




University Faculty Details Page on DU Web-site

Title	PROF.	First Name	VINAY	Last Name	GUPTA	Photograph
Designation	Professor					
Department	Physics and Astrophysics					
Address (Campus)	Department of Physics and Astrophysics, North Campus, University of Delhi, Delhi-110007					
(Residence)	A-40, Gagan Bharti Complex, Om Vihar, New Delhi-110059					
Phone No (Campus)	+91-11-27667725 Extn. 1331, +91-11-27666427					
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Email	vgupta@physics.du.ac.in , drguptavinay@gmail.com					
Web-Page	emdl.physics.du.ac.in					
Education						
Subject	Institution	Year	Details			
Ph.D. Physics	University of Delhi	1995	Thesis topic: Structural, optical & dielectric studies on ZnO thin film			
B.Ed.	M. D. University	1990	Subject: Physical Science			
M.Sc. Phys	University of Delhi	1989	Subjects: Physics (Spl. Electronics)			
B.Sc. (Honours) Physics	University of Delhi	1987	Subjects: Physics			
Career Profile						
Organisation / Institution	Designation	Duration	Role			
University of Delhi	Dean Examinations	28 May 2016 – till date	Administration			
Dept. of Physics & Astrophysics, University of Delhi	Professor	Dec. 2009 – till date	Teaching & Research			
M.Tech. Nuclear Science & Tech. Program, Dept. of Physics & Astrophysics, University of Delhi	Coordinator	1 Oct. 2008 – 19 July 2016	Administration and Teaching			
Dept. of Physics & Astrophysics, University of Delhi	Associate Professor/Reader	Dec. 2003 – Dec. 2009	Teaching & Research			
Dept. of Physics, Univ. of Puerto Rico, San Juan, USA	Visiting Fellow	3 June 2010-28 June 2010	Research			
Australian National University, Canberra, Australia	Visiting Fellow	28 July 2008-10 August 2008	Research			
Dept. of Physics, University of Puerto Rico, Puerto Rico, USA	BOYSCAST Fellow	May 2003 – Nov. 2003	Research			
Deen Dayal Upadhyaya College (Univ. of Delhi), Karampura,	Lecturer/Reader	Jan. 1995 – Dec. 2003	Teaching & Research			

New Delhi-110015			
Dept. of Physics & Astrophysics, University of Delhi	S.R.F./J.R.F.	April 1990 – July 1994	Research
Research Interests / Specialization			
<p>Specialization: Electronics materials and devices (Condensed Mater – Experimental)</p> <ul style="list-style-type: none"> • Research interests include Semiconductor oxides and Surface acoustic wave (SAW) sensors for gas/chemical /radiations/bio-molecules, Amperimetric biosensors, Surface Plasmon Resonance technique for dielectric studies and sensing applications, Micro-fluidics, Nanostructured materials, Piezoelectric and Multiferroic for energy harvesting applications, Pressure sensors, RF and microwave resonators, Non-linear optical studies, SAW devices, MEMS transducers and Micro-heaters, Molecular Simulations and device modeling. 			
Teaching Experience (Subjects/Courses Taught)			
<p>Total Experience: More than 22 years and Six Months</p> <p>2003-present: (M.Sc. Physics) Theory – Electromagnetic Theory, Electronics (core), Solid State Physics (Core), Advanced Electronics-I and II (Special Paper); Physics at Nanoscale(Special Paper) Practical– Solid State physics (M.Sc. Prev.), Electronics (M.Sc. Final)</p> <p>2008-present: (M.Tech. Nanoscience & Nanotechnology), Theory – Electronics, Nanosensors & Nanoelectronics</p> <p>2010-2014: (M.Tech. Nuclear Science & Technology), Practical – Plasma Physics laboratory</p> <p>2000-2004: (MCA-DU) Practical – Microprocessor, Digital and interface laboratory</p> <p>1993-2003: (B.Sc. Physics) Theory – Physics of Materials, Electronic devices, Linear & Digital circuits, Network analysis, Optics, Mechanics, Microprocessor, computer fundamentals, Numerical analysis, Instrumentation</p>			
Honors and Awards			
<ul style="list-style-type: none"> • Member (2014), Expert Committee of UGC for framing the syllabus for undergraduate courses of Physics under Choice based Credit System (CBCS). • Member, Research Council (2015-), Solid State Physics Laboratory, DRDO • Member (2013-16), Expert Advisory Group (EAG) for Sensor and Allied Instrumentation of IDP of DST • Member (2014-17), Scientific Advisory Committee, Inter-University Acceleration Centre (IUAC), Delhi • Principal Investigator (2014-16): UGC Project “e-PG Pathshala” to create e-content of both “Material Science” & “Physics” for Post graduate (MHRD project under National Mission on Education through ICT) • Vice Chairman (2015-), Semiconductor Society of India (SSI). • Vice-chairman, IEEE Electron Device Society Delhi Chapter (2013-2017) • MRSI Medal Lecture (2012), 23rd AGM of Material Research Society of India, Patiala, 12-15 Feb. 2012 • Member (2012-16), International advisory board, J.“Energy Harvesting & Systems”, Pub.: De Gruyter, USA • Recipient of BOYSCAST Fellowship (2003) of DST, Govt. of India for research abroad. • Senior member of the Institute of Electrical and Electronics Engineer (IEEE), USA. • Recipient of Young Scientist Project (1995) from DST, Govt. of India 			
Publications (LAST FIVE YEARS)			
<p>Total Number of Publication: 356 (262-International refereed Journals + 94-International conference Proc.)</p> <p>h-index = 30 (Scopus); 35 (Google scholar), i10-index = 110, Cumulative citations > 5000, Cumulative impact factor > 600, Average citations/ paper: > 18; Average impact factor/ paper: > 2.2</p>			

1. Books/Monographs (Authored/Edited)

Year of Publication	Title	Publisher	Co-Author
2009	Guest Editor, J. Scientific Conference Proceedings, Vol.1, No.1, pp.92; Special issue of peer-reviewed articles from MNNA-2006, Delhi, India	American Scientific Publishers, USA	S.P. Singh, M. Terasawa, D. Marshal
2006	"Pulsed Laser Deposition of Zinc Oxide" chapter in a book "ZnO Bulk, Thin Films & Nanostructures", Editors : C. Jagadish and S.J. Pearton, P.85-174.	Elsevier, UK.	K. Sreenivas
2004	"Ferroelectric and Dielectrics" pp.430	Allied Publication Delhi	R.P.Tandon, K. Sreenivas, C. Prakash, A.K. Arora

2. Research papers published in Refereed/Peer Reviewed Journals

In Indexed/ Peer Reviewed Journals

Year of Publication	Title	Journal	Co-Author
2016	Distinct detection of liquor ammonia by ZnO/SAW sensor: Study of complete sensing mechanism	Sensors and Actuator B, 238 (2017) 83-90	V.B. Raj, H. Singh, A.T. Nimal, M.U. Sharma, Monika Tomar
2016	A ZnO-CNT nanocomposite based electrochemical DNA biosensor for Meningitis detection	RSC Advances 6 (2016) 76214-222	Manvi Tak, Monika Tomar
2016	Enhanced CO gas sensing properties of Cu doped SnO ₂ nanostructures prepared by a facile wet chemical method",	Physical Chemistry Chemical Physics, 18 (2016) 18846-54	Neha Bhardwaj, Akhilesh Pandey, Biswarup Satpati, Monika Tomar, S. Mohapatra,
2016	Table top SPR measurement system for efficient urea biosensing using ZnO thin film matrix",	J. Biomedical Optics (2016) in Press	Ayushi Paliwal, Monika Tomar
2016	Tunable EMI shielding effectiveness using new exotic carbon: Polymer composites",	J. Alloys and Compounds, 688 (2016) 399-403	Monika Mishra, A.P. Singh, A. Chandra, S.K. Dhawan
2016	Ferroelectric photovoltaic response to structural transformations in doped BiFeO ₃ derivatives	Materials and Design, 105 (2016) 296-300	Surbhi Gupta, Monika Tomar
2016	Study of energy band discontinuity in NiZnO/ZnO heterostructure using X-ray photoelectron spectroscopy	Applied Physics Letters 108 (2016) 211603	Sheetal Dewan, Monika Tomar, Anshu Goyal, A.K. Kapoor, R.P. Tandon
2016	Swift heavy ion induced structural phase generation and enhanced luminescence from CdS based nanocomposites	Surface and Coatings Technology, (2016) in press	Pragati Kumar, Nupur Saxena, Fouran Singh
2016	EMI Shielding of MWCNT/ABS nanocomposites in contrast to Graphite/ABS composites and MWCNT/PS nanocomposite	RSC Advances, 6 (2016) 45049-45058	V.K. Sachdev, S.K. Sharma, Monika Tomar, R.P. Tandon
2016	Formation of luminescent Si nanocrystals by ion irradiation	Surface and Coatings Technology, (2016) in press	Nupur Saxena, Pragati Kumar, D. Kabiraj and D. Kanjilal
2016	Effect of insertion of low leakage polar layer on leakage current and multiferroic properties of BiFeO ₃ /BaTiO ₃ multilayer structure	RSC advances, 6 (2016) 59150-154	Savita Sharma, Monika Tomar, Ashok Kumar, Nitin K. Puri

2016	Sensitive optical biosensor based on Surface Plasmon Resonance using ZnO/Au bilayered structure	Optik - International Journal for Light and Electron Optics, 127 (2016) 7642-47	Ayushi Paliwal, Ravinder Kaur, Anjali Sharma, Monika Tomar
2016	Surface plasmon resonance study on the optical sensing properties of tin oxide (SnO ₂) films to NH ₃ gas	J. Applied Physics, 119 (2016) 164502	Ayushi Paliwal, Anjali Sharma, Monika Tomar
2016	Experimental investigations on NO ₂ sensing of pure ZnO and PANI-ZnO composite thin films	RSC Advances, 6 (2016) 56149-158	Rakesh K. Sonker, B.C. Yadav, A. Sharma, M. Tomar
2016	BiFeO ₃ /BaTiO ₃ multilayer structures for Solar energy harvesting application	Energy Harvesting and Systems, 3 (3) (2016) 237	Savita Sharma, Monika Tomar, N.K. Puri
2016	Photovoltaic effect in BiFeO ₃ /BaTiO ₃ multilayer structure fabricated by Chemical solution deposition technique	J. Physics Chemistry of Solids 93 (2016) 63-67.	Savita Sharma, Monika Tomar, Ashok Kumar, Nitin K. Puri
2016	Realization of a label-free electrochemical immunosensor for detection of low density lipoprotein using NiO thin film	Biosensors and Bioelectronics, 80 (2016) 294-299 (6.44)	Gurpreet Kaur, Monika Tomar
2016	Novel optically active lead-free relaxor ferroelectric (Ba _{0.6} Bi _{0.2} Li _{0.2})TiO ₃	Journal of Physics: Condensed Matter 28 (2016) 265901	H. Borkar, V. Rao, S. Dutta, Arun B, P. Pal, M. Tomar, J.F. Scott, A. Kumar
2016	Effect of Particle Clustering of Silver Nanoparticles on Ultrathin Silicon Solar Cell	Materials Research Express, 3 (2016) 076205	Poonam Shokeen, Amit Jain, Avinashi Kapoor
2016	Swift Heavy Ion irradiated SnO ₂ thin film sensor for efficient detection of SO ₂ gas	Nuclear Inst. and Methods in Physics Research B, (2016) 219-223	Punit Tyagi, Savita Sharma, Monika Tomar, Fouran Singh
2016	Refractive index dispersion of swift heavy ion irradiated BFO thin films using surface plasmon resonance technique	Nuclear Inst. and Methods in Physics Research B, (2016) 126-130	Savita Sharma, Ayushi Paliwal, Monika Tomar, Fouran Singh, N.K. Puri
2016	Influence of samarium doping on magnetic and structural properties of M type Ba-Co hexaferrite	Ceramics International, 42 (2016) 8413-18 (2.086)	K. Rana, P. Thakur, A. Thakur, M. Tomar, J. L.Mattei, P. Queffelec
2016	Synergic effect of graphene and MWCNT fillers on electromagnetic shielding properties of graphene-MWCNT/ABS nanocomposites	RSC Advances 6 (2016) 18257. (3.84)	S.K. Sharma, R.P. Tandon and V.K. Sachdev
2016	Detection of Neisseria meningitidis using surface plasmon resonance based DNA biosensor	Biosensors and Bioelectronics, 78 (2016) 106-110 (6.44)	Gurpreet Kaur, Ayushi Paliwal, Monika Tomar
2016	Controllable one step copper coating on carbon nanofibers for flexible cholesterol biosensor substrate	J. Material Chemistry B, 4 (2016) 229 (4.726)	B. Bajaj, H. I. Joh, Seong M. Jo, G.Kaur, A. Sharma, M. Tomar,

			S. Lee
2016	Giant Magnetoelectric Effect in PZT thin film deposited on Nickel	Energy Harvesting and System, 3 (2016) 181-88	R. Gupta, M. Tomar, Y. Zhou, A. Chopra, S. Priya, A.S. Bhalla, R. Guo
2016	Influence of Immobilization Strategies on Biosensing Response Characteristics: A Comparative Study	Enzyme and Microbial Technology 82 (2016) 144	Gurpreet Kaur, Shibu Saha, Monika Tomar
2016	Effect of ion beam irradiation on dielectric properties of BaTiO ₃ thin film using Surface Plasmon Resonance	J. Material Science 51 (2016) 4055-60	Savita Sharma, Ayushi Paliwal, Monika Tomar, Foreign Singh, N.K. Puri
2016	Metal oxide catalyst assisted SnO ₂ thin film based SO ₂ gas sensor	Sensors and Actuators B 224 (2016) 282-89	Punit Tyagi, Anjali Sharma, Monika Tomar
2016	Giant UV-sensitivity in ion beam irradiated nanocrystalline CdS thin films	RSC Advances, 6 (2016) 3642-49	Pragati Kumar, Nupur Saxena, Sheetal Dewan, Fouran Singh
2015	Thickness and annealing effects on the particle size of PLD grown Ag nanofilms	Plasmonics 11 (2015) 669-675	P. Shokeen, A. Jain, A. Kapoor
2015	Conduction mechanism in amorphous rf-sputtered TeO ₂ +y thin films	Materials Research Express, 2 (2015), 086301	Namrata Dewan
2015	Stress induced enhanced polarization in multilayer BiFeO ₃ /BaTiO ₃ structure with improved energy storage properties	AIP Advances, 5 (2015) 107216	Savita Sharma, Monika Tomar, Ashok Kumar, Nitin K. Puri
2015	Dielectric dispersion of rf sputtered deposited SnO ₂ , ZnO, WO ₃ thin films using Surface Plasmon Resonance Technique	IEEE Transactions on Dielectrics and Electrical Insulation 22 (2015) 3529	Ayushi Paliwal, Anjali Sharma, Monika Tomar
2015	Anomalous change in leakage and displacement currents after electrical poling on lead-free ferroelectric ceramics	Applied Physics Letter 107 (2015) 122904	H.Borkar, Monika Tomar, J.F Scott, Ashok Kumar,
2015	Enhanced Ferroelectric Photovoltaic response of BiFeO ₃ /BaTiO ₃ multilayered structure	J. Applied Physics 118 (2015) 074103	Savita Sharma, Monika Tomar, Sanjay Puri
2015	CdS/SiO ₂ nanocomposite as a luminescence-based wide range temperature sensor	RSC Advances, 5 (2015) 73545-551	Nupur Saxena, P. Kumar
2015	Graphene/semiconductor silicon modified BiFeO ₃ /indium tin oxide ferroelectric photovoltaic device for transparent self-powered window	Applied Physics Letter, 107 (2015) 062902	S. Gupta, R. Medwal, T.B. Limbu, R.K. Katiyar, S.P. Pavunny, M. Tomar, G. Morell, R.S. Katiyar
2015	Study of La-incorporated HfO ₂ MIM structure fabricated using PLD system for Analog/Mixed signal Applications	IEEE Transactions on Nanotechnology 14 (2015) 612-18	Ashutosh Sreevastava, Onkar Mangla
2015	Influence of Stress in ZnO Thin Films on its	Enzyme and Microbial	Shibu Saha, Monika

	Biosensing Application	Technology 79 (2015) 63-69	Tomar
2015	“Competing magnetic interactions and low temperature magnetic phase transitions in composite multiferroics	Materials Research Express 2 (2015) 086101	H. Borkar, R. Choudhary, V.N. Singh, Monika Tomar, Ashok Kumar
2015	A highly efficient urea detection using flower-like zinc oxide nanostructures	Materials Science and Engineering C, 57 (2015) 38-48	Manvi Tak, Monika Tomar,
2015	Influence of Immobilization Strategies on Biosensing Response Characteristics: A Comparative Study	Enzyme and Microbial Technology (2015) in press	Gurpreet Kaur, Shibu Saha, Monika Tomar
2015	Novel scheme to improve SnO ₂ /SAW sensor performance for NO ₂ gas by detuning the sensor oscillator frequency	Sensors and Actuators B 220 (2015) 154-161	V. Bhaskar Raj, Monika Tomar, Nimal, Manoj U Sharma
2015	Ultraviolet radiation detection by barium titanate thin films grown by Sol-gel hydrothermal method	Sensors and Actuators A 230 (2015) 175-181	Savita Sharma, Monika Tomar, Nitin Puri
2015	Room temperature detection of NO ₂ gas using optical sensor based on Surface Plasmon Resonance technique	Sensors and Actuators B 216 (2015) 497-503	Ayushi Paliwal, Anjali Sharma, Monika Tomar
2015	Optical properties of Pb(Zr _{0.52} Ti _{0.48})O ₃ /BiFeO ₃ multilayers with ZnO buffer layer	Applied Physics A 120 (2015) 53-58	S. Dutta, A. Pandey, Kajal Jindal, O.P. Thakur, R. Chatterjee
2015	Polyaniline/SnO ₂ nanocomposite sensor for NO ₂ gas sensing at low operating temperature	International Journal of Nanoscience, 14 (2015) 1550011	A. Sharma, M. Tomar, A. Badola, N. Goswami
2015	Swift heavy ion induced functionality in nanocrystalline CdS thin films: Role of growth temperature	Advanced Materials Letters, 6 (2015) 820-27	Pragati Kumar, Nupur Saxena, Avinash Agarwal
2015	Trap assisted space charge conduction in p-NiO/n-ZnO heterojunction diode”,	Materials Research bulletin 66 (2015) 123-31	Manisha Tyagi, Monika Tomar
2015	ZnO-CuO composite matrix based reagentless Biosensor for detection of total cholesterol	Biosensors and Bioelectronics 67(2015) 263-71	Neha Batra, M. Tomar
2015	Transition from diamagnetic to ferromagnetic state in laser ablated nitrogen doped ZnO thin films”,	AIP Advances 5(2015) 027117	K.Jindal, Monika Tomar, R.S.Katiyar, Vinay Gupta
2015	Improved structural and magnetic properties of cobalt nanoferrites: Influence of sintering temperature	Ceramic International 41 (2015) 4492-97	Kush Rana, Preeti Thakur, P. Sharma, M. Tomar, Atul Thakur
2015	Magnetic Hysteresis of cerium doped bismuth ferrite thin films	J. Magnetism & Magnetic Materials 378 (2015) 333-9	Surbhi Gupta, Monika Tomar

2015	Impedance spectroscopy study in the vicinity of ferroelectric phase transition	Science Letters Journal 4 (2015) 88	Hitesh Borkar, M. Tomar, Ashok Kumar
2015	Origin and role of elasticity in the enhanced DMMP detection by ZnO/SAW sensor	Sensors and Actuators B 207 (2015) 375-82	V. Bhasker Raj, Harpreet Singh, A.T. Nimal, M. Tomar, Manoj U Sharma
2015	Highly sensitive chemo-resistive ammonia sensor based on DBSA doped polyaniline thin film",	Science of Advanced Materials 07 (2015) 518-25	Jitender Kumar, Md. Shahabuddin, A.Singh, S.P. Singh, P. Saini, S.K. Dhawan
2015	Realization of zinc oxide-carbon nanotubes nano-composite based glucose biosensors	ScienceJet 4 (2015) 70	Manvi Tak, Monika Tomar
2014	Room Temperature lead-free relaxor-antiferroelectric electroceramics for energy storage applications	RSC Advances 4 (2014) 22840-47	Hitesh Borkar, V.N. Singh, B.P. Singh, M. Tomar, Ashok Kumar
2014	Stabilization of Ferromagnetism in Co Codoped ZnO:N	Integrated Ferroelectrics 158 (2014) 90-97	Kajal Jindal, Monika Tomar
2014	Plasmonic assisted enhanced photoresponse of metal nanoparticles loaded ZnO thin film ultraviolet photodetectors	J. Phys. D 47 (2014) 425102	Akshta Rajan, G. Kaur, Ayushi Paliwal, Harish Yadav, Monika Tomar
2014	Correlation between surface phonon mode and luminescence in nanocrystalline CdS thin films: an effect of ion beam irradiation	J. Applied Physics 116 (2014) 043517	Pragati Kumar, Nupur Saxena, F. Singh, Avinash Agarwal
2014	Effect of substrates temperature on structural and optical properties of thermally evaporated CdS nanocrystalline thin films	Indian J. Pure & Applied Physics 52 (2014) 699-703	M. Arif, Siddartha, Z.R. Khan, A. Singh
2014	Pd nanoclusters integrated SnO ₂ thin film sensor for low temperature detection of SO ₂ gas with enhanced response	Chemical Sensors 4 (2014) 18	Punit Tyagi, Anjali Sharma, Monika Tomar
2014	Reagentless uric acid biosensor based on Ni microdiscs loaded NiO thin film matrix	Analyst 139 (2014) 4606-4612	Kashima Arora, Monika Tomar
2014	Plasmonic enhancement of optical absorption of UV radiation by Au nanoparticles dispersed on ZnO thin film	Applied Physics A 116 (2014) 913-919	Akshita Rajan, Harish K. Yadav, Monika Tomar
2014	Enhanced magnetic and electric properties of nanocrystalline Ce modified BFO thin films	Ferroelectrics 470 (2014) 272-279	Surbhi Gupta, Monika Tomar
2014	Complex dielectric constant of various biomolecules as a function of wavelength using Surface Plasmon Resonance	J. Applied Physics 116 (2014) 023109	Aushi Paliwal, Monika Tomar
2014	Optimization of excess Bi doping to enhance ferroic orders of spin casted BiFeO ₃ thin film	J. Applied Physics 115 (2014) 234105	Surbhi Gupta, M.Tomar, M. Pal, R. Guo, A. Bhalla,
2014	Study on Mn induced Jahn-Teller distortion in BiFeO ₃ thin films	J. Materials Science 49 (2014) 5997-6006	Surbhi Gupta, Monika Tomar

2014	Flower-like ZnO nanostructure based electrochemical DNA biosensor for bacterial meningitis detection	Biosensors & Bioelectronics 59 (2014) 200-04	Manvi Tak, Monika Tomar
2014	Study of electrical and micro-structural properties of high-K gate dielectrics stacks deposited using pulse laser deposition for MOS capacitor applications	J. Materials Science 25 (2014) 3257-63	Asutosh Srivastava, Onkar Mangla, R. K. Nahar, C. K. Sarkar
2014	Magneto-optical properties of BiFeO ₃ thin films using Surface Plasmon Resonance technique	Physica B 448 (2014) 120-24	Ayushi Paliwal, Anjali Sharma, Monika Tomar
2014	Efficient detection of total cholesterol using (ChEt-ChOx/ZnO/Pt/Si) bioelectrode based on ZnO nanostructured matrix	Thin Solid Films 562 (2014) 612-20	Neha Batra, Anjali Sharma, Monika Tomar
2014	Ce doped bismuth ferrite thin films with improved electrical and functional properties	J. Materials Science 49 (2014) 5355-64	S. Gupta, Monika Tomar
2014	Metal oxide SAW E-nose employing PCA and ANN for the identification of binary mixture of DMMP and methanol	Sensors and Actuators B 200 (2014) 147-56	H.Singha, V.B.Raj, J.Kumar, U.Mittal, M.Mishra, A.T. Nimal, M.U. Sharma
2014	Anionic polymerization in Co and Fe doped ZnO: Nanorods, magnetism and photoactivity	Current Applied Physics 14 (2014) 749-56	Jasneet Kaur, R.K. Kotnala, K. C. Verma
2014	Multiferroic Properties of BiFeO ₃ /BaTiO ₃ Multilayered Thin Films	Physica B 448 (2014) 125-27	S.Sharma, Monika Tomar, A.Kumar, Nitin K. Puri
2014	AC electrical conductivity and magnetic properties of BiFeO ₃ -CoFe ₂ O ₄ nanocomposites	J. Alloys and Compound 599 (2014) 32-39	H.B. Sharma, K. N. Devi, J.H. Lee, S.Bobby Soran
2014	Fabrication of an efficient GLAD assisted p-NiO nanorods/n-ZnO thin film heterojunction UV photodiode	J. Materials Chemistry C 2 (2014) 2387-93	Manisha Tyagi, Monika Tomar
2014	Optical properties of WO ₃ thin films using SPR technique	J. Applied Physics 115 (2014) 043104	Ayushi Paliwal, Anjali Sharma, Monika Tomar
2014	Effect of processing parameters for electrocatalytic properties of SnO ₂ thin film matrix for uric acid biosensor	Analyst 139 (2014) 837-49	Kashima Arora, Monika Tomar
2014	Metal clusters activated SnO ₂ thin film for low level detection of NH ₃ gas	Sensors & Actuators B 194 (2014) 410-18	Md Shahabuddin, Anjali Sharma, Monika Tomar, Ahmad Umar
2014	Inducing electrocatalytic functionality in ZnO thin film by N doping to realize a third generation uric acid biosensor	Biosensors and Bioelectronics 55(2014) 57-65	Kajal Jindal, Monika Tomar
2014	Ferroelectric photovoltaic properties of Ce and Mn codoped BiFeO ₃ thin film	J. Applied Physics 115 (2014) 014102	Surbhi Gupta, Monika Tomar
2014	Glad assisted synthesis of NiO nanorods for	Biosensors and	Manisha Tyagi,

	realization of enzymatic reagentless urea biosensor	Bioelectronics 52 (2014) 196-201	Monika Tomar
2014	Physico-chemical modification induced by 70 MeV carbon ions in alpha phased polyvinylidene fluoride (α -PVDF) polymer	Indian J. Pure and Applied Physics 52, (2014) 131-36	Suveda Aarya, Md. Shabuddin, Kapil Dev, A.A. Bafar, Siddhartha
2014	Influence of thickness on optical and structural properties of BiFeO ₃ thin films: PLD grown	Mater. Res. Bull.(Elsevier) 49 (2014) 531-36	Arun Singh, Z.R. Khan, P. M.Vilarinho, R.S. Katiyar
2014	SHI induced enhancement in green emission from nanocrystalline CdS thin films for photonic applications	J. Luminescence 147 (2014) 184-89	P. Kumar, N. Saxena, R. Chandra, K.Gao, S.Zhou, A. Agarwal, F. Singh, D. Kanjilal
2013	Zinc oxide-multiwalled carbon nanotubes hybrid nanocomposite based Urea biosensor	J. Materials Chemistry B 1 (2013) 6392-401	Manvi Tak, Monika Tomar
2013	Laser ablated ZnO thin film for amperometric detection of urea	J. Applied Physics 114 (2013) 124702	Neha Batra, Monika Tomar, Prateek Jain
2013	N doped ZnO thin film for development of magnetic field sensor based on Surface plasmon resonance	Optics Letters 38 (2013) 3542-45	Kajal Jindal, Monika Tomar, R.S. Katiyar
2013	Nitrogen doped zinc oxide thin films biosensor for determination of Uric Acid	Analyst 138 (2013) 4353-62	Kajal Jindal, Monika Tomar
2013	Effect of metal oxide sensing layers on the distinct detection of ammonia using Surface Acoustic Wave (SAW) sensors	Sensors and Actuators B 187 (2013) 567-73	V.Bhasker Raj, H.Singh, A.T. Nimal, M.U. Sharma
2013	Sol-gel derived Ag doped ZnO thin film for UV photodetector with enhanced response	J. Materials Science 48 (2013) 7994-8002	Akshita Rajan, Harish K. Yadav & Monika Tomar
2013	Study of collective efforts of catalytic activity and photoactivation to enhance room temperature response of SnO ₂ thin film sensor for methane	Sensors and Actuators B 182 (2013) 741-46	Divya Haridas
2013	Raman spectra, photoluminescence, magnetism and magnetoelectric coupling in pure and Fe doped BaTiO ₃ nanostructures	J. Alloys and Compound 578 (2013) 5-11	K.C.Verma, J.Kaur, R.K. Kotnala
2013	Room temperature ferromagnetism in PLD grown Zn _{1-x} Li _x O _{1-y} N _y thin films	Integrated Ferroelectrics 148 (2013) 96-101	Kajal Jindal, Monika Tomar, R.S. Katiyar
2013	Realization of Surface acoustic wave (SAW) and semiconductor gas sensors for room temperature detection of NO ₂ gas	Integrated Ferroelectrics 148 (2013) 90-95	Anjali Sharma, V. B. Raj, Kajal Jindal, Monika Tomar
2013	Comparison of residual stress in deep boron diffused Silicon (100), (110) and (111) wafers	Material Letters,100 (2013) 44-46	S. Dutta, G. Saxena, Shaveta, K. Jindal, R.Pal, R. Chatterjee
2013	A process for the selective removal of arsenic from contaminated water using acetate functionalized zinc oxide nanomaterials	Environmental progress & Sustainable Energy, 32 (2013)	N. Singh, S.P. Singh, H.K. Yadav, T.Ahuja, S.Swarupa Tripathy and

		1023-1029	Rashmi
2013	Enhanced response characteristics of SnO ₂ thin film based NO ₂ gas sensor integrated with nanoscaled metal oxide clusters	Sensors and Actuators B, 181 (2013) 735-42	Anjali Sharma, Monika Tomar
2013	Oxide thin films (ZnO, TeO ₂ , SnO ₂ , and TiO ₂) based Surface Acoustic Wave (SAW) E-Nose for the detection of chemical warfare agents	Sensors and Actuators B, 178 (2013) 636-47	V. Bhasker Raj, Harpreet Singh, A.T. Nimal, M.U. Sharma
2013	P-N <u>junction</u> of NiO thin film for photonic devices	IEEE Electron Device Letters 34 (2013) 81-83	Manisha Tyagi, Monika Tomar
2013	Study of A-site and B-site doping on multiferroic properties of BFO thin films	Ferroelectrics 454 (2013) 41-46	Surbhi Gupta, Monika Tomar, A.R. James
2013	Post deposition annealing of NiOx thin film: A transition from n-type to p-type conductivity for short wavelength optoelectronic devices	J. Materials Research 28 (2013) 723-32	Manisha Tyagi, Monika Tomar
2013	A low temperature operated NO ₂ gas sensor based on TeO ₂ /SnO ₂ p-n interface	Sensors and Actuators B, 176 (2013) 875-83	Anjali Sharma, Monika Tomar
2013	Low temperature sensing of NO ₂ gas using SnO ₂ -ZnO nanocomposite sensor	Advanced Materials Letters, 4 (2013) 196-201	R.K. Sonker, A.Sharma, M. Shahabuddin, M. Tomar
2013	NiO Nanoparticle based Urea biosensor	Biosensors& Bioelectronics 41 (2013) 110-15	Manisha Tyagi, Monika Tomar
2013	WO ₃ nanoclusters-SnO ₂ film gas sensor heterostructure with enhanced response for NO ₂	Sensors and Actuators B, 176 (2013) 675-84	Anjali Sharma, Monika Tomar
2013	Efficient detection of cholesterol using ZnO thin film based matrix	J. Experimental Nanoscience, 8 (2013) 87	Neha Batra, Monika Tomar
2013	Raman spectroscopy of nanocrystalline Mn doped BiFeO ₃ thin films	J. Experimental Nanoscience, 8 (2013) 261	Surbhi Gupta, Monika Tomar
2013	SnO ₂ -CuO nanocomposite thin film for fast detection of H ₂ S gas	J. Experimental Nanoscience, 8 (2013) 326	Manish Verma
2012	Al:ZnO thin film: An efficient matrix for cholesterol detection	J. Applied Physics 112 (2012) 114701	Neha Batra, Monika Tomar
2012	Room temperature trace level detection of NO ₂ gas using SnO ₂ modified carbon nanotubes based sensor	J. Materials Chemistry 22 (2012) 23608-616	Anjali Sharma, Monika Tomar
2012	Realization of an efficient cholesterol biosensor using ZnO Nanostructured thin film	Analyst 137 (2012) 5854-59	Neha Batra, Monika Tomar
2012	Nanotwinning and structural phase transition in CdS quantum dots	Nanoscale Research Letter 7 (2012) 584	P. Kumar, N. Saxena, R. Chandra, Avinash Agarwal, D. Kanjilal
2012	Enhanced response of Pd nanoparticle loaded	IEEE Sensors J. 12	Manish Verma

	SnO ₂ thin film sensor for H ₂ gas	(2012) 2993-99	
2012	Recent advances in ZnO nanostructures and thin films for biosensor applications	Analytica Chimica Acta 737 (2012) 1-21	S. K. Arya, S.Saha, J.E.R.-Vick, S.Bhansali,S.P. ingh
2012	CuO thin film based uric acid biosensor with enhanced response characteristics	Biosensors& Bioelectronics 38 (2012) 11-18	Kajal Jindal, Monika Tomar
2012	Influence of hole mobility on the response characteristics of p-type NiO thin film based glucose biosensor	Analytica Chimica Acta, 725 (2012) 93-101	Manisha Tyagi, Monika Tomar
2012	Investigations on the origin of mass and elastic loading in the time varying distinct response of ZnO SAW ammonia sensor	Sensors & Actuators B, 166-167 (2012) 576-85	V.B. Raj, A.T. Nimal, Y. Parmar, M.U. Sharma
2012	A highly sensitive SnO ₂ -CuO multilayered sensor structure for detection of H ₂ S gas	Sensors & Actuators B, 166-167 (2012) 378-85	Manish Verma
2012	Deposition of stress free c-axis oriented LiNbO ₃ thin film grown on (002) ZnO coated Si Substrate	J. Applied Physics 111 (2012) 102803.1-6	Swati Shandilya, Monika Tomar
2012	Enhanced response characteristics of SnO ₂ thin film based sensors loaded with Pd clusters for methane detection	Sensors & Actuators B, 166-167 (2012) 156-64	Divya Haridas
2012	Sensing response characteristics towards H ₂ with Pt and Pd nanoparticles dispersed on SnO ₂	Sensor Letters 10 (2012) 775-82	Manish Verma, Monika Tomar
2012	Structural and Magnetic Properties of N doped ZnO thin films	J. Applied Physics 111 (2012) 102805.1-5	Kajal Jindal, Monika Tomar
2012	Fe doped ZnO thin film for mediator-less biosensing application	J. Applied Physics 111 (2012) 102804.1-5	Shibu Saha, Monika Tomar
2012	Magnetoelectric coupling in multiferroic Ba(Fe _{0.01} Ti _{0.99})O ₃ nanowires	Advanced Material Letter., 3 (2012) 371-75	J. Kaur, J. Kaur, J. Shah, R.K. Kotnala, K.C. Verma
2012	A comparative study of UV photoconductivity relaxation in zinc oxide (ZnO) thin films deposited by different techniques	J. Applied Physics 111 (2012) 102809.1-5	Harish K. Yadav
2012	Piezoresponse Force Microscopy and VSM Study of Single Phased Mn Induced Multiferroic BiFeO ₃	J. Applied Physics,111 (2012) 064110	S. Gupta, A. Sharma, Monika Tomar, M. Pal, Ruyan Guo, A. Bhalla
2012	Temperature dependent dynamics of ZnO nanoparticles probed by Raman scattering: A big divergence in the functional areas of nanoparticles and bulk materials	Applied Physics Letter 100 (2012) 051906	Harish Kumar Yadav, R.S. Katiyar
2012	Utilization of mass and elastic loading in oxide materials based SAW devices for the detection of mustard gas stimulant	Advanced Mater. Research 488-489 (2012) 1558-62	V.B. Raj, H. Singh, A. T. Nimal, M.U. Sharma, Monika Tomar
2012	Effect of WO ₃ catalyst nanoclusters towards NO ₂ sensing characteristics of SnO ₂ films	J. Nanoscience Letters 2 (2012) 27	Anjali Sharma, Monika Tomar

2012	Fundamentals and application of ordered molecular architectures to affinity biosensing	Chemical Society Reviews, 41 (2012) 1363-1402	Z. Matharu, A.J.Bandodkar, B.D. Malhotra
2012	Optical properties of NiO thin films: A potential material for optoelectronic devices	Advanced Mater. Research 488-489 (2012) 103-08	Manisha Tyagi, Monika Tomar
2012	Fe modified ZnO based mediator-less biosensor	Chemical Sensors 2 (2012) 8	Monika Tomar, Shibu Saha, Kasima Arora
2012	Optical properties of the c-axis oriented LiNbO ₃ thin film	Thin Solid Films 520 (2012) 2142-46	Swati Shandilya, Anjali Sharma, Monita Tomar
2012	Low temperature operating SnO ₂ thin film sensor loaded with WO ₃ micro-discs with enhanced response for NO ₂ gas	Sensors and Actuators B, 161 (2012) 1114-18	Anjali Sharma, Monika Tomar
2012	ZnO Surface Acoustic Wave Sensor for the Orthogonal Detection of DMMP	Diffusion and Defect data Pt. B: Solid State Phenom. 185 (2012) 69-72	V. Bhasker Raj, Monika Tomar, A.T.Nimal, Y.Parmar, M.U.Sharma
2012	Mediator Free Cholesterol Biosensor Based on 4-Aminothiophenol Self-Assembled Monolayer Platform	Analyst 137 (2012) 747-53	Zimple Matharu, P. R. Solanki, B.D. Malhotra
2012	Co and Fe doped SnO ₂ nanorods by Ce co-doping and their electrical and magnetic properties	Advanced Mater. Letter 3 (2012) 511-14	J. Kaur, J. Kaur, R.K. Kotnala, K.C. Verma
2012	Uric acid biosensor based on pulsed laser deposited CuO thin film	J. Nanoscience Letters 2 (2012) 28	Kajal Jindal, Kashima Arora, Monika Tomar
2012	Size dependent dielectric properties of Co and Fe doped SnO ₂ nanoparticles and their nanorods by Ce co-doping	Indian J. Pure and Applied Physics, 50 (2012) 57-63	J.Kaur, R.K. Kotnala & K.C.Verma
2011	Highly sensitive and selective uric acid biosensor based on RF sputtered NiO thin film	Biosensors& Bioelectronics 30 (2011) 333-336	Kashima Arora, Monika Tomar
2011	Al and Fe co-doped transparent conducting ZnO thin film for mediator-less biosensing application	AIP Advances 1 (2011) 042112. Also in Virtual J. Biological Phys. Res. in issue May 15, 2012	Shibu Saha
2011	Influence of surface defects in ZnO thin films on its biosensing response	J. Applied Physics 110 (2011) 064904. Also in Virtual J. Biological Phys. Res. in issue Oct. 1, 2011	Shibu Saha
2011	A Novel ZnO-Methylene Blue Nano-composite Matrix for Biosensing Application	International J. Electrochemistry 2011 (2011) A.ID 823734	S. Saha, Sunil Arya, S.P. Singh
2011	Modified cascade model of resonant Raman scattering: a case study of UV Raman scattering in Zn _{1-x} Mn _x O thin films	J. Raman Spectroscopy 42 (2011) 2126-31	Harish K. Yadav, R.S. Katiyar
2011	SnO ₂ thin film sensor with enhanced response for	Sensors and Actuators	Anjali Sharma, Monika

	NO ₂ gas at lower temperatures	B 156 (2011) 743-52	Tomar
2011	Composition dependent preferential orientation, dielectric and ferroelectric properties of Pb(ZrTi _{1-x})O ₃ thin films derived by sol-gel process	Materials Letters 65 (2011) 901-04	P. Jegatheesan, H.K. Yadav, N.V. Giridharan
2011	A-site substitution effect of Strontium on bismuth layered CaBi ₄ Ti ₄ O ₁₅ ceramics on electrical and piezoelectric properties	Materials Chemistry and Physics 130 (2011) 95-103	Amit Tanwar, Maya Verma, K. Sreenivas
2011	Softening behavior of acoustic phonon mode in ZnO nanoparticles: the effect of impurities and particle size variation with temperature	J. Raman Spectroscopy, 42 (2011) 1620-25	H.K. Yadav, K. Sreenivas, R.S. Katiyar
2011	Origin of stress in rf magnetron sputtered zinc oxide thin films	J. Applied Physics 109 (2011) 064905	Rashmi Menon, Hoe Tan, K. Sreenivas, C. Jagadish
2011	Enhanced room temperature response of SnO ₂ thin film sensor loaded with Pt catalyst clusters under UV radiation for LPG	Sensors and Actuators B, 153 (2011) 152-57	Divya Haridas, Arijit Chowdhuri, K. Sreenivas
2011	Effect of thickness of Platinum catalyst clusters on response of SnO ₂ thin film sensor for LPG	Sensors and Actuators B, 153 (2011) 89-95	Divya Haridas, Arijit Chowdhuri, K. Sreenivas

Articles

Nil

3.

a) Research papers published in Refereed/Peer Reviewed Conference Proceedings (Last Five Years)

1. "Low temperature operated NiO-SnO₂ heterostructured SO₂ gas Sensor", Punit Tyagi, Anjali Sharma, Monika Tomar & Vinay Gupta, AIP conference proceedings, Vol.1724, page 20077.1-8 (2016). doi: 10.1063/1.4945197
2. "Enhanced dielectric properties of multilayered BiFeO₃/BaTiO₃ capacitors deposited by pulsed laser deposition", Savita Sharma, Monika Tomar, Nitin K Puri and Vinay Gupta, AIP conference proceedings, Vol.1724, page 020098.1-7 (2016). doi: 10.1063/1.4945218
3. "Long range surface plasmon resonance (LRSPR) based highly sensitive refractive index sensor using Krestschmann prism coupling arrangement", Ayushi Paliwal, Anjali Sharma, Monika Tomar and Vinay Gupta, AIP conference proceedings, Vol.1724, page 020132.1-5 (2016). doi: 10.1063/1.4945252
4. "Structural and magnetic properties of Ni-Zn doped BaM nanocomposite via citrate precursor", Kush Rana, Preeti Thakur, Monika Tomar, Vinay Gupta and Atul Thakur, AIP conference proceedings, Vol.1731, page 050152 (2016). doi: 10.1063/1.4947806
5. "Long range surface plasmon resonance (LRSPR) based highly sensitive refractive index sensor using Krestschmann prism coupling arrangement", Ayushi Paliwal, Anjali Sharma, Monika Tomar and Vinay Gupta, AIP conference proceedings, Vol.1724, page 020132.1-5 (2016). doi: 10.1063/1.4945252
6. "Optical tuning of electrical properties of PZT thin film deposited on STO", Reema Gupta, Monika Tomar and Vinay Gupta, Proc. SPIE Vol. 9667 page. 966703 (November 6, 2015), International Workshop on Thin Films for Electronics, Electro-Optics, Energy, and Sensors, Suzhou, China. doi:10.1117/12.2199851
7. "Nanostructured zinc oxide thin film for application to surface Plasmon resonance based cholesterol biosensor", Gurpreet Kau, Monika Tomar and Vinay Gupta, Proc. SPIE Vol. 9667 page. 966706 (November 6, 2015), International Workshop on Thin Films for Electronics, Electro-Optics, Energy, and Sensors, Suzhou, China. doi:10.1117/12.2199850.
8. "Effect of rapid thermal annealing temperature on the dispersion of Si nanocrystals in SiO₂ matrix", Nupur Saxena, Pragati Kumar and Vinay Gupta, AIP conference proceedings, Vol.1661, page 080026 (2015)
9. "Influence of Ag doping concentration on structural and optical properties of CdS thin film", Pragati Kumar, Nupur Saxena, Avinash Agarwal and Vinay Gupta, AIP conference proceedings, Vol.1661, page 080017. (2015)

10. "Multiferroic BiFeO₃/BaTiO₃ thin films fabricated by Chemical solution deposition technique", S. Sharma, M.Tomar, N.K. Puri and V. Gupta, Mater. Res. Soc. Symp. Proc., Vol 1805, (2015).
11. "Enhanced response of SnO₂ based thin film sensors towards methane gas due to the collective efforts of catalytic activity and photo-activation phenomenon" Divya Haridas and Vinay Gupta, IOP Conference series: Materials science and Engineering. 73 (2015) 012025. DOI: 10.1088/1757-899X/73/1/012025.
12. "Efficient detection of SO₂ gas using SnO₂ based sensor loaded with metal oxide catalysts", P. Tyagi, A. Sharma, M.Tomar & V. Gupta, Proceedia Engineering 87(2014) 1075-78. DOI: 10.1016/j.proeng.2014.11.349
13. "Fast response of ultra-violet photodetectors based on sol gel derived Ga doped ZnO", A. Ranjan, H.K. Yadav, V. Gupta & M.Tomar, Proceedia Engineering 94(2014) 44-51. DOI: 10.1016/j.proeng.2013.11.046
14. "Ultraviolet radiation detection by barium titanate thin films grown by Sol-gel hydrothermal method", S. Sharma, M.Tomar, N.K.Puri & V. Gupta, Proceedia Engineering 87 (2014) 1172-75. DOI: 10.1016/j.proeng.2014.11.375
15. "NO_x Sensing properties of Barium Titanate thin films", S. Sharma, A. Sharma, M.Tomar, N.K. Puri and V. Gupta, Proceedia Engineering, 87 (2014) 1067-70. DOI: 10.1016/j.proeng.2014.11.347
16. "Low Temperature Operated NO₂ Gas Sensor Based on SnO₂-ZnO Nanocomposite Thin Film", Rakesh Kumar Sonker, Anjali Sharma, Monika Tomar, Vinay Gupta, and B. C. Yadav, Adv. Sci. Lett. 20, (2014) 911-916.
17. "Reliability and Reproducibility Study on Hand-Held Liquefied Petroleum Gas Sensors Based on Sputtered SnO₂ Thin Film and Micro-Heater Using Pt Catalyst", Punit Tyagi, Anjali Sharma, Monika Tomar, and Vinay Gupta, Adv. Sci. Lett. 20, (2014) 953-958. DOI: 10.1166/asl.2014.5472
18. "Room Temperature Efficient Detection of NH₃ Using Surface Plasmon Resonance (SPR) Technique", Ayushi Paliwal, Anjali Sharma, Monika Tomar, and Vinay Gupta, Adv. Sci. Lett. 20, (2014) 966-970.
19. "BFMO/BCFO Multilayered Thin Film for Photovoltaic Application", Surbhi Gupta, Monika Tomar, Ashok Kumar, and Vinay Gupta, Adv. Sci. Lett. 20, (2014) 971-976. DOI: 10.1166/asl.2014.5453
20. "Effect of Swift Heavy Ions on Pulsed Laser Deposited Ag Doped CdS Nanocrystalline Thin Films", Pragati Kumar, Nupur Saxena, Vinay Gupta, Kun Gao, Fouran Singh, and A. Agarwal, Adv. Sci. Lett. 20, (2014) 977-83.
21. "Influence of Doping of Different Metals on the Photoconducting Properties of ZnO Thin Films", Akshita Rajan, Vinay Gupta, Harish Kumar Yadav, and Monika Tomar, Adv. Sci. Lett. 20, (2014) 994-1000.
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26. "Analysis of the I-V Characteristics of the In/p-NiO/Pt/Si Schottky Diode", Manisha Tyagi, Monika Tomar, and Vinay Gupta, Adv. Sci. Lett. 20, (2014) 1077-1080. DOI: 10.1166/asl.2014.5452
27. "Ferroelectric and Magnetoelectric Characteristics of the PZT Thin Films Deposited on Nickel", Reema Gupta, M. Tomar, Vinay Gupta, Yuan Zhou, Amar Bhalla, and Shashank Priya, Adv. Sci. Lett. 20, (2014) 1116-1119.
28. "Nano-Crystalline SnO₂ Thin Film Based Surface Acoustic Wave Sensor for Selective and Fast Detection of NO₂ Gas", V. Bhasker Raj, Monika Tomar, A. T. Nimal, Manoj U. Sharma, and Vinay Gupta, Adv. Sci. Lett. 20, (2014) 1124-1128. DOI: 10.1166/asl.2014.5470
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31. "Hydrothermally Synthesized Flower-Like Zinc Oxide Nanostructured Matrix for Amperometric Biosensors

- with Enhanced Response”, Manvi Tak, [Vinay Gupta](#), and Monika Tomar, *Adv. Sci. Lett.* 20, (2014) 1337–1346.
32. “Nanocatalyst (Pt, Ag and CuO) Doped SnO₂ Thin Film Based Sensors for Low Temperature Detection of NO₂ Gas”, Rakesh Kumar Sonker, Anjali Sharma, Monika Tomar, B. C. Yadav, and [Vinay Gupta](#), *Adv. Sci. Lett.* 20, (2014) 1374–1377. DOI: 10.1166/asl.2014.5734
 33. “Role of Au Incorporated on the Surface of ZnO Thin Film in Enhancing the UV Photoresponse, Akshita Rajan, [Vinay Gupta](#), Harish K. Yadav & Monika Tomar, *Adv. Sci. Lett.* 20 (2014) 1437–41. DOI: 10.1166/asl.2014.5504
 34. “Structural, Optical, and Electrical Properties of Thin Films of Bismuth Tri-Iodide”, Alka Garg, Monika Tomar, and [Vinay Gupta](#), *Adv. Sci. Lett.* 20, (2014) 1442–1445. DOI: 10.1166/asl.2014.5505
 35. “Probing Temperature Dependent Dielectric and Optical Properties of WO₃ Thin Films by Surface Plasmon Resonance Technique”, Ayushi Paliwal, Anjali Sharma, Monika Tomar, and [Vinay Gupta](#), *Adv. Sci. Lett.* 20, (2014) 1522–1525. DOI: 10.1166/asl.2014.5513
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 39. “Dielectric properties of SnO₂ thin film using SPR technique for gas sensing applicataions”, Ayushi Paliwal, Anjali Sharma, Monika Tomar and [Vinay Gupta](#), *Conference Papers in Science*, Vol. 2014, A.ID 656120, pages 4, doi: 10.1155/2014/656120
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 41. “Langmuir-Blodgett films of polyaniline for efficient detection of uric acid”, Kashima Arora, Monika Tomar, Vinay Gupta, *World academy of Science, Engineering and Technology*, 78 (2013) 1490-93.
 42. “Thickness Dependent Optical Properties of WO₃ Thin Film Using Surface Plasmon Resonance”, Ayushi Paliwal, Monika Tomar and [Vinay Gupta](#), ***Proc. Materials Research Society Symp.***, 1494 (2013) 233-38.
 43. “Effect of dispersal of Pd nanocatalysts on H₂S sensing response of SnO₂ thin film based gas sensor”, Manish Verma, N.Batra, M. Tomar and [Vinay Gupta](#), ***Proc. Materials Research Society Symp.***, 1494 (2013) 327-32.
 44. “Copper doped ZnO thin film for ultra-violet photodetector with enhanced photosensitivity”, A. Ranjan, K. Arora, Harish Yadav, [Vinay Gupta](#) and M.Tomar, ***Proc. Materials Research Society Symp.***, 1494 (2013) 43-49.
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 46. “An Efficient Uric Acid Biosensor Based on Tin Oxide Thin Film Matrix”, Kashima Arora, Monika Tomar and [Vinay Gupta](#), ***Proc. Materials Research Society Symp.***, Vol. 1530 (2013), DOI:10.1557/opl.2013.470
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 48. “Study of Lanthanum incorporated HfO₂ nano-scale high-k dielectric using Pulsed Laser Deposition for metal-insulator-metal capacitor applications”, A. Srivastava, Y. Malhotra, [V. Gupta](#), *Proc. 2012 International Conference on Solid-State and Integrated Circuit (ICSIC 2012)*, *IPCSIT Vol. 32*, (2012) pp. 165-169
 49. “Surface Plasmon resonance based optical NO_x gas sensor”, A. Paliwal, M. Tomar and [V.Gupta](#), *Proc. of Intl. Conf. on Fiber optics and Photonics, PHONOTICS 2012*, A.N.6545475.
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54. "Improved response characteristics of SnO₂ film based NO₂ gas sensor with nanoscaled metal oxide catalysts", Anjali Sharma, Monika Tomar and Vinay Gupta, **Proc. of 14th International meeting on Chemical sensors**, (May 2012, Germany), pp. 702-05. DOI 10.5162/IMCS2012/8.3.4
55. "Highly sensitive ZnO-SnO₂ nanocomposite H₂ gas sensor", M.K. Verma, and Vinay Gupta, **Proc. of 14th International meeting on Chemical sensors**, (2012, Germany), pp.787-90. DOI 10.5162/IMCS2012/P1.0.13
56. "Analysis of industrial and domestic gases by means of electronic nose", Divya Haridas and Vinay Gupta, **Proc. 14th International meeting on Chemical sensors**, (May 2012, Germany), pp.122-25, DOI: 10.5162/IMCS2012/1.4.4
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63. "Enhanced UV Photon-response of tin nano-cluster loaded- laser Irradiated ZnO thin film detector", Rashmi Menon, K. Sreenivas & Vinay Gupta, **Proc. Materials Research Society Symp.** 2011, Vol.1288, pp. 49-54.
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b) Invited talks (Last Five years)

- Invited Talk, Inspire Programme, DST sponsored INSPIRE programme, SRM University, Kundli, Haryana, 20 July
- Invited Talk, "Processing techniques for thin films and nanostructures", Workshop on Techniques of Material processing, Central University of Haryana, 27-29 April 2016.
- Invited Talk, "Semiconductor thin films and nanostructure for UV photodetectors and Biosensors", National conference on Semiconductor Materials and Devices, IIT Jodhpur, 4-6 March 2016-03-06
- Invited Talk, "Thin films and multilayer structures of multiferroics for energy harvesting applications", International conference on Materials Science and Technology", Conference Center, University of Delhi, Delhi, 1-4 March 2016.
- Invited Talk and Session Chair, Conference on Microscopy of Materials during 2nd Annual General Meeting of Academy of Microscope Science & Technology (AMST), 26 Feb 2016, Thapar University, Patiala.

- Invited Talks at various colleges of Delhi University (Hindu, Kirori Mal, Daulat Ram, SSN , etc.)
- Invited Talk, Electronic Department, Kurukshetra University, 25 Feb 2016
- Key Note Talk, Workshop on “Advance Techniques in Mathematics, Physics & Computer Sciences (WATMPCS-16), 18th Feb 2016, SRM University, Modi Nagar
- Key Note address, “The World of Physics”, in the Enrichment Programme - Fundamentals of Physics for teachers of classes VI- X, the DPS Society’s- HRD Centre, February 2016.
- Invited Talk, Inspire Science Camp, sponsored by DST, at Rajdhani College, 2 Feb 2016
- Invited Talk, One day lecture series, Physics Department, Motilal Nehru College, 29th Jan 2016
- Invited Talk and Session Chair, “A table top Surface Plasmon Resonance (SPR) technique to probe the optical property of unknown materials and optical sensors”, International conference on Advances in Light Technologies and Spectroscopy of Materials (ICALTSM -2016), Lucknow University, 18 January 2016
- Invited Talk, “Low Frequency Raman Spectra of Semiconducting Nanoparticles and Ferroelectric Superlattices”, Inside Raman 2015, sponsored by Renishaw IISER Chandigarh, 10 Dec 2015
- Invited Talk, Inspire Internship programme (Science Camp) sponsor by DST, Deshbandhu College, 15 Dec 2015
- Invited Talk, “Multiferroic thin films and multilayer structures for energy harvesting applications”, National conference on Emerging Trends in Science & Engineering Research (ETSER-2015), NIT, Manipur, 3 Dec. 2015
- Invited Talk, “Prism coupling based Surface Plasmon Resonance (SPR) technique: A tool to probe optical property of unknown materials and optical sensors”, 3rd National Conference on Photonics and Materials Science, 18 November 2015, Guru Jambheshwar University of Science & Technology, Hisar
- Invited Talk, 1st Refresher Course in Physics, UGC-Human Resource Development Centre, Jawaharlal Nehru University, 12 October 2015
- Invited Talk, "International Conference on Emerging Technologies: Micro to Nano-2015 (ETMN-2015)", 24 Oct. 2015, Manipal University, Jaipur.
- Chief Guest, Hindi Diwas, Defence Institute of Physiology & Allied Sciences (DRDO), Delhi, 14 Sept. 2015.
- Key Note address, “The World of Physics”, in the Enrichment Programme - Fundamentals of Physics for teachers of classes VI- X, the DPS Society’s- HRD Centre, 9 September 2015.
- Invited Talk, “Neisseria Meningitidis Detection using Surface Plasmon Resonance based Microfluidic Biosensor”, Indo-UK Workshop on “Micro & Nano Fluidics for Health and Diagnostics”(fluidicsHD), CEERI, Pilani, 27-28 August 2015.
- Invited talk, CEP on “Physical Vapour deposition technique”, Solidstate Physics Lab (DRDO), Delhi, 4 Aug. 2015
- Invited Talk on “Surface Plasmon Resonance : A versatile tool for optical property and sensor application”, Faculty Development Program on Nanomaterials and Its Applications, Department of Biotechnology, 13th July 2015 at Jaypee Institute of Information Technology (JIIT), Noida
- Invited Talk, “Multiferroic thin film & multilayer structure for energy harvesting applications”, International workshop on Thin-films for Electronics, Electro-optics, Energy and Sensors, Suzhou, China, 4-6 July 2015
- Invited Talk, Development of Underwater Sensing Materials, Acoustic Sensors & its Characterization, during CEP on “Advanced Futuristic Under-Water Sensors” at Solidstate Physics Lab (DRDO), 18 March 2015.
- Invited Talk, Surface Plasmon Resonance (SPR) technique for dielectric studies of materials (solid, liquid or gases) and optical sensors, Ch. Devi Lal University, Sirsa, Haryana, 9 March 2015
- Invited talk, “Surface Plasmon Resonance (SPR) technique: A versatile tool for dielectric properties of materials (Solid, Liquid or gases) and optical Sensors”, National conference on Microscopy & Advances in Material Sciences, Dept. of Physics, University of Jammu, 2-4 March 2015
- Key Note address, Development of Multifunctional nanomaterial for sensing applications, Bhubneshwar, Orissa, Feb. 2015
- Invited Talk, Development of multifunctional materials for electronic devices, 3rd International Symposium on Semiconductor Materials & Devices (ISSMD-3), Crystal Growth Centre, Anna Univ., Chennai, 3 Feb, 2015
- Invited Talk, “NiO nanostructures based homojunctions and heterojunctions for UV photodiodes”, International conference on recent advances in nanoscience & nanotechnology-2014, 15-16 December 2014, Special centre for Nanoscience, Jawaharlal Nehru University, Delhi.
- Invited Talk, 18th NSFD, Physics Department, Manipur University, Imphal, Manipur, 3-5 Nov. 2014.
- Invited Talk, Energy Harvesting, INSPIRE program, Deshbandhu College (Univ. of Delhi), 9 Oct. 2014
- Invited Talk and Session chair, National conference on multifunctional advanced materials, Shoolini University, Solan, Himachal Pradesh, 11-13 June 2014.
- Invited Talk, “National conference on Nanotechnology and Renewable Energy”, Jamia Millia Islamia, New

Delhi, 28-29 April, 2014.

- Invited Talk, "1st Indo-UK seminar on recent Advances in Chemical Sensors" 10-11 February 2014, Gargi College, Delhi University, Delhi
- Plenary Talk, "National conference on synthesis characterization & application of advanced nanomaterials", Hindustan College of Science & Technology, Farah, Mathura, UP, 17-19 Jan 2014.
- Key note address, "National conference on Advances in Material Science for energy applications", Univ. of Petroleum and Energy Studies, Dehradun, 9-10 January 2014.
- Invited Talk, 17th International Workshop on the Physics of Semiconductor Devices (IWPSD), Amity University, Noida, 10-13 Dec. 2013
- Chair one technical session and Invited talk at International conference on Nanoscience and nanotechnology (ICNN-2013), Babasahed Bhimrao Ambedkar University, Lucknow, 18-20 Dec. 2013
- Invited Talk, Workshop on Sensors Technology, Physics Department, AND College (Delhi Univ.), 14 Oct. 2013
- Chair one Technical session and deliver invited talk, "International conference on Nanotechnology", 25-26 July 2013, Ansal University, Gurgaon
- Invited Talk, "Experiments, investigative projects & Research based on Electricity/Electronics", Enrichment programme for teachers of physics (senior secondary level), DPS Society's HRD Centre, Dwarka, 5 June 2013.
- Invited Talk and Session Chaired, National Conference on Multifunctional advanced materials Shoolini University of Biotechnology and Management Science, Solan, Himachal, 2-4 May 2013.
- Invited Talk, National conference on Nanoscience & Nanotechnology, Dept. of Applied Physics, Aligarh Muslim University, 15-16 March 2013
- Orientation programme, CPDHE, Delhi University, Delhi, March 2013
- Invited Talk, Smart sensors, INSPIRE program, Deshbandhu College (Univ. of Delhi), 2013
- Invited talk on "Semiconductor sensors for detection for NO₂ gas for environment monitoring", National symposium on chemistry & Environment, DDU College (University of Delhi), 22-23 March 2013.
- Invited Talk, INMAM workshop and 8th Asian Meeting on Ferroelectrics (AMF-8), Pattaya, Thailand, 8-13 Dec. 2012.
- Invited Talk, National conference on Nanoscience & Nanotechnology, Dept. of Applied Physics, Aligarh Muslim University, 10-12 March 2012
- Invited Talk, India-Singapore Joint Physics symposium (ISJPS-2012), IIT Delhi, 20-22 Feb. 2012.
- Medal lecture, 23rd AGM of Material Research Society of India, Thapar University, Patiala, 12-15 Feb 2012.
- Invited Talk, SPIE chapter, A.N.D. College (University of Delhi), Kalkaji, Feb 2012
- Invited Talk, Workshop on "Recent trends in physics", UGC-SAP program, Dept. of Physics & Electronics, Jammu University, 26 March 2012
- Invited Talk, INSPIRE program, Rajasthan University, Jaipur, 22 January 2012.
- Invited Talk, 26th National symposium on Plasma Science & Technology (PLASMA-2011), BITS Patna, 21 December 2011.
- Invited Talk, International Conference on nanomaterials and nanotechnology, University of Delhi, 20 December 2011
- Invited Talk, National workshop on multifunctional nanomaterials, Institute of Technical Education & Research, Siksha'O'Anusandhan University, 26 November 2011.
- Invited Talk, A workshop on MEMS Design, Technology & Applications (MDTA-2011), KITM, Kurukshetra, Haryana, 4 Nov. 2011
- Key-note Talk and Chief Guest, Joint Rajbhasha Technology Conference (SPL, INMAS, CEFIS, DIPAR, DIPAS), held at solid-state Physics Laboratory, Delhi, 18 Feb. 2011
- Invited Talk, 6th DAE-BRNS National symposium on PLD-2011, Indian Institute of Science, Bengaluru, 9-11 Nov. 2011
- Invited Talk and session chair, 16 National Seminar on Phys. & Tech. of Sensor, Physics Department, Lucknow University, Feb. 11-13, 2011
- Invited Talk, IISc-UNSW-UQ-DBT workshop on Materials, Indian Institute of Science, Bangalore, 7-8 Feb. 2011
- Invited Talk, One day workshop on Physics, Shivaji College (Delhi University), 4 Feb. 2011
- Invited Talk, 1st National conf. on recent advances in Polymer nanocomposites", Zakir Husain College (Delhi

University),14-15 Jan 2011
Total Publication Profile optional
<u>Books</u> 1 Edited Conference proceedings: American Scientific Publishers, USA 1 Edited book, Pub: Allied Publisher, India 1 Chapter in a Book, Pub: Elsevier, UK
<u>In Indexed/ Peer Reviewed Journals</u> 262 publications in Refereed Journals
<u>Articles</u> Nil
<u>Conference Presentations (International and National)</u> > 260 conference presentations
Public Service / University Service / Consulting Activity
<u>Public Service:</u> <ul style="list-style-type: none"> • Member of DST committee (2013-16), Expert Advisory Group (EAG) for Sensor and Allied Instrumentation of IDP • Expert Member for Physics, Expert committee of UGC for framing the syllabus along with schedule for Undergraduate courses under choice based credit system (CBCS) • UGC expert (2012-17), DSA program at Sardar Vallabh Bhai Patel University, Vidhya Nagar, Gujrat <u>University Service:</u> <ul style="list-style-type: none"> • Dean Examinations (May 2016 – till date) • Coordinator (Oct.2008- July 2016): M. Tech. Nuclear Science & Technology, Department of Physics and Astrophysics, University of Delhi • Convenor (2013), Curriculum development committee, 4-year undergraduate program (FYUP) of Physics, University of Delhi (2013) • VC Nominee, Departmental Research Committee, Dept. of Electronics, Delhi University (2010-14) • Program coordinator in Physics, 2-months Training program for the faculty of Kabul University at University of Delhi (2013) under World Bank funded Indo-Kabul project. • Treasurer (June 2006 – Aug. 2010), Delhi University Students Union (DUSU) • Coordinator (2007-09; 2010-13, 2014-16), Sub committee of Courses of committee for B.Sc. Physics, Delhi University to appoint examiners for Theory/Practical examinations. • Member (2004-05,2007-08,2010-11,2015-16), Executive committee, Dept. of Physics & Astrophysics, Delhi University • Nodal Officer, NAAC Committee (2015-16), Dept. of Physics and Astrophysics, Delhi University • Nodal Officer for Admission(2012-16), Department of Physics and Astrophysics, Delhi University • Member, Advisory Committee, DBT funded Star College Programme, Hansraj College (2015-16) • Organize training programmes for students of M.Tech. NST at INMAS, BARC, IGCAR, DTU, etc. • Member(2009-11),Finance committee,M.Tech. course in Nanoscience & Nanotechnology, Univ.of Delhi • Member, Advisory committee and Monitoring committee, DUSU election (2007-2010) • Convenor/Member in various departmental committees such as Time-table committee, Library

committee, Workshop committee, Admission committee, TPSC-visitor's program committee, Space committee, Writen-off committee, Examination committee, Clearance committee for retired faculty, User committee for experimental facility, etc.

- Convenor (Feb. 2011), Committee to improve/modify the semester based syllabus of B.Sc.(Hons) Physics, B.Sc. Applied/Physical science
- Presedising Officer (2013), UUC election of the Faculty of Science, Delhi University held on Oct.2013
- Coordinator, refresher course in Physics and Electronics of CPDHE, Dept. of Physics & Astrophysics, for University science teachers, Delhi University, 9 March to 30 March 2010.
- Coordinator, Three week structured Workshop at DRDO Laboratories [INMAS (June 2008, June 2009), and SPL (June 2009)], Delhi for undergraduate students of University of Delhi
- Coordinator/in-charge of refresher course: "Computer Application in Physical Science" for undergraduate science teachers at CPDHE, Delhi University, 17 Feb. to 9 March 2006
- Convener/Member of organizing committee of XI-XV annual QUEST (1996-2006), CSEC (Delhi University)
- Member, Governing Body of Daulat Ram College, University of Delhi (2010-2013)
- Member, Governing Body of Deen Dayal Upadhyaya College, Univ. of Delhi (2001-2002; 2010-2012)
- Member, Technical committee(2006-08), Delhi University for purchase of high end research instruments forUSIC
- Member, Technical committee (2006-08), Delhi University for purchase of teaching instruments for upgradation of science laboratories of undergraduate colleges.
- Convenor (2004), Curriculum development committee for B.Sc. Physical/Applied Science, Delhi Univ.
- Member(2004), Curriculum development committee, Interdisciplinary papers, B.Sc. Appl.Physical Sc.

Consulting Activities:

- Member, Management committee, Delhi Jain Sr. Sec. School, Palam, New Delhi (1991- till date)
- Member, Management committee, Jinwani Bharti Sr. Sec. School, Dwarka, N. Delhi (1997-till date)
- Member (2013-14), Technical Evaluation Committee for design consultancy Services for setting up Clean rooms & related infrastructure for advanced facility for Nanoelectronics at CEERI (CSIR), Pilani.
- External Expert, Syllabus for M.Sc. Physics (2013-14), YMCA university of Science & Tech., Faridabad.
- Member (May 2010), Course design committee for Condensed Matter Physics, IGNOU, New Delhi.

Professional Societies Memberships/Association

1. *Editing*

- Senior Editor(2015-17), Editorial board, Science Letters Journal:Chemical Sensors, Simplex academic publication
- Member (2016-17), Editorial board, "Science Advances Today", Simplex academic publication
- Senior Editor (2013-14), Associate Editor (2012-13) and Member (since 2011-) of the Editorial Board), Chemical Sensors, Simplex academic Publishers
- Guest Editor, Journal Scientific Conference Proceeding, Vol.1, No.1 (2009), pp.92; Special issue of peer-reviewed articles from MNNA 2006.
- Member (2012-14), International advisory board, Journal "Energy Harvesting & Systems", Pub.: De Gruyter, USA

2. *Reviewing*

Reviewed number of manuscripts for publication in several international Journals including:

- Advanced Materials, Nano scale, Applied Physics Letters, Biosensors and Bioelectronics, Sensors and Actuators B, J. Alloys and Compounds, J. Applied Physics, Physica B, Analytica Chemica Acta, Applied Surface Science, J. Crystal Growth, Thin Solid Films, Sensors, Analyst, RSC Advances, etc.

3. *Steering and Advisory committee of conferences*

- Member, Steering committee under Nanotechnology sectional committee MTD 33 of Bureau of Indian Standards to make arrangement for hosting the meeting of ISO/TC 229 Nanotechnology at New Delhi during 3-7 November 2014
- Member Steering committee, National Conference on “Electron Microscopy and Allied Fields” and XXXV Annual Meeting of Electron Microscope Society of India (EMSI), 7-11 July 2014
- Member: National organizing committee, 7th International Conference on the Physics of Dusty Plasma, Indian Habitate Centre, Delhi, March 4-7, 2014
- Member, Steering committee of 17th International Workshop on The Physics of Semiconductor Devices (IWPSD), 2013, Amity University.
- Member, Organizing Committee, International conference on quantum effects in solids of today (I-ConQuEST), 20-23 Dec. 2010 National Physical laboratory, Delhi
- Member, National Advisory Committee, International conference on nanostructured ceramics & other nanomaterials (ICNCN-2012), Dept. of Physics & Astrophysics, Delhi Univ., 13-16 March 2012
- Member, Steering committee of 16th International Workshop on The Physics of Semiconductor Devices (IWPSD), 2011, Jamia Millia Islamia University.
- Member, Advisory committee, Workshop on “Experiments on Physics & Electronics”, organized by ILLI, Delhi University, at Keshav Mahavidhyalaya for college teachers (22-26 July 2008)
- Member, Steering committee, National Conference on “Electron Microscopy and Allied Fields” and XXIX Annual Meeting of Electron Microscope Society of India (EMSI) during November 26-28, 2007

4. *Committees and Boards*

- Member (2015-18), Research Council, Solid State Physics Laboratory, DRDO, Delhi
- Member (2014-17), Scientific Advisory Committee of Inter-University Acceleration Centre, Delhi
- Member (2015-17), Board of Studies, School of Applied Physics, Delhi Technological Univ., Delhi
- Member (2013-2015), Steering committee of DST on Sensor Hub, CGCRI (CSIR Lab), Kolkata
- Member (2014-15), Expert committee of UGC for Travel grant assistance to college teachers to attend International conferences abroad
- Member (2015-2018), Board of Research Studies, Dept. of Physics, Central University of Haryana.
- Member of the accelerator Users committee of IUAC, Delhi (2014-16)
- Member, Board of Studies, Department of Physics, Lindsays University, Faridabad, (2014-16)
- Member of Board of Studies (2014), Amity Institute of Renewable & Alternative Energy, Amity University, Noida
- Area Advisory Member (2014-15), Amity Institute of Applied Sciences, Amity Univ., Noida
- Member Advisory Committee, Advanced Instrumentation Research Facility, Jawaharlal Nehru University, Delhi
- Member, Board of Research Studies, School of Physics & Materials, Thapar Univ. Patiala (2012-13)
- Member (2014-15), Research council, SRM University, Haryana

5. *Memberships and Office Bearer in Academic Societies*

- Senior Member of Institute of Electrical and Electronics Engineers (IEEE), USA
- Member of Optical Society of America, USA (2010 – till date)
- Life Member, Semiconductor Society (India)
- Life Member, Materials Research Soc. of India (MRSI)

- Life Member, Plasma Society of India
- Life Member, Electron Microscopy society of India
- Life Member, Indian Physics Teachers Association
- Regular Fellow (F1041), Optical Society of India (Nov. 2011).
- Vice-chairman (2015-), Semiconductor Society of India
- Vice-chairman (2013-14) and Member, Executive committee (2007-08), Delhi chapter of "IEEE Electron Devices Society"
- Member Executive committee (2010-12) Delhi Chapter, Materials Research Society of India

Projects (Major Grants / Collaborations)

Sponsoring Agency	Title of the projects	Tenure	Total Budget (Rs. In Lakhs)	Status
DST (Min. of S&T)	Development of thin film Surface Acoustic Wave device as a platform for the sensing applications	Nov.2014-19	424.38	Ongoing
DST (Min. of S&T)	Validation and improvement of indigenously developed table-top Surface Plasmon Resonance (SPR) system	March 15-Sept.16	86.31	Ongoing
DRDO(Min of Def.)	Molecular Modelling of Halons alternatives	April 2015- Dec.2017	276.07	Ongoing
DeitY (Min. IT & Comn.)	Demonstration of GaN LED by PLD	Feb.2014-Aug.16	470.80	Ongoing
UGC (MHRD)	e-PG Pathshala for preparation of content for Material Science for M.Sc.	Aug 2014-16	112.00	Ongoing
UGC (MHRD)	e-Pathshala for preparation of content for Physics contact for M.Sc.	Aug 2014-16	112.00	Ongoing
GAIL (Min. of Coal)	Development of metal oxide thin film based low cost sensor	Sept. 2013-2015	99.23	Completed
ISRO (Min. of Space)	Development of Platinum based Micro Heaters /Micro Evaporation Sources for Space Applications	Nov. 2014-15	32.00	Completed
DST (Min. of S&T)	Indigenous development of table top surface Plasmon resonance set-up	Oct. 2011-2013	40.71	Completed
ADA (NPMASS)	Growth and characterization of composite matrices of SnO ₂ thin film and nano catalysts for automotive gas sensors	Dec.2010-2013	33.93	Completed
DeitY (Min. IT & Comn.)	Development of low-cost real-time monitoring system for harmful gases (Ph-1)	March 2010 -2013	103.44	Completed
DeitY (Min. IT & Comn.)	Development of low-cost real-time monitoring system for harmful gases (Ph-2)	May 2011-2013	8.81	Completed
SPL (DRDO)	Multilayer metallization & PLG for advanced MEMS devices	Dec.2011- March2013	9.96	Completed
DST (PURSE)	Development of multifunctional metal oxide thin films for waveguiding and optoelectronic device applications	June 2009-2013	38.18	Completed
UGC (Min. of HRD)	Development of pulsed laser deposited CeO ₂ thin films for mediator-less glucose biosensor	May 2009-2012	9.69	Completed

DST (Min. of S&T)	Development of Magnetron source for Plasma assisted growth growth of metal oxide thin films for sensor application	March 2009 -2012	24.81	Completed
DST (Min. of S&T)	Development of prototype of SAW sensor for NO _x gas	Aug. 2009-2012	28.18	Completed
NRB (DRDO)	Design & Development of Functional Materials for Surface Acoustic Wave device Structures	Dec. 2009-2011	47.40	Completed
DRDO (Min.of Def.)	Development of oriented Lithium Niobate films by sputtering for Electro-optic applications	April 2005 -2008	38.99	Completed
DRDO (LASTEC)	Feasibility of growing SiC films through RF Sputtering/PLD technique for Laser mirrors	Oct. 2005 -2008	9.20	Completed
DST (Min. of S&T)	Development of thin film ultra-violet photodetector	May 2005 -2008	9.48	Completed

Collaborations (Academic):

- Prof. Amar Bhalla, University of Texas at Sanantanio, USA
- Prof. Ruyan Guo, University of Texas at Sanantanio, USA
- Prof. R.S. Katiyar, University of Puerto Rico, PR 00931-3343, USA
- Dr. Shashank Priya, Virginia Tech, USA
- Prof. Michael Sayer, Queen`s University, Kingston, Canada
- Prof. A.P. Freundorfer, Queen`s University, Kingston, Kanada
- Prof. Sung Ho Lee, Korea Institute of Technology, Korea
- Dr. Ajay Agarwal, MEMs Devision, CEERI, Pilani
- Dr. R.P. Singh, CFEES (DRDO), Delhi
- Dr. Manoj U. Sharma, Solid state Physics laboratory (DRDO), Delhi
- Dr. Shiv Kumar, Solid state Physics laboratory (DRDO), Delhi
- Dr. Ashok Kumar, National Physical Laboratory, Delhi

Collaborations (Industrial interaction):

- Gas Authority of India Limited (GAIL)
- M/s Optiregion, Wazirpur, New Delhi-110052
- M/s ARL Technologies, New Delhi

Other Details

Technology Breakthrough:

- Technology transfer on complete know-how about the developed equipment "Table-top Surface Plasmon Resonance (SPR) set up" to an industry "Optiregion, Ashok Vihar, Delhi-110052" for its commercialization on 17-02-2015.
- Integrated piezoelectric ZnO film with MEMS structure of CEERI, Pilani for acoustic sensor. Devices have been installed by VSSC (ISRO) in PSLV flights (C9-onward)

Administrative Experience: About Sixteen Years

- Dean Examinations (May 2016 – till date), University of Delhi
- Coordinator (Oct.2008- July 2016): M. Tech. Nuclear Science & Technology, Department of Physics and Astrophysics, University of Delhi

- Treasurer (June 2006 – Aug. 2010), Delhi University Students Union (DUSU)
- Research Supervisor (March 2004 – till date), Dept. of Physics and Astrophysics, University of Delhi
- Bursar (April 2000 - Dec. 2003), Deen Dayal Upadhyaya College (University of Delhi), Karampura, New Delhi-110015
- Teacher-in-charge (April 2000 - March 2002), Department of Physics and Electronics, D.D.U. College (University of Delhi), Karampura, New Delhi-110015
- Assistant Coordinator (Oct. 1997 – Dec. 1999), IGNOU study center of 2000 MBA students at D.D.U. College (University of Delhi), New Delhi-110015

Research Guidance:

1. *Supervision of awarded Doctoral Thesis : 14 + 02 (Waiting for defence)*
2. *Supervision of Doctoral Thesis, under progress: 08*

Other Activities:

- Expert Member in Selection Committees, for Appointment of various posts including Scientist E and F, Professors, Assist. Professor, etc. in different Universities, IITs, Institutes, Ministries, etc.
- Examiner of Ph.D. thesis of several students of various universities including NIT Singapore, IISc-B`lore, Univ. of Hyderabad, Jamia Millia Islamia, IIT Kharagpur, IIT Delhi, IIT Bombay, IIT Roorkee, Lucknow University, Shimla University, HNB University-U.P., BHU, Allahabad Univ., JNU, GGIP Univ., Meerut Univ., Pune Univ., Punjab Univ., MDU Univ., etc.
- Organized an Exhibition-“Bharat Gatha” on the occasion of 50th Years of celebration of India Independence at DDU College, and received appreciation from College Governing body.

Organization of Conferences/Workshops

- Coordinator, Two day DST sponsored workshop on “Indigenously developed Low cost Table top Surface Plasmon Resonance Technique and its applications”, 8-9 May 2014, University of Delhi.
- Coordinator, One day brainstorming meeting of DST, Govt. of India on “Plasmonics and Nanostructured Solar Cells”, Delhi University, 15 May 2010
- Coordinator, One day brainstorming Meeting of DST, Govt. of India on “Development of SPR setup”, Delhi University, 1 May 2010
- Organizing committee chair, Indo-Australia symp. on “Multifunctional Nanomaterials, Nanostructures and Applications-MNNA 2007”, Convention Hall, VC Office, University of Delhi, Dec.19-21, 2007.
- Convener/Org. Secretary, National Seminar on “Multifunctional Nanomaterials, Nanostructures and Applications”, Dept. of Physics and Astrophysics, University of Delhi, December 22-23, 2006.
- Treasurer, Organizing committee, International Conference on Physics Education, Vigyan Bhavan, Delhi, Sept. 2005
- Treasurer, Organizing committee of XIII National Seminar on Ferroelectrics and Dielectrics, Delhi University, Nov. 2004
- Convenor/Organizing Secretary, Seminar on Environment Pollution & Public Health, DDU College, Feb. 2002
- Member, Local org. committee of IX National Seminar on Ferroelectrics & Dielectrics, 1998, NPL, Delhi

COUNTRIES VISITED:

China	Delivered Invited talk at International workshop on Thin-films for Electronics, Electro-optics, Energy and Sensors, Suzhou, China, 4-6 July 2015
Thailand	Delivered Invited talk at INMAM workshop & attended AMF meeting, Pattaya, Thailand, 8-13 Dec. 2012
Australia	Visiting Fellow, Australian National University , Canberra (July-Aug 2008). Also Chaired, one

Taiwan	<p>Technical Session, International conference on Materials & devices (IUMRS-ICEM 2008), 28 July-10 Aug 2008, Sydney</p> <p>Visited Center for Nanotechnology, Chung Yuan Christian Univ., Chung-Li, Taiwan and delivered invited talk (Oct 2007)</p>
U.S.A.	<p>Visiting Fellow, Univ. of Central Florida, Orlando (18-22 August 2015); Univ. of Puerto Rico, San Juan (3-28 June 2010); BOYSCAST Fellow, Univ. of Puerto Rico, USA (May-Nov.2003). Participated in Gordon Research Conference, New London, NH</p>
France	<p>Visited Univ. of Paris, Ecole Polytechnique, CNRS-ENSCP - Université Bordeaux, Univ. of Joseph Fourier from Sept. 2009 and Oct. 2010 & delivered invited talks at Bordeaux and UJF. Delivered invited talk at Institute D'Orsay, Lab. detude de materiaux en films minces, Orsay (Sept 1998)</p>
Switzerland	<p>Attended 03 conferences (IEEE ISAF-XI, ECPAD-IV and Electroceramics-VI) in August 1998 at Montreux and visited Swiss Federal Institute of Technology, E.P.F. Laboratory at Laussane.</p>