CURRICULUM VITAE

Dr. SUKANTA MANDAL
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Academic Positions Hold

(iv) Associate Professor (from 15th February 2024 to present): Department of Chemistry, Indian Institute of Technology Kharagpur.

(iii) Assistant Professor Grade I (from 18th February 2015 to 14th February 2024): Department of Chemistry, Indian Institute of Technology Kharagpur.

(ii) Assistant Professor (from 1st December 2014 to 30th January 2015): Department of Chemistry, National Institute of Technology Patna.

(i) DST-INSPIRE Faculty (from 20th August 2013 to 31st October 2014): Department of Chemistry, Assam University, Silchar.

Broad Areas of Research

Synthetic Bio-inorganic Model Chemistry; Bio-inspired Redox Catalysis Using Transition Metal Complexes; Water Splitting Chemistry Towards Artificial Photosynthesis; Coordination Chemistry

Academic Qualifications

Dec. 2003–Jan. 2009 (Awarded May 2009)	Ph.D., Indian Institute of Technology, Kanpur, India Supervisor: Prof. Rabindranath Mukherjee **Thesis Title**: "*Bio-Inspired Coordination Chemistry of Dinuclear Manganese, Nickel and Copper Complexes*"
2001–2003	M.Sc., Specialization in Inorganic Chemistry (First Class), The University of Burdwan, West Bengal, India
1998–2001	B.Sc. in Chemistry (First Class Honors), The University of Burdwan, West Bengal, India
1996–1998	Higher Secondary (First Division), West Bengal Council of Higher Secondary Education
1994–1996	Secondary Examination (First Division), West Bengal Board of Secondary Education

Post-Doctoral Research Experiences

Oct. 2011– July 2013	Post-Doctoral Research Associate Supervisors: Prof. Antoni Llobet, Prof. Shunichi Fukuzumi, Prof. Wonwoo Nam (World Class University Research Program), Ewha Womans University, Seoul, South Korea.
June 2009–Aug. 2011	Post-Doctoral Research Associate Supervisor: Prof. Antoni Llobet Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain.

Academic Visit

Oct. 01–Nov. 15, 2007	Visiting Researcher at the Department of Chemistry, Lund University, Sweden. This visit was graphed as a planning grant for a collaborative research project between Prof. E. Nordlander (Lund University) and Prof. R. N. Mukherjee (IIT Kanpur).

Academic Awards/Fellowships/Scholarships

2012	DST-INSPIRE Faculty Award Fellowship
Oct. 2011–July 2013	World Class University (WCU) Program Post-doctoral Fellowship in Prof. W. Nam's research group, Ewha Womans University, Seoul, South Korea
June 2009–Aug 2011	Post-doctoral Fellowship (SOLAR-H2) in Prof. A. Llobet´s research group, ICIQ, Tarragona, Spain
2006	Senior Research Fellowship (SRF) from the CSIR, Govt. of India
2003	Junior Research Fellowship (JRF) from the CSIR, Govt. of India to pursue Ph.D.
2003	Graduate Aptitude Test in Engineering (GATE) from IITs, India
2001	National Scholarship (Govt. of India) based on B.Sc. results
1998	National Scholarship (Govt. of India) based on H.S. results

Teaching Experiences

- **Courses Taught at Assam University, Silchar (08/2013 to 10/2014):** (i) Environmental Pollution and Bioinorganic Chemistry (CH101 Unit-IV), (ii) Infra-red Spectroscopy (CH203 Unit-II), (iii) Magnetic Resonance (CH203 Unit-IV/V), (iv) Chemical Kinetics (CH103 Unit IV) (PG level, class of about 50 students).
- **Major Courses Taught/Teaching at IIT Kharagpur:** (**Theory**) (i) Chemistry (CY11001/CY11003), (ii) Inorganic Chemistry I (CY20105), (iii) Inorganic Chemistry II (CY20106), (iv) Chemistry of 3d Elements (CY20204), (v) Inorganic Chemistry: Principle, Structure & Reactivity (CY41005/CY41215).
  (**Laboratory**) (i) Chemistry Lab (CY19001/CY19003), (ii) Inorganic Chemistry Laboratory I (CY29002), (iii) Inorganic Chemistry Laboratory II (CY39004), (iv) Inorganic Quantitative Analysis (CY39202), (v) Advanced Inorganic Chemistry Laboratory (CY49001).
- **"Moodle" video for Chemistry Lab (CY19001) (Inorg. Expt)**

Professional Activities

- Faculty Advisor (19CY 5yr MSc Batch & 22CY 2Yr MSc Batch), Chemistry (2019-2024)
- Program Officer, NSS (2018-2022)
- Co-Principal-In-charge (EPR laboratory), Central Research Facility (2023-2024)
- Laboratory In-Charge (MSc Inorganic Lab), Chemistry (2021-2023)
- Laboratory In-Charge (FTIR), Chemistry (2023-2026)
- Laboratory In-Charge (Electrochemistry), Chemistry (2021-2026)
- Laboratory In-Charge (CHN), Chemistry (2021-2026)
- Laboratory In-Charge (NMR), Chemistry (2017-2019)
- In-Charge, Training and Placement, Chemistry (2022-2023)
- Departmental Time Table In-Charge, Chemistry (2016-2019)
- Member, Departmental Faculty Recruitment Committee, Education (2023)
- Member, Departmental Administrative Committee, Chemistry (2019-2021)
- Research Scholar Coordinator, Chemistry (Inorganic Section) (2017-2018)
- Subject Coordinator, Chemistry (CY11001), (Inorganic Section) (2018-2019)
- Subject Coordinator, Chemistry Lab (CY19001), (Inorganic Section) (2018-2019)
- Contributed as a Member of the Organizing Committee of Various Conferences
- Delivered Invited Talks at Various Seminars/Conferences (MTIC, SABIC, *etc*.)
- DSC Member of Numerous Research Scholars
- Institute Representative (IR) for GATE Exam
- Question Paper Setter (Chemistry, GATE 2022)
- Served as the selection committee expert member for the recruitment of Asst. Prof. in the Dept. of Chemistry, Haldia Institute of Technology (03/07/2024)
- Reviewer of Various Journals (ACS, RSC, Wiley, *etc*.)

Seminar / Conference / Workshop Organized

(1) NMRS-2016, (Member of the Organizing Committee, 2016, IIT Kharagpur)
(2) Organic Molecules: Synthesis and Applications (OMSA) (Member of the Organizing Committee, 2017, IIT Kharagpur)
(3) Recent Advances in Functional Inorganic & Nanomaterials Chemistry (Member of the Organizing Committee, 2017, IIT Kharagpur)
(4) Recent Advances in Materials for Sustainable Energy (Member of the Organizing Committee, 2018, IIT Kharagpur)
(5) Recent Trends and Developments in Chemistry (Member of the Organizing Committee, 2020, IIT Kharagpur)
(6) Frontiers in Chemical Sciences (Member of the Organizing Committee, 2020, IIT Kharagpur)
(7) Inorganic Chemistry Discussion Meeting (Member of the Organizing Committee, 2020, IIT Kharagpur)
(8) Emerging Trends in Catalysis and Synthesis (Member of the Organizing Committee, 2020, IIT Kharagpur)

Research Guidance

- **Ph.D. Students (completed):**
  (ii) Student's Name: Dr. Nirmalya Podder
  Thesis Title: "Biomimetic Model Studies of Phenoxazinone Synthase (PHS) and Quercetin 2,4-Dioxygenase (2,4-QD) with Tailor-Made Coordination Compounds"
  Degree Awarded: 2023
  (i) Student's Name: Dr. Animesh Kundu
  Thesis Title: "Developing Mononuclear Ruthenium Complexes for Water Oxidation Catalysis: A Molecular Approach"
  Degree Awarded: 2021
- **Ph.D. Students (ongoing):** (i) Mr. Mofijul Molla (ii) Ms. Sreeja Dasgupta (iii) Mr. Ayyan Ghosh (iv) Mr. Pratik Sarkar (co-guide)
- **Post-Doctoral Student**: Dr. Suman Kr. Dey (2018-2020)
- **Summer/Winter Internship Students:** (vii) Aritra Saha (05/2024-07/2024), from NIT Silchar; (vi) Tamanna Pradhan (12/2023-01/2024), from IIT Kgp; (v) Arnab Halder (05/2023-06/2023), from IIT Kanpur; (iv) Subhas Chandra Bose M (05/2023-07/2023), from IIT Kgp; (iii) Sourav Mandal (05/2023-08/2023), IIT Kgp; (ii) Shivam Sehgal (05/2022-06/2022), from IIT Kgp; (i) Rajib Samanta (05/2019-06/2019), from NIT Rourkela.
- **MSc/MS/BS Students:**
  2015-16: (i) Mr. Mofijul Molla (ii) Mr. Rahul Naskar
  2016-17: (i) Mr.Chiranjit Dutta (ii) Mr. B. Sreeram Praneeth
  2017-18: (i) Mr. Krishnendu Maji (ii) Ms. Srimoyee Khan
  2018-19: (i) Mr. Adil Panwar (ii) Mr. Sagar Bag
  2019-20: (i) Mr. Mohan Lal (ii) Mr. Subhajit Chakraborty
  2020-21: (i) Mr. Ayyan Ghosh (ii) Mr. Saswata Karan
  2021-22: (i) Mr. Vasantkumar (ii) Mr. Subham Sarkar
  2022-23: (i) Mr. Rajkumar Bunkar (ii) Mr. Rishabh Maurya

2023-24: (i) Mr. Dharmendra Kumar (ii) Mr. Sourav Mandal (iii) Ms. Manisha (BS)
2024-25 (i) Ms. Manisha (MS) (ii) Mr. Suman Saurabh Singh

Sponsored Research Projects

(iv) **Project title:** "Molecular Ruthenium Catalysts with Designed Ligands for Efficient Water Oxidation Reactions"
Sponsored by: Council of Scientific and Industrial Research (CSIR), India
Duration: 01-08-2021 to 31-07-2024
Project value: INR 12,00,000/-

(iii) **Project title:** "Syntheses, Characterizations and Reactivity Aspects of Metal(III)-Hydroxo Complexes: Biomimetic Model of Lipoxygenase-Like Activity"
Sponsored by: Science and Engineering Research Board (SERB), New Delhi
Duration: 20-01-2016 to 19-01-2019
Project value: INR 33,90,000/-

(ii) **Project title:** "Design & Synthesis of Molecular Catalyst for Water Oxidation Reactions Based on Transition Metals"
Sponsored by: ISIRD, IIT Kharagpur
Duration: 20-08-2015 to 19-08-2018
Project value: INR 28,00,000/-

(i) **Project title:** "Development of Artificial Photosystem II: Water Oxidation Catalyst"
Sponsored by: DST-INSPIRE Faculty Award
Duration: 20-08-2013 to 26-08-2019
Project value: INR 35,00,000/-

Publications in Peer-reviewed Journals

(22) Mofijul Molla, Anannya Saha, Suman K. Barman, and **Sukanta Mandal*** ''Monomeric Fe(III)-Hydroxo and Fe(III)-Aqua Complexes Display Oxidative Asynchronous Hydrogen Atom Abstraction Reactivity'' *Chem. Eur. J.* **2024**, e202401163. [Impact Factor = 4.5; Citations = 0]

(21) Nirmalya Podder, Anannya Saha, Suman K. Barman and **Sukanta Mandal*** "Flavonol dioxygenation catalysed by cobalt(II) complexes supported with 3N(COO) and 4N donor ligands: a comparative study to assess the carboxylate effects on quercetin 2,4-dioxygenase-like reactivity" *Dalton Trans.* **2023**, *52*, 11465-11480. [Impact Factor = 4.569; Citations = 0]

(20) Nirmalya Podder and **Sukanta Mandal*** "The effects of metal cofactors on the reactivity of quercetin 2,4-dioxygenase: synthetic model studies with M(II)-complexes (M = Mn, Co, Ni, Cu, Zn) and assessment of the regulatory factors in catalytic efficacy" *Dalton Trans.* **2022**, *51*, 17064–17080. [Impact Factor = 4.569; Citations = 4]

(19) Ayyan Ghosh, Sreeja Dasgupta, Animesh Kundu and **Sukanta Mandal*** "The impact of secondary coordination sphere engineering on water oxidation reactivity catalysed by molecular ruthenium complexes: a next-generation approach to develop advanced catalysts" *Dalton Trans.* **2022**, *51*, 10320–10337. [Impact Factor = 4.569; Citations = 3]

(18) Nirmalya Podder, Subhasis Dey, Anakuthil Anoop* and **Sukanta Mandal*** "Oxygenolysis of a series of copper(II)-flavonolate adducts varying the electronic factors on supporting ligands as a mimic of quercetin 2,4-dioxygenase-like activity" *Dalton Trans*. **2022**, *51*, 4338 – 4353. [Impact Factor = 4.569; Citations = 6]

(17) Animesh Kundu, Suman K. Barman and **Sukanta Mandal*** "Dangling Carboxylic Group That Participates in O−O Bond Formation Reaction to Promote Water Oxidation Catalyzed by a Ruthenium Complex: Experimental Evidence of an Oxide Relay Pathway" *Inorg. Chem.* **2022**, *61*, 1426–1437. [Impact Factor = 5.436; Citations = 9]

(16) Nirmalya Podder and **Sukanta Mandal*** "Aerobic Oxidation of 2-Aminophenol Catalysed by a Series of Mononuclear Copper(II) Complexes: Phenoxazinone Synthase-like Activity and Mechanistic Study" *New J. Chem.* **2020**, *44*, 12793-12805. [Impact Factor = 3.925; Citations = 23]

(15) Animesh Kundu, Suman Kr Dey, Subhasis Dey, Anakuthil Anoop* and **Sukanta Mandal*** "Mononuclear Ruthenium-Based Water Oxidation Catalyst Supported by Anionic, Redox-Non-Innocent Ligand: Heterometallic O−O Bond Formation via Radical Coupling Pathway" *Inorg. Chem.* **2020**, *59*, 1461−1470. [Impact Factor = 5.436; Citations = 18]

(14) Animesh Kundu, Srimoyee Khan, Subhasis Dey, Chiranjit Dutta, Anakuthil Anoop and **Sukanta Mandal*** "Synthesis and Physicochemical Properties of Ruthenium(II) Complexes Having Pentadentate Scaffolds: Water Oxidation Activity and Deactivation Pathway" Eur. J. *Inorg. Chem.* **2019**, 164-177. [Impact Factor = 2.551; Citations = 4]

(13) Lorenzo Mognon, **Sukanta Mandal**, Carmen E. Castillo, Jerome Fortage, Florian Molton, Guillem Aromi, Jordi Benet-Buchhlolz, Marie-Noelle Collomb and Antoni Llobet "Synthesis, Structure, Spectroscopy and Reactivity of New Heterotrinuclear Water Oxidation Catalysts" *Chem. Sci.* **2016**, *7*, 3304 - 3312. [Impact Factor = 9.969; Citations = 15]

(12) **Sukanta Mandal**, Shinya Shikano, Yusuke Yamada, Yong-Min Lee, Wonwoo Nam, Antoni Llobet and Shunichi Fukuzumi "Protonation Equilibrium and Hydrogen Production by a Dinuclear Cobalt-Hydride Complex Reduced by Cobaltocene with Trifluoroacetic Acid" *J. Am. Chem. Soc.* **2013**, *135*, 15294 - 15297. [Impact Factor = 16.383; Citations = 85]

(11) Dachao Hong,[‖] **Sukanta Mandal**,[‖] Yusuke Yamada, Yong-Min Lee, Wonwoo Nam, Antoni Llobet and Shunichi Fukuzumi "Water Oxidation Catalysis with Nonheme Iron Complexes under Acidic and Basic Conditions: Homogeneous or Heterogeneous?" *Inorg. Chem.* **2013**, *52*, 9522–9531 ([‖] equal contribution). [Impact Factor = 5.436; Citations = 189]

(10) **Sukanta Mandal**, Jhumpa Mukherjee, Francese Lloret and Rabindranath Mukherjee "Modeling Tyrosinase and Catecholase Activity Using New m-Xylyl Based Ligands with Bidentate Alkylamine Terminal Coordination" *Inorg. Chem.* **2012**, *51*, 13148–13161. [Impact Factor = 5.436; Citations = 98]

(9) Matthew L. Rigsby, **Sukanta Mandal**, Wonwoo Nam, Lara C. Spencer, Antoni Llobet and Shannon S. Stahl "Cobalt Analogs of Ru-Based Water Oxidation Catalysts: Overcoming Thermodynamic Instability and Kinetic Lability to Achieve Electrocatalytic O2 Evolution" *Chem. Sci.* **2012**, *3*, 3058–3062. [Impact Factor = 9.969; Citations = 157]

(8) Shunichi Fukuzumi, **Sukanta Mandal**, Kentaro Mase, Kei Ohkubo, Hyejin Park, Jordi Benet-Buchholz, Wonwoo Nam and Antoni Llobet "Catalytic Four-Electron Reduction of O_2 *via* Rate-Determining Proton-Coupled Electron Transfer to a Dinuclear Cobalt-μ-1,2-peroxo Complex" *J. Am. Chem. Soc.* **2012**, *134*, 9906–9909. [Impact Factor = 16.383; Citations = 110]

(7) Lele Duan, Fernando Bozoglian, **Sukanta Mandal**, Beverly Stewart, Timofei Privalov, Antoni Llobet and Licheng Sun "A Molecular Ruthenium Catalyst With Water-Oxidation Activity Comparable to that of Photosystem II" *Nat. Chem.* **2012**, *4*, 418–423. [Impact Factor = 24.27; Citations = 1252]

(6) Arnau Arbuse, **Sukanta Mandal**, Somnath Maji, Ma Angeles Martinez, Xavier Fontrodona, Diana Utz, Frank W. Heinemann, Sandra Kisslinger, Siegfried Schindler, Xavier Sala and Antoni Llobet "Ligand Influence over the Formation of Dinuclear [2+2] versus Trinuclear [3+3] CuI Schiff Base Macrocyclic Complexes" *Inorg. Chem.* **2011**, *50*, 6878–6889. [Impact Factor = 5.436; Citations = 14]

(5) **Sukanta Mandal**, V. Balamurugan, Francesc Lloret and Rabindranath Mukherjee "Syntheses, X-ray Structures, and Physicochemical Properties of Phenoxo-Bridged Dinuclear Nickel(II) Complexes: Kinetics of Transesterification of 2-Hydroxypropyl-p-nitrophenyl phosphate" *Inorg. Chem.* **2009**, *48*, 7544–7556. [Impact Factor = 5.436; Citations = 55]

(4) **Sukanta Mandal**, Francesc Lloret and Rabindranath Mukherjee "Discrete and 1D Coordination Polymeric Chloro-Bridged Copper(II) Dimers Exhibiting Ferro- and Antiferromagnetic Exchange Coupling: Magneto-Structural Correlations and Non-Covalent Interactions" *Inorg. Chim. Acta.* **2009**, *362*, 27–37. [Impact Factor = 3.118; Citations = 30]

(3) **Sukanta Mandal**, Anindita De and Rabindranath Mukherjee "Formation of {CuIII2(μ-O)2}2+ Core Due to Dioxygen Reactivity of a Copper(I) Complex Supported by a New Hybrid Tridentate Ligand: Reaction with Exogenous Substrates" *Chemistry & Biodiversity* **2008**, *5*, 1594–1608. [Impact Factor = 2.9; Citations = 6]

(2) Anindita De, **Sukanta Mandal** and Rabindranath Mukherjee "Modeling Tyrosinase Activity. Effect of Ligand Topology on Aromatic Ring Hydroxylation: An Overview" *J. Inorg. Biochem.* **2008**, *102*, 1170–1189. [Impact Factor = 3.9; Citations = 40]

(1) **Sukanta Mandal** and Rabindranath Mukherjee "A New Tyrosinase Model With 1,3-bis[(2-dimethylaminoethyl)iminomethyl]benzene: Binuclear Copper(I) and Phenoxo/Hydroxo-Bridged Dicopper(II) Complexes" *Inorg. Chim. Acta.* **2006**, *359*, 4019–4026. [Impact Factor = 3.118; Citations = 18]

Presentations in Conference/Seminar Proceedings

Invited Talks

(13) "Molecular Water Oxidation Catalysis with Tailor-Made Ruthenium Complexes" in *6th Symposium on Advanced Biological Inorganic Chemistry (SABIC 2024)*, Kolkata, 07-11 January 2024.

(12) "Efficient Water Oxidation Catalyzed by a Mononuclear Ru-complex Supported with a Redox-Non-Innocent Ligand: Insights into Metal-Ligand Synergy and Mechanism" in *Modern Trends in Inorganic Chemistry (MTIC-XX)*, IISc Bengaluru, 14-17 December 2023.

(11) "Coordination Compounds and Water Oxidation Catalysis: A Molecular Approach" at Kalna College, 10th September 2020 (Webinar).

(10) "Molecular Water Oxidation Catalysis by Coordination Complexes" in *Frontiers in Chemical Sciences (FCS 2020)*, Department of Chemistry, Bharathiar University, Coimbatore, Tamilnadu, 03-05 December 2020 (Webinar).

(9) "Mononuclear Ruthenium Complex Supported by Anionic, Redox Non-innocent Ligand: Water Oxidation Catalysis and Mechanistic Studies" in *Emerging Trends in Catalysis & Synthesis (ETCS-2020)*, IIT Kharagpur, 11-12 March 2020.

(8) "Mononuclear Ruthenium Complex Supported by Anionic, Redox-Non-Innocent Ligand: Water Oxidation Catalysis and Mechanistic Study" IISER Kolkata, 15th January 2020.

(7) "Oxidation of Water Catalyzed by Tailor-Made Transition Metal Complexes: Mechanistic Study" in *Recent Advances in Materials for Sustainable Energy (RAMSE-2018)*, IIT(ISM) Dhanbad, 03-05 March 2018.

(6) "Homogeneous Water Oxidation Catalyzed by Tailor-Made Transition Metal Complexes: Mechanistic Investigation" in *Recent Advances in Functional Inorganic & Nanomaterials Chemistry*, IIT Kharagpur, 11th November 2017.

(5) "Bioinorganic Model Study and Water Oxidation Chemistry" at Department of Chemistry, Hooghly Mohsin College, 11th February 2016.

(4) "Transition Metal Complexes Encompassing Synthetic Bioinorganic Model Study and Water Splitting Chemistry" IISER Bhopal, 22nd April 2014.
(3) "Transition Metal Complexes Encompassing Synthetic Bioinorganic Model Study and Water Splitting Chemistry" Indian Institute of Technology Kharagpur (IIT Kharagpur), 30th October 2013.
(2) "Transition Metal Complexes Encompassing Synthetic Bioinorganic Model Study, Water Oxidation and Dioxygen Reduction Reactions" Indian Association for the Cultivation of Science (IACS), Kolkata, 10th January, 2013.
(1) Short talk entitled "Bio-Inspired Coordination Chemistry of Nickel and Copper" at *Chem Fest 2008,* In-house symposium of Department of Chemistry at IIT Kanpur.

- **Poster Presentations**

(9) "Water Oxidation Reactions Catalyzed by New Heterotrinuclear Complexes" in *5th Symposium on Advanced Biological Inorganic Chemistry (SABIC 2017)*, Kolkata, 07-11 January 2017.
(8) "Homogeneous Water Oxidation Catalysis by Transition Metal Complexes" in *DST-INSPIRE Faculty Monitoring-cum-Interaction Meet (Chemical & Material Sciences)*, KIIT University, Bhubaneswar, 16-17 January 2017.
(7) "Water Splitting Reactions Catalyzed by Transition Metal Complexes" in *Modern Trends in Inorganic Chemistry (MTIC-XVI)*, Jadavpur University, 03-05 December 2015.
(6) "Catalytic Four-Electron Reduction of O_2 via Rate-Determining Proton-Coupled Electron Transfer to a Dinuclear Cobalt-μ-1,2-peroxo Complex" Sukanta Mandal, Kentaro Mase, Kei Ohkubo, Hyejin Park, Jordi Benet-Buchholz, Wonwoo Nam, Antoni Llobet, and Shunichi Fukuzumi in *6th Asian Biological Inorganic Chemistry Conference (AsBIC VI),* Hong Kong, China, 5-8 November 2012.
(5) "Mono/Di/Tri-, Homo/Hetero Nuclear Ru/Mn/Fe/Co Complexes as Water Oxidation Catalyst" Sukanta Mandal, Hyejin Park, Shunichi Fukuzumi, Wonwoo Nam and Antoni Llobet in *7th International Conference on Porphyrins and Phthalocyanines (ICPP-7)*, Jeju, Korea, 01-06 July 2012.
(4) "Complexes of Ru and Mn as Water Oxidation Catalyst" Isidoro Lopez, Somnath Maji, Sukanta Mandal and Antoni Llobet in *Workshop of the European Research Project SOLAR-H2,* Berlin, Germany, March 2010.
(3) "Modeling of Tyrosinase and Catechol Oxidase Activity Using Designed Ligands: Some Recent Results" Sukanta Mandal, Jhumpa Mukherjee and Rabindranath Mukherjee in *13th International Conference on Biological Inorganic Chemistry (ICBIC 13)*, Vienna, Austria, 15-20 July 2007).
(2) "Demonstration of Aromatic Ring Hydroxylation (Tyrosinase-like Activity) Using New *m*- Xylyl-Based Schiff Base Ligand: Copper-Oxygen Intermediate Due to Reaction between Bis(μ-hydroxo)dicopper(II) and Hydrogen Peroxide" Sukanta Mandal and Rabindranath Mukherjee in *Chemical Research Society of India*, *8th National Symposium in Chemistry (NSC-8),* Indian Institute of Technology Bombay, Mumbai, India, 03-05 February 2006.

(1) "Modeling Tyrosinase Activity. Demonstration of Aromatic Ring Hydroxylation Using a New *m*-xylyl-Based Ligand System" Sukanta Mandal, Jhumpa Mukherjee and Rabindranath Mukherjee in *Third Symposium on Advances in Bioinorganic Chemistry (SABIC-2004) in conjunction with Second Asian Biological Inorganic Chemistry Conference (AsBIC-II)*, Goa; Organized by Tata Institute of Fundamental Research, Mumbai, India, 5-10 December 2004.

Student Presentations in Conference Proceedings

(13) M. Molla and S. Mandal "Exploring C-H bond activation by monomeric Fe(III)-OH complexes: a biomimetic model of lipoxygenase-like activity" in *6th Symposium on Advanced Biological Inorganic Chemistry (SABIC 2024)*, Kolkata, 07-11 January 2024. (Poster Presentation)
(12) S. Dasgupta, A. Ghosh and S. Mandal "Molecular Ruthenium(III) Complexes for Water Oxidation Catalysis: Impact of Redox-Non-Innocent Ligand" in *6th Symposium on Advanced Biological Inorganic Chemistry (SABIC 2024)*, Kolkata, 07-11 January 2024. (Poster Presentation)
(11) S. Dasgupta, A. Ghosh and S. Mandal "Redox-Non-Innocent Ligand Supported Ruthenium(III) Complexes as Potential Water Oxidation Catalysts" in *Modern Trends in Inorganic Chemistry (MTIC XX)*, 2023. (Poster Presentation)
(10) N. Podder and S. Mandal "Oxygenolysis of a series of copper(II)-flavonolate adducts varying the electronic factors on supporting ligands as a mimic of quercetin 2,4-dioxygenase-like activity" in *Modern Trends in Inorganic Chemistry (MTIC XIX)*, 2022. (Poster Presentation)
(9) M. Molla and S. Mandal "C-H bond activation by monomeric Fe(III)-OH complexes: biomimetic model of lipoxygenase-like activity" in *Modern Trends in Inorganic Chemistry (MTIC XIX)*, 2022. (Poster Presentation)
(8) S. Dasgupta, A. Ghosh, R. Maurya and S. Mandal "Molecular Ruthenium(III) Complexes with Redox-Innocent Ligand Frameworks for Water Oxidation Catalysis" in *Modern Trends in Molecular Magnetism (MTMM 3)*, 2022. (Poster Presentation)
(7) A. Kundu and S. Mandal "Dangling Carboxylic Group Participates in O-O Bond Formation Reaction to Promote Water Oxidation Catalysed by a Ru Complex: An Oxide Relay Pathway" in *Recent Trends in Chemical Sciences (RTCS-2021)*, 2021. (Oral Presentation)
(6) A. Kundu and S. Mandal "Efficient Water Oxidation Catalyzed by Single-Site Ruthenium(III) Complex with a Redox-Non-Innocent Ligand Framework" in *Recent Trends in Chemical Sciences (RTCS-2020)*, 2020. (Oral Presentation)
(5) N. Podder and S. Mandal "Catalytic Dioxygenation of Flavonoid by Copper(II) Complexes: Biomimetic Model of Quercetin 2,3-Dioxygenase Activity" in *Modern Trends in Inorganic Chemistry (MTIC XVIII)*, 2019. (Poster Presentation)
(4) A. Kundu and S. Mandal "Chemically Driven Water Oxidation by Mononuclear Ru(II) Complexes and Deactivation Pathway" in *ACS National Meeting & Expo (Fall 2019)*, 2019. (Oral Presentation)
(3) A. Kundu, S. K. Dey and S. Mandal "Efficient Water Oxidation Catalyzed by Single-site Ruthenium(III) Complex with a Redox Non-innocent Ligand Framework" in *Modern Trends in Inorganic Chemistry (MTIC XVIII)*, 2019. (Poster Presentation)

(2) A. Kundu and S. Mandal "Design & Synthesis of Ruthenium Based Molecular Catalysts for Water Oxidation Reaction towards Artificial Photosystem II" in *Young Scientists Conference, India International Science Festival*, 2019. (Poster Presentation)
(1) A. Kundu and S. Mandal "Chemically Driven Water Oxidation Catalysed by Tailor-Made Mononuclear Ruthenium Complexes: Mechanistic Investigation" *in Modern Trends in Inorganic Chemistry (MTIC XVII)*, 2017. (Poster Presentation)

Research Scholar Accomplishments from S. Mandal's Laboratory

(1) **Mr Animesh Kundu** (Roll No: 15CY90J11), a research scholar under the guidance of **Dr. Sukanta Mandal** at the Department of Chemistry, received the **"Prof A. K. Dey Memorial Young Scientist Award"** at the International Conference on "*Recent Trends in Chemical Sciences (RTCS-2020)*" at the 57th Annual Convention of Chemists (December 26-29, 2020) organized by Indian Chemical Society.
(2) **Mr Animesh Kundu** (Roll No: 15CY90J11), Department of Chemistry, Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, is the recipient of **Professor B. C. Halder Memorial Award for the presentation (Oral)** entitled "Dangling Carboxylic Group Participates in O-O Bond Formation Reaction to Promote Water Oxidation Catalysed by a Ru Complex: An Oxide Relay Pathway" in the *58th Annual Convention of Chemists, 2021 & International Conference on "Recent Trends in Chemical Sciences (RTCS-2021)*" organized by the Indian Chemical Society, Kolkata, India during December 21st – 24th, 2021.
(3) **Dr Animesh Kundu** was awarded the second position for his presentation of a paper entitled "Dangling Carboxylic Group Participates in O-O Bond Formation Reaction to Promote Water Oxidation Catalyzed by a Ru Complex: An Oxide Relay Pathway" as a *part of the Chemistry and Chemical Engineering Conference in Students' Research Convention-22* conducted from 4th-6th March 2022 at Indian Institute of Technology, Kanpur.
