md5=fa676b788b84aa79e1b55ea2b5257d07
371	Azide-alkyne cycloaddition en route to ferrocenyl-methoxy-methyl-isatin-conjugates: Synthesis, anti-breast cancer activities and molecular docking studies	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; School of Molecular and Cell Biology, University of the Witwatersrand, Private Bag 3, Wits, Johannesburg, 2050, South Africa; School of Chemistry and Physics, University of KwaZulu Natal, P/Bag X54001, Westville, Durban, 4000, South Africa	10	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076253345&doi=10.1016%2fj.jorganchem.2019.121072&partnerID=40&md5=72416300a701e5513dcb84d62d5b8752
372	E-mail viral marketing: modeling the determinants of creation of "viral infection"	Department of Business Management, Guru Nanak Dev University Regional Campus, Gurdaspur, India; University Business School, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064516966&doi=10.1108%2fjmd-03-2017-0215&partnerID=40&md5=9ae0f8113ba2d5e7d572fd945d040b5
373	Manganese and Zinc Doped CaO-SiO ₂ -P ₂ O ₅ Bioceramics for Recovery from Bone Defects	Department of Physics, Guru Nanak Dev University, Amritsar, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078962269&doi=10.1080%2f10584587.2019.1674973&partnerID=40&md5=5fc64cc593a38157e516ace32000ebcd
374	A Gene Expression Data Classification and Selection Method using Hybrid Meta-heuristic technique	PG Department of Computer Science and Applications, Khalsa College, Amritsar, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099553143&doi=10.4108%2f%2feal.13-7-2018.159917&partnerID=40&md5=5d359c6c34bfc14bb6758bd4d02ebdcd
375	Understanding community participation and engagement in open source software Projects: A systematic mapping study	Department of Computer Science, Guru Nanak Dev University Amritsar143005, India; Department of Computer Engineering and Technology, Guru Nanak Dev University Amritsar143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095828964&doi=10.1016%2fj.jksuci.2020.10.020&partnerID=40&md5=1a297c1891a0c93375075ff5c7830874
376	Advances in coordination chemistry of hexaurea complexes of chromium(III)	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Chemistry, Maharishi Markandeshwar University, Sadopur-Ambala, Haryana, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095737383&doi=10.1080%2f00958972.2020.1836363&partnerID=40&md5=1101d2f4ba442ca4f53ae66ad030f2e1

377	A middleware for polyglot persistence and data portability of big data PaaS cloud applications	Department of Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, 143001, India; Department of Computer Science and Applications, Guru Nanak Dev University, Amritsar, 143001, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090977535&doi=10.32604%2fcm.2020.011535&partnerID=40&md5=b842369248d51201501317188932158e
378	Plant-microbe interactions under adverse environment	Plant Stress Physiology Lab, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; School of Biotechnology and Biosciences, Lovely Professional University, Jalandhar, India; Department of Biotechnology, Modern College of Arts, Science and Commerce, Ganeshkhind, Savitribai Phule Pune University, Pune, India; Department of Microbiology, D.A.V University, Sarmastpur, Jalandhar, Punjab, India; Department of Zoological Sciences, Guru Nanak Dev University, Amritsar, India; Department of Botany, School of Life Sciences, Satellite Campus Kargil, University of Kashmir, Srinagar, Jammu and Kashmir, India; Department of Biotechnology, D.A.V College, Amritsar, Punjab, India	10	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089647667&doi=10.1007%2f978-981-15-2156-0_26&partnerID=40&md5=6bcc394c0418ff6068c885b2a3733bf1
379	Antioxidant system and plant cross-adaptation against metal excess and other environmental stressors	Dokuchaev Kharkiv National Agrarian University, Kharkiv, Ukraine; Karazin Kharkiv National University, Kharkiv, Ukraine; Ukrainian Association for Haemophilia and Haemostasis 'Factor D', Topol-3/20/2, Dnipro, Ukraine; Department of Botanical and Environment Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089043698&partnerID=40&md5=3b257260d6956be38704816b65a25fcd
380	Impact of transition metal oxidation state on the multiferroic properties and magnetoelectric coupling strength of BST ceramics	Material Science and Characterization Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, India; UGC-DAE Consortium for Scientific Research, R-5 shed, BARC, Mumbai, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088009871&doi=10.1080%2f21870764.2020.1793473&partnerID=40&md5=ececc581660b7b530ff42bf935ea29da
381	Comparison of anthropometric profile and handgrip strength between inter-university volleyball players and a reference group	Department of Physiotherapy, School of Allied Health Sciences, Sharda University, Greater Noida (U.P.), 201306, India; Department of Physiotherapy, Guru Nanak Dev University, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083739296&doi=10.2478%2fbhk-2020-0011&partnerID=40&md5=f11e1d098883772614398e57b19cb81f
382	Do Female Directors Signal Indian SME IPOs Quality? Evidence From a Quantile Regression Approach	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082950799&doi=10.1177%2f0972150920911806&partnerID=40&md5=e31ecaa230b97bf58e08f0920ad017e1
383	Integer Wavelet Transform-Based ECG Steganography for Hiding Patients' Confidential Information in e-Healthcare Systems	Department of Electronics and Communication Engineering, National Institute of Technology, Jalandhar, 144011, India; Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, 144007, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081343611&doi=10.1007%2f978-981-15-0751-9_48&partnerID=40&md5=618117f3455d150ed9511e1059f06f1
384	Farmers' awareness level towards solar energy products	University Business School, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081032495&doi=10.37200%2fjIPR%2fV2411%2fPR200140&partnerID=40&md5=e29aa6a0ce4a1b3dbcc8c1bc27a30d2
385	DNA damage in spleen as an indicator of genotoxicity in Channa punctatus exposed to 4-nonylphenol	Department of Fisheries, Dr. G.C. Negi College of Veterinary and Animal Sciences, Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya, Palampur, 176 062, India; Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India; Department of Veterinary Medicine, Dr. G.C. Negi College of Veterinary and Animal Sciences, Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya, Palampur, 176 062, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080053604&doi=10.22438%2fieb%2f41%2f1%2fMRN-1099&partnerID=40&md5=f1313cb7e2283d96b57fb664700a22e
386	Proactively managing clones inside an IDE: a systematic literature review	Department of Computer Science, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078960308&doi=10.1080%2f1206212X.2020.1720952&partnerID=40&md5=b1ff057a766697dd3178fd2f4fb1ca20
387	Taxonomy of routing protocols in wireless sensor networks: A survey	Department of Applied Sciences – Computer Applications, I. K. Gujral Punjab Technical University, Kapurthala, 144603, India; Department of Computer Science and Engineering, Khalsa College of Engineering & Technology, Amritsar, 143001, India; Department of Computer Science and Engineering, P.U. Swami Sarvanand Giri Regional Centre, Hoshiarpur, 146021, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078305685&partnerID=40&md5=bce77c08d9e2d5381c176a104aec4783
388	Elucidating physiological and biochemical alterations in giant duckweed (Spirodela polyrhiza L. Schleiden) under diethyl phthalate stress: Insights into antioxidant defence system	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078032910&doi=10.7717%2fpeerj.8267&partnerID=40&md5=30a8e5b4de207883ba5f32a906ff5f07

389	Synthetic strategies in curcumin chemistry focused on anticancer applications	SynBioC Research Group, Department of Green Chemistry and Technology, Faculty of Bioscience Engineering, Ghent University, Coupure Links 653, Ghent, B-9000, Belgium; Department of Food Technology, Safety and Health, Faculty of Bioscience Engineering, Ghent University, Coupure Links 653, Ghent, B-9000, Belgium; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115005154&doi=10.24820%2fARK.5550190.P011.314&partnerID=40&md5=dd15df95c6390deca363818b7a7e5f4
390	Structural transformation of Punjab agriculture and its environmental implications	Post-Graduate Department of Economics, DAV College, Jalandhar, Punjab, 144008, India; Punjab School of Economics, GNDU, Amritsar, Punjab, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111159114&doi=10.35716%2fIJD%2f20036&partnerID=40&md5=df15c369c26ec9f29de9be03370ab42c
391	Subject mapping of Punjabi language books: A bibliometric study	Department of Library and Information Science, Guru Nanak Dev University, Amritsar, India; Department of Library and Information Science, University of Delhi, Delhi, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099797479&partnerID=40&md5=6b0402b7f4d115e755bb2bdb6dff3e0a
392	Performance analysis of 80 Gbps Ro-FSO system by incorporating hybrid WDM-MDM scheme	Department of ECE, Sathyabama Institute of Science and Technology, Chennai, India; Electronics Technology Department, Guru Nanak Dev University, Amritsar, India; Electronics and Communication Engineering Department, Guru Nanak Dev University, Regional Campus, Jalandhar, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095598803&doi=10.1007%2fs11082-020-02613-0&partnerID=40&md5=873a31b20d37628e46e3faa8a233bce3
393	(p,N)-Policy for Unreliable Server Bulk Queue with Bernoulli Feedback	Department of Mathematics, Indian Institute of Technology Roorkee, Roorkee, 247667, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095131423&doi=10.1007%2fs40819-020-00912-4&partnerID=40&md5=1385d4fed937ae556e97c8350523fa8a
394	A high-speed single-channel inter-satellite optical wireless communication link incorporating spectrum-efficient orthogonal modulation scheme	Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, Punjab, India; Division of Computational Physics, Institute for Computational Science, Ton Duc Thang University, Ho Chi Minh City, Viet Nam; Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091957609&doi=10.1002%2fmop.32511&partnerID=40&md5=66b7bf5e49ad7d9d155ff7da5c836c35
395	Fabrication of composite material based nanogenerator for electricity generation enhancement of food waste by-product	Department of Electronics Engineering, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089819995&doi=10.1016%2fj.matchemphys.2020.123331&partnerID=40&md5=9909217f75cf43d1c8d49ba5dde3a2a1
396	Modeling the protein-nucleic acid base interactions through hydrogen-bonded complexes of N-heterocyclic analogs of Indene with amino acid side-chain mimics	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089082840&doi=10.1007%2fs11224-020-01600-1&partnerID=40&md5=8ee064bc463d9a0e132a11f997417f22
397	Personal Cognitive Factors Affecting Career Aspirations of Women Working in Financial Sector in India	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Commerce, Bebe Nanaki University College, Mithra (Kapurthala), Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086514016&doi=10.1177%2f0972262920931344&partnerID=40&md5=48b6dc6c9953ffabc9c527e2dfaf784f
398	Borosphere molecular junction-based sensor for detecting radium and radon in water	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094634436&doi=10.1557%2fjmr.2020.205&partnerID=40&md5=d6dbc2609512fb5c399abb7480a971e
399	In situ high pressure neutron diffraction and Raman spectroscopy of 20BaO-80TeO2glass	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; UGC-DAE-Consortium of Scientific Research, University Campus Khandwa Road, Indore, 452001, India; Isis Neutron and Muon Facility, Rutherford Appleton Laboratory Chilton, Oxon, OX11 0QX, United Kingdom	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097178722&doi=10.1039%2fd0ra07867k&partnerID=40&md5=2c3a636c22a15f2269d5c3b03ceff870
400	Unraveling the binding and micellization behavior of dioctylsulfosuccinate Sodium Salt with vitamin B1 and B6: A physiochemical and computational study	Department of Chemistry, UGC Sponsored Centre of Advanced Studies-II, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088858654&doi=10.1016%2fj.colsurfa.2020.125324&partnerID=40&md5=c0170084489751dfc552fca25414f168
401	"Metal-Free" Nanoassemblies of AIEE-ICT-Active Pyrazine Derivative: Efficient Photoredox System for the Synthesis of Benzimidazoles	Department of Chemistry, UGC Centre of Advanced Study-II Guru Nanak Dev University, Amritsar, Punjab, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096159319&doi=10.1021%2ffacs.ioc.0c01965&partnerID=40&md5=0601d1b339fa5681693964a8206ad060
402	Structural and thermal properties of magnesium tellurite glasses	Sensors and Glass Physics Laboratory, Department of Physics Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096598119&doi=10.1063%2f5.0017748&partnerID=40&md5=32084ff7d7e790fca803935e04720fa9
403	Determinants of oversubscription of SME IPOs in India: evidence from quantile regression	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089991034&doi=10.1108%2fAPJBA-05-2020-0160&partnerID=40&md5=39114bda80fcdc759d25dd131459a5d4

404	Comparison of ambient air pollution levels of Amritsar during foggy conditions with that of five major north Indian cities: multivariate analysis and air mass back trajectories	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Dr. SSB University Institute of Chemical Engineering and Technology, Panjab University, Chandigarh, India; Centre for Climate Change Research, Indian Institute of Tropical Meteorology, Pune, Maharashtra, India; Department of Environmental Sciences, Central University of Jammu, Jammu, India; Department of Environmental Sciences, Central University of Himachal Pradesh, Dharamshala, Himachal Pradesh, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Civil Engineering, Indian Institute of Technology, Kanpur, India; Environmental Sciences and Biomedical Metrology Division, CSIR-National Physical Laboratory, New Delhi, India	12	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099868703&doi=10.1007%2fs42452-020-03569-2&partnerID=40&md5=92a8bec54d42cd54b007939a8428fe0d
405	Novel Use of Trypan Blue Dye to Stain Fungus in Corneal Scrapings in Eye Clinics	Department of Ophthalmology, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India; Department of Ophthalmology, Amritsar Eye Hospital, Amritsar, Punjab, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Microbiology, Government Medical College, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092681692&doi=10.1097%2fjco.000000000002446&partnerID=40&md5=f77a1b10292d8a6886cf4dd8bd4e1642
406	Complex permittivity and complex permeability characteristics of Co–Ti doped barium strontium hexaferrite/paraffin wax composites for application in microwave devices	School of Electronics and Electrical Engineering, Lovely Professional University, Phagwara, Punjab, India; Institute for Multidisciplinary Research, University of Belgrade, Belgrade, 11030, Serbia; Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Physics, Telecommunications and Materials, Science and Engineering Laboratory (LOCEM), Federal University of Ceara-UFC, Fortaleza, Brazil; School of Electronic Science and Engineering, Xi'an Jiaotong University, Xi'an, 710049, China; National University of Science and Technology MISIS, Leninsky Av 4, Moscow, 119049, Russian Federation; South Ural State University, Lenin Av 76, Lenin Prospect, Chelyabinsk, 454080, Russian Federation; Scientific-Practical Materials Research Centre of NAS of Belarus, P. Brovki str 19, Minsk, 220072, Belarus; Institute of Physics, Mathematics & IT, Immanuel Kant Baltic Federal University, A. Nevskogo str 14, Kaliningrad, 236041, Russian Federation; Department of Electronics and Communication Engineering, Yadavindra College of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Punjab, India	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092398841&doi=10.1007%2fs00339-020-04016-0&partnerID=40&md5=c89f5dee01830e58e27cff788a1452bd
407	X-ray photoelectron spectra and electronic structure of Mo doped V2O5	College of Science, Institute of Materials Physics and Chemistry, Nanjing Forestry University, Nanjing, 210037, China; Institute of Physics and Technology, Ural Federal University, Mira 19 str., Yekaterinburg, 620002, Russian Federation; Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; M. N. Mikheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences, S. Kovalevskoi 18 str., Yekaterinburg, 620108, Russian Federation	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092080138&doi=10.1016%2fj.tsf.2020.138360&partnerID=40&md5=53d1fdeb633a9f96ae93994582f12753
408	A Smart Disaster Management Framework for Wildfire Detection and Prediction	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, HarDOchanni Road, Gurdaspur, Punjab, 143521, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091352607&doi=10.1093%2fcomin%2fbx091&partnerID=40&md5=2cd93d9fd4b36c2411ff6b65add07968
409	Di-2-pyridylketone-N1-substituted thiosemicarbazone derivatives of copper(II): Biosafe antimicrobial potential and high anticancer activity against immortalized L6 rat skeletal muscle cells	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Botanical & Environmental sciences, Guru Nanak Dev University, Amritsar, 143 005, India; School of Chemistry and Biochemistry, Thapar Institute of Engineering and Technology, Patiala, 147004, India; Department of Chemistry, Keene State College, Keene, NH 03435, United States	9	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090414551&doi=10.1016%2fj.iinorgbio.2020.111205&partnerID=40&md5=50605906a6ffa99e22bad1650c3b43ee

410	Identification of host factors limiting the overexpression of recombinant Cu, Zn superoxide dismutase in Escherichia coli	Biotechnology Division, CSIR-Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh 176061, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087662340&doi=10.1007%2fs10529-020-02962-6&partnerID=40&md5=adc96fb6e464ba6f7503c6a7db72f07b
411	Excitation induced enhancement of spectral response and energy transfer mechanisms in Fe/Sm modified ZnO phosphors	Department of Physics, Guru Nanak Dev University, Punjab, Amritsar, 143001, India; CSIR-National Physical Laboratory, New Delhi, 110012, India; National Synchrotron Radiation Research Center, Hsinchu Science Park, Hsinchu, 30076, Taiwan; Department of Physics, Tamkang University, Tamsui, Taiwan; Inter University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi, 110067, India	10	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093946294&doi=10.1063%2f5.0015613&partnerID=40&md5=f543f9936de0d10357a71b051ca9179a
412	Influence of phase transformation on structure–property relationship in quaternary In10Sb10Ag10Se70 chalcogenide films	Department of Physics, GND University, Amritsar, 143005, India; Department of Physics, DAV University, Jalandhar, 144012, India; Material Science Division, Inter University Accelerator Centre, New Delhi, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089312622&doi=10.1007%2fs10854-020-04191-z&partnerID=40&md5=059cef4bb0b40fdabfc99fb4b30b488f
413	Deterioration of digestive physiology of Bactrocera cucurbitae larvae by trypsin inhibitor purified from seeds of Mucuna pruriens	Department of Zoology, Guru Nanak Dev University AmritsarPunjab 143005, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University AmritsarPunjab 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089007105&doi=10.1016%2fj.pestbp.2020.104647&partnerID=40&md5=901a818e620e5263068dedd427cfd72b
414	A game theoretic approach for conflict resolution in argumentation enabled social IoT networks	Dept of CSE; GNDU, RC, Jalandhar	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086738520&doi=10.1016%2fj.adhoc.2020.102222&partnerID=40&md5=0320b46c02950e1c183ed09d309b5df7
415	Determinants of Diffusion and Adoption of ATM cum Debit Cards in Indian Banking Sector	Department of Commerce, PG Government College (Hisar) District, Hissar, Haryana, India; Department of Commerce, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85070306512&doi=10.1177%2f0972150919856960&partnerID=40&md5=3fd784ebe2b105ac9b586fe256f560d
416	Behavioral intentions of heritage tourists: Influential variables on recommendations to visit	The University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075528088&doi=10.1080%2f1743873X.2019.1692852&partnerID=40&md5=e5b6f5b270e0acba9ab5e53bd77a14e4
417	Convex linear metric spaces are normable	Department of Mathematics, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104436482&doi=10.1007%2fs41478-019-00185-1&partnerID=40&md5=a12f6f98685e2707a4394753991f70c4
418	Bioconversion of different organic waste into fortified vermicompost with the help of earthworm: A comprehensive review	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Zoology, Khalsa College, Amritsar, Punjab, India; Division of Biotechnology, Punjab State Council for Science and Technology, Chandigarh, India; River Basin Research Center, Gifu University, 1-1 Yanagido, Gifu, Japan	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099383805&doi=10.30486%2fjirowa.2020.1893367.1037&partnerID=40&md5=1d644a4755ea199a7d0499cd8b7b294d
419	An Improved Regression Type Estimator of Population Mean with Two Auxiliary Variables in Stratified Double Sampling	Department of Mathematics, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085874921&doi=10.1007%2fs42519-020-00107-6&partnerID=40&md5=cc865e929ac2ee60f41ad5e67a18341b
420	Corrected estimator of sensitive population proportion using unknown repeated trials in the unrelated question randomized response model	Department of Mathematics, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080875380&doi=10.1002%2fbimi.201900334&partnerID=40&md5=ecd022ecb9caae161bc987a66ec43929
421	Genetic portrait of North-West Indian population based on X chromosome Alu insertion markers	Department of Anthropology, Panjab University, Chandigarh, India; Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, India; Icahn School of Medicine at Mount Sinai, Tisch Cancer Institute, 1470 Madison Avenue, New York, NY, United States; Wildlife Institute of India, Dehradun, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076819680&doi=10.1007%2fs00414-019-02238-3&partnerID=40&md5=113ca9f31faaf4241fbb3cf77396efd
422	Development, Characterization and Evaluation of Parenteral Formulation of Diclofenac Sodium	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089032444&doi=10.1208%2fs12249-020-01729-6&partnerID=40&md5=17dddfe02f71608f7ae7b711aebb8ba9
423	Synthesis and characterization of novel amphiphilic tamarind seed xyloglucan-octenyl succinic anhydride conjugate	Department of Bio & NanoTechnology, Guru Jambheshwar University of Science & Technology, Hisar, Haryana 125001, India; Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science & Technology, Hisar, 125001, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab, India; DHR-ICMR, Ministry of Health & Family Welfare, Government of India, New Delhi, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088526062&doi=10.1007%2fs10965-020-02195-1&partnerID=40&md5=4f7ebfce51cbd1eefcb10c480c497a9

424	Screening of rhizomes of <i>Rheum emodi</i> Wall. Ex. Meissen for antimutagenic potential employing Ames assay	PG Department of Botany, Hans Raj Mahila Maha Vidyalaya, Jalandhar, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, India; Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079445125&doi=10.1007%2fs13237-020-00309-0&partnerID=40&md5=bf8ec4d7f6a4e025b00a60e10708c71d
425	The Role of Personality in Influencing Work–Family Balance Experience: A Study of Indian Journalists	Department of Commerce, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85049771623&doi=10.1177%2f0972150918779157&partnerID=40&md5=73ee31de0ceb1620af3cf40fb437c68f
426	Analysis of micellar, thermodynamic and structural parameters of gemini surfactants in aqueous solutions of vitamins	Department of Chemistry, Lyallpur Khalsa College, Jalandhar, Punjab 144001, India; Department of Chemistry, Gandhi Memorial National College, Ambala Cantt., Haryana 133001, India; Department of Chemistry, UGC-Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084658138&doi=10.1016%2fj.molliq.2020.113237&partnerID=40&md5=d829e101d41fbf72e6dfe4309da75d7e
427	Characterization and measurement of nanostructured copper-based electromagnetic wave absorber	Electronics and Communication Engg. Department, SLIET Logowal, Sangrur, India; Electrical and Instrumentation Engg. Department, SLIET Logowal, Sangrur, India; Electronics and Communication Department, GNDU, Amritsar, India; Analytical Chemistry Nanotechnology, Department of Chemistry (PG Studies), Shree Velagapudi Ramakrishna Memorial College, Guntur, India; Analytical Chemistry Nanotechnology, PG Department of Chemistry, Dharma Appa Rao College, Nuzvid, India; Rasakalpa AITDC Laboratory, Kandukur, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087144735&doi=10.1080%2f02726343.2020.1780375&partnerID=40&md5=6532d9a21a45c342321fb20b8f8e54d9
428	Molecular identification and phylogenetic relationship of <i>Demodex</i> mites based on mitochondrial 16S rDNA	Sri Guru Ram das Institute of Medical Science and Research, Amritsar, India; Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab, India; Molecular Microbiology Lab, Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85100343860&doi=10.4103%2ftp.TP.76.19&partnerID=40&md5=886e29468e5a219bb764d4fe37a8fd2f
429	Punjabi adaptation of WHO's global physical activity questionnaire (GPAQ) in gurumukhi script: A validity and reliability study	Department of Physical Education, Apeejay College of Fine Arts, Jalandhar, Punjab, India; Department of Physical Education (T), Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088511236&partnerID=40&md5=f135e9d8a553c5d321f9e5d76e24543a
430	Insecticidal effects of phenolic compounds on the development of polyphagous <i>Spodoptera litura</i> larvae	Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087931469&doi=10.26651%2fallelo.%2f2020-50-2-1283&partnerID=40&md5=0d8aedc7a2868f92721ee906d380e0ac
431	Adenine based molecular junction as biosensor for detection of toxic phosgene gas	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086236839&doi=10.1007%2fs00894-020-04427-z&partnerID=40&md5=757f8638fc87fc7b3bf0130a41e69731
432	Assessment of genotoxic and biochemical effects of purified compounds of <i>Alpinia galanga</i> on a polyphagous lepidopteran pest <i>Spodoptera litura</i> (Fabricius)	Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Natural Products, National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar, Mohali, Punjab 160062, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085325833&doi=10.1007%2fs12600-020-00813-8&partnerID=40&md5=9bda41bcf254cc47e90c1a7aaf981755
433	Soft-computing-centric framework for wildfire monitoring, prediction and forecasting	Department of Computer Science and Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074751962&doi=10.1007%2fs00500-019-04477-3&partnerID=40&md5=2f9e9fc3201994275ee9f98f16130fd8
434	Structural, dielectric, reflection and optical characteristics of the rare-earth (Yb, Er, Dy and Eu) substituted M-phase Li _{1+x} -yNb _{1-x-3y} Ti _x +4yO ₃ solid solutions	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078948543&doi=10.1016%2fj.jallcom.2020.153979&partnerID=40&md5=0db59692631c70bc523113f69ba78c04
435	Gamma-ray, Neutron and Beta Radiation Shielding Properties of Bi ₂ O ₃ -Li ₂ O-MnO ₂ -B ₂ O ₃ Glasses	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Physics, Guru Nanak Dev University College Verka, Amritsar, 143501, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086374667&doi=10.1088%2f1742-6596%2f1531%2f1%2f012043&partnerID=40&md5=c10fa4e29f81970e415b906dddec54c0

436	Structural and Dielectric Properties of Cr ³⁺ -Cu ²⁺ Substituted Cobalt Ferrites	Department of Physics, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 144411, India; Department of Physics, Sa'adatu Rimi College of Education, P.M.B. 3108, Kumbotso, Kano State, Nigeria; Department of Physics, Faculty of Science, Federal University Dutse, P.M.B. 7156, Jigawa State, Dutse, Nigeria; Department of Science Education, Faculty of Arts and Education, Bauchi State University, Gadau P.M.B. 65, Itas, Gadau, Bauchi State, Nigeria; Department of Chemistry, School of Physical Sciences and Chemical Engineering, Lovely Professional University, Phagwara, Punjab 44411, India; Department of Electronics and Communication, Guru Nanak Dev University, Amritsar, 143005, India	10	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086373883&doi=10.1088%2f1742-6596%2f1531%2f1%2f012029&partnerID=40&md5=ee9047d4fc32c89723beccd4e92b6332
437	Quantitative analysis of rosuvastatin calcium in bulk and solid pharmaceutical dosage forms using green and rapid fourier-transform infrared spectroscopic method	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, 143 005, India; Kota College of Pharmacy, Kota, Rajasthan, 325 003, India; Laureate Institute of Pharmacy, Kathog, Kangra, Himachal Pradesh, 177 101, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095788742&partnerID=40&md5=533243f47b2889fb45a8fee793a18207
438	Chemical constituents and biological activities of genus picrorhiza: An update	Department of Chemistry, M.M. University, Sadopur-Ambala, Haryana, 134 007, India; M. M. College of Pharmacy, M. M. University, Mullana, Haryana, 133 203, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143 005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095744927&partnerID=40&md5=74192ca99de15fced015c105bce0b181
439	Augmenting Banking and FinTech with Intelligent Internet of Things Technology	Guru Nanak Dev University Regional Campus, Department of Computer Science and Engineering, Punjab, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093071634&doi=10.1109%2fCIT048877.2020.9198018&partnerID=40&md5=b64a608acda0f1adb609e7f28649e97f
440	Design and fabrication of hexagonal antenna for wireless applications	Dept. of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India	2	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091845350&doi=10.1007%2fs41870-018-0234-9&partnerID=40&md5=4feb4ddea0463b396d6a1a6184e33400
441	Binding ability of sodium valproate with cationic surfactants and effect on micellization: calorimetric, surface tension, light scattering and spectroscopic approach	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075246255&doi=10.1007%2fs10973-019-09036-4&partnerID=40&md5=c81456de865fe54f51c423f91b03e069
442	Aquatic plant diversity and physicochemical characteristics of headwater stream Bal Ganga, Garhwal Himalaya	Department of Environmental Sciences, H.N.B. Garhwal University (A Central University), Srinagar, Garhwal, Uttarakhand 246174, India; Department of Environmental Sciences, Babasaheb Bhimrao Ambedkar University (A Central University), Vidya Vihar, Raebareli Road, Lucknow, Uttar Pradesh 226025, India; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072108960&doi=10.1007%2fs10668-019-00392-7&partnerID=40&md5=22d709bf0cf28639a28e2f39a9b3efb6
443	Schizophyllum commune induced oxidative stress and immunosuppressive activity in Spodoptera litura	Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Microbiology, Guru Nanak Dev University, Amritsar, Punjab, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085622322&doi=10.1186%2fs12866-020-01831-6&partnerID=40&md5=330e88285b7a3c6f827e29e83c1b5465
444	Characterization of Cu ²⁺ and Zn ²⁺ binding sites in SUMO1 and its impact on protein stability	Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Institute of Microbial Technology, Sector 39A, Chandigarh, India; Centre of Biomedical Research, Sanjay Gandhi Post-Graduate Institute of Medical Sciences Campus, Raibareli Road, Lucknow, Uttar Pradesh 226014, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab 143005, India	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079658558&doi=10.1016%2fj.iibiomac.2020.02.116&partnerID=40&md5=da0c0a720e3bb084dcdc8da524aba112
445	Effect of Religiosity and Moral Identity Internalization on Prosocial Behaviour	Department of Psychology, Guru Nanak Dev University, Amritsar, Punjab, India	1	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081542518&doi=10.1177%2f0971685820901402&partnerID=40&md5=89c5acc0229cfbb2d4724f11ee033a9c
446	Association study of the single-nucleotide polymorphisms -3971G/A and +276G/T in the adiponectin gene with type 2 diabetes in a North Indian Punjabi population	Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075454663&doi=10.1111%2fahg.12366&partnerID=40&md5=40cda32a7903d4de1af8a8746d8836a7
447	First principle approach to elucidate transport properties through L-glutamic acid-based molecular devices using symmetrical electrodes	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081212611&doi=10.1007%2fs00894-020-4323-x&partnerID=40&md5=5bbcf6f60240edd661e35cb6f2621d0

448	Accurate determination of energy levels, hyperfine structure constants, lifetimes and dipole polarizabilities of triply ionized tin isotopes	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics, Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, Wuhan, 430071, China; Atomic, Molecular and Optical Physics Division, Physical Research Laboratory, Navrangpura, Ahmedabad, 380009, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082679202&doi=10.1088%2f1361-6455%2fab68b7&partnerID=40&md5=3dbafa3bf3c6a8e8afa13369420439bd
449	Nano cuboids: Impact of 8-hydroxyquinoline on tryptophan properties and its applications	Department of Chemistry, UGC Centre for Advanced Studies, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079148708&doi=10.1016%2fj.tetlet.2020.151698&partnerID=40&md5=16593fa08a8521f49c20d979d505757f
450	Rhodium-catalysed chemo- and regio-selective [3 + 2+2] cycloadditions of bis(methylenecyclopropanes) and alkynes: Synthesis of spirocyclic 5–7 condensed cycloheptenes	Department of Chemical Sciences, I. K. Gujral Punjab Technical University, Kapurthala, India; Drug Discovery Research Center, Translational Health Science and Technology Institute, Faridabad, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079242931&doi=10.1080%2f00397911.2020.1720738&partnerID=40&md5=594766122594b756c1bb82baf18e80ea
451	Antiproliferative Effects of Roylea cinerea (D. Don) Baillon Leaves in Immortalized L6 Rat Skeletal Muscle Cell Line: Role of Reactive Oxygen Species Mediated Pathway	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Pathology and Laboratory Medicine, Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada; Department of Biochemistry, Sri Guru Ram Das University of Health Sciences, Amritsar, Punjab, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082698729&doi=10.3389%2ffphar.2020.00322&partnerID=40&md5=795520f3887323bc61d92f3d910bce93
452	Development of informative genic SSR markers for genetic diversity analysis of Picrorhiza kurroa	Biotechnology Department, CSIR-Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh, India; Department of Biotechnology, Guru Nanak Dev University, Amritsar, India; Academy of Scientific and Innovative Research, New Delhi, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066989872&doi=10.1007%2fs13562-019-00515-1&partnerID=40&md5=6b6b34f95d7dc8666cfc566a84f1768f
453	Impact of environment toxin on phytoplankton-zooplankton dynamics	I.K.Gujral Technical University, Kapurthala, Punjab, India; P.G.Department of Mathematics, Khalsa College AmritsarPunjab, India; Department of Applied Sciences, D.A.V.Institute of Engineering and Technology, Jalandhar, Punjab, India; Department of Mathematics, L.R.D.A.V.College, Jagraon, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081187907&partnerID=40&md5=580d45c38de311fb8c7e541018e5060b
454	Effect of gamma irradiation on structure and photoconductivity of amorphous Sb30Se70 chalcogenide films	Department of Physics, GND University, Amritsar, 143005, India; Department of Physics, DAV University, Sarmastpur, Jalandhar, 144012, India; Material Science Division, Inter University Accelerator Centre New Delhi -110067, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076090738&doi=10.1016%2fj.inoncrvsol.2019.119807&partnerID=40&md5=9723fdbbf2f7153e914ef14693897e92
455	Consumers Attitude Towards Controversial Television Commercials and Its Impact on Purchase Intentions	University Business School, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Business Management, Guru Nanak Dev University Regional Campus, Gurdaspur, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102181622&doi=10.1177%2f0258042X19890242&partnerID=40&md5=9e8a16a8fcbbc022a75309f59b5b5f61
456	Swift Heavy Ion Irradiated Low-Density Polyethylene: Structural and Optical Investigations	Department of Physics, Lovely Professional University, Phagwara, Punjab, India; Department of Applied Science, Beant College of Engineering and Technology, Batala, Punjab, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074968587&doi=10.1080%2f0222348.2019.1687139&partnerID=40&md5=866f6bd619a7705de4c4a66640adb56a
457	Correction: 'A new randomized response model'	Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074564753&doi=10.1111%2ffrssb.12341&partnerID=40&md5=387a14ed6e2eaad83b5204c455ef3dd9
458	Reversible detection of hypochlorite using the deprotonation-protonation strategy: A search for new building blocks	Department of Chemistry, UGC Sponsored Centre for Advanced Studies-II, Guru Nanak Dev University, Punjab, Amritsar, 143005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Punjab, Amritsar, 143005, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114897061&doi=10.1039%2fd0ma00300i&partnerID=40&md5=c7dfe097814dd58617d14b10771f11ce
459	Bearing fault diagnosis based on flexible analytical wavelet transform and fuzzy entropy approach	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, 143005, India; Department of Mechanical Engineering, Guru Nanak Dev University, Amritsar, 143005, India; Department of Mechanical Engineering, University of Alberta, Edmonton, AB T6G 2G8, Canada; Discipline of Mechanical Engineering, Indian Institute of Technology, Indore, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104348016&doi=10.1016%2fj.matpr.2020.12.160&partnerID=40&md5=5777c1b5b6cbe9acc732013151d4bad8
460	Ammonia sensing using MoS2/WO3composite obtained via top-down approach	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104315631&doi=10.1016%2fj.matpr.2020.11.248&partnerID=40&md5=c27b3da977d2e217bc6b88487820dca

461	Role of Plant Growth Regulators (PGRs) in Mitigation of Heavy Metal Phytotoxicity in Plants	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Microbiology, D.A.V. University, Jalandhar, Punjab, India; Department of Biotechnology, Modern College of Arts Science and Commerce, Ganeshkhind, Savitribai Phule Pune University, Pune, India; Department of Biotechnology, D.A.V. College, Amritsar, Punjab, India; Department of Agricultural Sciences, D.A.V. University, Jalandhar, Punjab, India	10	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102108192&doi=10.1007%2F978-3-030-45975-8_14&partnerID=40&md5=0a449e768f81be928303e73efc3098f7
462	COVID-19 and Ludhiana's woolen knitwear industry: way forward	Punjab School of Economics, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85101442388&doi=10.1108%2FJTA-07-2020-0082&partnerID=40&md5=830e1c850809ae7a771bb422dec905f3
463	3D printing technology in pharmaceutical delivery system: Recent advancement in innovative approach [Farmasötik Taşıyıcı Sistemlerde 3B Baskı Teknolojisi: Yenilikçi Yaklaşımda Son Gelişmeler]	Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Pharmacology, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Pharmaceutical Chemistry, Khalsa College of Pharmacy, Amritsar, Punjab, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097747906&partnerID=40&md5=fcacae5533c39cfad0a07a50542d7879
464	Biosurfactants as a novel additive in pharmaceutical formulations: Current trends and future implications	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India; Sri Sai College of Pharmacy, Bad-hani, Pathankot, 145001, India; The International School BangaloreKarnataka 562125, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097373930&doi=10.2174%2F1389200221666201008143238&partnerID=40&md5=18f90968c63a3b6b38e6fa87714b948a
465	Sub-chronic and chronic toxicity evaluation of 7-methylxanthine: a new molecule for the treatment of myopia	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Department of Pathology, Augusta University, Augusta, GA, United States; Department of Pathology, Government Medical College, Amritsar, India; Department of Ophthalmology, Baba Farid University of Health Sciences, Faridkot, Punjab, India	6	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092784387&doi=10.1080%2F01480545.2020.1833904&partnerID=40&md5=a25a4fe7b345ae4d9ce14718e33a4429
466	Do Prestigious Underwriters Shape the Performance of SME IPOs in India?	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092285969&doi=10.1177%2F0972150920963216&partnerID=40&md5=6148c6d78952b75cc07d8726f4baf3f
467	Customers' usage behaviour of e-banking services: Interplay of electronic banking and traditional banking	University Business School, Guru Nanak Dev University, Amritsar, India; University School of Financial studies, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092084286&doi=10.1002%2Fijfe.2266&partnerID=40&md5=9cdf2f0a190be8f546b4ff6d094e104
468	Effect of photoperiod and growth media on yield and antioxidant properties of wheatgrass juice of Indian wheat varieties	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091382455&doi=10.1007%2Fs13197-020-04805-8&partnerID=40&md5=d38589a0ebe4c54bbfc80469f8aa7b30
469	Biotechnological Strategies for Enhanced Production of Biofuels from Lignocellulosic Biomass	Department of Microbiology, Guru Nanak Dev University, Amritsar, India; Center-Eau Terre Environnement, INRS-ETE, Université du Québec, QC, Québec, Canada; Ludhiana Beverages Pvt Ltd, Jaspalon, Doraha, Ludhiana, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090032064&doi=10.1007%2F978-3-030-38032-8_24&partnerID=40&md5=729528dbd2f9a6c5bef7b174683129fb
470	Recent advances in the novel formulation of docosahexaenoic acid for effective delivery, associated challenges and its clinical importance	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab 143105, India; Department of Orthopaedics, Government Medical College, Amritsar, Punjab 143001, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089358760&doi=10.2174%2F1567201817666200512103402&partnerID=40&md5=8a0d5c48d2896a632591e16fd0830de6
471	Asymmetric synthesis of 3, 3-disubstituted oxindoles	University of Calabria, Italy; Aix-Marseille University, France; Guru Nanak Dev University, India; University of Southampton, United Kingdom	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088986478&partnerID=40&md5=772c4ee0f67ff169e9c2b0ccc512f7c7
472	Harmonious biomaterials for development of in situ approaches for locoregional delivery of anti-cancer drugs: Current trends	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; The International School BangaloreKarnataka, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086748869&doi=10.2174%2F1573406415666190621095726&partnerID=40&md5=e2f11330605e2aa8066f80e2e9e8cadc
473	Classification and Validation of MRI Brain Tumor Using Optimised Machine Learning Approach	Guru Nanak Dev University, Amritsar, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085485671&doi=10.1007%2F978-981-15-1420-3_19&partnerID=40&md5=39fb0eff558da6c1af97371d28b68cc3
474	Screening of brca1 variants c.190t>c, 1307delt, g.5331g>a and c.2612c>t in breast cancer patients from north india	Guru Nanak Dev University, Department of Human Genetics, Human Cytogenetics Laboratory, Amritsar, Punjab, India; Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Department of Surgery, Amritsar, Punjab, India; Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Department of Pathology, Amritsar, Punjab, India; Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Department of Radiotherapy, Amritsar, Punjab, India	7	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085293310&doi=10.1590%2F1678-4685-gmb-2019-0014&partnerID=40&md5=2e1dd4ae360b8e3dd376485c1f213d84

475	Recent advances in generative adversarial networks: An analysis along with its outlook	Guru Nanak Dev University, Department of Computer Engineering, Amritsar, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083955411&doi=10.1109%2Fconfluence47617.2020.9058040&partnerID=40&md5=ed00f42241c18ec22d3733c9a5d63cb9
476	CFRF: Cloud forensic readiness framework – A dependable framework for forensic readiness in cloud computing environment	Computer Science, Punjab School of Economics, Guru Nanak Dev University, Amritsar, 143005, India; Faculty of Engineering and Technology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083442202&doi=10.1007%2F978-3-030-38040-3_88&partnerID=40&md5=0cf5f13c67076ee3a0d147c0254fb425
477	Unreliable server retrieval G-queue with bulk arrival, optional additional service and delayed repair	Guru Nanak Dev University, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Mathematics, Indian Institute of Technology, Roorkee, 247667, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083336219&doi=10.1504%2Fijor.2020.106362&partnerID=40&md5=67fd10822d1201dad60c27997c38696c
478	Marketing of agricultural produce: An attitudinal analysis of farmers	University Business School, Guru Nanak Dev University, Amritsar. Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080107655&doi=10.31838%2Ficr.07.02.94&partnerID=40&md5=cb05dc9409e35c4393dac894bfa8759b
479	A Review on Hybrid WSN-NGPON2 Network for Smart World	Punjabi University, Patiala, Punjab, India; Guru Nanak Dev University Regional Campus, Gurdaspur, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079345790&doi=10.1007%2F978-3-030-40305-8_31&partnerID=40&md5=660bf3782391cff55b0f6b8fc86ba82d
480	TensorFlow-based semantic techniques for multi-cloud application portability and interoperability	Department of Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079284125&doi=10.1007%2F978-981-15-0146-3_2&partnerID=40&md5=daeb151b978afeba0c7e42e410f878d0
481	Enhanced security mechanism in cloud based on DNA excess 3 codes	GNDU (Main Campus), Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079275278&doi=10.1007%2F978-981-15-0146-3_1&partnerID=40&md5=6e9b1e1c9e299b1ea9e64d4444ef541a
482	Enhancing high availability for NoSQL database systems using failover techniques	Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079272042&doi=10.1007%2F978-981-15-0146-3_3&partnerID=40&md5=b0a004695270ccbc72eed1132c0fa4fe
483	Volumetric, acoustic, viscometric, calorimetric and spectroscopic studies to elucidate the effects of citrate and tartrate based food preservatives on the solvation behaviors of acidic amino acids at different temperatures	Department of Chemistry, UGC Sponsored Center for Advanced Studies-1, Guru Nanak Dev University, Amritsar Punjab, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078685177&doi=10.1039%2F9f00872a&partnerID=40&md5=850b631b635043f504fde0c9e140f751
484	Nickel(0)-Catalyzed [3+2]-Cycloadditions of Bis(alkylidene)cyclopropanes with Diazenes: A Facile Synthesis of Functionalized Pyrazolidine-1,2-dicarboxylates	Department of Chemical Sciences, I. K. Gujral Punjab Technical University Kapurthala, Punjab, 144603, India; Drug Discovery Research Centre (DDRC), Translational Health Sciences and Technology Institute (THSTI), Faridabad, 121001, India; Department of Chemistry, Guru Nanak Dev University Amritsar, Punjab, 143005, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076893978&doi=10.1055%2Fs-0039-1691502&partnerID=40&md5=1345d9e222a5a4a2ae1bcf8a90d46be5
485	Towards a model-driven framework for data and application portability in paas clouds	Guru Nanak Dev University, Amritsar, Punjab 143001, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076852379&doi=10.1007%2F978-981-15-0029-9_8&partnerID=40&md5=ae82eac266978b6e78db452db89df7cd
486	Comprehending code fragment in code clones: A literature-based perspective	Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076640366&doi=10.1007%2F978-3-030-29407-6_56&partnerID=40&md5=391307ed72f6458095ffff2b16ad2973
487	Top-k% concept stratagem for classifying semantic web services	Department of Computer Science, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072843414&doi=10.1007%2F978-981-13-8618-3_22&partnerID=40&md5=5ab396c55add0a49f6833c8e392d3b25
488	Pubertal development and problem behaviours in Indian adolescents	Department of psychology, Guru Nanak Dev University, Amritsar, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081913900&doi=10.1080%2F02673843.2020.1739089&partnerID=40&md5=8bd9df9ae1f2859315b13c8c2cd38c5
489	Customer reviews as the measure of software quality	Department of Computer Engineering and Technology, Guru Nanak Dev University, Amritsar, India; Department of Computer Science, Guru Nanak Dev University, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85101762952&doi=10.1049%2Fiet-sen.2019.0309&partnerID=40&md5=a57ae356029f3281ed5c9e6f6862590a
490	Productivity and profitability of egyptian clover (Trifolium alexandrinum) affected under different sowing times and dates of last cutting	School of Organic Farming, Punjab Agricultural University, Ludhiana, Punjab, 143 001, India; Department of Agriculture, Khalsa College, Amritsar, Punjab, 143 002, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114138271&partnerID=40&md5=e06db61ba774b6a661d16f5a4d99e376
491	Integrated weed management in processing potato (Solanum tuberosum L.) using straw mulching and herbicides	Department of Agronomy, Khalsa College Amritsar, Punjab, 143001, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85105443276&doi=10.5958%2F2395-146X.2020.00137.4&partnerID=40&md5=b0ac5f3190d48feff12a328bb279ef25

492	Structural, thermal, electrical and dielectric properties of La _{1-x} Sr _x Mn _{0.50} Fe _{0.50} O ₃ (0.10 ≤ x ≤ 0.40) cathode material for solid oxide fuel cells	Department of Applied Sciences, I.K. Gujral Punjab Technical University, Jalandhar, 144001, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Applied Sciences, DAV Institute of Engineering and Technology, Jalandhar, 144001, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098650667&doi=10.14233%2fajchem.2020.22965&partnerID=40&md5=88d36eed9ea7c5250e6e92379b2cbad9
493	Magic wavelengths for optical-lattice based CS and RB active clocks	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Atomic, Molecular and Optical Physics Division, Physical Research Laboratory, Navrangpura, Ahmedabad, 380009, India; Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing, 100190, China; University of Chinese Academy of Sciences, Beijing, 100049, China	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098556599&doi=10.3390%2fatoms8040079&partnerID=40&md5=9bb219ba4aa67e139c5f0800074e2b36
494	Enhanced electrical conductivity in Zr-Doped (La 0.7 Ba 0.3)(Mn 0.5 Fe 0.5)O ₃ solid solutions	Ct University, Sidhwan Khurd Ludhiana, Punjab, 142024, India; Department of Physics, Baba Farid College (Affiliated to Punjabi University Patiala), Bathinda, 151001, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Ludhiana Group of Colleges, Chokimann Ludhiana, Punjab, 142001, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098534361&doi=10.1142%2f2010135X20500320&partnerID=40&md5=4466fc183e3d6b5eed2fee0cd052ccc6
495	Candida antarctica lipase-B-catalyzed kinetic resolution of 1,3-dialkyl-3-hydroxymethyl oxindoles	Department of Chemistry, U.G.C. Centre of Advance Studies in Chemistry-II, Guru Nanak Dev University, Amritsar, India; Department of Chemistry, DAV University, Jalandhar, Punjab, India; Department of Chemistry and Center of Advanced Studies in Chemistry-II, Panjab University, Chandigarh, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096320255&doi=10.1002%2fchir.23284&partnerID=40&md5=39f989638562aaf45ccb2ee2f0c3ad04
496	Bioprospecting the antimicrobial, antibiofilm and antiproliferative activity of <i>Symplocos racemosa</i> Roxb. Bark phytoconstituents along with their biosafety evaluation and detection of antimicrobial components by GC-MS	Microbial Technology Laboratory, Department of Microbiology, Guru Nanak Dev University, Amritsar, 143005, India; National Salmonella & Escherichia Centre and Diagnostic Reagents Laboratory, Central Research Institute, Kasauli, HP 173204, India; Department of Veterinary Pathology, Dr. G.C.Negi College of Veterinary and Animal Sciences, CSK Himachal Pradesh KrishiVishvavidyalaya, Palampur, HP 176062, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096119437&doi=10.1186%2fs40360-020-00453-y&partnerID=40&md5=ffb95c77df4b21b7e8f1c24f6cfbe21
497	In silico pathway analysis based on chromosomal instability in breast cancer patients	Human Cytogenetics Laboratory, Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Surgery, Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Amritsar, Punjab, India; Department of Pathology, Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Amritsar, Punjab, India; Department of Radiotherapy, Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Amritsar, Punjab, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095681270&doi=10.1186%2fs12920-020-00811-z&partnerID=40&md5=a2565085cc383e0fdfd1737f1361579
498	Synthesis, characterization, DNA-binding and biological studies of novel titanium (IV) complexes	Department of Chemistry, National Institute of Technology, Hamirpur, Himachal Pradesh 177 005, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Biotechnology, Deenbandhu Chhotu Ram University of Science and Technology, Murthal (Sonepat), Haryana 131039, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093914485&doi=10.1007%2fs12039-020-01843-9&partnerID=40&md5=1a28a4bd0a0efb463cb135b1be49547f
499	In silico analysis of SNPs in human phosphofructokinase, muscle (PFKM) gene: An apparent therapeutic target of aerobic glycolysis and cancer	P.G. Department of Bio-Technology, Khalsa College, Amritsar, 143001, India; Department of Biological Sciences, George Washington University, Washington, DC 20052, United States	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093662903&doi=10.1016%2fj.genrep.2020.100920&partnerID=40&md5=056feceb3dbae9d83f8bfe65e6a892dd
500	Structural insights into rice SalTol QTL located SALT protein	Department of Biotechnology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; CSIR-Institute of Microbial Technology, Sector 39-A, Chandigarh, 160036, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092054501&doi=10.1038%2fs41598-020-73517-y&partnerID=40&md5=13155ad2cbdf3c11dd2dd45921f682b1
501	The five-level Λ-Ξ system as an optical switch under different wavelength mismatching regimes, including one due to Rydberg transition	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Physics, Indian Institute of Technology, Roorkee, 247 667, India; Guru Nanak Dev University, Amritsar, 143005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091521882&doi=10.1016%2fj.ijleo.2020.165600&partnerID=40&md5=e4078fea806f83db5a984b80b9343963
502	Polyamines induced nematode stress tolerance in <i>Solanum lycopersicum</i> through altered physico-chemical attributes	Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090246069&doi=10.1016%2fj.pmp.2020.101544&partnerID=40&md5=3953d9e89bfff585e03ab1c811f3cc0bb
503	Non-linear optical behavior of benzothiazole based chromophores: Second harmonic generation	Department of Chemistry, UGC Centre of Advanced Study, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, 560012, India	5	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089684337&doi=10.1016%2fj.dvpeig.2020.108739&partnerID=40&md5=c5ff5f08e937b0eca867eab1318ec52e

504	Secondary Metabolites of <i>Alpinia galanga</i> Induce toxic Effects in Polyphagous Lepidopteran Pest, <i>Spodoptera litura</i> (Fabricius) [Sekundäre Metaboliten von <i>Alpinia galanga</i> induzieren toxische Wirkungen bei <i>Spodoptera litura</i> (Fabricius)]	Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Natural Products, National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar, Punjab 160062, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089566533&doi=10.1007%2fs10343-020-00514-6&partnerID=40&md5=a7daa70d79c657ac586b3c1e69f12e15
505	Linkage disequilibrium and haplotypes of five TP53 polymorphisms in oesophageal cancer patients	Human Cytogenetics Laboratory, Department of Human Genetics, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Pathology, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, 143 005, India; Department of Surgery, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, 143 005, India; Department of Radiotherapy, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, 143 005, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087953160&doi=10.1007%2fs12041-020-01224-8&partnerID=40&md5=7130860bf39f2546c3af73435708eaac
506	Role of water in cyclooxygenase catalysis and design of anti-inflammatory agents targeting two sites of the enzyme	UGC Sponsored Centre for Advanced Studies, Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, 143005, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087295889&doi=10.1038%2fs41598-020-67655-6&partnerID=40&md5=00f3fdb84daa4c81a947c968ee03d026
507	Two-level utilization-based processor allocation for scheduling moldable jobs	Department of Computer Science, National Taichung University of Education, Taichung, Taiwan; Computer Engineering and Technology Department, Guru Nanak Dev University, Amritsar, India; National Center for High-Performance Computing, National Applied Research Laboratories, Hsinchu, Taiwan	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082717796&doi=10.1007%2fs11227-020-03246-6&partnerID=40&md5=7ce44415d220e190a59f79f54d6b0c41
508	Design, Synthesis, Antiproliferative Evaluation, and Molecular Docking Studies of N-(3-Hydroxyindole)-Appended β -Carbolines/Tetrahydro- β -Carbolines Targeting Triple-Negative and Non-Triple-Negative Breast Cancer	Department of Chemistry, Guru Nanak Dev University, Amritsar, 143005, India; School of Molecular and Cell Biology, University of the Witwatersrand, Private Bag 3, WITS, Johannesburg, 2050, South Africa; School of Chemistry and Physics, University of KwaZulu-Natal, P/Bag X54001, Westville, Durban, 4000, South Africa	8	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097044115&doi=10.1021%2facsomega.0c01226&partnerID=40&md5=2225a12db49870c7368ac1130997880e
509	Low temperature processable crystalline WO ₃ langmuir-blodgett ultra-thin film as blocking layer in solar cells application	Indian Institute of Technology Gandhinagar, Palaj, Gandhinagar, India; Department of Physics, Guru Nanak Dev University, Amritsar, India; Technical Physics Division, Bhabha Atomic Research Centre, Trombay Mumbai, India; Chemistry Division, Bhabha Atomic Research Centre, Trombay Mumbai, India	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096627245&doi=10.1063%2f5.0016670&partnerID=40&md5=be537469583b07daf8cfe99979b4702d
510	Evidence of strong correlation between local structures in glass and crystalline phase of lanthanum tellurite system	Solid State Physics Division, Bhabha Atomic Research Centre, Trombay, Mumbai, 400085, India; Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096620573&doi=10.1063%2f5.0017025&partnerID=40&md5=608f23dbdceb491905816a74c0e1acd3
511	Influence of erbium doping on electrical properties and thermal sensitivity of tin oxide based temperature sensor	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096620360&doi=10.1063%2f5.0016715&partnerID=40&md5=247de36601e05fcc09a8a3159d791dce
512	Investigation of structural and optical characteristics of CaWO ₄ and BaWO ₄ nanoparticles	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India; Hard X-ray Applications Laboratory, SUS, Raja Ramanna Centre for Advanced Technology, Indore, 452013, India; Homi Bhabha National Institute, Anushakti Nagar, Mumbai, 400094, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096618638&doi=10.1063%2f5.0017034&partnerID=40&md5=69483448cab8f7408920e19612e2708a
513	Ambient-air fabrication with inorganic/polymer hole transport layer: Towards low cost perovskite solar cells	Department of Physics, Guru Nanak Dev University, Amritsar, India; Technical Physics Division, Bhabha Atomic Research Centre, Trombay Mumbai, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096603563&doi=10.1063%2f5.0017180&partnerID=40&md5=96f515c5668736e650ba79b3f15a7e4b
514	Thermal characteristics and short-range structure in TiO ₂ TeO ₂ and Bi ₂ O ₃ -TeO ₂ glasses: A comparative study	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096601915&doi=10.1063%2f5.0017178&partnerID=40&md5=1a5204ad499f359ca18edac66e7f98ce
515	Ammonia sensor using MoS ₂ nanostructures synthesized via bottom-up approach	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096600172&doi=10.1063%2f5.0017100&partnerID=40&md5=dcc8e30dd113aa69156db416f762cb23
516	Effects of oblique angle deposition on surface wettability of Sn metal thin films	Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096572263&doi=10.1063%2f5.0017828&partnerID=40&md5=f1667035d130b0f31121ef3deb8318c3
517	Electrospun 1D TiO ₂ nanorods for enhancing the performance of dye sensitized solar cells	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India; S.I.E.T, Ram Tirath Road, Amritsar, 143107, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096548590&doi=10.1063%2f5.0016993&partnerID=40&md5=085fab18e6b283681bf2cbb4efb2452b
518	Thermal, structural and photoluminescence properties of Eu ³⁺ /Er ³⁺ -doped Li ₂ O-TeO ₂ glasses	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096536774&doi=10.1063%2f5.0017651&partnerID=40&md5=d9182f2a79b24a5747c77a4c29d4b793

519	Up-converting rare earth phosphor yttrium doped TiO ₂ material for dye sensitized solar cells application	Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096521733&doi=10.1063%2F5.0016989&partnerID=40&md5=1c1d0c24ad65ea70cbf1a92cea881bb9
520	Corrigendum to 'A Fog-Cloud based cyber physical system for Ulcerative Colitis diagnosis and stage classification and management' [Journal Microprocessor and Microsystems, 72 (2020) /102929] (Microprocessors and Microsystems (2020) 72, (S0141933119302273), (10.1016/j.micpro.2019.102929))	Baba Gulam Shah Badshah University, Rajouri, J&K, India; Guru Nanak Dev University, Amritsar, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095585433&doi=10.1016%2Fj.micpro.2020.103304&partnerID=40&md5=d73cbcd8c5193b3f22f3d80d1815daf3
521	Neutron diffraction investigation of strontium tellurite glass, anti-glass and crystalline phases	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, India; Centre for Energy Research, Budapest, Hungary	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092478164&doi=10.1080%2F01411594.2020.1832225&partnerID=40&md5=27de05bfa3fd4760a76a1b46731ff13e
522	In vitro screening of peptidase inhibitory activity in some plants of North India	Department of Zoology, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092537274&doi=10.1016%2Fj.heliyon.2020.e05203&partnerID=40&md5=dfc22b1de8d4a36a009b5d5bb39dbbcd
523	Correction to: Synthesis, characterization and theoretical calculations of (1,2-diaminocyclohexane)(1,3-diaminopropane)gold(III) chloride complexes: in vitro cytotoxic evaluations against human cancer cell lines (BioMetals, (2015), 28, (827–844), 10.1007/s10534-015-9869-1)	Department of Chemistry, King Fahd University of Petroleum and Minerals, Dhahran, 31261, Saudi Arabia; Center of Research Excellence in Nanotechnology, King Fahd University of Petroleum and Minerals, Dhahran, 31261, Saudi Arabia; Department of Chemistry, College of Sciences and Humanities, Prince Sattam Binin Abdulaziz University, Al-Kharj, 11942, Saudi Arabia; Department of Molecular, Biology & Biochemistry, Guru Nanak Dev University, Amritsar, 143005, India; Clinical Research Laboratory, SAAD Research Development Center, SAAD Specialist Hospital, Al-Khobar, 31952, Saudi Arabia; Veterinary Medicine, College of Agriculture and Veterinary Medicine, Qassim University, Buraydah, 51452, Saudi Arabia	7	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089288130&doi=10.1007%2Fs10534-020-00242-4&partnerID=40&md5=b10072b6a4996d1ee640a547eb2f71d1
524	Diversity and relationship among grain, flour and starch characteristics of Indian Himalayan colored corn accessions	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083426456&doi=10.1007%2Fs13197-020-04412-7&partnerID=40&md5=32cbf306606a831c3059b718c3c0e0d9
525	Potential role of EphrinA2 receptors in postconditioning induced cardioprotection in rats	Department of Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala, India; Department of Pharmacology, Khalsa College of Pharmacy, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088115427&doi=10.1016%2Fj.ejphar.2020.173231&partnerID=40&md5=caa780dff678b463ff4a26ea084f4d14
526	Synthetic Emergence in N-Arylimidazoles: A Review	Department of Chemistry, Chaudhary Bansi Lal University, Bhiwani, Haryana, India; Department of Chemistry, Maharishi Markandeshwar University, SadopurHaryana, India; Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Chemistry, Central University of Haryana, Mahendragarh, Haryana, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099621038&partnerID=40&md5=f185d9386210094423091fa8988651d7
527	Comparison of CERES-Wheat and infocrop model to predict the phenology and yield of wheat	Department of Agriculture, Guru Nanak Dev University, Amritsar, 143001, India; Department of Agriculture, Khalsa College, Amritsar, 143 001, India; Department of Climate Change and Agrometeorology, Punjab Agricultural University, Ludhiana, 141 001, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092302405&partnerID=40&md5=fc358a239d4d1a015f4ec4878987d036
528	Applications of molecular dynamic simulations in lipid-based drug delivery system	Department of Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; Pharmaceutics Division, University Institute of Pharmaceutical Sciences, UGC-Centre of Advanced Study, Panjab University, Chandigarh, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091263685&doi=10.1089%2Fadt.2020.986&partnerID=40&md5=120c80271b3d5ffb25c5304bfc4ce7cc
529	Role of nanoemulsion for safe and cost-effective delivery of amphotericin b	Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Pharmacology, Khalsa College of Pharmacy, Amritsar, Punjab, India; Department of Medical Laboratory Sciences, Khalsa College of Pharmacy and Technology, Amritsar, Punjab, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090681103&doi=10.22159%2Fijap.2020v12i5.38245&partnerID=40&md5=4d5b9009593be263dd1a71058bb6fec5
530	Growth and characterization of hydrophobic anti-reflection CaF ₂ films	Sensors and Glass Physics Laboratory, Department of Physics, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Physics, University of Petroleum and Energy Studies, Dehradun, Uttarakhand 248007, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088316181&doi=10.1007%2Fs10854-020-03980-w&partnerID=40&md5=9144e0a6368c8d8b49d5d80b8fd1a0ff
531	The benefits of probiotic interventions in maternal-fetal health: An appraise review	Department of Pharmacology, Chandigarh College of Pharmacy, Landran, Mohali, Punjab 140307, India; CSIR-Indian Institute of Integrative Medicine, Jammu, 180001, India; Department of Zoology, Khalsa College, Amritsar, Punjab 143002, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088125065&doi=10.1016%2Fj.phanu.2020.100211&partnerID=40&md5=077ec96bca93411c753e4405cadd23ba

532	c.29C>T polymorphism in the TGF-β1 gene correlates with increased risk of End Stage Renal Disease: original study and meta-analysis	Department of Biotechnology, DAV College, Amritsar, Punjab, India; Academy of Scientific and Innovative Research (AcSIR), CSIR-Central Drug Research Institute, Lucknow, India; CSIR-Central Drug Research Institute, Lucknow, India; Drug Discovery Research Center (DDRC), Translational Health Science and Technology Institute (THSTI), NCR Biotech Science Cluster, Faridabad, Haryana, India; Department of Nephrology, Kidney Hospital, Jalandhar, Punjab, India; Gautam Budh Health Care Foundation, Noida, Uttar Pradesh, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, India; Centre for Cellular and Molecular Biology, Hyderabad, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083640217&doi=10.1016%2fj.mgene.2020.100703&partnerID=40&md5=4cc587ce84e37e67ce5b8c20904a2179
533	Diminution of fluoride from groundwater using electrocoagulation: Process optimization and role of arsenic interference	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098643421&doi=10.5004%2fdwt.2020.25925&partnerID=40&md5=18e4fe7ac9e504cf48d990e1835445c2
534	Erratum: A scientometric review of global research on smart disaster management (IEEE Transactions on Engineering Management DOI: 10.1109/TEM.2020.2972288)	Department of Computer Science and Engineering, Guru Nanak Dev University Regional Campus, Gurdaspur, India; Department of Computer Science and Informatics, Central University of Himachal Pradesh, Dharamshala, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087509229&doi=10.1109%2fTEM.2020.2980393&partnerID=40&md5=c0fccc9d8e4e3476b3e81a1b7482de49
535	Frontline publishers of punjabi language books: A bibliometric study	Department of Library and Information Science, Guru Nanak Dev University, Amritsar, 143 005, India; Department of Library and Information Science, University of Delhi, Delhi, 110 007, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090684463&doi=10.14429%2fdiit.40.4.15811&partnerID=40&md5=73d66641469523d0322fe60cd56a18f6
536	Measuring the complexity of migration transition: an attempt using metrics	Department of Computer Science & Engineering, Guru Nanak Dev University Regional Campus, Gurdaspur, Punjab, India; Department of Computer Science, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071189761&doi=10.1080%2f0952813X.2019.1654549&partnerID=40&md5=bd23f608b618f71b910faa40f9f74ea
537	Feature Selection Using Metaheuristic Algorithms: Concept, Applications and Population Based Comparison	Guru Nanak Dev University, Department of Computer Science and Engineering, Gurdaspur, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092688498&doi=10.1109%2fComPE49325.2020.9200173&partnerID=40&md5=72e7da2a5e9354718a35bc4dc7005a93
538	Synthesis, characterization, DNA-interactions, antioxidant, antimicrobial and anticancer studies of mixed-ligand titanocene dichloride complexes	Department of Chemistry, National Institute of Technology, Hamirpur, Himachal Pradesh 177005, India; Department of Biotechnology, Deenbandhu Chhotu Ram University of Science and Technology, Sonapat, Murthal, Haryana 131039, India; Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090676517&doi=10.31838%2fijpr%2f2020.12.03.164&partnerID=40&md5=79b6c118d07c32102bf65b9b4e25d950
539	The Media Coverage of Drugs and Alcohol in Punjab during COVID-19 Pandemic	Department of Sociology, Guru Nanak Dev University, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090225414&doi=10.1111%2faspp.12537&partnerID=40&md5=3bf0caf80b6075c567dfbc97e9e19c6f
540	Planar and Nonplanar Electron-Acoustic Solitary Waves in the Presence of Positrons	Sikh National College, Banga, 144505, India; Department of Physics, DAV University, Jalandhar, 144008, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088637514&doi=10.1134%2fS1063780X20070028&partnerID=40&md5=31ce8c60acb99693511e66e26a7dfab
541	Effect of jack knife stretching versus proprioceptive neuromuscular facilitation (Hold relax) stretching technique in asymptomatic individuals with hamstring tightness: A randomized clinical trial	Faculty of Physiotherapy, KIMSUDU, Karad, Maharashtra, India; Faculty of Physiotherapy, DPU, Pune, Maharashtra, India; Faculty of physiotherapy, GNDU, Amritsar, Punjab 143001, India	4	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088019145&partnerID=40&md5=67b42cd3bbfc2c87bc09ed89b4261cf6
542	Factors influencing web accessibility of corporate information: Indian evidence	Akal University, India; Guru Nanak Dev University, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086943974&doi=10.4018%2fjEER.2020070101&partnerID=40&md5=db14f20e8f4e57429c0439540d009cc8
543	Impact of Industry on the Forest Resources	Department of Mathematics, Khalsa College, Amritsar, Punjab, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086401430&doi=10.1088%2f1742-6596%2f1531%2f1%2f012049&partnerID=40&md5=9df0e26d7768be55ee0c5d3aed311b11
544	Step-up multiple comparison procedure for comparing several normal variances	Department of Mathematics, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85057523203&doi=10.1080%2f03610918.2018.1501484&partnerID=40&md5=1d39fda4a3c17c216531e9fae0e63a4c
545	Impact of online financial advertisements on Indian consumer's attitude: Moderating effect of perceived product innovativeness	GLA University, 17 KM. Stone, NH-2, Mathura Road, Post- Chaumuha, Mathura, Uttar Pradesh 281406, India; Guru Nanak Dev University, Department of Business Management, Hardochhani Road, Gurdaspur, Amritsar, Panjab 143521, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096970844&partnerID=40&md5=45b2f6367fdae4a66b2f5d05a0a6064
546	Capital Adequacy Compliance: Adoption of Basel I, II and III	University Business School (UBS), Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093067223&partnerID=40&md5=85aefb3985affd73eda49f181b457ca9

547	Is Institutional Environment the Only Force Behind Corporate Social Responsibility Disclosure? An Insight into Indian Companies	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Commerce and Business Administration, Khalsa College, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085490985&doi=10.1177%2f0974686220923804&partnerID=40&md5=b413e1c7d9c1c4c0e4d102b06b5df1ec
548	Statistical optimization of culture conditions of mesophilic gamma-glutamyl transpeptidase from <i>Bacillus altitudinis</i> IHB B1644	Food and Nutraceuticals Division, CSIR-Institute of Himalayan Bioresource Technology, Council of Scientific and Industrial Research (CSIR), PO Box 6, Palampur, Himachal Pradesh 176061, India; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Biotechnology, CSIR-Institute of Himalayan Bioresource Technology, PO Box 6, Palampur, Himachal Pradesh 176061, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085031343&doi=10.1007%2fs13205-020-02252-y&partnerID=40&md5=7e6af6bf037492972d8ee328894b16d6
549	A Generalization of Bevelacqua's Irreducibility Criterion	Department of Mathematics, Guru Nanak Dev University, Amritsar, 143005, India; Department of Mathematics, SGGGS College, Sector-26, Chandigarh, 160019, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084356599&doi=10.1080%2f00029890.2020.1718952&partnerID=40&md5=be9226b9df7af65b9198bee68287ad60
550	Physico-Chemical Properties of Soil as Influenced by Integrated Nutrient Management in Onion (<i>Allium cepa</i> L.) Crop	Directorate of Extension Education, Punjab Agricultural University, Ludhiana, Punjab 141 004, India; Department of Agriculture Khalsa College, Amritsar, Punjab 143 005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099166230&doi=10.18805%2fIJARE.A-5513&partnerID=40&md5=ba023f69a3f3458b8f42f154204651f4
551	Gene content in solanaceous chloroplast genomes	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, 143005, India; I. K.Gujral Punjab Technical University, Kapurthala, 144 603, India; Centre for I.T. Solutions, Guru Nanak Dev University, Amritsar, 143005, India; Department of Bioinformatics, Hans Raj Mahila Maha Vidyalaya, Jalandhar, 144008, India; Department of Electronics and Communication Engineering, Beant College of Engineering and Technology, Gurdaspur, 143521, India	5	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086760293&partnerID=40&md5=7881bdc859af042d07f98b08201baefc
552	Contemplating charge transport by modeling of DNA nucleobases based nano structures	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080106060&doi=10.1016%2fj.cap.2020.02.016&partnerID=40&md5=854c23583a40cbbd19c7bb0d87680166
553	Interactive video-player to improve social smile in individuals with autism spectrum disorder	IKG Punjab Technical University, Kapurthala, India; Computer Science and Engineering, CT Institute of Engineering Management and Technology, Jalandhar, India; Khalsa College of Engineering and Technology, Amritsar, India; CT Institute of Engineering Management and Technology, Jalandhar, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076526493&doi=10.1108%2fAIA-05-2019-0014&partnerID=40&md5=845cf7e3cef680ec3ff43907543502f0
554	A Study of dimensions of brand equity of female buying behavior of cosmetic products	PG Department of Commerce, Business Administration Khalsa College, Amritsar, Punjab, India; University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084153204&partnerID=40&md5=ae26c1b1920bd11c2e66c6479c5f86c5
555	De-escalation in the Progression of Trillion Dollar Economy: An Empirical Assessment of Indian Corporate Sector	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083644753&doi=10.1080%2f10599231.2020.1745049&partnerID=40&md5=543c14e4e9a51e22252f1676a68c9666
556	Code clone detection using machine learning techniques: A systematic literature review	Guru Nanak Dev University, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093886603&doi=10.4018%2fIJOSSP.2020040104&partnerID=40&md5=346759f58f5ae04ed7c369e243eca056
557	Sensory, physical and nutritional qualities of cookies and pinnis prepared from brown rice and wheat flour	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085118663&partnerID=40&md5=df7f01fcf205ae3f8950a9fd9d5913f0
558	Type-ii fuzzy membership-based traffic congestion control for urban areas	Computer science engineering department, Khalsa college of engineering & technology, Amritsar, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083489279&partnerID=40&md5=b87bb9e6ccb222412e7563a9fb6bfae5
559	Novel mutation in MKKS/BBS6 linked with arRP and polydactyly in a family of North Indian origin	Department of Human Genetics, Guru Nanak Dev University, Amritsar, India; Dr. Daljit Singh Eye Hospital, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078874522&doi=10.1111%2fceo.13719&partnerID=40&md5=3c31a1f7571192b1bbce539bbf6cdc9
560	Identification and analysis of the impact of organizational support on the work-life balance of the employees in punjab state power corporation limited	Mittal School of Business, Lovely Professional University, Phagwara, Punjab, India; University Business School, Guru Nanak Dev University, Amritsar, Punjab, India; Lovely Professional University, Phagwara, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084485680&partnerID=40&md5=ebf2f402a0b7a09a0cbcd2203764c58c
561	Impact of GST on impulsive buying behavior of consumer on FMCG (fast moving consumer goods)	Mittal School of Business, Lovely Professional University, Phagwara, Punjab, India; University Business School, Guru Nanak Dev University, Amritsar, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084429479&partnerID=40&md5=83f78773c0d5bde6f580b0719230004c
562	Integrating CuO-Fe2O3 Nanocomposites and Supramolecular Assemblies of Phenazine for Visible-Light Photoredox Catalysis	Department of Chemistry, UGC Sponsored Centre for Advanced Studies-II, Guru Nanak Dev University, Amritsar, Punjab 143005, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088775219&doi=10.1002%2fasia.201901687&partnerID=40&md5=f7ff164519abc9cc736b3a842c70b511

563	Re-joining of authorized nodes in MANETs using EGSR scheme and detection of internal attacks using ZACK scheme	Department of Computer Science and Engineering, KCET, I.K.G-PTU, Amritsar, India; Department of Electronics and Communication Engineering, BCET, Gurdaspur, India; Department of Computer Engineering and Technology, GNDU, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091833610&doi=10.1007%2fs41870-018-0155-7&partnerID=40&md5=715e19f3397a8883487d45a25292736e
564	DNA alterations in blood cells of Channa punctatus after acute exposure to 4-Nonylphenol	Guru Nanak Dev University, Amritsar, Punjab, 143 005, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087344868&partnerID=40&md5=1b7af5a768bdce5da4f2e493fa5aa19d
565	Price formation in Indian gold market: Analysing the role of gold Exchange Traded Funds (ETFs) against spot and futures markets	University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085760462&doi=10.1016%2fj.iimb.2019.07.017&partnerID=40&md5=61753b45e666cd1461c637ae4d42cec1
566	Synthesis and Validation of a Cu Meta-Based Wideband Microwave Absorber on an Antenna Array	Electronics and Communication Engineering Department, SLIET Logowal, Sangrur, India; Electrical and Instrumentation Engineering Department, SLIET Logowal, Sangrur, India; Electronics and Communication Department, GNDU, Amritsar, India; Analytical Chemistry and Nanotechnology, MCETRC, Chinnaravuru, Tenali, Andhra Pradesh 522 201, India; Rasakalpa AITDC Laboratory, Rasakalpa AITDC, Kandukur, Andhra Pradesh 523 105, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85069507178&doi=10.1007%2fs11664-019-07395-0&partnerID=40&md5=7437b87c0d2211e9479bb745fd8930cc
567	A closed testing procedure for comparison between successive variances	Department of Mathematics, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079353040&doi=10.1080%2f02664763.2019.1645819&partnerID=40&md5=e9eaf3c93d5bfea2f5e210bee06afd60
568	An Efficient Blockchain Based Authentication Scheme to Secure Fog Enabled IoT Devices	Guru Nanak Dev University, Computer Science Engineering, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092128376&doi=10.1109%2fjindo-TaiwanICAN48429.2020.9181356&partnerID=40&md5=95ebdcdb6b2be62d7f898e5ff8f1be2b
569	Macroeconomic determinants of gold prices: A bounds testing approach	Department of Business Management and Commerce, Guru Nanak Dev University (GNDU - RC), Gurdaspur, Punjab, India; University School of Financial Studies, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089676281&doi=10.17010%2fijf%2f2020%2fv14i2%2f150554&partnerID=40&md5=aac18eb759dcfe692be239fa24bd84f
570	Dynamic triangular localization based security aware protocol for wireless sensor networks	Computer science and Engineering Department, Khalsa College of Engineering and Technology, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079656853&partnerID=40&md5=82f0b7448ad7dd6c3202b476615658aa
571	Non dominated sorting genetic algorithm based energy aware clustering protocol	Computer Science Engineering Department, Khalsa College Of Engineering & Technology, Amritsar, India, Computer Science Engineering Department, Inder Kumar Gujral Punjab Technical University, Jalandhar., India, computer Science Engineering Department, Guljar Group Of Institutes, Khanna, Punjab	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079650247&partnerID=40&md5=03f37254eebf34bd50b87b072b9a3d96
572	Synthesis and characterization of s-fac-[Co(dien)2][4-np]3(4-npH)-2H2O containing symmetric, [4-np...H...4-np]- and unsymmetric, [4-np-H...4-np]- dimers of 4-nitrophenolate (4-np-)	Department of Chemistry, UGC Centre for Advance Studies-I, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Faculty of Chemistry and Chemical Technology, University of Ljubljana, Vecna Pot 113, Ljubljana, 1000, Slovenia; Department of Chemistry, Maharishi Markandeshwar University, Sadopur, Ambala, Haryana 133007, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076701566&doi=10.1016%2fj.poly.2019.114274&partnerID=40&md5=b60e22adda1211f3d211e58e31ffa9f
573	Analysis of cold spray-coated boiler-tube material in a chlorine-based corrosive environment at 900°C	Mechanical Engineering, Guru Nanak Dev University, Amritsar, Punjab, India; Mechanical Engineering, I.K. Gujral Punjab Technical University, Jalandhar, Punjab, India; Mechanical Engineering, Shaheed Bhagat Singh State Technical Campus, Ferozepur, Punjab, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071421641&doi=10.1002%2fmaco.201911116&partnerID=40&md5=432885ace2f127bdecc49697bf48ff3
574	Comparing several normal variances with a control using sample quasi range	Department of Statistics, Post Graduate Government College, Chandigarh, India; Department of Mathematics, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85053333834&doi=10.1080%2f03610918.2018.1485937&partnerID=40&md5=8a0e2d351c523e385df6417b3e94e867
575	The costs and benefits of going beyond the call of duty	University School of Financial Studies, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074409213&doi=10.1108%2fjppm-01-2019-0035&partnerID=40&md5=f789ef60e82f1382c04a6f1364134657
576	DES-N-doped oxygenated carbon dot colloidal solutions for light harvesting and bio-imaging applications	CSIR-Central Salt, Marine Chemicals Research Institute, G. B. Marg Gujarat, Bhavnagar, 364002, India; Academy of Scientific and Innovative Research (AcSIR), Ghaziabad, 201002, India; Department of Chemistry, UGC-centre for Advance Studies-II, Guru Nanak Dev University, Amritsar, 143005, India	6	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85122195162&doi=10.1039%2f0ma00621a&partnerID=40&md5=56e755dcf6abf31a0f49b4bc37df3dc2
577	The mediating role of parental mediation in the relationship between media use and materialism	Department of Commerce and Business Management, Khalsa College, Punjab, Amritsar, India; University Business School, Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115996298&doi=10.1504%2fjibir.2020.110964&partnerID=40&md5=071ecff08871f28108215b3cddb922

578	Quality and post-harvest losses of potato (<i>Solanum tuberosum</i> L.) as affected by gibberellic acid and potassium management	Department of Agronomy, Punjab Agricultural University, Punjab, 141004, India; Department of Agronomy, Khalsa College Amritsar, Punjab, 143001, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115767929&partnerID=40&md5=0bb314e270af21aef0e5c8ab9d0a69bd
579	Productivity growth and efficiency differences in indian manufacturing sector: An inter-state analysis	Mata Ganga Girls College Tarn, Taran, 143401, India; Punjab School of Economics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111148835&doi=10.35716%2fied%2f19133&partnerID=40&md5=7e3760decb182070011a06985ff6450
580	Analysis of remittances by internal migrants in urban informal sector in Punjab	Department of Laws, Punjab School of Economics Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111144292&doi=10.35716%2fied%2f19138&partnerID=40&md5=9b9a45a95c38ff21c1f73bf235ee20da
581	Influence of development stages on the physicochemical properties of black carrots (<i>Daucus carota</i> L.)	Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, 143005, India; Food Engineering and Biotechnology, Middle East Technical University, Turkey	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85107009882&doi=10.1080%2f23311932.2020.1841358&partnerID=40&md5=f69dd0d9270ed376939a44099ae31bea
582	Alterations in structure of biomolecules using ATR-FTIR and histopathological variations in brain tissue of <i>Channa punctatus</i> exposed to 2Naphthalene sulfonate	Department of Zoology, Guru Nanak Dev University, Scf 54, UT Market Grand Trunk Road, Off, NH 1, Amritsar, Punjab 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85106541524&doi=10.1093%2ftoxres%2fFAA052&partnerID=40&md5=be00b3c216c08e755f7eedc459bcf1f9
583	The rotary machine fault detection by hybrid method based on local mean decomposition and fluctuation based dispersion entropy	Department of Mechanical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India; Machinery Fault Diagnostics Laboratory, Department of Mechanical Engineering, UIT, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104277783&doi=10.1016%2fj.matpr.2020.12.763&partnerID=40&md5=586b4835b82e34e5983843d6b5e85483
584	Effect of integrated nutrient management on productivity and quality of malt barley (<i>Hordeum distichon</i> L.)	P.G. Department of Agriculture, Khalsa College, Guru Nanak Dev University, Amritsar-Punjab, 143 001, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104206159&doi=10.18805%2fag.D-4980&partnerID=40&md5=ae509424d2178ada610a0309992f867c
585	Examining the dynamics of customer adoption of retail loyalty programmes in India	GGs Khalsa College, Sarhali, Tarn Taran, India; University Business School, Guru Nanak Dev University, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102191241&doi=10.1504%2fIJECRM.2020.113430&partnerID=40&md5=764116ce33c8f8b177a814939f0f6684
586	Role of Biochar in Heavy Metal Toxicity in Plants	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Division of Research and Development, Department of Research Facilitation, Lovely Professional University, Phagwara, Punjab, India; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India	6	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102146331&doi=10.1007%2f978-3-030-45975-8_17&partnerID=40&md5=594760416a07dfee9525ea77d773038c
587	Role of Beneficial Microbes in the Molecular Phytotoxicity of Heavy Metals	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India; Sant Baba Bhag Singh University Padhiana, Khiala, Jalandhar, Punjab, India; Department of Zoology, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Botany, School of Life Sciences, Satellite Campus Kargil, University of Kashmir, Jammu and Kashmir, India; Hans Raj Mahila Maha Vidyalyaya, Jalandhar, India	8	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102129544&doi=10.1007%2f978-3-030-45975-8_13&partnerID=40&md5=4f36ed6fa41691496b6dfcc02e20b1da
588	Pedobarographic analysis of balance in sporting and non-sporting population	MYAS-GNDU Department of Sport Sciences and Medicine, Guru Nanak Dev University, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098284652&partnerID=40&md5=85b33e1988a8064e93dc0f44ab67517b
589	Employee engagement and its predictors: Literature review and a proposed model	University Business School, Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097668475&doi=10.1504%2fIJBG.2020.111651&partnerID=40&md5=6f647ef8f59e4e8a78581304211c714b
590	Performance comparison of all-optical logic gates using electro-optic effect in MZI-based waveguide switch at 1.46 μ m	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097610711&doi=10.1515%2fjoc-2020-0125&partnerID=40&md5=f3f5c9d052fdcad66ef722108d1968e
591	Maternal Mediation of Retail Food Promotions Directed at Children	Lyallpur Khalsa College, Jalandhar, Punjab, India; Guru Nanak Dev University, Amritsar, Punjab, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096380696&doi=10.1080%2f08974438.2020.1846653&partnerID=40&md5=097524bea8ada76040ca51eaea39a20f
592	Microbial Diversity and their Biofilm Formation Potential in Pipes of Water Distribution System	Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095818236&doi=10.3233%2fIAJW200058&partnerID=40&md5=5f89634838651490b40cc37c0a66be09
593	From genotoxicity induction to recovery in different organs in fish <i>channa punctatus</i> after sub chronic exposure to 4- nonylphenol	Department of Fisheries, DGCN COVAS, CSKHPKV, Palampur, Himachal Pradesh, 176062, India; Department of Zoology, GNDU, Amritsar, Punjab, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093082205&doi=10.18311%2ftu%2f2020%2fv27i1%262%2f25234&partnerID=40&md5=bfb3b09863b49ea53e407e0a55eb15c5
594	A novel quantum-inspired solution for high-performance energy-efficient data acquisition from IoT networks	Department of Computer Science and Engineering, Lovely Professional University, Phagwara, India; Department of Computer Science and Informatics, Central University, Dharamshala, H.P., India; Department of Physics, GNDU Regional Campus, Gurdaspur, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092175897&doi=10.1007%2fs12652-020-02494-x&partnerID=40&md5=232d8173b4643cb2baf6937173cf76dc

595	Understanding factors affecting technical debt	BBK DAV College For Women, Lawrence Road, Amritsar, India; Guru Nanak Dev University, Amritsar, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091797338&doi=10.1007%2fs41870-020-00487-9&partnerID=40&md5=f054864df8ef59b0f2a9dc81ff396c9c
596	Seismic response of bentonite enhanced soils to be used as fabricated liner in engineered landfills	Department of Civil Engineering, Guru Nanak Dev University, Amritsar, India; Department of Civil Engineering, Punjab Engineering College (Deemed to be University), Chandigarh, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091145437&doi=10.1007%2f978-3-030-51350-4_34&partnerID=40&md5=f1ffee12226ae84a3923d4bc211e7ee
597	Error rate performance of potential multicarrier waveforms and coding techniques for 5G	Department of Engineering and Technology, Faculty of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091058429&doi=10.2174%2f210327909666190409130000&partnerID=40&md5=97c2ebc38d9ac2ef58fea389ff2577be
598	Using community detection technique in recommender system	DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, GURU NANAK DEV UNIVERSITY REGIONAL CAMPUS, India	1	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090617017&doi=10.37418%2famsj.9.6.52&partnerID=40&md5=2841bb1bd407ef1a268feafa8baf6237
599	Investigation of anticancer and antitubercular activity of some medicinal plants	Lovely Professional University, Phagwara, India; Guru Nanak Dev University, Amritsar, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090352162&partnerID=40&md5=10c5b33669ab410ed402a01e4af6a25e
600	Numerical solution of nonlinear oscillatory differential equations using shifted second kind Chebyshev wavelet method	Department of Mathematics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090158197&partnerID=40&md5=3b945d7cda54d472d394deea83c32532
601	Five polypore species new to India	Department of Botany, Punjabi University, Patiala, Punjab, IN-147002, India; Department of Agriculture, Khalsa College, Amritsar, Punjab, IN-143002, India	4	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089597691&doi=10.33585%2fCMY.72202&partnerID=40&md5=131258085d4353b5ed192249e6c64126
602	Radio over fiber (RoF) link modelling using cross term memory polynomial	Department of Electronics and Communication Engineering, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Department of Electronics and Communication Engineering, Punjabi University, Patiala, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089453927&doi=10.1515%2fioc-2020-0102&partnerID=40&md5=83f622130e2ed6a2cc2e49d60d00623f
603	Role of plant growth regulators in ameliorating heavy metal caused oxidative stress in plants: An update	State Key Laboratory of Subtropical Silviculture, Zhejiang A & F University, Hangzhou, China; Department of Botany, DAV University, Sarmastpur, Jalandhar, Punjab, India; Department of Botany, Doaba College, Jalandhar, Punjab, India; Plant Stress Physiology Lab, Department of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar, India; School of Bioengineering & Biosciences, Lovely Professional University Punjab, India; Centre for Life Sciences, Central University of Jharkhand, Brambe, Ranchi, India; Department of Zoology, Guru Nanak Dev University, Amritsar, India; School of Land and Food, University of Tasmania, Hobart, TAS, Australia	11	2020	1 year	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089058266&partnerID=40&md5=0e051d23e86bd204e8072e9df2f3c30e
604	2*20 GBIT/S MDM-OFDM-IAOWC link with enhanced detection	DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, GURU NANAK DEV UNIVERSITY, REGIONAL CAMPUS, GURDASPUR, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088986341&doi=10.37418%2famsj.9.6.78&partnerID=40&md5=ee1898b0f213caa0d7c72abef681f3a1
605	Hybrid mode-wavelength division multiplexing based ofdm-ro-fso link	DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, GURU NANAK DEV UNIVERSITY, REGIONAL CAMPUS, GURDASPUR, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088985074&doi=10.37418%2famsj.9.6.79&partnerID=40&md5=21f828aa4fe370ee42302097aad4c497
606	Recent advances in nanotherapeutic interventions for the treatment of alzheimer's disease	Department of Pharmaceutics, Khalsa College of Pharmacy, Amritsar, Punjab, India; I.K. Gujral Punjab Technical University, Kapurthala, Punjab, India; Department of Oral & Maxillofacial Pathology and Microbiology, Sri Guru Ram Das Institute of Dental Sciences and Research, Amritsar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086792700&doi=10.2174%2f1381612826666200422092620&partnerID=40&md5=1f122fd606058db164269e89e1972944
607	Quasi-opposition-Based Multi-verse Optimization Algorithm for Feature Selection	DAV University, Jalandhar, Punjab, India; Guru Nanak Dev University, Regional Campus, Gurdaspur, Punjab, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085286718&doi=10.1007%2f978-981-15-3369-3_27&partnerID=40&md5=b429994ad00d95c475f53de760e90e40
608	Putative functional non-coding polymorphisms in SELP significantly modulate sP-selectin levels, arterial stiffness and type 2 diabetes mellitus susceptibility	School of Medicine, Wayne State University, Detroit, MI, United States; Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, Punjab, India; Carewell Heart and Superspeciality Hospital, Amritsar, Punjab, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084962401&doi=10.1186%2f12902-020-00548-x&partnerID=40&md5=0a92a9e11928e5588b49f2dc00986f39
609	Multi-agent based recommender system for Netflix	Department of Computer Science and Engineering, GNDU Regional Campus, Gurdaspur, Punjab 143521, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084702397&doi=10.1007%2f978-981-15-3020-3_20&partnerID=40&md5=a308e10432e64c2e1e0ad566313bf756
610	Efficient vm migration policy in cloud computing environment	Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar, India	3	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084701505&doi=10.1007%2f978-981-15-3020-3_36&partnerID=40&md5=6f3d138e957f91a1953249ce24e7ba03

611	Prevalent general and preventive maintenance practices in Indian process industry	Department of Placements, Guru Nanak Dev University, Amritsar, Punjab, India; Department of Industrial and Production Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India	3	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083331257&doi=10.1504%2FIIJPM.2020.106402&partnerID=40&md5=07f0d4181b1a2012dba66802e52823c3
612	Performance evaluation of an all-optical multicasting strategy based on cross-gain modulation (XGM) in a single semiconductor optical amplifier (SOA)	Department of Electronics Technology, Guru Nanak Dev University, Amritsar, Punjab 143005, India; Department of Electrical & Instrumentation Engineering, Thapar Institute of Engineering and Technology, Patiala, Punjab 147001, India	4	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081995748&partnerID=40&md5=0ef00883b47a1f97e9e341c5f8cf7cea
613	Cold Spray Coating for Corrosive Conditions	Guru Nanak Dev University, Amritsar, Punjab, India	1	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081400763&doi=10.1007%2F978-3-030-36296-6_88&partnerID=40&md5=11cca92de39087124edb51cda19a87e
614	Performance Comparison Between Different Dispersion Compensation Methods in an Optical Link	Department of Engineering and Technology, Guru Nanak Dev University, Regional Campus, Jalandhar, India; Department of Electronics and Communication Engineering, Punjabi University, Patiala, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081347942&doi=10.1007%2F978-981-15-1084-7_4&partnerID=40&md5=810d16a79377a387b7e6135ad52c9698
615	A Hybrid Image Steganography Using Chaotic Maps in DCT Domain	Department of Electronics and Communication Engineering, Guru Nanak Dev	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080024169&doi=10.31838%2Ficr.07.01.76&partnerID=40&md5=70bad51b74b9a9b5d8bd0946b1021208
616	E-waste management strategy in organizations - A conceptual framework	University Business School, Guru Nanak Dev University, Amritsar, India	2	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079242279&partnerID=40&md5=cc31cfbc66d8f0055b86fb6be510a244
617	Serum hTERT level as sensitive biomarker with prognostic implications in breast, lung, gastric and liver cancers	Department of Zoology, Khalsa College, Amritsar, Punjab, 143001, India	1	2020	2 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078838700&doi=10.31349%2FrevMexFis.66.82&partnerID=40&md5=0f55677f8f7cdf7a95f54048de94ec4e
618	Single particle spectrum of a nucleon in the harmonic oscillator mean field with spin-orbit coupling-A semiclassical view	Department of Physics, Swami Swarandhara Memorial College, Bhatinda, 143531, India; Department of Physics, Guru Nanak Dev University, Amritsar, 143005, India	2	2020	3 years	Collaborative Research	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078838700&doi=10.31349%2FrevMexFis.66.82&partnerID=40&md5=0f55677f8f7cdf7a95f54048de94ec4e
619	National Students' Conference on Spectroscopy	Chemical Research Society of India (CRSI) (local chapter Chandigarh/ Amritsar); in collaboration with American Chemical Society (ACS), Society for Promotion of Science and Technology (SPSTI), Panchkula, Punjab State Council for Science and Technology (PSCST), Chandigarh	500	2020	16th & 17th October, 2020	The conference was unique in looking for a thorough grasp on the principles, applications and strategies of some of the modern spectroscopic techniques and aims to give in-depth knowledge on the recent developments in spectroscopy by means of invited talks, pre-recorded demonstrations and poster presentations. Another aim of the conference was to enable the participants to learn basic principles and current developments in atomic and molecular spectroscopy. UG, PG and Ph.D. students from various universities and colleges were invited to participate in this conference.	http://punjabpost.in/welcome/180426 , http://tribunenewsline.com/gndu-to-organize-first-national-students-conference/ , https://youtu.be/lrc223QapJw , https://youtu.be/Lle2t2PKjxk
620	"How to prevent cancers and lead a healthy life style" by Dr. Indu Bansal Aggarwal	Narayana Superspecialty Hospital	90	2020	October 30,2020	Webinar on cancer awareness and healthy lifestyle was delivered for the general audience	https://youtu.be/MHxTML9mYgg
621	Vigyan safari"	Society for Promotion of Science and Technology (SPSTI)	200	2020	31-03-20	SciRox, Science Club GNDU launched moving science lab with science experiments and demonstrations for school students	https://www.youtube.com/watch?v=uu5lguqGtNc , https://spsti.org/scirox-gndu-and-spsti-launched-vigyan-safari-in-amritsar/ , https://www.tribuneindia.com/news/amritsar/gndu-to-launch-science-expo-bus-on-march-1-216821 , http://punjabpost.in/welcome/187271

622	Mental health: lecture series	Pale Blue Dot	100	2020	October 10,2020 to October 31,2020	A month long lecture series was organised virtually for audience across the nation for mental health issues. Some of the speakers were internationally renowned.	https://youtu.be/NU5LLJXSGoQ
623	Commonly committed mistakes in Covid19 illness and vaccine related frequently asked questions	Amandeep Hospital	70	2020	May 2, 2021	Interactive session by Dr. Vineet Sehgal, PGI Chandigarh shedding light on do's don't during Corona	Not Available
624	Covid in kids	Amandeep Hospital	100	2020	May 22, 2021	Panel discussion by renowned doctors from Amritsar for taking preventive measures for covid in kids.	Not Available
625	understanding online teaching	Maur Club	50	2020	June 27, 2021	A lecture series for educators on various resources during pandemic by Prof. V. Madhurima, Central University of Tamil Nadu.	https://youtu.be/avZBHI_9oDY
626	Fundamental Sciences & Quantum Technologies using Atomic Systems (FSQT-2020)	Physical Research Lab, Ahmedabad	300	2020	28th September to 1st October, 2020	The goal of this meeting was to cover important research topics that are of current interest in atomic and molecular physics. Many leading theorists and experimentalists from various institutes and universities across India and abroad were invited to establish a strong and efficient collaboration for pursuing research on the aforementioned topics together, by exchanging ideas and bringing out subjects of mutual interest.	https://sites.google.com/view/fsqt2020/ , https://youtu.be/XzSvWgc_s4M , https://youtu.be/ejiovGtYu8M
627	World ozone day	Punjab State Council for Science & Technology, ENVIS Hub, Punjab	70	2020	16 September, 2020	Web conference on world Ozone day including lectures from Dr. N. Srinivas, GITAM University and Dr. Jatinder Kaur, GNDU	https://youtu.be/irrtxN38cig
628	STIP-2020	Not Available	50	2020	27 August, 2020	Panel discussion on "Science technology innovation policy 2020"	https://youtu.be/VEP6L5orefs
629	MoU	Indigram Labs Foundation (ILF) New Delhi	Institutional	2020	Continuous	Joint Research, collaboration, mentorship, skill enhancement, capacity building etc.	https://online.gndu.ac.in/MOU/Indigram%20Labs.pdf
630	MoU	Sabudh Foundation Mohali	Institutional	2020	5 Years	Collaboration, mentorship, Offer skill courses, capacity building etc.	https://online.gndu.ac.in/MOU/Sabudh%20foundation%20MoU.pdf
631	MoU	College of Agriculture and Natural Resources, National Chung Hsing University, Taiwan	Institutional	2020	5 Years	Joint Research, collaboration, mentorship, capacity building, mobility etc.	https://online.gndu.ac.in/MOU/Chunghsingtaiwan.pdf
632	MOA	College of Agriculture, Cornell University, USA	Institutional	2020	5 Years	Joint Research, collaboration, mentorship, capacity building, mobility etc.	https://online.gndu.ac.in/MOU/Cornell_University.pdf
633	Interaction	Punjab Agriculture University, Ludhiana, Punjab	Institutional	2020	Not Available	Collaboration in Academic and	https://online.gndu.ac.in/MOU/PunjabagriculturalUniversityludhiana.pdf
634	International Webinar on "Sustainable Habitat and Circular Economy	Spatial Planning and Environment Research, Panchkula	105	2020	April 20-21, 2021	Collaboration	https://drive.google.com/file/d/1VZ8NOWyF5W334TuPskhK1IOMk5AXhBj/view?usp=sharing

635	International Webinar on "Awareness on Prevention of Cancer & Post- Covid Times"	Sanjeevani Life Beyond Cancer	95	2020	26 November, 2020	Collaboration	Not Available
636	International Webinar on "Changing Higher Education Scenario in Post- Covid Times"	Human Resource Development Centre (HRDC)	115	2020	19 November, 2020	Collaboration	https://drive.google.com/file/d/1VZ8NOWyF5W334TuPSkhK1IOMk5AXhBJ/view?usp=sharing
637	Fundamental Science & Quantum Technologies using Atomic	PRL, Ahmedabad	110	2020	01 October, 2020	Collaboration	https://drive.google.com/file/d/1VZ8NOWyF5W334TuPSkhK1IOMk5AXhBJ/view?usp=sharing
638	Vitamin D Deficiency and Coronary Artery Disease	University Industry Linkage and Intellectual Property Rights cell	98	2020	17 February, 2020	Collaboration	https://drive.google.com/file/d/1VZ8NOWyF5W334TuPSkhK1IOMk5AXhBJ/view?usp=sharing
639	Radiochemistry and Application of Radiosotopes for 7 days	IANCAS and BARC	55	2020	04 February, 2020	Collaboration	https://drive.google.com/file/d/1VZ8NOWyF5W334TuPSkhK1IOMk5AXhBJ/view?usp=sharing