



**Institute of Chemical Technology  
IndianOil Odisha Campus  
Bhubaneswar**



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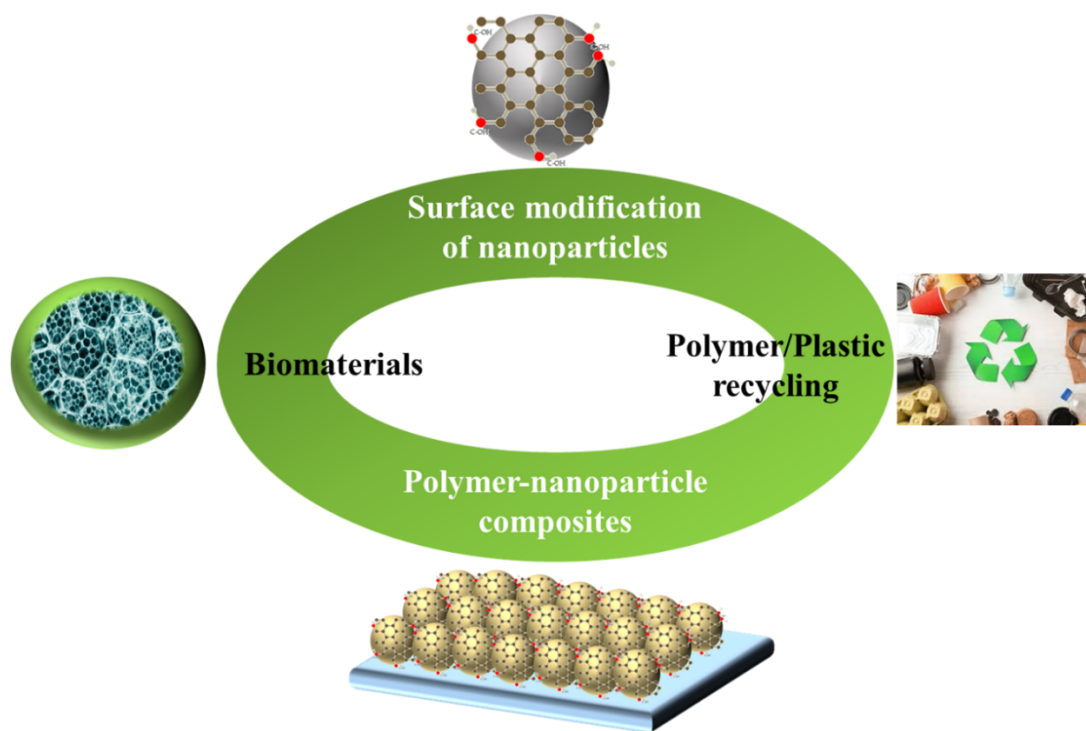
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**Research Area**

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**Education**

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- **Ph. D:** *Department of Materials Science and Engineering, Indian Institute of Technology Delhi (IIT Delhi).*  
**Ph.D (Visiting Scientist):** National Chiao Tung University (NCTU) Taiwan  
*“NCTU Taiwan Elite Scholarship”*
- **Master in Engineering (M.E):** *Plastics and Polymer Engineering, Central Institute of Plastics Engineering and Technology (CIPET), Ahmedabad.*
- **Bachelors of Technology (B. Tech):** *Plastics and polymer engineering, Central Institute of Plastics Engineering and Technology (CIPET), Bhubaneswar*

## Selected Publications

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1. Priming the pores of mesoporous silica nanoparticles with an in-built RAFT agent for anchoring a thermally responsive polymer, **Smrutirekha Mishra**, James M. Hook, Leena Nebhani, *Microporous and Mesoporous Materials* 277, 2019, 60–69
2. Imprinting the location of an in-built RAFT agent and selective grafting of polymer chains inside or outside the pores of mesoporous silica nanoparticles, **Smrutirekha Mishra**, Aditya Rawal, Leena Nebhani, *Microporous and Mesoporous Materials* 294, 2020, 109898
3. Hybrid mesoporous silica based nanocarriers for responsive drug release in cancerous cell line, **Smrutirekha Mishra**, Arti Kataria, Bishwajit Kundu, Leena Nebhani, *Applied Nanoscience*, 20, 2020, 65
4. Tuning shear thickening behavior via synthesis of organically modified silica to improve impact resistance of Kevlar fabric, Subhendu Kumar Sahoo, **Smrutirekha Mishra**, Ehteshamul Islam, Leena Nebhani, *Materials Today Communications*, 23, 2020, 100892
5. Combined effect of functionality and pore size on dehydrogenation of ammonia borane via its nanoconfinement in polyacrylamide grafted organically modified mesoporous silica, **Smrutirekha Mishra**; Po-Cheng Kang; Rui-Fang Guo; Cheng-Yu Wang; Leena Nebhani, *ACS Applied Energy Materials*, 4, 2021, 6585-6598

## List of Awards and Honors

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1. Post-Doctoral Fellowship 2020-University of Padova, Italy (Not taken)
2. NCTU Taiwan Elite scholarship, 2019
3. 3rd position in ORAL presentation at YRS-2019, IIT Delhi
4. Consolation award Open house demonstration 2018, IIT Delhi
5. 3rd position in master's degree 2015, CIPET Ahmedabad
6. Consolation award at APM-2013 (International Conference), Lucknow
7. 2nd.position in undergraduate ORAL talk, VIDYANSH-2012, CIPET Bhubaneswar
8. 1st.position in undergraduate ORAL talk, VIDYANSH-2011, CIPET Bhubaneswar
9. Child scientist award district level 2004 on aerospace innovation
10. State scholarship award from 1993 -2003