Prof Saurav Chatterjee

Organometallic Research Group
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Academic Profile:

M.Sc. (Inorganic Chemistry) : The University of Burdwan (1996)
PhD : Indian Institute of Technology Mumbai (2001)

Research & Professional Experience:

Postdoctoral Fellow, University of Bonn, Germany: 2003 to 2004
Postdoctoral Fellow, Ruhr Uni- Bochum, Germany : 2002 to 2003
CSIR Pool Scientist, IIT Bombay (2005-2007)
Assistant professor, NIT Rourkela (2007-2011)
Associate professor, NIT Rourkela (2012- till date)

Research Interest:

Functionalization of ferrocenyl and half sandwich molecular entities and understanding their redox, biological and photophysical properties; Design of metal cluster framework for binary transition metal-main group nanomaterial synthesis.

Honours and Affiliation:

DAAD fellowship for research stay (2012) : University of Duisburg –Essen, Germany

Research Group :

Doctoral Students:
Dr. Sumanta K. Patel
Dr. Sasmita Mishra
Dr. Vijaylakshmi Tirkey
Mr. Avishek Ghosh
Ms. Smriti Dewangan
Mr. Rajkumar Boddhula
Ms. Tilasi Barik

Masters project Students
Mr.Kumar Sourabh
Ms. Suchitra Naik
Mr. Vikas Kalyani

Ms. K. S. Shradha Reddy
Mr. Kamal Hassan
Ms. Dipannita Roy
Mr. Ch. Nanda
Mr. Sourabh Bera
Ms. Annu K. Pandey
Ms. Jayanti Betal
Mr. Suvendu K Barik
Mr. Promoda K Behera
Ms. Sushreeta Behera
Mr. Kaushik Sahu
Ms. Ipsita De
Mr. Sabuj Dhar
Mr. Arnab Bhowmick
Ms. Nishibanya Behera
Ms. Basanti Ekka
Ms. Puspanjali Bal
Mr. Deepak Ranjan Mandal
Ms. Moumita Chakraborty
Ms. Sushmita Maitra
Ms. Sambita Sahoo

Summer Internship Students:

Ms. Sushree Maitree Baral
Mr. Kumar Saurabh
Ms. Sakshi jha
Ms. Somya

Foreign Visitors

Dr. Georg Bendt, Universitaet Duisburg-Essen, Germany
Dr. Monika Rusek, Universitaet Duisburg-Essen, Germany

Selected Publications:

1. Electrolyte-free dye sensitized solar cell with high open circuit voltage using a bi-functional ferrocene based cyanovinyl molecule as dye and redox couple.
A. Ghosh, S. Mishra, S. Giri, S. M. Mobin, A. Bera, **S. Chatterjee***
Organometallics (2018) in press) , doi:10.1021/acs.organomet.8b00104

2. Synthesis and structure of open and closed type Iron telluride -stibine cluster compounds
R. Boddhula, A. Ghosh, C. Wölper, S. M. Mobin, S. Giri, **S. Chatterjee***, *J. Organomet. Chem.*, 851 (2017) 22-29.

3. Synthesis of diferrocenyl hydrazone-enone receptor molecules: Electronic communication, Metal binding and DFT study.
S. Mishra, S. Dewangan, S. Giri, S. M. Mobin, **S. Chatterjee***, *Eur. J. Inorg. Chem.* (2016) 5485.

4. Synthesis, structure and antibacterial activity of ferrocenyl diphopshine chelated iron - telluride cluster
V. Tirkey, R. Boddula, S. Mishra, S. M. Mobin, **S. Chatterjee***, *J. Organomet. Chem.*, 794 (2015) 88.
5. Ferrocenyl–cymantrenyl hetero-bimetallic chalcones: Synthesis, structure and biological properties
S. Mishra, V. Tirkey, A. Ghosh, H. R. Dash, S. Das, M. Shukla, S. Saha, S. M. Mobin, **S. Chatterjee***, *J. Mol. Struct.* 1085 (2015) 162–172
6. Synthesis of mono- and bi-metallic alkynyldithiocarboxylate complexes from sunlight driven insertion reaction and their biological activity
S.K. Patel, V. Tirkey, S. Mishra, H.R. Dash, S. Das, M. Shukla, S. Saha,
S.M. Mobin, **S. Chatterjee***, *J. Organomet. Chem.*, 749 (2014) 75.
7. Synthesis, characterization and antibacterial studies of ferrocenyl and cymantrenyl hydrazone compounds
V. Tirkey, S. Mishra, H.R. Dash, S. Das, B. Prasad Nayak, S. M. Mobin, **S. Chatterjee***
J. Organomet. Chem., 732 (2013) 122.
8. Synthesis and characterization of bridged and chelated diphosphine coordinated transition metal chalcogenide clusters, $[(CO)_{18}Fe_6(\mu_3\text{-}Te)_4\{\mu\text{-}PPh_2(CH_2)_2PPh_2\}]$ and $[(CO)_nFe_2(\mu_3\text{-}Y)_2M\{PPh_2\text{-}R\text{-}PPh_2\}]$, [Y = Se, Te; M = Pd, Fe; n = 6, 8; R = $\{(\eta^5\text{-}C_5H_4)_2Fe\}$, $\{(CH_2)_2\}$]
S. Chatterjee*, S. K. Patel, V. Tirkey, S. M. Mobin, *J. Organomet. Chem.*, 699 (2012) 12.

Sponsored/ Consultancy Projects:

Sl. No	Title of the project	Funding agency	Years
1.	**Synthesis and characterization of transition metal acetylides, their reactivity studies and electrochemical behavior.**	**DST-SERB**	**2009-2012**
2	**Metal Complexes of Ferrocene Based Ligands, their Electrochemical Behavior and Biological properties**	**CSIR**	**2011-2014**
3.	**Synthesis, characterization and reactivity of transition metal clusters and their potential towards metal nanoparticles**	**SERB (DST)**	**2014-2017**
4.	**Design of binary materials using transition metal chalcogenide and pnictide complexes**	**DST-DAAD, Indo – German Joint Research project**	**2015-2017**
5.	**Investigation of functionalized sandwich and half-sandwich organometallic molecules as optical sensing and molecular switching devices**	**CSIR**	**2018-2021**

Group Pics: