

FACULTY MEMBERS' ACADEMIC PROFILE

- 1. Name of the Faculty member:** Dr. Debraj Saha
- 2. Designation:** Assistant Professor in Chemistry (W.B.E.S)
- 3. Qualification:** M.Sc.; Ph.D. (Jadavpur University)
- 4. Specialization:** Inorganic Chemistry
- 5. E-mail address:** debrajsaha909@gmail.com
- 6. Date of Joining in W.B.E.S.:** 10.06.2015
- 7. Date of Joining in this College:** 02.02.2021
- 8. Total Teaching experience in College level:** 7+ years
- 9. Research interests:** Metal-Organic Framework Compounds
- 10. Title of thesis (Ph.D.) with year:** “Metal Containing Framework Compounds: Synthesis, Characterization and Heterogeneous Catalysis” (2015)
- 11. Research guidance:** NIL
- 12. Research Projects (Completed):** A minor research project on “Synthesis, Characterization and Applications of Novel Organic-inorganic Framework Compounds” funded by UGC, India (Ref. No. F. PSW-188/15-16 (ERO) dated 21-Nov-16)
- 13. List of publications:**



A) Published papers in Journals:

- Susmita Bhunia, **Debraj Saha**, Subratanath Koner, *Langmuir* **2011**, 27, 15322-15329. MCM-41 supported oxo-vanadium(IV) complex: A highly selective heterogeneous catalyst for bromination of hydroxy aromatic compounds in water [ISSN: 0743-7463 (Print), 1520-5827 (Web); **IF: 4.33**].
- Debraj Saha**, Tanmoy Maity, Tirthankar Dey, Subratanath Koner, *Polyhedron* **2012**, 35, 55-61. One-dimensional chain copper(II) complex: Synthesis, X-ray crystal structure and catalytic activity in epoxidation of styrene [ISSN: 0277-5387; **IF: 2.97**].
- Debraj Saha**, Rupam Sen, Tanmoy Maity, Subratanath Koner, *Dalton Trans* **2012**, 41, 7399-7408. Porous magnesium carboxylate framework: synthesis, X-ray crystal structure, gas adsorption property and heterogeneous catalytic aldol condensation reaction [ISSN: 1477-9226; **IF: 4.56**].
- Debraj Saha**, Tanmoy Maity, Rupam Sen, Subratanath Koner, *Polyhedron* **2012**, 43, 63-70. Heterogeneous catalysis over a barium carboxylate framework compound: Synthesis, X-ray crystal structure and aldol condensation reaction [ISSN: 0277-5387; **IF: 2.97**].
- Rupam Sen, **Debraj Saha**, Subratanath Koner, *Chem Eur J* **2012**, 18, 5979-5986. Controlled construction of metal-organic frameworks: Hydrothermal synthesis, X-ray structure and heterogous catalytic study [ISSN: 0947-6539 (Print), 1521-3765 (Web); **IF: 5.02**].
- Tanmoy Maity, **Debraj Saha**, Soma Das, Subratanath Koner, *Eur J Inorg Chem* **2012**, 4914-4920. Barium carboxylate metal-organic framework: synthesis, X-ray crystal structure, photoluminescence and

- catalytic study [ISSN: 1434-1948; IF: 2.55].
- Rupam Sen, **Debraj Saha**, Subratanath Koner, *Catal. Lett* **2012**, *142*, 124-130. Lanthanide carboxylate frameworks: Efficient heterogeneous catalytic system for epoxidation of olefins [ISSN: 1011-372X (Print), 1572-879X (Web); IF: 2.93].
 - Debraj Saha**, Rupam Sen, Tanmoy Maity, Subratanath Koner, *Langmuir* **2013**, *29*, 3140-3151. Anchoring of palladium onto surface of porous metal-organic framework through post-synthesis modification and studies on Suzuki and Stille coupling reactions under heterogeneous condition [ISSN: 0743-7463 (Print), 1520-5827 (Web); IF: 4.33]
 - Debraj Saha**, Tanmoy Maity, Rajesh Bera, Subratanath Koner, *Polyhedron* **2013**, *56*, 230-236. Cobalt(III) Schiff base complex: Synthesis, X-ray structure and aerobic epoxidation of olefins [ISSN: 0277-5387; IF: 2.97].
 - Debraj Saha**, Tanmoy Maity, Soma Das, Subratanath Koner, *Dalton Trans* **2013**, *42*, 13912-13922. A magnesium-based multifunctional metal-organic framework: Synthesis, thermally induced structural variation, selective gas adsorption, photoluminescence and heterogeneous catalytic study [ISSN: 1477-9226; IF: 4.56].
 - Debraj Saha**, Tanmoy Maity, Rupam Sen, *J Coord Chem* **2013**, *66*, 2444-2454. Heterogeneous catalytic epoxidation of olefin over a hydrothermally synthesized 3D phosphate bridge copper(II) framework. [ISSN: 0095-8972 (Print), 1029-0389 (Web); IF: 1.86].
 - Rupam Sen, **Debraj Saha**, Dasarath Mal, Paula Brandão, Zhi Lin, *Eur. J. Inorg. Chem.* **2013**, 5103-5109. Cobalt based 3D metal-organic frameworks: Useful candidate for olefin epoxidation at ambient temperature by H₂O₂ [ISSN: 1434-1948; IF: 2.55].
 - Rupam Sen, **Debraj Saha**, Dasarath Mal, Paula Brandão, Guillaume Rogez, Zhi Lin, *Eur. J. Inorg. Chem.* **2013**, 5020-5026. Synthesis, Structural Aspects and Catalytic Performance of a Tetrahedral Cobalt Phosphonate Framework [ISSN: 1434-1948; IF: 2.55].
 - Rupam Sen, **Debraj Saha**, Dasarath Mal, Paula Brandão, Guillaume Rogez, Zhi Lin, *Eur J Inorg Chem* **2013**, 3076-3081. A 2D → 3D Polycatenated Metal-Organic Framework: Synthesis, Structure, Magnetic and Catalytic Study [ISSN: 1434-1948; IF: 2.55].
 - Shyamapada Shit, Umesh Yadava, **Debraj Saha**, Roland Fröhlich, *J Coord Chem* **2013**, *66*, 66-76. 2,2'-Bipyridyl-acetylphenolato mixed ligand copper(II) complexes: syntheses, characterizations and catalytic activity in styrene epoxidation [ISSN: 0095-8972 (Print), 1029-0389 (Web); IF: 1.86].
 - Dipak K. Hazra, Monika Mukherjee, Rupam Sen, **Debraj Saha**, Subratanath Koner, Alok K. Mukherjee, *J Mol Struct* **2013**, *1033*, 137-144. 18-Crown-6 ether templated transition-metal dicyanamido complexes: Synthesis, structural characterization and DFT studies [ISSN: 0022-2860; IF: 3.84].
 - Debraj Saha**, Tanmoy Maity, Subratanath Koner, *Dalton Trans* **2014**, *43*, 13006-13017. Alkaline earth metal-based metal-organic framework: hydrothermal synthesis, X-ray structure and heterogeneously catalyzed Claisen-Schmidt reaction [ISSN: 1477-9226; IF: 4.56].
 - Tanmoy Maity, **Debraj Saha**, Subratanath Koner *ChemCatChem* **2014**, *6*, 2373-2383. Aromatic N-Arylations Catalyzed by Copper-Anchored Porous Zinc-Based Metal-Organic Framework under Heterogeneous Conditions [ISSN: 1867-3880; IF: 5.49].
 - Shyamapada Shit, **Debraj Saha**, Dipankar Saha, Tayur N. Guru Row, Corrado Rizzoli, *Inorganica Chimica Acta* **2014**, *415*, 103-110. Azide/thiocyanate incorporated cobalt(III)-Schiff base complexes:

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- Characterizations and catalytic activity in aerobic epoxidation of olefins [ISSN: 0020-1693; IF: 3.11].
20. Susmita Bhunia, Sreyashi Jana, **Debraj Saha**, Buddhadeb Dutta, Subratanath Koner, *Catal. Sci. Technol* **2014**, 4, 1820-1828. Catalytic olefin epoxidation over cobalt(II)-containing mesoporous silica by molecular oxygen in dimethylformamide medium [ISSN: 2044-4753 (Print), 2044-4761 (Web); IF: 6.17].
 21. Tanmoy Maity, **Debraj Saha**, Soma Das, Susmita Bhunia, Subratanath Koner, *Catal Commun* **2015**, 58, 141-148. Ligand free copper-catalyzed heterogeneous O-arylation reaction under green condition. [ISSN: 1566-7367; IF: 3.51].
 22. Rupam Sen, **Debraj Saha**, Subratanath Koner, Dasarath Mal, Paula Brandão, Zhi Lin, *Chempluschem* **2015**, 80, 591-598. pH tuned modulation of 1D chain to 3D MOF: Synthesis, structure and their useful application in heterogeneous Claisen-Schmidt reaction. [ISSN: 2192-6506; IF: 3.21].
 23. Rupam Sen, **Debraj Saha**, Subratanath Koner, Dasarath Mal, Paula Brandão, Zhi Lin, *Chem Eur J* **2015**, 21, 5962-5971. SC-to-SC transformation from a non-porous to porous MOF and its application potential in gas adsorption and Suzuki coupling reaction through post-modification [ISSN: 0947-6539 (Print), 1521-3765 (Web); IF: 5.02].
 24. **Debraj Saha**, Tanmoy Maity, Subratanath Koner, *Eur J Inorg Chem* **2015**, 1053-1064. Alkaline earth metal based metal-organic frameworks: Hydrothermal synthesis, X-ray structure, gas adsorption and heterogeneously catalyzed hydrogenation reaction [ISSN: 1434-1948; IF: 2.55].
 25. Tanmoy Maity, **Debraj Saha**, Susmita Bhunia, Brandão, Soma Das, Subratanath Koner, *RSC Adv.* **2015**, 82179-82191. A family of ligand and anion dependent structurally diverse Cu(II) Schiff-base complexes and their catalytic efficacy in an O-arylation reaction in ethanolic media [ISSN: 2046-2069; IF: 4.03].
 26. **Debraj Saha**, Dipak K. Hazra, Tanmoy Maity, Subratanath Koner, *Inorganic Chemistry* **2016**, 55, 5729-5731. Heterometallic Metal–Organic Frameworks That Catalyze Two Different Reactions Sequentially [ISSN: 0020-1669; IF: 5.43].
 27. **Debraj Saha**, Saikat Gayen, Subratanath Koner, *Polyhedron* **2018**, 146, 93-98. Cu(II)/Cu(II)-Mg(II) containing pyridine-2,5-dicarboxylate frameworks: Synthesis, structural diversity, inter-conversion and heterogeneous catalytic epoxidation [ISSN: 0277-5387; IF: 2.97].
 28. Saikat Gayen, **Debraj Saha**, Subratanath Koner, *J Mol Struct* **2018**, 1162, 10-16. Quinoline derivative containing monomeric and polymeric metal carboxylates: Synthesis, crystal structure and gas adsorption study over a 2D layered framework [ISSN: 0022-2860; IF: 3.84].
 29. Tanmoy Maity, **Debraj Saha**, Soma Das, Parnali Ghosh, Subratanath Koner, *Polyhedron* **2019**, 173, 114127-114134. Homo and hetero-bridged dinuclear copper(II) complex: Synthesis, X-ray structure and catalytic N-arylation [ISSN: 0277-5387; IF: 2.97].
 30. **Debraj Saha**, Saikat Gayen, Tanmoy Maity, Antonio Frontera, Joaquín Ortega-Castro, Karen Leus, Guangbo Wang, Pascal Van Der Voort, Paula Brandão, Subratanath Koner, *New J. Chem.* **2020**, 44, 1806-1816. Combined Experimental and Computational Studies on Preferential CO₂ Adsorption over Zinc-based Porous Framework Solid [ISSN: 1144-0546 (Print), 1369-9261 (Web); IF: 3.92].

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31. Tanmoy Maity, Pamei Ghosh, Soma Das, Debraj Saha, Subratanath Koner, *New J. Chem.* **2021**, 45, 5568-5575. A post-synthetically modified metal–organic framework for copper catalyzed denitrative C–N coupling of nitroarenes under heterogeneous conditions [ISSN: 1144-0546 (Print), 1369-9261 (Web); **IF: 3.92**].
32. Saikat Gayen, Pamei Ghosh, Hisashi Honda, Debraj Saha, Saptarshi Biswas, Rakesh Debnath, Subratanath Koner, *Polyhedron* **2021**, 208, 115444-115452. Solvent mediated photoluminescence responses over mixed-linker cadmium (II) based metal–organic frameworks [ISSN: 0277-5387; **IF: 2.97**].
33. Debraj Saha, *Rasayan J. Chem.* **2021** (Special Issue), 110-117. Copper(II) and magnesium(II) containing heterometallic carboxylate framework: Efficient heterogeneous catalytic system for Aromatic n-arylation [ISSN: 0974-1496 (Print), 0976-0083 (Web); **IF: 1.23**].

14. Membership of Learned Societies/ Editorial Boards, etc.: No

15. Patents: Nil

16. Awards:

Received “**CrystalEngComm (Royal Society of Chemistry) Poster Prize Award**” at the **International Conference on “Structural Chemistry of Molecules and Materials”** which was held at Center for Research in Nanoscience and Nanotechnology, University of Calcutta on **30th November - 2nd December, 2014**.

17. Other notable activities: Not to mention

18. A) Participation in Seminars/Symposia/Conferences/Workshops:

S. No.	From	To	Institute/Organization	Sponsored by	Presented a Poster in the
1	06.02.2013	08.02.2012	Department of Chemistry, University of Calcutta	University of Calcutta	International Symposium on Molecular Organisation and Complexity: A Chemical Perspective
2	14.12.12	15.12.12	Jadavpur University	UGC and Jadavpur University	1 st International Workshop on Nanomaterials (IWoN): Engineering Photon and Phonon Transport
3	30.11.14	02.12.14	Center for Research in nanoscience and nanotechnology (CRNN), University of Calcutta	RSC, IISER-Kolkata, CU, JU	International Conference on Structural Chemistry of Molecules and Materials
4	14.06.14	14.06.14	Faculty of Science, Jadavpur University	Jadavpur University	National Seminar on Social Function of Science-2013 and The Celebration of 150 th Birth Anniversary of Swami Vivekananda
5	07.10.2022	08.10.2022	UGC-HRDC, Aligarh	Aligarh	Workshop on NEP

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			Muslim University	Muslim University	2020 Implementation
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B) Participation in OP/RC:

S. No.	From	To	Institute/Organization	Sponsored by	Name of the Programme
1	15.03.2017	11.04.2017	UGC-HRDC, Ranchi University, Ranchi	UGC	Orientation Programme
2	04.12.2018	24.12.2018	UGC-HRDC, University of Burdwan, Burdwan	UGC	Winter School in Environmental Planning and Management
3	27.09.2022	11.10.2022	UGC-HRDC, Aligarh Muslim University	UGC	Interdisciplinary Subject Refresher Course in Environmental Studies