



# Miranda House

## UNIVERSITY OF DELHI

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**Name:** Dr. GEETA RANI

**Department:** PHYSICS

**Current Designation:** ASSISTANT PROFESSOR

**Email id:** [geeta.rani@mirandahouse.ac.in](mailto:geeta.rani@mirandahouse.ac.in)

### **Academic Qualifications:**

M.Sc. (2008): Physics with specialization in Condensed Matter Physics from Miranda House College, University of Delhi, Delhi -110007

B.Sc. (2006) : Honours degree in Physics from Miranda House college, University of Delhi, Delhi-110007

### **Research Degree(s):**

Ph.D. (2014) : Physics with specialization in material science from the Department of Physics and Astrophysics, University of Delhi, Delhi-110007

**Title of Thesis:** Structural, Optical and Electrical studies of Wide Band Gap Nanomaterials

**NET (Lectureship): Qualified 2016**

### **Field of Specialization under the Subject/Discipline:**

- ❖ Synthesis of different Nanomaterials and their Modification
- ❖ Doping effects in Nanomaterials
- ❖ Condensed Matter Physics
- ❖ Digital and Analog System and Applications

**Total Teaching Experience:** 6.5 Years

**Teaching at Miranda House since:** 5.5 Years



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### List of Publications:

- 1) Photoluminescence characterizations in phase transition alumina with boehmite nanostructures, **Geeta Rani, Journal of the Korean Ceramic Society, 58**, pages 747–752 (2021)
- 2) Current-Voltage Characteristics in ZnS-ZnO Mixed System, **Geeta Rani, Int. J. of Electrical and Electronic Science 5(3)**, 56-62 (2018).
- 3) Annealing effect on the Structural, Optical and Thermoluminescent Properties of ZnAl<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, **Geeta Rani, Powder Technology 312**, 354 (2017).
- 4) Effect of temperature on structural and optical properties of boehmite nanostructure, **Geeta Rani & P. D. Sahare, Int. J. of appl. ceramic tech. 12, 124** (2015).
- 5) Structural and photoluminescent properties of Cr<sup>3+</sup>: Al<sub>2</sub>O<sub>3</sub> nanoparticles via solution combustion synthesis method, **Geeta Rani & P. D. Sahare, Advanced Powder Technology, 25**, 764 (2014).
- 6) Study of the structural and morphological changes during the phase transition of ZnS to ZnO, **Geeta Rani & P. D. Sahare, Applied Physics A, 116, 831** (2014).
- 7) Synthesis and Characterizations of Eu<sup>3+</sup>-doped Phase Transitioned Alumina, **Geeta Rani, Adv. Sci. Lett., 20**, 1585 (2014).
- 8) Effect of phase transition on the thermoluminescence characteristics of nanocrystalline alumina. **Geeta Rani & P. D. Sahare, Nuclear Inst. and Meth. Phys. Res. B, 311**, 71 (2013).
- 9) Structural and Spectroscopic characterizations of ZnO quantum dots annealed at different temperature, **Geeta Rani & P. D. Sahare, J. of Mater. Sci. & Tech., 29**, 1035 (2013).
- 10) Spectroscopy of nickel-doped Zinc sulphide nanoparticles, **Geeta Rani & P. D. Sahare, Spectroscopy Lett. 46**, 391 (2013).
- 11) Preparation and characterization of short length ZnO nanorods and ZnO@ZnS core-shell nanostructures **Geeta Rani & P. D. Sahare, J. Nano Comm. Net. 3**, 197 (2012).
- 12) Fluorescence quenching of laser grade dye coumarin 440 in presence of hydrogen peroxide. A. Pattnaik, P. D. Sahare, **G. Rani. Indian Journal of Phys. 85**, 1775 (2011).
- 13) Synthesis and Luminescent Properties of Li-doped ZnS Nanostructures by Chemical Precipitation Method, **Geeta Rani & P. D. Sahare, AIP Conf. Proc. 1393**, 253 (2011).



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### **Administrative Responsibilities:**

1. Time table Committee
2. Admission Committee
3. PRO Committee
4. Placement Cell
5. Spic Macay

### **Seminars/Workshops/Conferences attended:**

1. Online One Week Short Term Course on “Recent Trends in Advanced Materials and Devices” organized by Department of Physics and Department of Electronics & Communication Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar held during September 21, 2020 to September 25, 2020.
2. Online One-Week Online Faculty Development Program on “Ethics and Values in Technical Education in Context of National Education Policy-2020” organized by Centre for Value Based Education, Delhi Technological University, Delhi during April 15th -19th, 2021
3. Online One-week short term course on computational Physics in the online mode by the Department of Physics, Motilal Nehru National Institute of technology, Allahbad, Prayagraj from 1 March 2021 to 5 March 2021.
4. Online Participated in the International Conclave on “CONTEMPORARY PHYSICS: THE NEW PARADIGM SHIFT-II SERIES” Organized by IQAC, Rajdhani College, University of Delhi, India held from 27th February to 28th February 2021
5. Online Three days online National Workshop on Challenges of Teaching Physics Laboratory Courses in Online mode organized by Department of Physics under the aegis of IQAC, Kalindi College in association of Department of Physics and Astrophysics, University of Delhi and The National Academy of Science India (NASI), Delhi Chapter on 23-25 January 2021.
6. Online National Webinar Series jointly organized by the Discipline of Natural Sciences, PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur, and Department of



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- Physics, Central University of Rajasthan on Experimental & Computational Tools for Materials Research (ECTMR 2020) June 01 – 08, 2020.
7. Online One Week Faculty Development Programme organized by RPS group of Institutions (Haryana) On “Recent Advances in Science and Technology” From 21-27 May 2020.
  8. Participated in the Science Conclave: Research on the Frontiers, D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 10- 12 January 2018.
  9. Canada-2018 | IJAS’ American Canadian conference for academic disciplines “DEVELOPING ARDUINO BASED EXPERIMENTS THROUGH STUDENT PROJECTS”, McGill University, 410 Sherbrooke Street West, Montreal (30 May to 2 June 2018) and Ryerson University’s International Learning Center at 240 Jarvis Street, Toronto (5 to 8 June 2018).
  10. Participated in Inspire Internship Programme, during 18th Dec 2017 to 22nd Dec 2017, at Miranda House, University of Delhi.
  11. Faculty Development Programme on “Applied Physics and Embedded Systems Design” organized by the Department of Physics and Electronics, Rajdhani College, University of Delhi on 14-15<sup>th</sup> December 2017.
  12. One day Faculty Development Programme on “Multifunctional Materials for Energy Harvesting and Allied Devices” during November 10th, 2017 at Department of Physics, ARSD College, University of Delhi.