Faculty Details Proforma For College Web-site

Title	Dr	First Name	Onkar	Last Name	Mangla	Photograph
Designation		**Assistant Professor**				
Address		**Physics Department, Daulat Ram College, University of Delhi, Delhi-110007**				
Phone No. Office		**-**				
Residence		**-**				
Mobile No.		**-**				
Email - ID		**onkarmangla@dr.du.ac.in**				
Web Page						

Educational Qualification

Degree	Institution	Year
B.Sc. (H) Physics	Dyal Singh College, University of Delhi	2006
M.Sc. (Physics)	Kirori Mal College, University of Delhi	2009
Ph.D. (Physics)	University of Delhi	2015

Career Profile

To grow both academically and professionally, and achieve the goals of sustainable life.

Administrative Assignments

- Teacher-in-Charge, Physics Department, Daulat Ram College, University of Delhi from October 2022 to till date.
- Teacher-in-Charge, Physics Department, Daulat Ram College, University of Delhi from May 2018 to April 2019.
- Member, Admission committee 2018-19; 2022-23; 2023-24, Daulat Ram College, University of Delhi.
- Member, Purchase committee 2018-19; 2022-23; 2023-24, Daulat Ram College, University of Delhi.
- Member, Discipline committee 2018-19; 2019-20; 2020-21, Daulat Ram College, University of Delhi.
- Member, In-House Skill Development committee 2018-19, Daulat Ram College, University of Delhi.
- Member, Prospectus committee (Information Bulletin) 2019-20; 2020-21, Daulat Ram College, Delhi University.

Areas of Interest / Specialization

Elements of Mechanics, Mathematical Physics, Communication Electronics, Quantum Mechanics and Applications, Electronics, Digital Electronics, Microprocessors and Microcontrollers, Digital Systems and Applications, Analog Systems and Applications, Astronomy and Astrophysics, Elements of Modern Physics, Solid State Physics, Statistical Mechanics.

Subjects Taught

Elements of Mechanics, Mathematical Physics, Communication Electronics, Quantum Mechanics and Applications, Electronics, Digital Electronics, Microprocessors and Microcontrollers, Digital Systems and Applications, Analog Systems and Applications, Astronomy and Astrophysics, Elements of Modern Physics, Solid State Physics, Statistical Mechanics.

Research Guidance

NA

Publications Profile

Papers published in International Refereed Journals:

1. **O. Mangla** and M. P. Srivastava, "GaN nanostructures by hot dense and extremely non-equilibrium plasma and their characterizations", Journal of Materials Science **48**, 304-310 (2013), ISSN: 0022-2461 (print version), ISSN: 1573-4803 (electronic version), Impact Factor: 4.220.
2. **O. Mangla**, A. Srivastava, Y. Malhotra, and K. Ostrikov, "Lanthanum oxide nanostructured films synthesized using hot dense and extremely non-equilibrium plasma for nanoelectronic device applications", Journal of Materials Science **49**, 1594-1605 (2014), ISSN: 0022-2461 (print version), ISSN: 1573-4803 (electronic version), Impact Factor: 4.220.
3. **Onkar Mangla**, Asutosh Srivastava, Yashi Malhotra, and Kostya (Ken) Ostrikov, "Metal-insulator-metal capacitors based on lanthanum oxide high-κ dielectric nanolayers fabricated using dense plasma focus device", Journal of Vacuum Science and Technology B **32**, 03D107 (2014), ISSN: 2166-2746, E-ISSN: 2166-2754, Impact Factor: 1.416.
4. A. Srivastava, **O. Mangla**, R. K. Nahar, V. Gupta, and C. K. Sarkar, "Study of electrical and micro-structural properties of high-κ gate dielectric stacks deposited using pulse laser deposition for MOS capacitor applications", Journal of Materials Science: Materials in Electronics **25**, 3257-3263 (2014), ISSN: 0957-4522 (print version), ISSN: 1573-482X (electronic version), Impact Factor: 2.478.
5. **O. Mangla**, S. Roy, and M. P. Srivastava, "Synthesis and Characterization of Gallium Arsenide Nanostructured Film for Optoelectronic Applications", Advanced Science, Engineering and Medicine **6**, 1200-1204 (2014), ISSN: 2164-6627 (print); EISSN: 2164-6635 (online).
6. **Onkar Mangla** and Savita Roy, "A study on aberrations in energy band gap of quantum confined gallium arsenide spherical nanoparticles", Materials Letters **143**, 48-50 (2015), ISSN: 0167-577X, Impact Factor: 3.423.
7. A. Srivastava, **O. Mangla**, and V. Gupta, "Study of La-incorporated HfO_2 MIM Structure Fabricated using PLD System for Analog/Mixed Signal Applications", IEEE Transactions on Nanotechnology **14**, 612-618 (2015), ISSN: 1536-125X, Impact Factor: 2.57.
8. **Onkar Mangla**, Savita Roy, and Kostya (Ken) Ostrikov, "Dense Plasma Focus-Based Nanofabrication of III-V Semiconductors: Unique Features and Recent Advances", Nanomaterials **6**, 4 (2016), ISSN: 2079-4991, Impact Factor: 5.076.
9. **O. Mangla** and V. Gupta, "Study of electrical properties of hafnium oxide thin film based metal-insulator-metal capacitors: pre and post metallic annealing", Journal of Materials Science: Materials in Electronics **27**, 12527-12532 (2016), ISSN: 0957-4522 (print version), ISSN: 1573-482X (electronic version), Impact Factor: 2.478.
10. **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.

11. **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.
12. **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.
13. **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.
14. **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).
15. **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.
16. **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.
17. **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.
18. **Onkar Mangla,** and Savita Roy, "Synthesis of nano-diamond-like carbon for protective optical window coating applications", Bulletin of Materials Science **44**, 273 (2021), ISSN: 0250-4707 (Print) 0973-7669 (Online), Impact Factor: 1.783.

Papers published in Conference Proceedings:

1. **O. Mangla**, S. Roy, and M. P. Srivastava, "Optical absorption study of GaAs nanostructures synthesized using hot and dense plasma", Proceedings of 27th PSSI National Symposium on Plasma Science & Technology (PLASMA-2012) on Challenges of Power Generation & Lighting 21st Century, Pondicherry University, Chennai, 206-211 (2013), ISBN: 978-93-82062-82-0.
2. **O. Mangla**, S. Roy, and S. Annapoorni, "Gallium arsenide/gold nanostructures deposited using plasma method", AIP Conference Proceedings **1731**, 050006 (2016), ISSN: 0094-243X (print); EISSN: 1551-7616 (online).
3. **O. Mangla** and S. Roy, "Gallium nitride nanoneedles grown in extremely non-equilibrium nitrogen plasma", AIP Conference Proceedings **1731**, 050007 (2016), ISSN: 0094-243X (print); EISSN: 1551-7616 (online).
4. D. Jain, **O. Mangla**, and S. Roy, "Wide band gap gallium arsenide nanoparticles fabricated using plasma method", AIP Conference Proceedings **1731**, 050143 (2016), ISSN: 0094-243X (print); EISSN: 1551-7616 (online).

Conference Organization / Presentation (in the last three years)

NIL

Research Projects (Major Grants/Research Collaboration)

NA

Awards and Distinctions

- 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.

- Best Poster Award for paper entitled "Optical absorption study of GaAs nanostructures synthesized using hot and dense plasma" presented during 27th PSSI National Symposium on Plasma Science & Technology (PLASMA-2012) held at Pondicherry University from December 10-13, 2012.
- Dr. N. Subrahamanyam award for securing First position in M.Sc. Physics Final year in Kirori Mal College, University of Delhi (2009).
- Dr. Ashok Kumar Memorial award for securing First position in B.Sc. (H) Physics 2nd year in Dyal Singh College, University of Delhi (2005).

Association with Professional Bodies

Life Member of Plasma Science Society of India.

Other Activities

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