



Dr. DEEPAK SAHU - Ph. D.

Name : Deepak Sahu
Designation : Assistant Professor
Department : Basic Science and Humanities (Chemistry)
(JOINED THE INSTITUTE IN 2022)
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RESEARCH INTERESTS

- Nanocomposites, Carbon dots, Graphene based composites
- Sensing, Catalytic applications

Academic Qualifications

- Ph. D. (Chemistry) VSSUT, Burla, Odisha, India
- M. Sc. (Chemistry) NIT Rourkela, Odisha, India

Teaching Experience/Industrial Experience/Research Experience

Teaching Experience – 6 years+

Research Experience – 7 years

PUBLICATIONS

JOURNALS

1. **D. Sahu**, N. Sarkar, G. Sahoo, P. Mohapatra, and S K Swain* "Nano Silver imprinted polyvinyl alcohol nanocomposites thin films for Hg²⁺ sensor" *Sensors and Actuators B: Chemical*, 246 (2017) 96-107. (Elsevier) (Impact Factor: 6.393)
2. **D. Sahu**, G. Sahoo, P. Mohapatra, and S K Swain* "Dual Activities of Nano Silver Embedded Reduced Graphene Oxide Using Clove Leaf Extracts: Hg²⁺ Sensing and Catalytic Degradation" *ChemistrySelect*, 4 (2019) 2593-2602. (Wiley) (Impact Factor: 1.716)
3. **D. Sahu**, P. Mohapatra, and S K Swain* "Highly orange fluorescence emission by water soluble gold nanoclusters for "turn off" sensing of Hg²⁺ ion" *Journal of Photochemistry and Photobiology A: Chemistry*, (Revision Submitted) (Elsevier) (Impact Factor: 3.261)
4. **D. Sahu**, N. Sarkar, P. Mohapatra, and S K Swain* "Rhodamine associated silver/reduced graphene oxide nanocomposites for ultra-sensitive detection of Hg²⁺ ion" *Microchemical Journal*, (Under review) (Elsevier) (Impact Factor: 3.201)
5. **D. Sahu**, N. Sarkar, P. Mohapatra, and S K Swain* "Nano Gold Hybrid Polyvinyl Alcohol Films for Sensing of Cu²⁺ ions"

- ChemistrySelect, 4 (2019) 9784 –9793. (Wiley) (Impact Factor: 1.716) DOI: 10.1002/slct.201902167
6. **D. Sahu**, N. Sarkar, G. Sahoo, P. Mohapatra, and S K Swain* "Nano Silver Imprinted Graphene Oxide as Catalyst in Reduction of 4- nitrophenol" Journal of Physical Organic Chemistry, (2019) e3971. (Wiley) (Impact Factor: 1.5 DOI: <https://doi.org/10.1002/poc.3971>)
 7. N. Sarkar, G. Sahoo, R. Das, G. Prusty, **D. Sahu** and S. K. Swain* Anticorrosion Performance of Three-Dimensional Hierarchical PANI@BN Nanohybrids. Industrial & Engineering Chemistry Research, 55 (2016) 2921-2931. (ACS) (Impact Factor: 3.14) DOI: <https://doi.org/10.1021/acs.iecr.5b04887>
 8. G. Sahoo, N. Sarkar, **D. Sahu** and Sarat K Swain*, Nano Gold Decorated Reduced Graphene Oxide Wrapped Polymethylmethacrylate for Supercapacitor Applications. RSC Advances, 7 (2017) 2137-2150 (RSC) (Impact Factor: 3.215 DOI: 10.1039/C6RA26930C)
 9. P.K.Behera, **D.Sahu**, S K Swain, P. Mohapatra* "Capsule Shaped Nano Silver Embedded Reduced Graphene Oxide Nanocomposites For Sensing Of Mercury Ions" Applied Nanoscience. 14(2) (2024) 353-361 (Springer)
 10. P.K.Behera, **D. Sahu**, B.R. Jali, A.K. Barick, S K Swain, P. Mohapatra* "A simple method for synthesizing nitrogen doped carbon quantum dots for fluorescent 'turn off'" mercury(II) ion sensing Journal of Fluorescence (2024) 1-10 (Springer) <https://doi.org/10.1007/s10895-024-03649-1>

CONFERENCE PAPERS PRESENTED

1. **D. Sahu**, P. Mohapatra and S K. Swain* "RhodamineB associated Ag/r-GO nanocomposites as ultrasensitive fluorescent sensor for Hg²⁺ ions in aqueous medium" International Conference on nanotechnology: Innovation, Ideas and Initiatives (ICN:3I 2017), IIT Roorkee, December 05-08, 2017.
2. **D. Sahu**, P. Mohapatra and S K. Swain*, "Nano silver decorated polyvinyl alcohol nanocomposite thin films for sensing of Hg²⁺ ion" International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM-2016) at IISC Bangalore, 3-7, December, 2016.
3. D. Sahu, P. Mohapatra and S K. Swain*, "Graphene reinforced transition metal nanocomposites" International Conference on Innovative Applications of Chemistry in Pharmacology & Technology at Berhampur University, Berhampur, 06-08, February, 2015.
4. D. Sahu, P. Mohapatra and S K. Swain*, "Nano silver/PVA nanocomposites thin film for sensing of Hg²⁺ ion" 29th Annual conference of Orissa Chemical Society at IGIT, Sarang, Odisha, 13-14, December, 2015.