



ENLIGHTENMENT TO ERECTION

UNIVERSITY OF NORTH BENGAL

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Raja Rammohunpur, Dist- Darjeeling, West Bengal, Pin-734013, India.



Department of Chemistry

Print



Dr. Hari Sankar Das

B.Sc., M.Sc. Ph.D., POSTDOC

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Subject Specialization: Inorganic Chemistry

Areas of Research Interest:

- Development of catalysts for a variety of homogeneous organic transformations such as hydrosilylation, hydroboration, hydroamination, Suzuki coupling, Ullmann coupling, Sonogashira coupling and hydrogen autotransfer reaction.
- Metal complexes of non-innocent ligands for electron transfer studies and catalytic application in radical reactions.
- Designing of magnetically switchable molecular materials based on ligand-driven light-induced spin change.

No. of Ph.D. students: (a) Supervised: Nil (b) Ongoing: Nil

No. of M.Phil. students: (a) Supervised: Nil (b) Ongoing: Nil .

No. of Publications: (a) Scientific Papers: 06

Achievement & Awards:

- 2006: Secured 1st rank (SC) in Joint Admission to M.Sc. program (JAM)
- 2007: Recipient of Merit-Cum-Means Scholarship from IIT Kanpur.
- 2008: Qualified in Graduate Aptitude Test for Engineering (GATE)
- 2008: Qualified in National Eligibility Test (NET / CSIR)
- 2012: Post-doctoral stipends, TU-Kaiserslautern, Germany
- 2017: SERB National Postdoctoral Fellowship, SERB-India

Research Experiences:

07/2017-09/2018:

National Post-Doctoral Fellow,

IISER-Kolkata, India

Advisor: Prof. Dr. Swadhin K. Mandal "Developing phenalenyl based transition metal catalysts for the reduction of primary amides to primary amines using hydrosilanes".

01/2017-07/2017:

Postdoctoral research fellow

Invictus Oncology Pvt. Ltd. Delhi, India

Advisor: Dr. Arindam Sarkar "Phenalenyl based platinum complexes: development of efficacious, safe and fluorescent anticancer drugs".

07/2012-09/2016:

Postdoctoral Research fellow,

TU-Kaiserslautern, Germany

Advisor: Prof. Dr. Hans-Jörg Krüger "Designing and synthesis of photo-switchable Iron (II) complexes based on Ligand-Driven Light-Induced Spin Change (LD-LISC)".

10/2008-06/2012:

Graduate Research Associate,

University of Stuttgart, Germany

Advisor: Prof. Dr. Biprajit Sarkar "Synthesis of non-innocent quinonoid ligands and their use for metalation with redox rich ruthenium moiety to generate systems for electron transfer studies".

2008

M.Sc. project,

IIT-Kanpur, India

Advisor: Prof. Sabyasachi Sarkar "Synthesis of binuclear water soluble corrole complexes".

2007

Summer project,

IIT-Kanpur, India

Advisor: Prof. Sabyasachi Sarkar "Synthesis of transition metal based corrole complexes".

Industry Experience:

- Worked for Invictus Oncology Pvt Ltd., Delhi (www.invictusonology.com), a research laboratory focused on development of efficacious, safe anticancer drugs as a postdoctoral research fellow.

Teaching Area:

- Organometallic Chemistry and Catalysis
- Magnetochemistry
- Redox Chemistry and Electron Transfer
- Bioinorganic Chemistry
- Main Group Chemistry

Administrative Experiences:

- Nil

List of Selected Publications:

1. "First structurally Characterized *mono*- and *di*-nuclear Ruthenium Complexes Derived from Zwitterionic Quinonoid Ligands", **H. S. Das**, A. K. Das, R. Pattacini, R. Hübner, B. Sarkar, and P. Braunstein, *Chem. Commun.*, **2009**, 4387–4389.
2. "Straightforward Synthesis of Substituted *p*-Quinones: Isolation of a Key Intermediate and Use as a Bridging Ligand in a Diruthenium Complex", **H. S. Das**, F. Weisser, D. Schweinfurth, C.-Y. Su, L. Bogani, J. Fiedler, and B. Sarkar, *Chem. Eur. J.*, **2010**, *16*, 2977–2981.
3. "One-pot Synthesis of Symmetric and Asymmetric *p*-Quinone Ligands and Unprecedented Substituent Induced Reactivity in a Dinuclear Ruthenium Complex", David Schweinfurth, **H. S. Das**, F. Weisser, D. Bubrin, S. Zalis and B. Sarkar, *Inorg. Chem.*, **2011**, *50*, 1150–1159.
4. "Invariant Oxidation State of Copper but not of Ruthenium in Complexes with Noninnocent *N*-(2-Methyl-5,8-dihydroquinolin-7-yl)acetamide: A Combined Structural, Electrochemical and Spectroelectrochemical Investigation", Alexa Paretzki, **H. S. Das**, F. Weisser, T. Scherer, D. Bubrin, J. Fiedler, J. E. Nycz and B. Sarkar, *Eur. J. Inorg. Chem.*, **2011**, *15*, 2413-2421.

5. "Tuning the Electronic Properties in Ruthenium–Quinone Complexes through Metal Coordination and Substitution at the Bridge" H. S. Das, D. Schweinfurth, J. Fiedler, M. Khusniyarov, S. M. Mobin and B. Sarkar, *Chem. Eur. J.*, **2014**, *20*, 4334–4346.
6. "A safe and efficacious Pt(II) anticancer prodrug: design, synthesis, *in vitro* efficacy, the role of carrier ligands and *in vivo* tumour growth inhibition" P. K. Dutta, R. Sharma, S. Kumari, R. D. Dubey, S. Sarkar, J. Paulrai, G. Vijaykumar, Manoj Pandey, L. Sravanti, M. Samarla, H. S. Das, Yashpal, Heerala B., R. Goyal, N. Gupta, S. K. Mandal, A. Sengupta, and A. Sarkar, *Chem. Commun.*, **2019**, *55*, 1718–1721.