

BIODATA

1. Name: Dr. Purabi Kar

2. Qualification:

June 2010-July 2015: Ph. D. in Chemistry,
Specialization: Pillared Clay Analogues and Clay-
Polymer Composite Materials, Dept. of Chemistry, NIT Rourkela.
July 2008-June 2010: M.Sc.(Chemistry)
National Institute of Technology, Rourkela (Odisha)



3. Designation: Assistant Professor

4. Email Id: purabi306@gmail.com

5. Area of interest:

Heterogeneous Catalysis, Nanocomposites, Bioinorganic complexes, Quantum Chemistry, Thermodynamics

6. Area of research:

- (i) Synthesis and surface modification of pillared clays.
- (ii) Evaluation of physicochemical properties of pillared clays from different characterization techniques.
- (iii) Study of surface property of different modified clay systems.
- (iv) Application of pillared clay system as a catalyst for the synthesis of biologically important molecules and for removal of organic pollutants from the environment.

7. Teaching Area:

- UG: Engineering Chemistry, Physical Chemistry, Polymer Chemistry
- PG: Quantum Chemistry, Thermodynamics, Polymer Chemistry, Environmental Chemistry

8. Total No. of Teaching Experience (Yrs):

- UG: 08
- PG: 01

9. Research Supervision N/A

- Completed (M.Phil./Ph.D./D.Sc./D.Litt.)

Srl. No.	Name of the Student	Degree	University	Title of the Thesis	Date of Registration	Date of Submission	Date of Award of Degree

- Ongoing (M.Phil./Ph.D./D.Sc./D.Litt.)

Srl No.	Name of the Student	Degree	University	Title of the Thesis	Date of Registration

10. Publication Profile

a) Published research articles:

1. **Purabi Kar, Aparajita Nayak, Y.P. Bhoi, B.G. Mishra**, "Catalytic application of Zr-Pillared clay-sulfonated polyvinyl alcohol composite catalytic system for one-pot multicomponent synthesis of hexahydropyrimidines", *Microporous and Mesoporous Materials*, 223 (2016), 176-186.
2. **Purabi Kar, B.G. Mishra, S.R. Pradhan**, Polyphosphoric acid–zirconia pillared clay composite catalytic system for efficient multicomponent one pot synthesis of tetrahydropyridines under environmentally benign conditions, *Journal of Molecular Catalysis A: Chemical* 387 (2014) 103–111.
3. **Purabi Kar and B. G. Mishra**, Hydrodehalogenation of Halogenated Organic Contaminants from Aqueous Sources by Pd Nanoparticles Dispersed in the Micropores of Pillared Clays Under Transfer Hydrogenation Condition, *Journal of Cluster Science* 25 (2014) 1463-1478.
4. **Purabi Kar, B.G. Mishra**, Silicotungstic acid nanoparticles dispersed in the micropores of Cr-pillared clay as efficient heterogeneous catalyst for the solvent free synthesis of 1,4-dihydropyridines, *Chemical Engineering Journal* 223 (2013) 647–656.
5. **Purabi Kar, Satish Samantaray, B. G. Mishra**, Catalytic application of chromium-pillared montmorillonite towards the environmentally benign synthesis of octahydroxanthones, *Reaction Kinetics Mechanism & Catalysis* 108 (2013) 241–251.
6. **S. Samantaray, P. Kar, G. Hota, and B. G. Mishra**, Sulfate Grafted Iron Stabilized Zirconia Nanoparticles as Efficient Heterogeneous Catalysts for Solvent-Free Synthesis of Xanthenediones under Microwave Irradiation, *Industrial Engineering & Chemistry Research*, 2013, 52, 5862–5870
7. Jharana Sahoo, Mandakini Behari, Purabi Kar, Somanath Sahoo & Debadutta Das
Eco-Friendly Degumming of Tussar Silk Cocoons Using a Natural, nonionic Surfactant, *Journal of Macromolecular Science, Part B – Physics*. 2025 page 1-16

b) Books Chapters Published: N/A

c) Books Published: N/A

d) Articles Published in Newspapers/Magazines: N/A

11. Research Projects: N/A

Name	Department	Type (major/minor)	Name of the funding agency	Funds provided (in Rs. in lakhs)	Title of the project	Month and year of receiving grant	Duration of the project	Completed/ongoing (Date of Completion/expecting completion)

12. Paper presented in Conferences/Seminars:

1. **Purabi Kar and B.G. Mishra**, Novel synthesis of tetrahydropyridines using polyphosphoric acid intercalated zirconia pillared montmorillonite, 16th CRSI National Symposium in Chemistry (NSC-16), 7th -9th February, 2014, Department of Chemistry, IIT Bombay, Mumbai, India.
2. **Purabi Kar and B. G. Mishra**, Treatment of halogenated organic compounds using supported Pd bimetallics dispersed in the micropores of Al-pillared clay, 3rd International Conference on Advanced Nanomaterials & Nanotechnology, 1st-3rd December 2013, Department of Chemistry, IIT Guwahati, India.
3. **Purabi Kar, Satish Samantaray, B. G. Mishra**, Chromium pillared clays and its modified analogues as efficient heterogeneous catalyst for synthesis of Xanthene derivatives and Dihydropyridines, 14th CRSI National Symposium in Chemistry, 3rd - 5th February 2012, National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, Kerala, India.
4. **Purabi Kar, B. G. Mishra**, Preparation, characterization and catalytic application of vanadia supported Cr-pillared clay for oxidation of aniline, Silver Jubilee Annual Conference of Orissa Chemical Society & National Conference on Molecule, 24-26th December 2011, Department of Chemistry, Sambalpur University, Burla, Odisha, India.
5. **Satish Samantaray, Purabi Kar, Prabhat kumarSubudhi and B. G. Mishra**, Selective synthesis and stability of t-zirconia nanoparticles; structural properties, 13th CRSI NSC and 5th CRSI RSC symposium in chemistry 4-6th February 2011, Department of Chemistry, NISER and KIIT university, Bhubaneswar, India.

13. Invited Lectures/Special Lectures/Resource persons or presentation at Conferences/Workshops: N/A

14. Awards and Distinctions: N/A

15. Association with Professional Bodies: N/A