

Dr. Rajesh Bera

Current Designation: Associate Professor

Department: Chemistry

Date of Joining: 14.11.2006

E-mail: berarajesh2010@gmail.com



1. Academic Qualifications

Degree	Institution	Year	Subject/Discipline
Ph.D.	Jadavpur University	2012	Chemistry
M.Sc.	Vidyasagar University	2004	Chemistry
NET	Council of Scientific & Industrial Research	2004	Chemical Sciences
GATE	Dept. of Education, Ministry of HRD, Govt. of India	2004	Chemistry

2. Thesis Title

Ph.D. Thesis Title: Studies on Some Transition Metal Based Catalyst: Synthesis, Characterization and Olefin Epoxidation.

3. Specialization and Area of Interests

Specialization: Inorganic Chemistry

Area of Interests: Materials Chemistry and Coordination Chemistry: Synthesis of Homogeneous and Heterogeneous Transition Metal Catalyst, Catalyst Characterization, Epoxidation of Olefins, Porous materials, Inorganic synthesis, X-ray Structure determination, Spectral studies.

4. Teaching Responsibilities

Course instructor of Inorganic Chemistry including theoretical concept on Chemical Bonding, Periodic Properties of Elements, Acid-base reactions, Coordination Chemistry, Bioinorganic Chemistry, Analytical techniques and Practical related to allied fields.

5. Publications

a. Research Papers in Journals

1. Pratap Kumar Saha, Buddhadeb Dutta, Sreyashi Jana, **Rajesh Bera**, Sandip Saha, Ken-ichi Okamoto, Subratanath Koner, "*Immobilization of a copper-Schiff base complex in a Y-zeolite matrix: Preparation, chromogenic behaviour and catalytic oxidation*", **Polyhedron** 26 (2007) 563.
2. Sreyashi Jana, Buddhadeb Dutta, **Rajesh Bera**, Subratanath Koner, "*Anchoring of Copper Complex in MCM-41 Matrix: A Highly Efficient Catalyst for Epoxidation of Olefins by tert- BuOOH*", **Langmuir** 23(2007) 2492.
3. Buddhadeb Dutta, Sreyashi Jana, **Rajesh Bera**, Pratap Kumar Saha, Subratanath Koner, "*Immobilization of copper Schiff base complexes in zeolite matrix: Preparation, characterization and catalytic study*", **Applied Catalysis A: General** 318 (2007) 89.
4. Sreyashi Jana, Buddhadeb Dutta, **Rajesh Bera**, Subratanath Koner, "*Immobilization of Palladium in Mesoporous Silica Matrix: Preparation, Characterization, and Its Catalytic Efficacy in Carbon-Carbon Coupling Reactions*", **Inorganic Chemistry** 47 (2008) 5512.
5. Rupam Sen, **Rajesh Bera**, Ashis Bhattacharjee, Philipp Gütlich, Soumen Ghosh, Alok K. Mukherjee, Subratanath Koner, "*Oxo-Vanadium(IV) Dihydrogen Phosphate: Preparation, Magnetic Study, and Heterogeneous Catalytic Epoxidation*", **Langmuir** 24 (2008) 5970.

6. Chandan Adhikary, **Rajesh Bera**, Buddhadeb Dutta, Sreyashi Jana, Gabriele Bocelli, Andrea Cantoni, Siddhartha Chaudhuri, Subratanath Koner, "*Catalytic efficacy of Schiff-base copper(II) complex: Synthesis, X-ray structure and olefin oxidation*", **Polyhedron** 27 (2008) 1556.
7. Buddhadeb Dutta, Sreyashi Jana, **Rajesh Bera**, Subratanath Koner, "*Facile synthesis of palladium nanoparticles in Y-zeolite matrix: An efficient catalyst for Heck coupling reaction*", **International Journal of Nanomanufacturing** 3 (2009) 337.
8. **Rajesh Bera**, Chandan Adhikary, Sandra Ianelli, Siddhartha Chaudhuri, Subratanath Koner, "*Single end-on azido bridged 1D chain copper(II) complex: Synthesis, X-ray crystal structure and catalytic activity in homogeneous epoxidation of cyclooctene*", **Polyhedron** 29 (2010) 2166.
9. **Rajesh Bera**, Subratanath Koner, "*Incorporation of Tungsten Oxide in Mesoporous Silica: Catalytic Epoxidation of Olefins Using NaHCO_3 as co-catalyst*", **Inorganica Chimica Acta** 384 (2012) 233.
10. Debraj Saha, Tanmoy Maity, **Rajesh Bera**, Subratanath Koner, "*Cobalt(III) Schiff base complex: Synthesis, X-ray structure and aerobic epoxidation of olefins*", **Polyhedron** 56 (2013) 230.
11. Habibar Chowdhury, **Rajesh Bera**, Corrado Rizzoli, Chandan Adhikary, "*A nitrate bridged one-dimensional copper(II) coordination polymer with a tridentate (NNO) Schiff base: synthesis, X-ray structure and catalytic efficacy*", **Transition Metal Chemistry** 45 (2020) 605.
12. Habibar Chowdhury, **Rajesh Bera**, Corrado Rizzoli, Chandan Adhikary, "*Double end-on azido derivative of a tridentate (NNO) Schiff base dimeric copper(II) complex: synthesis, X-ray structure, magnetic property and catalytic effectiveness*", **Journal of Coordination Chemistry** 73((2020) 3062.
13. **Rajesh Bera**, Chandan Adhikary, "*Catalytic potency of zeolite Y immobilized copper-2,2'-bipyridine hybrid complex in oxidation of olefins*", **Journal of Porous Materials** 28 (2021) 695.

14. **Rajesh Bera**, "*Catalytic Efficacy of 2,2'-Bipyridine Cobalt(II) Complex: Hydrothermal Synthesis, X-Ray Structure and Aerobic Epoxidation of Alkenes*", **Asian Journal of Chemistry** 33 (2021) 10.

15. Habibar Chowdhury, **Rajesh Bera**, Chandan Adhikary, "*Synthesis, Structure, Magnetic and Catalytic Competency of a Tetradentate (NNOO) Schiff Base Mediated Dimeric Copper(II) complex*", **Asian Journal of Chemistry** 33 (2021) 1280.

6. Oral/Poster Presentations

1. Presented a Poster titled "Incorporation of tungsten oxide in SBA-15: Catalytic epoxidation of olefins using sodium-bi-carbonate as co-catalyst" in a Two-Day International Seminar titled 'Recent Trends in Science Towards Sustainable Development' organized by Acharya Prafulla Chandra College in collaboration with Indian Chemical Society on 6th August-7th August, 2018.

2. Presented a Poster titled "Catalytic efficacy of tungsten oxide incorporated SBA-15: Synthesis, characterization and catalytic epoxidation of alkenes" in a Two-Day International Seminar on 'International Year of the Periodic Table of Chemical Elements-2019' organized by Department of Chemistry, University of North Bengal on 22nd November-23rd November, 2019.

3. Presented a Poster titled "Synthesis, X-Ray Structure of a Cobalt(II) System and its Catalytic Efficacy towards aerobic epoxidation of Olefins" in a One-day International Seminar titled 'Elements of Periodic Table in the Chemical Avenues of Biological World' organized by Department of Chemistry in collaboration with Department of Zoology, South Calcutta Girls' College, Kolkata on 17th December, 2019.

4. Presented a Poster titled "Single end-on azido bridged 1D chain copper(II) complex: Synthesis, X-ray crystal structure and catalytic efficacy in homogeneous epoxidation of cyclooctene" in a One-Day International Symposium titled 'Current Trends in Chemistry' organized by Department of Chemistry, Diamond Harbour Women's University in association with Indian Chemical Society on 10th January, 2020.

7. Conferences/Seminars/Symposia/Workshops Attended

1. Attended a One-day workshop on 'Choice-based Credit System (CBCS)' in Chemistry organized by IQAC and Department of Chemistry, Gokhale Memorial Girls' College, Kolkata on 24th May, 2018.
2. Attended a One-day workshop on 'UG Chemistry Honours Practical, Semester-3 (Under CBCS), University of Calcutta' organized by Department of Chemistry, Asutosh College, Kolkata in collaboration with UGBOS, University of Calcutta on 29th July, 2019.
3. Attended a One-day workshop on 'UG Inorganic Chemistry (Honours) Practical of Semester-4 (Under CBCS), University of Calcutta organized by Department of Chemistry, St. Paul's C.M. College, Kolkata in collaboration with UGBOS, University of Calcutta on 19th February, 2020.
4. Attended a One-day National Level Seminar on 'Modern Trends in Chemistry for Sustainable Development' organized by Department of Chemistry, Vijaygarh Jyotish Ray College, Kolkata and the Indian Chemical Society, Kolkata on 3rd March, 2020.
5. Attended a One-day International Webinar on 'Covid-19 Pandemic: a search for Relief' organized by Department of Chemistry and IQAC, Charuchandra College, Kolkata on 22nd August, 2020.
6. Attended a One-day International Webinar on 'Science, Biology and the World's Future' organized by the Department of Botany and IQAC, Dinabandhu Andrews College, Kolkata on 25th August, 2020.

8. Membership in Academic Bodies

Life member of Indian Association for the Cultivation of Science (IACS), Kolkata

9. Administrative Responsibility

- i) Teachers' Representative, Governing Body, Dinabandhu Andrews College
- ii) Joint Convener, Examination sub-committee, Dinabandhu Andrews College
- iii) Joint Convener, Environmental Consciousness and Sustainability and Waste Management sub-Committee, Dinabandhu Andrews College

iv) Member of Finance Sub-committee, UGC sub-committee, Online admission and Registration sub-committee, Building and Infrastructure sub-committee, ICT sub-committee, CAS and Promotion sub-committee, Sports and Cultural sub-committee.
