

Prof. M.S. Gaur

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Qualification	:	M.Sc., M.Phil., Ph.D.
Department	:	Physics
Experience	:	24 Years
(Academics/Industry/Research)		
Research Interest	:	 Broad area: Material Science Sub-Area Synthesis characterization of nanoparticles and their sensor applications Nanobiosensor for detection of environmental hazards Charge storage and transport process in electro-active polymers and nanocomposites Thermally stimulated effects Dielectric relaxation in polymer nanocomposites Piezo and Pyro electric study of electroactive polymer nanocomposites for sensor applications Study of SEM, TEM, XRD, DSC, FTIR spectra of nanoparticles and polymer nanocomposites
Ph.D. Supervised	:	9
Ph. D. supervising		4
D Took /84 Took /84 Dhil		D. Took : 04
B.Tech./M.Tech./M. Phil.		B. Tech.: 04 M. Phil :3
Dissertation supervised		
Sponsored Research Project / Consultancy	•	3 ongoing (PI) No. of Government sponsored research project completed as a PI: 10
PI in DST sponsored International joint Project		01 with Research Center of Biotechnology of the Russian Academy of Sciences, Leninsky Prospect 33, Moscow 119071, Russia 01 with Francisk Skorina Gomel State University, Gomel, 246019 (Belarus)
Research Publications	:	Journal : 84 Conference : 90 Book : NA Book Chapter : NA

Recent Publications

- 1." Measurement of AC and DC relaxation properties in polyvinyl chloride (PVC) nanocomposites", Measurement,135, 2019,323-332, ISSN: 0263-2241.
- 2."Security Rapid visual detection of lead and mercury via enhanced cross linking aggregation of aptamer-labeled gold nanoparticles", J. Nanosci. & Nanotech. (AmericanScient.Publisher),19,2019,1–7, ISSN: 1533-4880.
- 3. Efficient chemiluminescence by aptamer reactant platform combination with activated Ag—Au alloy nanoparticles for cobalt detection", In. J. of Envi.Anal. Chemi. Tylor & Franci) 98, 6,2018,570-581,ISSN: 0306-7319
- 4. Investigation of TSDC and dielectric modulus of PVDF—BaZrO3 nanocomposites thin film, Vacuum (Elsevier), 156,2018,375-383, 207X.
- 5." Enhanced energy storage in polyvinylidenefluoride (PVDF) + BaZrO3 electroactive nanocomposites", Ionics (Springer), 24, 7, 2018, 1965–1978, ISSN: 0947-7047.
- 6." Effect of interface in dielectric relaxation properties of PEMA–BaZrO3 nanocomposites", Polym. Bull. (Springer), 75, 2018,4003-4018, ISSN: 0170-0839.
- 7." Structure and properties of polyaniline nanocomposite coatings containing gold nanoparticles formed by low-energy electron beam deposition", Applied Surface Science (Elsevier), 428, 15 2018,1070-1078, ISSN: 0169-4332.
- 8." Measurement of thermally stimulated discharge current (TSDC) for detection of thyroid-stimulating hormone (TSH) in human blood", J. Therm. Anal Calorim. (Springer), 131(2), 2018,2005–2011, ISSN: 1388-6150.
- 9." Improvement of dielectric properties of spin coated PMMA-ZnO nano hybrid thin film", Ferroelectrics (Tylor & Francis), 510 (1), 2017,56-70,, ISSN: 1563-5112.
- 10." Investigation of structural properties of electron-beam deposition of zinc oxide coatings doped with copper", Surfaces and Interfaces (Elsevier), 6,2017, 24–32., ISSN: 2468-0230.

For more details visit: https://scholar.google.com/citations?user=D0kkM8YAAAAJ&hl=en

Total Conferences/Workshop/Seminar/Symposium :90 Recent conferences:

- 1. Invited talk in International conference on Materials for Energy Applications (ICME-2018) to be held S.S. Jain Subodh PG (Autonomous) College, Jaipur affiliated to University of Rajasthan, Jaipur-302004, India during on 6th 8th December 2018.
 - Paper entitled:" Nanotechnology approach for Sensitive detection of heavy metal ions" (Invited Talk)
- 2. International Conference on "Applied Nanotechnology and Nanoscience, Tuljaram Chaturchand College, Baramati, Distt. Pune (Mahrastra), 7-9 Dec 2017.
- Paper entitled: An Emerging Interface between Electret, Biomedical Science and Nanotechnology: Present Status and Prospects (Invited talk)
- 3. International Conference on "Study of Nanomaterial and Scientific Development in 21st Century (ICSNSDC)", Jiwaji University, Gwalior (M.P.), 3-5 Nov 2017
- Paper entitled: Electrochemical Nanobiosensor: An Effective Approach for Detection of Environmental Hazards (Invited Talk)
- 4. International conference on Nanoscience and Technology (ICNN2017), September 22-24, 2017, Babasaheb Ambedkar University (A Central University, Lucknow)
- Paper entitled: Nanobiosensor: Modern and future approaches (Invited talk)
- 5. 16th International Symposium on Electrets, held in KU Leuven, Belgium, Sept 04-07, 2017

(Partial travel support granted by CSIR), Oral and poster presentation

Paper Title i).Bioelectret biosensor for detection of TSH in human blood : Oral Presentation ii) Pyroelectric Properties of hybrid nanocomposites system : Poster Presentation

6. Advances in Nanomaterials and Nanotechnology (ICANN-2016)" on 4-5th November 2016, Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia, New Delhi

Title of paper: Aptamer Conjugated Gold Nanoparticles – Colorimetric Biosensor for Detection of Heavy Metals (Invited talk) M. S. Gaur

7. 3rd International Conference on Nanosructured Materials and Nanocomposites (ICNM-2015), 12-14 th Dec 2015, Hindustan College of science and Technology, Farah, Mathura, U P

Title of paper: Nanoluminescence Derived from silver nanoparticles for heavy metal detection

8. 11th International Conference on the Properties and Applications of Dielectric Materials (ICPADM), Sydney, Australia, 19-22th July 2015.

Title of Paper: Dielectric relaxation in nanocrystalline polymers

9. 2nd International Conference on Nanosructured Materials and Nanocomposites (ICNM-2014), 19-21, Dec 2014, M. G. University, Kottayam (Kerla)

Title of Invited talk: Morphological, thermal and electrical properties of polymer nanocomposites

- 10. National Conference on "Synthesis Characterization and Applications of Advanced Nanomaterial (NCSCAAN-20114)" 17-19th Jan 2014, Hindustan College of Science and Technology, Farah, Mathura (UP)
- 11. Nanobiosensor: New trends of Sensor Research (invited talk) , M. S. Gaur, National Conference on biomedical Science and Technolog, 21-22 Dec 2013, National Physical Laboratory , New Delhi

Achievements		
MoU Signed	:	6 Countries (Russia, Belarus, China, South Africa, Brazil)
Award	:	 "Bharat Shiksha Ratan Award" presented by Global Society for Health an Educational Growth, New Delhi, India Visiting Professor, Francisk Skorina Gomel State, University, Gomel, Belarus. Research Advisor: Nan Yang Academy of Sciences, Singapore Member of Editorial Board: Advances in Materials Research (USA)
Membership of Professional Bodies	:	1. Life member of Biosensor Society, India 2. Life member Indian Society for Technical Education (ISTE) 3. Nano and Molecular Society (India), Executive President (visit: www.nmsindia.net)
Abroad Visit	:	20 Countries