

EDUCATION

- **PhD, Environmental Engineering and Management**
Department of Civil Engineering
Indian Institute of Technology, Kharagpur
January 2018
- **MTech, Environmental Engineering and Management**
Department of Civil Engineering
Indian Institute of Technology, Kharagpur
May 2013
- **BTech, Civil Engineering**
Veer Surendra Sai University of Technology, Burla, Odisha
May 2011

ACADEMIC THESIS

- **Modified photo-Fenton process for degradation of dyes and textile wastewater using a novel Co(II)-based heterogeneous catalyst (Ph.D. Thesis)**, IIT Kharagpur, January 2018.
- **Degradation of tetracycline by nano manganese dioxide in aqueous phase (MTech Thesis)**, IIT Kharagpur, May 2012–May 2013.
- **Flood Frequency Analysis of River Mahanadi at Hirakud (Bachelor's Thesis)**, V.S.S.U.T Burla, August 2010–April 2011.

RESEARCH INTEREST

- Pollutant degradation by advanced oxidation processes.
- Synthesis of heterogeneous catalyst and their application for wastewater treatment.
- Nanomaterial mediated recalcitrant pollutant remediation.
- Development of sustainable environmental technologies.

TECHNICAL SKILLS

ORIGIN, AUTOCAD, DESIGN EXPERT, MATLAB

PUBLICATIONS

1. **Mahamallik, P., Pal, A.** (2019). Photo-Fenton process in Co(II)-adsorbed admicellar soft-template on alumina support for methyl orange degradation, **Catalysis Today**, accepted, <https://doi.org/10.1016/j.cattod.2019.07.045>
2. Pal, A., **Mahamallik, P.**, Saha S., Majumdar A. (2017). Degradation of tetracycline antibiotics by advanced oxidation processes: application of MnO₂ nanomaterials, **Natural Resources and Engineering**, 2(1), 32-42.
3. **Mahamallik, P., Pal, A.** (2017). Photo-Fenton Decolorization of methylene blue adsorbed in Co (II)-embedded alumina surface: comparison of process modeling by RSM and ANN, **Research Journal of Chemistry and Environment**, 21(11), 45-59.
4. **Mahamallik, P., Pal, A.** (2017). Degradation of textile wastewater by modified photo-Fenton process: Application of Co (II) adsorbed surfactant-modified alumina as heterogeneous catalyst. **Journal of Environmental Chemical Engineering**, 5(3), 2886-2893.
5. Kongarapu, R. J., **Mahamallik, P., Pal, A.** (2017). Surfactant modification of chitosan hydrogel beads for Ni@NiO core-shell nanoparticles formation and its catalysis to 4-nitrophenol reduction. **Journal of Environmental Chemical Engineering**, 5(2), 1321-1329.
6. **Mahamallik, P., Pal, A.** (2016). Photo-Fenton process in a Co(II)-adsorbed micellar soft-template on an alumina support for rapid methylene blue degradation. **RSC Advances**, 6, 100876-100890.
7. **Mahamallik, P., Pal, A.** (2015). A soft-template mediated approach for Au (0) formation on a heterosilica surface and synergism in the catalytic reduction of 4-nitrophenol. **RSC Advances**, 5(95), 78006-78016.
8. **Mahamallik, P., Saha, S., Pal, A.** (2015). Tetracycline degradation in aquatic environment by highly porous MnO₂ nanosheet assembly. **Chemical Engineering Journal**, 276, 155-165.

CONFERENCE

1. Mahamallik, P., Pal, A., Photo-Fenton process for decolorization of methyl orange: Co(II)-adsorbed admicellar soft-template on alumina support as a heterogeneous catalyst, International Conference on Applied Catalysis and Chemical Engineering, April 8-10, 2019, Dubai, UAE
2. Mahamallik, P., Pal, A., Co(II)-adsorbed micellar soft-template on an alumina support for rapid methylene blue degradation by photo-Fenton process, National Conference on Advances in Environmental & Chemical Science, March 17-18, 2017

3. Mahamallik, P., Pal, A., Photo-Fenton Decolorization of Methylene Blue Adsorbed on Co²⁺-Embedded Alumina Surface: Comparison of Process Modeling through Response Surface Methodology and Artificial Neural Network, ICEESD 2017:19th International Conference on Energy, Environment and Sustainable Development, 23-24 January, 2017, Paris, France (accepted).
4. Mahamallik, P., Pal, A., Immobilization of Nano Au (0) on Heterosilica Surface and its Catalytic Activity towards 4-Nitrophenol Reduction, 17th National Conference on Surfactants, Emulsions and Biocolloids, 4-6 November, 2015, Raipur, Chattisgarh, India.
5. Mahamallik, P., Pal, A., Degradation of Tetracycline Hydrochloride by Nano Manganese Dioxide in Aqueous Phase, Symposium on Sustainable Infrastructure Development (SID) 8-9 February 2013, IIT Bhubaneswar, Bhubaneswar, Odisha, India.

ACHIEVEMENTS AND ACTIVITIES

- Awarded in 17th National Conference on Surfactants, Emulsions & Biocolloids(NATCOSEB XVII, PRSU, RAIPUR) November 04-06, 2015 for oral presentation.
- GATE fellowship during M.Tech and Institute fellowship during Doctoral Research at IIT Kharagpur.

TEACHING EXPERIENCE

- Assistant Professor at KIIT University, School of Civil Engineering (July 2017-February 2020)