



Dr. Satyabrata Subudhi

Designation: Faculty

Qualification: MSc, M. Phil., PhD

Date of Birth: 10.07.1992

Date of Joining: 01. 07. 2024

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WOS: <https://www.webofscience.com/wos/author/record/ABC-9233-2021>

- **Area of Interest:** Metal Organic Framework, Covalent Organic Framework, Photocatalysis, Organic Transformation Reaction, Photocatalytic applications Towards Energy and Environment.
- **Courses taught :** Organic Chemistry, Inorganic Chemistry, Physical Chemistry, Analytical Chemistry, Polymer Chemistry, Green Chemistry, Environmental Chemistry.
- **Career :** Assistant Professor (Guest Faculty, 2024): Rama Devi Women's University, Bhubaneswar.
- **Teaching Experience :** 03 years
- **Research Experience :** 03 years
- **Administrative/Executive Experience :** NIL
- **Membership in Scientific Societies :** Interdisciplinary Symposium on Materials Chemistry (ISMC)
- **Research**
- ✓ **Publications**

Total Publication: 10

Total citation: 1540 ; H-index: 21 ; i10 index: 23

✓ **Journal publications**

- [1] **Subudhi, S.**, Mansingh, S., Swain, G., Behera, A., Rath, D. and Parida, K., 2019. HPW-Anchored UiO-66 Metal–Organic Framework: A Promising Photocatalyst Effective toward Tetracycline Hydrochloride Degradation and H₂ Evolution via Z-Scheme Charge Dynamics. **Inorganic chemistry**, 58(8), pp.4921-4934.
- [2] **Subudhi, S.**, Swain, G., Tripathy, S.P. and Parida, K., 2020. UiO-66-NH₂ Metal–Organic Frameworks with Embedded MoS₂ Nanoflakes for Visible-Light-Mediated H₂ and O₂ Evolution. **Inorganic Chemistry**, 59(14), pp.9824-9837.
- [3] **Subudhi, S.**, Tripathy, S., Ray, A., Behera, P., Bhaumik, A., Parida, K., Mixed-valence bimetallic Ce-Zr MOF based nanoarchitecture: A visible light active photocatalyst for

- ciprofloxacin degradation and hydrogen evolution. **Langmuir (Accepted)**
- [4] **Subudhi, S.**, Mansingh, S., Tripathy, S.P., Mohanty, A., Mohapatra, P., Rath, D. and Parida, K., 2019. The fabrication of Au/Pd plasmonic alloys on UiO-66-NH₂: an efficient visible light-induced photocatalyst towards the Suzuki Miyaura coupling reaction under ambient conditions. **Catalysis Science & Technology**, 9(23), pp.6585-6597.
- [5] **Subudhi, S.**, Paramanik, L., Sultana, S., Mansingh, S., Mohapatra, P. and Parida, K., 2020. A type-II interband alignment heterojunction architecture of cobalt titanate integrated UiO-66-NH₂: A visible light mediated photocatalytic approach directed towards Norfloxacin degradation and green energy (Hydrogen) evolution. **Journal of Colloid and Interface Science**, 568, pp.89-105.
- [6] Tripathy, S.P., **Subudhi, S.**, Acharya, R., Acharya, R., Das, M. and Parida, K., Hydrolytically stable citrate capped Fe₃O₄@ UiO-66-NH₂ MOF: A hetero-structure composite with enhanced activity towards Cr (VI) adsorption and photocatalytic H₂ evolution. **Journal of Colloid and Interface Science** **606**, 353-366.
- [7] Mansingh, S., **Subudhi, S.**, Sultana, S., Swain, G., Parida, K., Cerium-Based Metal–Organic Framework Nanorods Nucleated on CeO₂ Nanosheets for Photocatalytic N₂ Fixation and Water Oxidation. **ACS Appl. Nano Mater.** **2021**, 4(9), 9635–9652.
- [8] Sahoo, M., Mansingh, S., **Subudhi, S.**, Mohapatra, P. and Parida, K., 2019. A plasmonic AuPd bimetallic nanoalloy decorated over a GO/LDH hybrid nanocomposite via a green synthesis route for robust Suzuki coupling reactions: a paradigm shift towards a sustainable future. **Catalysis Science & Technology**, 9(17), pp.4678-4692.
- [9] Mansingh, S., Das, K.K., Behera, A., **Subudhi, S.**, Sultana, S. and Parida, K., 2020. Bandgap engineering via boron and sulphur doped carbon modified anatase TiO₂: a visible light stimulated photocatalyst for photo-fixation of N₂ and TCH degradation. **Nanoscale Advances**.

✓ **Full paper in conference proceedings**

- [1] **Subudhi, S.** and Parida, K., 2020. Zr-based MOF: An enhanced photocatalytic application towards H₂ evolution by consequence of functional group and LSPR effect. **Materials Today: Proceedings**.
- [2] Tripathy, S.P., **Subudhi, S.**, Acharya, R., Acharya, R., Das, M. and Parida, K., 2019. Adsorptive removal of Cr (VI) onto UiO-66-NH₂ and its determination by radioanalytical techniques. **Journal of Radioanalytical and Nuclear Chemistry**, 322(2), 983-992.

✓ **List of Patents:**

1. Au modified UiO-66-NH₂ photocatalyst and method for synthesis thereof. **(Patent Grant No. 533011)**
2. NixPy on MOF derived C/N Co-doped ZnO photocatalyst composite and method for synthesis thereof. **(Patent Grant No. 439831)**