

## Faculty Profile

Name :Dr. Snigdharani Panda  
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Department :Chemistry  
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**About me:** Dr. Snigdharani Panda is currently an Assistant Professor in the Department of Chemistry at the National Institute of Engineering (NIE), Mysore. She completed her Ph.D. in Chemistry from the National Institute of Technology (NIT) Rourkela. Following her doctoral studies, she pursued postdoctoral research at the Indian Institute of Technology (IIT) Bombay in Soft Matter Nano Lab, Department of Physics, where she worked on nanomaterial-based systems and their interdisciplinary applications. Her academic interests lie in bridging fundamental nanoscience with practical applications in sensing, biomedicine, and advanced functional materials.

### **Qualification:**

Ex: B.Sc Chemistry (Khalikote Autonomous College, Berhampur, Odisha.), M.Sc Chemistry (Berhampur University), Ph.D. Chemistry (National Institute of Technology Rourkela)

### **Courses Taught:**

- ✓ Engineering Chemistry, UG class, PMEC Berhampur (2021- 2022)
- ✓ B. tech inorganic Chemistry lab 2022, 2023 IIT Bombay
- ✓ MSc. Lab 2023-2024, IIT Bombay
- ✓ Applied Chemistry for CSE Stream, UG Class (2025 till date)
- ✓ Applied Chemistry laboratory for CSE Stream (2025 till date)
- ✓ Biology for Engineers ISE stream, UG Class (2026)

### **Publications:**

Journal Publications:

1. Panda, S., Jadav, A., Panda, N., Mohapatra, S. (2018): "A novel carbon quantum dot based fluorescent nanosensors for selective detection of flumioxazin in real sample", *New Journal of Chemistry*, 42, 2074-2080.
2. Das, R. K., Panda, S., bhol, C. S., bhutia, S. K., Mohapatra, S. (2019): "N-doped carbon quantum dot (NCQD) deposited carbon capsules for synergistic fluorescence imaging and photothermal therapy of oral cancer", *Langmuir*, 35, 15320-15329.

3. Panda, S., Paital, B., Mohapatra, S. (2020): “CQD@ $\gamma$ Fe<sub>2</sub>O<sub>3</sub> multifunctional nanoprobe for selective fluorescence sensing, detoxification and removal of Hg (II)”, *Colloids and Surface A: Physicochemical and Engineering Aspects*, 589, 124445.
4. Panda, S., Bhol, C. S., Bhutia, S. K., Mohapatra, S. (2021): “PEG-PEI modified small molecule gated N-doped mesoporous carbon nanospheres for pH/ NIR light triggered drug release and cancer phototherapy”, *Journal of Material Chemistry B*, 9, 3666-3676.
5. Panda, S., Bhol, C. S., Bhutia, S. K., Mohapatra, S. (2021): “DSPE-PEG coated uniform nitrogen doped carbon capsules for NIR mediated synergistic chemophototherapy of skin cancer”, *ACS Appl. Biomater.*, 4, 9, 7059–7069.
6. Panda, S., Dash, P., Nayak, B., Mohapatra, S. (2022): “Papaya-derived CQD loaded fluorescent hydrogel for NIR-stimulated photochemotherapy and antibacterial activity”, *ACS Applied Polymeric Materials*, 4, 1, 369–380.
7. Panda, S., Khan, I., Neekhra, S., Srivastava, R., Srivastava, S. (2024): “NIR-responsive Porous Gold Nanorod Dispersed in 3D Gelatin Scaffold for Stimuli Responsive Drug Release and Synergistic Therapy”, *Material advances*, 5(17), 6853-6863.
8. Khan, I., Panda, S., Kumar, S., Srivastava, S. (2025): “A composite hydrogel of porous gold nanorods and gelatin: Nanoscale structure and rheomechanical properties”, *The Journal of Chemical Physics*, 162(1).

Conference Proceedings: NIL

**Text Books:**

Futuristic Trends in Chemical, Material Sciences & Nano Technology. e-ISBN: 978-93-5747745-1, Editor in IIP Series, Volume 3, Book 21, Part 9, Chapter 1, 166-198.

**Book Chapters:**

1. Perovskite-based electrochemical sensing of ion and gas molecules: an overview, R. Mandal, S. Das, S. Panda, Book Chapter 21(<https://doi.org/10.1016/B978-0-32399529-0.00004-7>)accepted 2023.
2. Nanotechnology in Cancer Imaging. S. Panda, R. Mandal, C.S. Bhol, Springer Naure 2026 (Recently accepted)

**Other achievements:**

**Patent:**

METHOD OF FABRICATING MESOPOROUS ANISOTROPIC PLASMONIC GOLD NANORODS. Prof. SRIVASTAVA SUNITA PREMSHANKARLAL, PANDA SNIGDHARANI IITB Ref. No. IN567760, Patent Granted (2025).

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