

FACULTY MEMBER ACADEMIC PROFILE

1. **Name of the Faculty member:** RUBINA RAHAMAN
2. **Designation:** Assistant Professor in Chemistry (W.B.E.S.)
3. **Qualification:** Ph.D (Jadavpur University)
4. **Specialization:** Inorganic Chemistry
5. **E-mail address:** rubinarahaman.chem@gmail.com
6. **Date of Joining in W.B.E.S.:** 04.05.2018
7. **Date of Joining in this College:** 04.05.2018
8. **Total Teaching experience in College level:** 4+ year
9. **Research interests:** Synthesis of biomimetic iron complexes as functional models of the C-C bond cleaving nonheme oxygenases, development of nonheme iron catalysts for bioinspired oxidations using dioxygen as the terminal oxidant and theoretical studies using quantum chemical density functional theory (DFT) based approaches.
10. **Title of thesis (Ph.D.) with year:** “Biomimetic Models of C-C Bond Cleaving Nonheme Oxygenases: Reactivity and Mechanistic Studies” (November, 2018)
11. **Research guidance:** Nil
12. **Research Projects (Completed and ongoing):** Nil
13. **List of publications:**



Published papers in Journals:

1. “Aliphatic C-C Bond Cleavage of α -Hydroxy Ketones by Nonheme Iron(II) Complexes: Mechanistic Insight into the Reaction Catalyzed by 2,4'-Dihydroxyacetophenone Dioxygenase”, **R. Rahaman**, S. Paria and T. K. Paine, *Inorg. Chem.* **2015**, 51, 10576-11586 [ISSN 1520-510X; IF: 4.857].
2. “Mimicking the Aromatic Ring Cleavage Activity of Gentsiate1,2-Dioxygenase by a Nonheme Iron Complex”, **R. Rahaman**, B. Chakraborty and T. K. Paine, *Angew.Chem.Int.Ed.* **2016**, 55, 13838-13842 [ISSN 1521-3773; IF: 11.994].
3. “Aliphatic C-C Bond Cleavage in α -Hydroxy Ketones by a Dioxygen-Derived Nucleophilic Iron-Oxygen Oxidant”, S. Bhattacharya, **R. Rahaman**, S. Chatterjee and T. K. Paine, *Chem. Eur. J.* **2017**, 23, 3815-3818 [ISSN 1521-3765; IF: 5.317].
4. “Bioinspired Oxidation of 1-Aminocarboxylic Acids by a Nonheme Iron(II) Complex: Mimicking the Activity of 1-Aminocyclopropane-1-Carboxylic Acid Oxidase”, **R. Rahaman**, S. Munshi and T. K. Paine, *Z. Anorg. Allg. Chem.* **2018**, 644, 745-751 [ISSN 0044-2313; IF:1.179]
5. “Dioxygen reactivity of iron(ii)-gentsiate/1,4-dihydroxy-2-naphthoate complexes of N4 ligands: oxidative coupling of 1,4-dihydroxy-2-naphthoate ”, **R. Rahaman**, S. Munshi, S. Banerjee, B.

- Chakraborty, S. Bhunia and T. K. Paine, *Dalton Trans.*, **2019**, 48, 16993-17004 [[ISSN 1477-9226](#); **IF: 4.052**]
6. "Aliphatic C-C Bond Cleavage of 1,2-Diols with Dioxygen by a Nonheme Iron Complex", **R. Rahaman**, S. Bhattacharya and T. K. Paine, *Manuscript Under Preparation*.
14. **Membership of Learned Societies/ Editorial Boards, etc.:** Nil
15. **Patents:** Nil
16. **Awards:**
- All India Rank 008 in the CSIR UGC National Eligibility Test (NET) held in June, 2011.
17. **Other notable activities:** Nil
18. **Participation in Seminars/Symposia/Conferences/Workshops:**
1. **Presented a Poster** entitled "*Aliphatic C-C Bond Cleavage of α -Hydroxy Ketones by Nonheme Iron(II) Complexes: Mechanistic Insight into the Reaction Catalyzed by 2,4' - Dihydroxyacetophenone Dioxygenase*" in the 17th **CRSI National Symposium** in Chemistry (NSC-17), held at **National Chemistry Laboratory, Pune, India** on **6-8th February, 2015**.
 2. **Presented a Poster** entitled "*Oxygen Dependent Aromatic Ring Cleavage of Gentsic Acid by a Nonheme Iron Complex: Functional Model of Gentsate-1,2-Dioxygenase*" in the 19th **CRSI National Symposium** in Chemistry (NSC-19), held at North Bengal University, Darjeeling, West Bengal, India on **14-16th July, 2016**.
 3. Participated in the 5th **Symposium on Advanced Biological Inorganic Chemistry** (SABIC-2017), organised by Indian Association for the Cultivation of Science and Tata Institute of Fundamental Research (TIFR), Kolkata, India on **7-11th January, 2017**.