

Publication List (Journal Papers, Conference Proceedings, Books)

Department of Applied Physics, SoVSAS, GBU

Faculty Name: Dr. Ashish Kumar Keshari

Publications in Refereed Journals

1. Size and Distribution: A Comparison of XRD, SAXS and SANS study of II-VI Semiconductor Nanocrystals, **A. K. Keshari**, and A. C. Pandey, *J. Nanosci. Nanotechnol.* Volume 8, Number 3, March 2008, pp. 1221–1227 (7) (IF-1.354)
2. Influence of organic polymers as capping agent on structural and optical properties of ZnS:Mn²⁺ and CdS nanocrystals, **A. K. Keshari**, M. Kumar, P. K. Singh, and A. C. Pandey, *J. Nanosci. Nanotechnol.* Volume 8, No. 1, 301–308 (2008). (IF-1.354)
3. Highly stabilized and photoluminescence enhancement of ZnS:Mn²⁺ nanoparticles in biotin matrix, **Ashish K. Keshari** and Avinash C. Pandey, *Journal of Applied Physics* 105, 064315 (2009) (IF-2.328)
4. Small angle X-ray scattering study of doped ZnO nanocrystals using GIFT, **Ashish K. Keshari***, Rupali Mishra and Avinash C. Pandey, *Advanced Science Letters*, 2, 21–27 (2009) (IF-1.253)
5. Temperature induced size selective synthesis of hybrid CdS/pepsin nanocrystals and their photoluminescence investigation, **Ashish K. Keshari**, Prashant K. Singh, and A. C. Pandey, *Journal of Luminescence*, 130 (2010) 315–320. (IF-2.732)
6. Precession controlled synthesis and ligands assisted modulation of optical properties and Raman scattering in Ag doped ZnO nano-egg; **Ashish K. Keshari** and Manjeet Singh, *Physica E* 123 (2020) 114177. (IF-3.57)
7. ZnO nanoparticles doping with transition metal elements in polymeric and biomacromolecular matrix and their optical evolution, **Ashish Kumar Keshari**, Prakrati Gupta, Manjeet Singh, *Optical Materials*, 111, 2021, 110697. (IF-3.08)
8. Precursor induced evolution in single anatase phase synthesis of TiO₂ nanoparticles for Water treatment and Dye-sensitized solar cell, **Ashish Kumar Keshari**, Preeti Choudhary and Vivek Kumar Shukla, *Physica B: Condensed Matter*, 631, 413716 (IF-2.436)
9. **Nanostructured MoS₂, SnS₂, and WS₂ Based Anode Materials for High Performance Sodium-Ion Batteries Via chemical route methods: A Review Article**, **Ashish K Keshari** and Rav

indra Kumar, *Energy Technology*, August 2021, Vol 9, Issue 8, 2100179. (IF-3.6).

10. Cd doped ZnO Nano-rectangle and its correlation with properties, **Ashish K. Keshari** and Manjeet Singh (To be communicated)

11. Nano-organic and Nano-bio corona study of Al doped ZnO Nanoparticles, **Ashish K. Keshari** and Manjeet Singh (To be communicated)

Publications in Conference Proceedings

1. Color tunability and Raman investigation in CdS quantum dots, **Ashish K. Keshari** and Avinash C. Pandey, *ICTOPON 2009 AIP Conf. Proc./Volume 1147/Issue 1/pp 229-237*.

2. Optical stability and photoluminescence enhancement of biotin assisted ZnS:Mn²⁺ nanoparticles, **Ashish K. Keshari**, Vyom Parashar and Avinash C. Pandey, *ICTOPON 2009 AIP Conf. Proc./Volume 1147/Issue 1/pp 187-193*.

3. Keshari, A.K., Singh, M., Sharma, M. (2018-2019). Surface Stabilized Quantum Confined Zn O Nanosystems. In: Sharma, R., Rawal, D. (eds) *The Physics of Semiconductor Devices*. IWPSD 2017. Springer Proceedings in Physics, vol 215. Springer, Cham. https://doi.org/10.1007/978-3-319-97604-4_183

4. **Modulation of photoluminescence in Mg and Cu caged ZnO nanocrystals; Ashish Kumar Keshari**, Manish Sharma and Manjeet Singh, *Materials Today: Proceedings Volume 34, Part 3, February 2021, Pages 626-634, doi.org/10.1016/j.matpr.2020.02.917*.

5. **Synthesis of Mn²⁺ activated ZnS quantum dots with their structural stability and modulation of opto-electronic properties**, Anshika Goel, **Ashish K Keshari** and Mukesh Kumar, *Journal of Physics: Conference Series, Volume 1531, 2nd International Conference on Recent Advances in Fundamental and Applied Sciences RAFAS (2019) 5-6 November 2019, Punjab, India*

Other Conference Contributions...

1. Participants of MRS (India) 15th Annual general meeting at BHU, Varanasi, India in 2004.

2. Preparation and Characterization of Nanophosphor Materials by Wet Chemical Route, Prinsa Verma, Sarika Pandey, D. Sharma, S. Yadav, **A. K. Keshari**, L. Kumar, A.C. Pandey, A. M. Awasthi, D. M. Phase, V. Ganesan, National Conference on 'Advanced Characterization Techniques on Nanomaterials' at IIT Roorkee, India in 2005 (August 24 -26).

3. II-VI Semiconductor nanocrystals and Small angle scattering, **A.K. Keshari**, A. C. Pandey, S. Pandey, P. Verma, D. Sharma, R. Mishra, 'International Conference on Nanoscience and Technology' at IIT Delhi, India in 2006 (March 16-18).
4. Biocompatibility of nanostructured ZnO, ZnS/CdS and their composites with SiO₂, S. Pandey, P. Verma, D. Sharma, **A. K. Keshari**, A. C. Pandey, 'International Conference on Nanoscience and Technology' at IIT Delhi, India in 2006 (March 16-18).
5. Temperature dependent synthesis and their evolutions in ZnO/Doped ZnO/ZnS Nanophosphors, P. Verma, S. Pandey, D. Sharma, **A. K. Keshari**, A. C. Pandey, 'International Conference on Nanoscience and Technology' at IIT Delhi, India in 2006 (March 16-18).
6. Optical and Structural studies on ZnS and CdS Nanophosphors with biopolymers and polymers, D. Sharma, S. Pandey, P. Verma, **A. K. Keshari**, A.C. Pandey, 'International Conference on Nanoscience and Technology' at IIT Delhi, India in 2006 (March 16-18).
7. Biomimetic Synthesis and Small Angle X-Ray Scattering Analysis of Ni²⁺ Doped CdS Nanocrystals, P.K. Singh, A.C. Pandey, **A.K. Keshari**, 8th International Conference on Nanostructured Materials 'Nano-2006' at IISc. Bangalore, India in 2006 (August 20-25).
8. SAXS STUDY OF ZnO AND DOPED ZnO SEMICONDUCTOR NANOCRYSTALS, Rupali Mishra, A.C. Pandey, Raghvendra S. Yadav, **A .K. Keshari**, Prinsa Verma, Sarika Pandey, 8th International Conference on Nanostructured Materials 'Nano-2006' at IISc. Bangalore, India in 2006 (August 20-25).
9. ZnS Nanophosphor capped with Biopolymers, Sarika Pandey, P. Verma, D. Sharma, **A.K. Keshari**, A.C. Pandey, 8th International Conference on Nanostructured Materials 'Nano-2006' at IISc. Bangalore, India in 2006 (August 20-25).
10. Tuning of band gap by using different capping agent in ZnS doped with Mn²⁺ nanocrystals, Prinsa Verma, Sarika Pandey, **A.K. Keshari**, A.C. Pandey, 8th International Conference on Nanostructured Materials 'Nano-2006' at IISc. Bangalore, India in 2006 (August 20-25).
11. Temperature Dependent Synthesis of CdS Nanocrystals using Pepsin, **A.K. Keshari**, P.K.Singh, A.C. Pandey, 9th Asian Symposium on Information Display (ASID'06) at New-Delhi, India in 2006 (October 8-12).

12. Temporal evolution study of biotin capped ZnS:Mn²⁺ nanocrystals, **A. K. Keshari**, P. K. Singh, and A. C. Pandey (Accepted for poster presentation in ‘International Congress on Nanotechnology’ San Fransisco, California, USA in 2007, November 5-8).
13. International Symposium on Clusters, Cluster Assemblies and Nano-scale Materials held at Harish-Chandra Research Institute, Allahabad during February 9-11, 2009.
14. Workshop on Surfaces and Interface Modifications By Energetic Ions held at University of Allahabad on March 18, 2009.
15. Meghnad Saha Memorial Symposium on Emerging Trends in Laser & Spectroscopy held at University of Allahabad during March 23-25, 2009.
16. Color tunability and Raman investigation in CdS quantum dots, **Ashish K. Keshari** and Avinash C. Pandey at ”International Conference on Transport and Optical Properties of Nanomaterials” (ICTOPON 2009) at University of Allahabad during 05-08 January, 2009.
17. Optical stability and photoluminescence enhancement of biotin assisted ZnS:Mn²⁺ nanoparticles, **Ashish K. Keshari**, Vyom Parashar and Avinash C. Pandey at ”International Conference on Transport and Optical Properties of Nanomaterials” (ICTOPON 2009) at University of Allahabad during 05-08 January, 2009.
18. Invited talk on “Nanotechnology: The Revolution of Endless Possibilities” in 2nd National Conference on Innovative and Emerging Technologies in Computing Methodology held at Marudhar Engineering College, Bikaner, Rajasthan in November, 2012.
19. Oral presentation on “Lemon (Citrus limon) juice mediated synthesis of narrow band-gap ZnO nanoballs” at 2nd USA International Conference on Surfaces, Coatings, and Nanostructured Materials (NANOSMAT-USA) held at, *Rice University, Houston USA* during 19-22 May, 2014.
20. Oral presentation on “Fluorescent Nano-diamonds for Bio-imaging Applications by Engineering of Nitrogen Vacancy Centers” at ‘International conference on Advances in Nanomaterials and Nanotechnology (ICANN-2016)’ held at *Centre for Nanoscience and Nanotechnology, Jamia Milia Islamia, New Delhi* during 04-05 November, 2016.
21. Surface Stabilized Quantum Confined ZnO Nanosystems” Ashish Kumar Keshari, Manjeet Singh and Manish Sharma, at “XIX International Workshop on The Physics of Semiconductor Devices (IWPSD 2017)” held at IIT Delhi, New Delhi during December 12-15, 2017.

22. Modulation of photoluminescence in Mg and Cu caged ZnO nanocrystals; Ashish Kumar Keshari, Manish Sharma and Manjeet Singh, at the “3rd International Conference on Science and Engineering of Materials” (ICSEM – 2019) held at Sharda University, Greater Noida and organized during July 19-21, 2019.

23. Synthesis of Mn²⁺ activated ZnS quantum dots with their structural stability and modulation of opto-electronic properties, Anshika Goel, Ashish K Keshari and Mukesh Kumar at “2nd International Conference on Recent Advances in Fundamental and Applied Sciences (RAFAS 2019) held at Lovely Professional University, Punjab during 5-6 November, 2019.

List of Books/Book Chapters

“My Journey to Nanotechnology: Quantum Confined Atom based Nanomaterials” Published by LAP LAMBERT Academic Publishing in 2012.

Faculty Name: Dr. Bhawana Joshi

Publications in Refereed Journals

1. Enhanced electrochemical performance of hierarchical porous carbon/polyaniline composite for supercapacitor applications
Sangeeta Rawal, U K Mandal, Ashwani Kumar, Yogesh Kumar, **Bhawana Joshi**, Nano Express 2 (1), (2021) 010013
2. Synthesis and electrochemical study of phosphorus-doped porous carbon for supercapacitor applications
Sangeeta Rawal, Yogesh Kumar, U K Mandal, Ashwani Kumar, Ruchika Tanwar, **Bhawana Joshi**, SN Applied Sciences 3 (2), (2021) 1-14
3. Investigating Effect of CdS Buffer Layer on the Performance of Cu₂ZnSnS₄ Based Solar Cells Using SCAPS-1D
Rihana Khan, Sumair Faisal Ahmed, Muhammad Khalid, **Bhawana Joshi**
Trans. Electr. Electron. Mater. (Springer) (2020). <https://doi.org/10.1007/s42341-020-00223-x>
4. Structural and optical band gap modification of Zn₂SnO₄ thin films after irradiation with swift heavy ions for transparent electrode applications
Nitin Kumar, K. Asokan, **Bhawana Joshi**
Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms (Elsevier), 472 (2020) 14-18

5. Synthesis and Characterization of sol gel derived nontoxic CZTS thin films without sulfurization
Pratyay Amrit, Surbhi Jain, Monika Tomar, Vinay Gupta, **Bhawana Joshi**
International Journal of Applied Ceramic Technology (Wiley), 17 (2019) 1194-1200
6. The effects of thermal annealing on the structural and electrical properties of zinc tin oxide thin films for transparent conducting electrode applications
Nitin Kumar, **Bhawana Joshi**, K Asokan, Physica B: Condensed Matter (Elsevier), 558 (2019) 5-9
7. Background, fundamental understanding and progress in electrochemical capacitors,
Yogesh Kumar, Sangeeta Rawal, **Bhawana Joshi**, S. A. Hasami, Journal of Solid State Electrochemistry (Springer) (January 2019), DOI: 10.1007/s10008-018-4160-3
8. Synthesis and characterization of activated carbon from the biomass of Saccharum bengalense for electrochemical supercapacitors,
Sangeeta Rawal, **Bhawana Joshi**, Yogesh Kumar, Journal of Energy Storage (Elsevier), 20 (2018) 418-426
9. Influence of deposition power on the structural, optical and electrical properties of electron beam evaporated SnO₂ thin films for transparent conducting electrode applications
Nitin Kumar, **Bhawana Joshi**, K. Asokan, **Journal of Semiconductors (IOP)**, 39 (2018) 1-7
10. Coexistence of intrinsic and extrinsic origins of room temperature ferromagnetism in as implanted and thermally annealed ZnO films probed by x-ray absorption spectroscopy
P. Satyarthi, S. GHosh, B. Joshi, P. Kumar, C. L. Chen, W. F. Pong, D. Kanjilal, K. Asokan, P. Srivastava, **Journal of Applied Physics**, 113 (2013) 183708
11. Correlation between electrical transport, microstructure and room temperature ferromagnetism in 200 keV Ni²⁺ ion implanted Zinc oxide (ZnO) thin films
B. Joshi, S. Ghosh, P. Srivastava, P. Kumar and D. Kanjilal **Applied Physics A: Materials Science & Processing**, 107 (2012) 393
12. Probing origin of room temperature ferromagnetism in Ni ion implanted ZnO thin films with x-ray absorption spectroscopy
P. Srivastava, S. Ghosh, **B. Joshi**, P. Satyarthi, P. Kumar, D. Kanjilal, D. Buerger, S. Zhou, H. Schmidt, A. Rogalev and F. Wilhelm, **Journal of Applied Physics**, 111 (2012) 013715
13. Room temperature transparent ferromagnetism in 200 keV Ni²⁺ ion implanted pulsed laser deposition grown ZnO/Sapphire film
B. Pandey, S. Ghosh, P. Srivastava, D. Kanjilal, P. Kumar, S. Zhou, H. Schmidt, **Journal of Applied Physics**, 107 (2010) 02390
14. Influence of microstructure on room temperature ferromagnetism in Ni implanted nanodimensional ZnO thin films
B. Pandey, S. Ghosh, P. Srivastava, D. Kanjilal, P. Kumar, **Journal of Applied Physics**, 105 (2009) 033909

15. Synthesis of Nanodimensional ZnO and Ni doped ZnO thin films by Atom Beam Sputtering and study of their physical properties
B. Pandey, S. Ghosh, P. Srivastava, D. Kabiraj, N. P. Lalla, T. Shripati,
Physica E: Low Dimensional Systems and Nanostructures, 41 (2009) 1164
16. Synthesis and characterization of Ni-doped ZnO: A transparent magnetic semiconductor
B. Pandey, S. Ghosh, P. Srivastava, D. K. Avasthi, D. Kabiraj, J. C. Pivin, **Journal of Magnetism and Magnetic Materials**, 320 (2008) 3347
17. Study of ZnO and Ni-doped ZnO synthesized by atom beam sputtering technique,
S. Ghosh, P. Srivastava, **B. Pandey**, M. Saurav, P. Bharadwaj, D. K. Avasthi, D. Kabiraj,
S. M. Shivaprasad, **Applied Physics A - Materials Science and Processing**,
90 (2008) 765.
18. Room Temperature Ferromagnetism in 200 keV Nickel ion implanted Zinc oxide film
S. Ghosh, M. Saurav, **B. Pandey**, D. Kanjilal, P. Kumar, **Radiation Effects and Defects in Solids**, 163 (2008) 215
19. Synthesis of Nano-Dimensional ZnO and Ga doped ZnO Thin films by Vapor Phase Transport and Study as Transparent Conducting Oxide
S. Ghosh, M. Saurav, **B. Pandey**, P. Srivastava, **Journal of Nanoscience and Nanotechnology**, 8 (2007) 2655

Publications in Conference Proceedings

1. **Bhawana Joshi**, Rihana (2017) “Numerical simulation of $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ based thin film solar cells with SCAPS-1D software” Published in the proceedings of “Nanotechnology for Instrumentation and Measurement Workshop (III International Conference) NanofiM-2017”.
2. Urvashi Sharma, Pratiksha Saxena, **Bhawana Joshi** (2017) “Mathematical and Graphical User Interface (GUI) of Solar Software for Photovoltaic Applications” Published in the proceedings of “Nanotechnology for Instrumentation and Measurement Workshop (III International Conference) NanofiM-2017”.
3. **Bhawana Joshi**, Santanu Ghosh, Pankaj Srivastava “Optical properties of post-annealed Zinc oxide (ZnO) thin films synthesized by Pulsed Laser Deposition (PLD) *Advanced Materials Proceedings*, 2 (9), (2017) 581-586
4. **Joshi B.**, Ghosh S., Srivastava P., (2016), “Optical Properties of post-annealed zinc oxide (ZnO) thin films synthesized by pulsed laser deposition (PLD)” *Proc. of Int. Conf. on Materials Science and Technology*, 01-04 March 2016, DOI: 10.5185/icmtech.2016 (Abstract)
5. **Joshi Bhawana**, Saxena Pratiksha, Khera Natasha (2016), “Optical Properties of Zinc oxide (ZnO) thin films for applications in optical devices: MATLAB Simulation” *Proc. of the*

List of Book Chapters

1. Ferromagnetism in Zinc Oxide: Intrinsic/Extrinsic Origins and Correlation with Electronic Structure (Chapter Title), P. Satyarthi, **Bhawana Joshi**, P. Srivastava, S. Ghosh, Spintronics: A Review and Directions for Research (Book Title), (2019) Nova Science Publishers Inc., New York, ISBN: 978-1-53616-144-1 (ebook)

Faculty Name: Dr. Manmohan Singh Shishodia

Publications in Refereed Journals

1. Jyoti Kumari, Harish, Akash, Arushi Pandey, Pushpendra Kumar, Manoj K Singh, Alok Singh, **Manmohan Singh Shishodia**, Rajendra P. Joshi, and Anoop Kumar Mukhopadhyay, " Thickness Controlled Physical Properties of Chemically Synthesized Nanostructured Calcite Thin Films", ChemistrySelect, 1-9, (2022). (Accepted)
2. Pratima Rajput, and **Manmohan Singh Shishodia**, "FRET sensing, and field enhancement near spheroidal nanoparticle: Multipole spectral expansion approach", Optics Communications **519**, 128391 (2022).
3. Pratima Rajput, and **Manmohan Singh Shishodia**, "Energy Transfer Interactions and Sensing Characteristics of Gain-Assisted and Graphene-Coated Plasmonic Nanomatryoshka", Plasmonics **16**, 2277 (2021).
4. Pratima Rajput, and **Manmohan Singh Shishodia**, "Multipole spectral expansion analysis of electric field enhancement near spheroidal plasmonic nanoparticle", Asian Journal of Physics **30**, 729 (2021).
5. Pankaj Pathania, and **Manmohan Singh Shishodia**, "Fano Resonance-Based Blood Plasma Monitoring and Sensing using Plasmonic Nanomatryoshka", Plasmonics **18**, 2117 (2021).
6. Pratima Rajput, **Manmohan Singh Shishodia**, "Förster Resonance Energy Transfer and Molecular Fluorescence near Gain Assisted Refractory Nitrides Based Plasmonic Core-Shell Nanoparticle", Plasmonics **15**, 1, (2020).
7. Alok Singh, **Manmohan Singh Shishodia**, "Graphene vs. silica coated refractory nitrides based core-shell nanoparticles for nanoplasmonic sensing", Physica E: Low-dimensional Systems and Nanostructures **124**, 114288, (2020).
8. **Manmohan Singh Shishodia**, Soniya Juneja, "Surface plasmon enhanced electric field versus Förster resonance energy transfer near core-shell nanoparticle", Journal of Applied Physics **125**, 213104, (2019).
9. Pankaj Pathania, and **Manmohan Singh Shishodia**, "Gain-Assisted transition metal ternary nitrides ($Ti_{1-x}Zr_xN$) core-shell based sensing of waterborne bacteria in drinking water", Plasmonics **14**, 1435 (2019).

10. Soniya Juneja, and **Manmohan Singh Shishodia**, "Surface Plasmon Amplification in Refractory Transition Metal Nitrides based Nanoparticle Dimers", *Optics Communications* **433**, 89 (2019).
11. **Manmohan Singh Shishodia**, and Soniya Juneja, and "Enhanced optical response of Al, Rh, Ag, and Au nanosphere dimer in uniform electric field", *World Scientific News* **113**, 57 (2018).
12. **Manmohan Singh Shishodia**, and Pankaj Pathania, "Estimation of sensing characteristics for refractory nitrides based gain assisted core-shell plasmonic nanoparticles", *Physics of Plasmas* **25**, 042101 (2018).
13. **Manmohan Singh Shishodia**, and S. Juneja, "Localized surface plasmon mediated energy transfer in the vicinity of core-shell nanoparticle", *Journal of Applied Physics* **119**, 203104 (2016).
14. GuangQi Li, **Manmohan Singh Shishodia**, B. D. Fainberg, B. Apter, M. Oren, A. Nitzan, and Mark Ratner, "Compensation of Coulomb blocking and energy transfer in the current voltage characteristic of molecular conduction junctions", *Nano. Lett.* **12**, 2228-2232 (2012).
15. **Manmohan Singh Shishodia** and A. G. U. Perera, "Heterojunction plasmonic midinfrared detectors", *Journal of Applied Physics*, Vol. **109**, Issue 4, 043108-043108-9 (2011).
16. **Manmohan Singh Shishodia**, P. V. V. Jayaweera, S. G. Matsik, A. G. U. Perera, H. C. Liu, and M. Buchanan, "Surface Plasmon Enhanced Absorption: Design and Experiment", *Photonics and Nanostructures: Fundamental and Applications*, Vol. **09**, Issue 1, 95-100 (2010).
17. **Manmohan Singh Shishodia** and Anurag Sharma, "Non-iterative Bi-directional Wave Propagation Method for Treating Reflections", *Optics Communications*, Vol. **276**, 246-250 (2007).
18. **Manmohan Singh Shishodia**, Anurag Sharma, and G. B. Reddy, "A numerical method for the analysis of nonlinear carrier diffusion in cylindrical semiconductor optoelectronic devices", *Phys. Stat. Sol. (b)*. Vol. **244**, 3231-3243 (2007).
19. Anurag Sharma, **Manmohan Singh Shishodia** and G.B.Reddy, "Numerical Simulation of Inhomogeneous and Nonlinear Diffusion", *Phys. Stat. Sol. (b)* Vol. **243**, 1193-1204 (2006).

Publications in Conference Proceedings

1. Pratima Rajput, and **Manmohan Singh Shishodia**, "Energy transfer interactions in the vicinity of bimetallic combination of refractory nitride and coinage metals based core@shell plasmonic nanoparticle", *AIP Conference Proceedings* **2369**, 020176 (2021).
2. Pratima Rajput, and **Manmohan Singh Shishodia**, "Forster Resonance Energy Transfer near Bimetallic Combination of Coinage Metals and refractory Nitrides based Plasmonic Nanoparticle", *International Conference on Photonics, Metamaterials and Plasmonics: PMP-2019*, February 14-16, 2019, Jaypee Institute of Information Technology (JIIT), Noida (2019).
3. **Manmohan Singh Shishodia**, and Pratima, "Role of optical gain assisted core-shell plasmonic nanoparticle in forster resonance energy transfer and resonance linewidth", *Proceedings of the Photonics-2018*, ISBN 978-93-88653-41-1 (2018).

4. Alok Singh, Pradeep Kumar, and **Manmohan Singh Shishodia**, “Spherical and Cylindrical Plasmonic Nanoparticles for Enhanced Light Trapping in Photovoltaic Cells”, Proceedings of the UPCON-2018, ISBN 978-1-5386-5002-1 (2018).
5. Pankaj Pathania, and **Manmohan Singh Shishodia**, “Surface Plasmon Amplification in Transition Metal Nitrides based Gain Assisted Core-Shell Nanoparticles”, Proceedings of the UPCON-2018, ISBN: 978-1-5386-5002-8 (2018).
6. Pankaj Pathania, and **Manmohan Singh Shishodia**, “Transition Metal Nitrides as Plasmonic Materials for Ultra-sensitive Bio-molecular Sensing”, Proceedings of the NANOFIM-2017, ISBN 978-93-86724-22-9 (2017).
7. Soniya Juneja, and **Manmohan Singh Shishodia**, “Surface Plasmon Enhanced Electric Field in TiN and ZrN Based Coupled Spherical Nanoparticle Dimer”, Proceedings of the NANOFIM-2017, ISBN 978-93-86724-22-9 (2017).
8. **Manmohan Singh Shishodia**, and Pratima Rajput, “Multipole spectral expansion based closed form expressions for field enhancement near spherical and core@shell plasmonic nanoparticles”, Proceedings of the ICFST-2017, ISBN 978-93-85329-23-4 (2017).
9. Soniya Juneja, Shipra Choudhary, and **Manmohan Singh Shishodia**, “Theoretical study of surface plasmon mediated field modification near a pair of ZrN spherical nanoparticles”, Proceedings of the ICFST-2017, ISBN 978-93-85329-23-4 (2017).
10. Pankaj Pathania, and **Manmohan Singh Shishodia**, “Theoretical analysis of zirconium nitride nanoshells with gain-assisted silica core layer”, Proceedings of the ICFST-2017, ISBN 978-93-85329-23-4 (2017).
11. **Manmohan Singh Shishodia**, Soniya Juneja, Boris D. Fainberg, Abraham Nitzan, “Intermolecular energy transfer near plasmonic nanoshell”, Proceedings of the ICEE-2014, ISBN: 978-1-4673-6528-4 (2014).
12. B. D. Fainberg, G.-Q. Li, **M. S. Shishodia**, A. Nitzan, M. Ratner, “Exciton effects on current through molecular nanojunctions: compensation of Coulomb blocking”, Israel Chemical Society Meeting Ramat Gan, 07-08 February 2012.
13. **Manmohan Singh Shishodia**, Boris D. Fainberg, and Abraham Nitzan, “Theory of energy transfer interactions near sphere and nanoshell based plasmonic nanostructures”, SPIE Nanoscience+nanoengineering, San Diego, California U.S.A, 21-25 August, (2011).
14. A. G. U. Perera, S. G. Matsik, **Manmohan Singh Shishodia** et al., “GaAs and GaN Based High Operating Temperature Spin Split-off band Infrared Detectors”, presented at SPIE Photonics West, San Francisco-U.S.A., 23-28 January, (2010).
15. A. G. U. Perera, S. G. Matsik, **Manmohan Singh Shishodia** et al., “Spin Split-off band based High Operating Temperature IR Detectors in 3-5 μm and beyond”, presented in SPIE Defense, Security, and Sensing, Orlando-U.S.A, 5-9 April, (2010).
16. A. G. U. Perera, G. Ariyawansa, **Manmohan Singh Shishodia** et al., “Multi-Color Infrared Sensing with Superlattice Quantum Dot Structures and Absorption Enhancement Using Surface Plasmons”, Presented at IEEE Sensors, Christchurch-New Zealand, 25-28 October, (2009).
17. **Manmohan Singh Shishodia** and Anurag Sharma, “A Bi-directional Wave Propagation Method for Simulation of Reflections from Single and Multiple Discontinuities”, Eighth International Conference on Optoelectronics, Fiber Optics and Photonics, Photonics-2006, Hyderabad-India, December 13-16, (2006).

18. Anurag Sharma, **Manmohan Singh Shishodia** and G.B.Reddy, "A New Method for Numerical Simulation of Inhomogeneous and Nonlinear Diffusion", Asia Pacific Microwave Conference (APMC-2004), New-Delhi- India, December 15-18, (2004).
19. **Manmohan Singh Shishodia**, Anurag Sharma and G. B. Reddy, "Simulation of Dopant and Carrier Diffusion in Optoelectronic Devices using the Collocation Method", National Conference on Mathematical Techniques: Emerging Paradigms for Electronics and IT industries (MATEIT-2006), New Delhi-India, March 22-25, (2006).

Faculty Name: Dr. Mausumi Pohit

Publications in Refereed Journals

International Journals

1. **M. Seth**, M. Ray (Shah), A. Basuray, 'Optical implementation of arithmetic operations using positional residue system,' Optical Engineering. **33**, 541-547 (1994)
2. A. K. Datta, **M. Seth**, 'Cellular processing for edge detection in an optical shadow-casted architecture,' Optics & Laser Technology **26**, 297-300 (1994)
3. A. K. Datta, **M. Seth**, 'Multi-input optical parallel logic processing using shadow-casting technique,' Applied Optics **34**, 8144-8152 (1994)
4. A. K. Datta, **M. Seth**, 'Parallel arithmetic operations in an optical architecture using a modified iterative technique,' Optics Communications **115**, 245-250 (1995)
5. A. K. Datta, S. K. Sen, S. Bandopadhyay, **M. Seth**, 'Optical computing techniques,' IETE Technical Review **12**, 91-103 (1995)
6. **M. Seth**, A. K. Datta, 'Optical implementation of a connectionist model of Hough Transform,' Optical Engineering **35**, 1779-1784 (1996)
7. **M. Seth**, A. K. Datta, 'Parallel arithmetic operations in an optical architecture,' Optik **103**, 51-54 (1996)
8. G. Unnikrishnan, **M. Pohit** and K. Singh, 'A polarization encoded optical encryption system using Ferroelectric spatial light modulator,' Optics Communications **185**, 25-31 (2000)
9. **M. Pohit** and K. Singh, 'Performance of a wavelet matched filter with optimized dilation designed using simulated annealing algorithm,' Optics Communications **187**, 337-346 (2001)
10. **M. Pohit**, "Scale invariant recognition in optical correlators using prior estimation of object size," Optics Communications **281**, 5541-5549 (2008)
11. **M. Pohit**, "Neural network model for rotation invariant recognition of object shapes," Applied Optics **49**, 4144-4151 (2010)
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