

Academic Profile of Faculty Member

Hemlata Bisht

(Assistant Professor; Physics)
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Qualification: PhD. (Physics)



Area of Specialization: Fluorescence Spectroscopy, Computational Chemistry, Uv-vis spectroscopy, organic electronics.

Total Number of Students for Master's Dissertation (Awarded/Ongoing): None

Number of Ph.D. awarded: None

Number of candidates working for Ph.D. award: None

Achievements:

- Qualified Graduate Aptitude Test in Engineering (**Gate**) qualified in Gate-2015, Gate-2016, and Gate-2017.
- Qualified National Eligibility Test (NET-JRF) Dec 2015.
- Awarded with Junior and Senior Research Fellowship; UGC-New Delhi.
- During Ph.D., Completed DIC BHU Project titled as "Development of Plasmonic Plates for Ultrafast Detection of Fluorescent Biomarker" as the team member under Prof. Hirdyesh Mishra.

List of Publications:

1. **Hemlata Bisht**, Abhinav Pratap Singh, Satyabrata Jit, and Hirdyesh Mishra Effect of concentration on the photophysics of solution of [6,6]-phenyl C61 butyric acid methyl ester (PCBM) in chloroform *J. Lumin.* 258, 119808, **2023**.
2. **Hemlata Bisht**, Abhinav Pratap Singh, Hem Chandra Joshi, Satyabrata Jit, and Hirdyesh Mishra Förster Resonance Energy Transfer between Fluorescent Organic Semiconductors: Poly(9,9-dioctylfluorene-alt-benzothiadiazole) and 6,13-Bis(triisopropylsilylethynyl)pentacene *J. Phys. Chem. B*, 126, 3931-3939, **2022**.
3. **Hemlata Bisht**, Abhinav Pratap Singh, Satyabrata Jit, Sandeep Pokharia, and Hirdyesh Mishra Effect of Diffusion on Photo-induced Excited-State Energy Transfer between Fluorescent Semiconducting Molecules: Tris-(8-hydroxyquinoline) Aluminum and 6,13-Bis(Triisopropylsilylethynyl)Pentacene *J. Phys. Chem. C*, 125, 23011-23020, **2021**.
4. **Hemlata Bisht**, Gopal Rawat, Satyabrata Jit, and Hirdyesh Mishra Excitation Energy Transfer/Migration between Tris(8-hydroxyquinoline) Aluminum and Poly[2-methoxy-5-(2-ethylhexyloxy)-1,4-phenylenevinylene] in Chloroform *J. Phys. Chem. C*, 124, 6486-6494, **2020**.
5. Rajiv Kumar Pandey, **Hemlata Bisht**, Swatantra K. Yadav, Arun Kumar Singh, Rajiv Prakash, and Hirdyesh Mishra Surface driven nano-morphology of poly 3-hexylthiophene film, and their photophysical, spectral and electronic traits *Materials Science & Engineering B*, 260, 114622, **2020**.

Attended Conference/ Seminar:

- Participated and presented a contributory paper in the 26th DAE-BRNS National Laser Symposium, held at BARC, Mumbai during December 20-23, 2017.
- Participated and presented a talk in the symposium on “Advances in Physics from Small to Large Scale”, organized by the Department of Physics, Kumaun University, Nainital during March 27-28, 2018.
- Participated and presented a poster in the 22nd National Conference on Atomic and Molecular Physics, held at IIT Kanpur during March 25-28, 2019.
- Participated and presented the contribution as a contributed talk on “Concentration Dependent Photophysics of PCBM” at 5th International Conference on SOFT MATERIALS, held at Malaviya National Institute of Technology, Jaipur during December 11th-16th, 2022.

Place: GDC, Kanda


(Hemlata Bisht)