

Curriculum Vitae

Personal Information

Name: Dr. SUMAN SINHA
Date of Birth: 10/10/1991
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Academic Record

- **February 2015 – October 2019** **Ph. D.,** *Indian Institute of Engineering Science and Technology, Shibpur (IESTS), Howrah 711103, West Bengal, India.*
- **Research Area:** Synthetic Inorganic and Organic Chemistry. Synthesis of small bioactive molecules using novel strategic approach. Development of new catalytic systems to explore alternative, cheap, environmentally benign way of synthetic organic chemistry.
 - **Research Supervisor:** Dr. Nanda Dulal Paul.
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- **2012 – 2014** **M. Sc.,** *Indian Institute of Engineering Science and Technology, Shibpur (IESTS), Howrah 711103, West Bengal, India.*
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- **2009 – 2012** **B. Sc.,** *Rabindra Mahavidyalaya, The University of Burdwan, West Bengal, India.*
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- **2007 – 2009** **Higher Secondary Education** (12th Standard): *W.B.C.H.S.E, Haripal G. D Institution, Hooghly, West Bengal.*
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- **2007** **Secondary Education** (10th Standard): *W.B.B.S.E, Haripal G. D Institution, Hooghly, West Bengal.*

Expertise

- **Experimental techniques:** complexation, synthesis and purification of organic compounds, crystallization, homogeneous catalysis, reactions under inert conditions, TLC, Column Chromatography, Fractional Crystallization.
- **Instrumental Techniques:** UV-Visible, IR, NMR, EPR, X-Ray single crystal. Electrochemical Technique: Cyclic Voltammetry.

Publications

1. **Sinha, S.**; Das, S.; Mondal, R.; Mandal, S.; Paul, N. D. Cobalt Complexes of Redox Noninnocent Azo-aromatic Pincers. Isolation, Characterization and Application as Catalyst for the Synthesis of Quinazolin-4(3H)-ones. *Dalton Trans.* **2020**, 49, 8448-8459.
2. **Sinha, S.**; Sikari, R.; Sinha, V.; Jash, U.; Das, S.; Brandão, P.; Demeshko, S.; Meyer, F.; de Bruin, B.; Paul, N.D. Iron-Catalyzed/Mediated C-N Bond Formation: Competition Between Substrate Amination vs. Ligand Amination. *Inorg. Chem.* **2019**, 58, 1935–1948
3. **Sinha, S.**; Das, S.; Sikari, R.; Parua, S.; Brandão, P.; Demeshko, S.; Meyer, F.; Paul, N. D. Redox Noninnocent Azo-Aromatic Pincers and Their Iron Complexes. Isolation, Characterization, and Catalytic Alcohol Oxidation. *Inorg. Chem.* **2017**, 56, 14084–14100.
4. Sikari, R.; **Sinha, S.**; Jash, U.; Das, S.; Brandão, P.; de Bruin, B.; Paul, N. D. Deprotonation Induced Ligand Oxidation in a Ni^{II} Complex of a Redox Noninnocent N1-(2-Aminophenyl)benzene-1,2- diamine and Its Use in Catalytic Alcohol Oxidation. *Inorg. Chem.* **2016**, 55, 6114–6123. (**Sikari, R.; Sinha, S contributed equally**).
5. Mondal, R.; **Sinha, S.**; Das, S.; Chakraborty, G.; Paul N. D. Iron Catalyzed Sustainable Synthesis of Pyrimidines Under Air. *Adv. Synth. Catal.* **2019**, 361, 1 –8. DOI: 10.1002/adsc.201901172. (**Mondal, R.; Sinha, S contributed equally**).
6. Parua, S.; Das, S.; Sikari, R.; **Sinha, S.**; Paul, N. D. One pot Cascade Synthesis of Quinazolin-4(3H)-ones via Nickel Catalyzed Dehydrogenative Coupling of o-Aminobenzamides with Alcohols. *J. Org. Chem.* **2017**, 82, 7165–7175. DOI: 10.1021/acs.joc.7b00643.
7. Jash, U.; Chakraborty, G.; **Sinha, S.**; Sikari, R.; Mondal, R.; Paul, N. D. Cu(II)-Complex of 1, 10-Phenanthroline Based Pincer as Efficient Catalyst for Oxidative Cross Dehydrogenative Coupling of Carboxylic Acids with Unactivated Alkanes. *A. J. Org. Chem.* **2018**, 7, 1681-1688. DOI: 10.1002/ajoc.201800180.
8. Parua, S.; Sikari, R.; **Sinha, S.**; Chakraborty, G.; Mondal, R.; Paul, N. D. Accessing Polysubstituted Quinazolines via Nickel Catalyzed Acceptorless Dehydrogenative Coupling. *J. Org. Chem.* **2018**, 83, 11154-11166. DOI: 10.1021/acs.joc.8b01479.
9. Parua, S.; Sikari, R.; **Sinha, S.**; Das, S.; Chakraborty, G.; Paul, N. D. A Nickel Catalyzed Acceptorless Dehydrogenative Approach to Quinolines. *Org. Biomol. Chem.* **2018**, 16, 274–284. DOI: 10.1039/c7ob02670f.
10. Das, S.; **Sinha, S.**; Jash, U.; Sikari, R.; Saha, A.; Barman, S. K. Brandão, P.; Paul, N. D. Redox-Induced Interconversion and Ligand-Centered Hemilability in Ni^{II} Complexes of Redox-Noninnocent Azo-Aromatic Pincers. *Inorg. Chem.* **2018**, 57, 5830–5841. DOI: 10.1021/acs.inorgchem.8b00231.
11. Chakraborty, G.; Sikari, R.; Das, S.; Mondal, R.; **Sinha, S.**; Banerjee, S.; Paul, N. D. Dehydrogenative Synthesis of Quinolines, 2-Aminoquinolines, and Quinazolines Using

- Singlet Diradical Ni(II)-Catalysts. *J. Org. Chem.* **2019**, *84*, 2626–2641. DOI: 10.1021/acs.joc.8b03070.
- 12.** Sikari, R.; **Sinha, S.**; Das, S.; Saha, A.; Chakraborty, G.; Mondal, R.; Paul, N. D. Achieving Nickel Catalyzed C–S Cross-Coupling under Mild Conditions Using Metal–Ligand Cooperativity. *J. Org. Chem.* **2019**, *84*, 4072–4085. DOI: 10.1021/acs.joc.9b00075.
- 13.** Das, S.; **Sinha, S.**; Samanta, D.; Mondal, R.; Chakraborty, G.; Brandao, P.; Paul, N. D. Metal–Ligand Cooperative Approach To Achieve Dehydrogenative Functionalization of Alcohols to Quinolines and Quinazolin-4(3H)-ones under Mild Aerobic Conditions. *J. Org. Chem.* **2019**, *84*, 10160–10171. DOI: 10.1021/acs.joc.9b01343.
- 14.** Sikari, R.; **Sinha, S.**; Chakraborty, G.; Das, S.; Petrus van Leest, N.; Paul, N. D. C–N Cross-Coupling Reactions Under Mild Conditions Using Singlet Di-Radical Nickel(II) Complexes as Catalyst: N-Arylation and Quinazoline Synthesis. *Adv. Synth. Catal.* **2019**, *361*, 4342–4353. DOI: 10.1002/adsc.201900545.