

Teacher's Achievements

Research (Publications)

- Thermal annealing and transient electronic excitations induced interfacial and magnetic effects on Pt/Co/Pt trilayer. **Neeru Sehdev**, Rohit Medwal, Rakesh Malik, Asokan Kandasami, Dinakar Kanjilal and S. Annapoorni, Nuclear Inst. and Methods in Physics Research B 420 (2018) 50 2.
- Dense-Plasma-Driven Ultrafast Formation of FePt Organization on Silicon Substrate. Rohit Medwal, **Neeru Sehdev**, Wang Ying, R.S. Rawat and S. Annapoorni, Bull. Mater. Sci 40 (2017) 233
- **Onkar Mangla, Savita Roy**, S. Annapoorni, and K. Asokan, "Annealing of deep level defects in GaAs nanostructures by ion beam irradiation", Materials Letters 217, 231-234 (2018), ISSN: 0167-577X, Impact Factor: 3.423.
- **Onkar Mangla and Savita Roy**, "Zinc Oxide Nanostructures Fabricated under Extremely Non-Equilibrium Plasma Conditions", Solid State Phenomena 287, 75-79 (2019), ISSN: 1662-9779, Impact Factor: 0.468.
- **Onkar Mangla and Savita Roy**, "Monoclinic Zirconium Oxide Nanostructures Having Tunable Band Gap Synthesized under Extremely Non-Equilibrium Plasma Conditions", Proceedings 3, 10 (2019), ISSN: 2504-3900.
- **Onkar Mangla and Savita Roy**, "Metal-Oxide-Semiconductor Capacitors Fabricated on Zirconium Oxide High-K Gate Dielectric Nano-Layers", International Journal of Recent Technology and Engineering (IJRTE) 7 (6S), 868-870 (2019), ISSN: 2277-3878 (Online), Impact Factor: 6.04.
- **Onkar Mangla and Savita Roy**, "Study of Morphological, Structural, Optical and Transport Properties of Gallium Nitride Nanodots Fabricated under Extreme Plasma Conditions", International Journal of Advances in Science Engineering and Technology (IJASEAT) 7 (1-S-2), 4-8 (2019), ISSN(p): 2321 –8991, ISSN(e): 2321 –9009, Impact Factor: 3.15 (0.41).
- **Onkar Mangla, Savita Roy**, S. Annapoorni, and K. Asokan, "A study on defect annealing in GaAs nanostructures by ion beam irradiation", Bulletin of Materials Science 43, 78 (2020), ISSN: 0250-4707 (Print) 0973-7669 (Online), Impact Factor: 1.783.
- **Onkar Mangla and Savita Roy**, "Synthesis of gallium arsenide nanostructures for solar cell applications", Materials Letters 274, 128036 (2020), ISSN: 0167-577X, Impact Factor: 3.423.
- **Onkar Mangla and Savita Roy**, "Bilayer of zirconium oxide/lanthanum oxide high-k dielectric fabricated for metal-oxide-semiconductor nano-electronic device applications", Materials Letters 301, 130242 (2021), ISSN: 0167-577X, Impact Factor: 3.423.
- **Onkar Mangla, and Savita Roy**, "Synthesis of nano-diamond-like carbon for protective optical window coating applications", Bulletin of Materials Science (Accepted) (2021), ISSN: 0250-4707 (Print) 0973-7669 (Online), Impact Factor: 1.783.

- **Comparison Of The Results Of Differential Equation By Ordinary Method And Euler's Method Using Scilab.** R. Singh, A. K. Shukla, S. S. Gaur, P. Verma, P. Biswas and **O. Rana** Vidyabharati International Interdisciplinary Research Journal (Special Issue) ISSN 2319-4979, special Issue, 2021, pp126-128.
- **The Matrix Formulations And Algebraic Equations Using Scilab.** Dr. Ravindra Singh, Dr. Ashok Kumar Shukla, Dr. Shiv Shankar Gaur, Dr. Priyanka Verma¹, Polly Biswas, **Dr. Omwati Rana** Journal: National Journal of Environment and Scientific Research NJESR/July 2021/ Vol-2/Issue-7 DOI - 10.53571/NJESR.2021.2.7.56-71 E-ISSN-2582-5836
- **Interface modification for enhancing the conduction mechanisms in 2,2',7,7'-tetrakis(N,N-diphenylamine)-9,9'-spirobifluorene (Spiro-TAD) Nano layers for optoelectronic applications** Authors: **Omwati Rana**, Ritu Srivastava, M.N. Kamalasanan, M.Husain and M. Zulfequar Title: Journal: International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-7, Issue-6S
- **Shefali Jain**, Neeraj Chaudhary & Shailesh Narain Sharma, (2021) An insight into the mechanism of charge transfer of organic (P3HT): inorganic (CZTS) composites for hybrid photovoltaics, Materials Technology, Taylor & Francis, pp.1-11, <https://doi.org/10.1080/10667857.2020.1870195> (3.846) ISSN: 1066-7857.
- **Shefali Jain**, Akanksha Singh, Mahesh Kumar, & Shailesh Narain Sharma, (2020). Structural Modelling of Hybrid ZnO–CdSe Nano-Compounds Using X-ray Photoelectron Spectroscopy Depth-Profiling Technique. Journal of nanoscience and nanotechnology, 20(6), 3741-3753. <https://doi.org/10.1166/jnn.2020.17513> (1.353) ISSN: 1533-4880
- **Shefali Jain**, Shilpi Verma, Surinder P. Singh and Shailesh Narain Sharma, “Novel Electrochemical Biosensor for Uric Acid Detection nanostructured Cu₂ZnSnS₄ (CZTS) thin films” Journal of Biosensors and Bioelectronics 127, February (2019), 135-141 <https://doi.org/10.1016/j.bios.2018.12.008> (8.173). ISSN: 0956-5663
- **Shefali Jain**, Parul Chawla, Shailesh Narain Sharma, Dinesh Singh and N Vijayan, “Efficient Colloidal Route to Pure Phase Kesterite Cu₂ZnSnS₄ (CZTS) Nanocrystals with Controlled Shape and Structure” Journal of Superlattices and Microstructures, Elsevier, Volume 119, July (2018), 59-71. <https://doi.org/10.1016/j.spmi.2018.04.003> (2.123) ISSN 0749-6036
- **Shefali Jain**, Dinesh Singh, N.Vijayan, Shailesh Narain Sharma, “Controlled synthesis mechanism analysis of kesterite phased CZTS nanorods via colloidal route”, Journal of Applied Nanoscience, Springer, Volume 8, Issue 3, pp 435–446, March (2018) <https://doi.org/10.1007/s13204-018-0781-1> (3.325) ISSN: 2190-5509
- Parul Chawla, **Shefali Jain**, Parth Vashishtha, Mansoor Ahamed Maricar, Shailesh Narain Sharma, “Transition from CZTSe to CZTS via Multicomponent CZTS_{Se}: Potential Low Cost Photovoltaic Absorbers” Journal of Superlattices and Microstructures 113, January (2018) 502-509. <https://doi.org/10.1016/j.spmi.2017.11.025> (2.123)
- **Shefali Jain**, Akanksha Singh, Govind Gupta, N. Vijayan, Shailesh Narain Sharma, “Precursor Ratio Optimizations for the Synthesis of Colloidal CZTS Nanoparticles for Photocatalytic Degradation of Malachite Green” in Journal of Physics and chemistry of solids 122, November (2018), 8-18 <https://doi.org/10.1016/j.jpcs.2018.05.048> (2.207) ISSN: 0022-3697

- **Shefali Jain**, Pooja Semalti, S P Singh, Shailesh Narain Sharma, “Role of Hot-Injection Technique for the Synthesis of Phase-Pure Kesterite CZTS Nanocrystals for Biosensing Applications” Nano Trends-A Journal of Nano Technology & Its Applications Vol 20, No 3 (2019) pp.6-12 (1.3) ISSN: 0973-418X.
- **S Jain**, P Semalti, VN Singh, SN Sharma - Chemical Methods for Processing Nanomaterials, Chemical Route Synthesis and Properties of CZTS Nanocrystals for Sustainable Photovoltaics, Ch-11, Pg-195-216, First edition published 2021, CRC Press, Taylor & Francis Group, LLC. ISBN: 978-0-367-0888-9 (hbk)
- Thermal annealing and transient electronic excitations induced interfacial and magnetic effects on Pt/Co/Pt trilayer. **Neeru Sehdev**, Rohit Medwal, Rakesh Malik, Asokan Kandasami, Dinakar Kanjilal and S. Annapoorni, Nuclear Inst. and Methods in Physics Research B 420 (2018) 50 2. Dense-Plasma-Driven Ultrafast Formation of FePt Organization on Silicon Substrate. Rohit Medwal, Neeru Sehdev, Wang Ying, R.S. Rawat and S. Annapoorni, Bull. Mater. Sci 40 (2017) 233
- Multielectron geometric phase in intensity interferometry, **Disha Wadhawan**, Krishanu Roychowdhury, Poonam Mehta, and Sourin Das, Phys. Rev. B **98**, 155113 – Published 5 October 2018
- "Dissipation and quantum noise in chiral circuitry" ,Disha Wadhawan and Sourin Das Journal: Physica E 2020, 121 (114 -117) ISSN No.1386-9477 Impact factor- 3.570

Awards

Dr. Onkar Mangla received, Excellent Paper Award for paper entitled “Study of Morphological, Structural, Optical and Transport Properties of Gallium Nitride Nanodots Fabricated under Extreme Plasma Conditions” presented during Academics World 108th International Conference on Nanoscience, Nanotechnology and Advanced Materials (IC2NM 2018) held at Village Hotel Changi, Singapore from December 2-3 December, 2018

Sports and Extra Curricular Achievements

- Dr. Disha Wadhawan secured second Position in Table-Tennis Tournament organized at Annual Sports Day: 2019-2020 of Daulat Ram College.
- Dr. Disha Wadhawan Contributed as a resource person at the Physics Generation camp in Homi Bhabha Centre for Science Education (TIFR), Mumbai from January 19, 2020 to January 20, 2021.
- Ms. Jyoti Chauhan Contributed as a resource person at the Physics Generation camp in Homi Bhabha Centre for Science Education (TIFR), Mumbai from January 19, 2020 to January 20, 2021.

- Ms. Jyoti Chauhan secured First Position in Table-Tennis Tournament organized at Annual Sports Day: 2019-2020 of Daulat Ram College.
- Ms. Jyoti Chauhan secured Second Position in Chess Tournament organized at Annual Sports Day: 2019-2020 of Daulat Ram College.
- Ms. Jyoti Chauhan secured Third Position in 100m race organized at Annual Sports Day: 2019-2020 of Daulat Ram College.