Dr. KOUSHIK SARKAR

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Ph.D in Chemistry

Teacher
St. Xavier's College
Kolkata, West Bengal, India

Academic Details

S.No.	Degree	Institution	Year	Division/Class
1	**B. Sc.**	University of Calcutta	2008 - 2011	1st
2	**M. Sc.**	University of Calcutta	2011 - 2013	1st
3	**Ph. D**	Indian Association for the Cultivation of Science (IACS) (Advisor: Prof. Parthasarathi Dastidar)	2013 - 2019	NA
4	**Post-Doctoral training**	Indian Association for the Cultivation of Science (IACS) (Advisor: Prof. Parthasarathi Dastidar)	July 2019 – December 2019	NA

Achievements

- Qualified **CSIR-NET December-2012** with ***CSIR Rank 54***
- Qualified **CSIR-NET June-2013** with ***CSIR Rank 53***
- Qualified **GATE-2013** exam with ***All India Rank 876***
- Secured ***All India Rank 159*** in Joint Admission Test (**JAM 2011**) conducted by **Indian Institutes of Technology**
- Obtained scholarships for securing good marks in **Secondary10th level exam** from **Govt. of India**

Work experiences

- Completed a short project in The University of Calcutta underthe guidance of Dr. Chhanda Mukhopadhyay from April 2010to June 2010.
- Completed Ph.D in 'Supramolecular Approach in DevelopingOrganic and Organic-Inorganic-Hybrid-Systems for Biological Applications' in Indian Association for the Cultivation of Science under the guidance of Prof. Parthasarathi Dastidar from August 2013 to July 2019.
- Worked as a Research Associate in Indian Association for theCultivation of Science under the guidance of Prof. Parthasarathi Dastidar from July 2019 to December 2019.
- Worked as a teacher in the Department of Chemistry,St. Xavier's College Kolkata, January 2020 till date.

Area of Interest

- Crystal Engineering, Supramolecular Chemistry
- Gels, Metallogels and soft materials
- Metal-organic Framework, Metal-Organic Polyhedra and Organic cage
- Organic Synthesis, Covalent-organic Framework
- Biomedical applications of Organic and Organic-Inorganic-Hybrid-Systems
- Single Crystal X-ray Diffraction
- Catalysis

Conferences Attended

- Attended '**National Symposium on Perspective & Challenges in Organic Chemistry**' held on October 18th at Kolkata, India.
- Presented Poster at the '**13th Conference of the Asian Crystallographic Association**' held on December 5-8, 2015 at Kolkata, India.
- Presented Poster at the '**International Conference on Polymer Science & Technology**' held on January 8-11, 2017 at Thiruvanthapuram, India.
- Oral presentation at the '**24th Congress & General Assembly of the International Union of Crystallography**' held on August 21-28, 2017 at Hyderabad, India.
- Attended '**Workshop and Training Course on Single Crystal XRD**' on August 28-30, 2017 at Kolkata, India.

Publications

Articles:

1. Metallogels Derived from Silver Coordination Polymers of C_3-Symmetric Tris(pyridylamide) Tripodal Ligands: Synthesis of Ag Nanoparticles and Catalysis. M. Paul, **K. Sarkar** and P. Dastidar, ***Chem. Eur. J.* 2015, *21*, 255 – 268**. (**I.F: 5.236)**
2. Multifunctional single-layered vesicles derived from Cu(II)-metal–organic-polyhedra. **K. Sarkar**, M. Paul and P. Dastidar, ***Chem. Commun.* 2016, *52*, 13124-13127**. (**I.F: 6.222)**
3. Nanoscale Mn^{II}-Coordination Polymers for Cell Imaging and Heterogeneous Catalysis. **K. Sarkar** and P. Dastidar, ***Chem. Eur. J.* 2016, *22*, 18963 – 18974**. (**I.F: 5.236)**
4. Hand-Ground Nanoscale Zn^{II}-Based Coordination Polymers Derived from NSAIDs: Cell Migration Inhibition of Human Breast Cancer Cells. M. Paul, **K. Sarkar**, J. Deb and P. Dastidar, ***Chem. Eur. J.* 2017, *23*, 5736 – 5747**. (**I.F: 5.236)**
5. Supramolecular Hydrogel Derived from A C_3-symmetric Boronic acid Derivative for Stimuli Responsive Release of Insulin and Doxorubicin. **K. Sarkar** and P. Dastidar, ***Langmuir* 2018, *34*, 685-692**. (**I.F: 3.882)**
6. Exfoliated Nanosheets of a Cu^{II} Coordination Polymer Modulate Enzyme Activity of α-Chymotrypsin. **K. Sarkar** and P. Dastidar, ***Chem. Eur. J.* 2018, *24*, 11297 – 11302**. (**I.F: 5.236)**
7. Rationally Developed Metallogelators Derived from Pyridyl Derivatives of NSAIDs Displaying Anti-inflammatory and Anticancer Activities. **K. Sarkar**, S. Khasimbi, S. Mandal and P. Dastidar, ***ACS Appl. Mater. Interfaces* 2018, *10*, 30649-30661**. (**I.F: 9.229)**
8. Rational Approach Towards Designing Metallogels From a Urea Functionalized Pyridyl Dicarboxylate - Anti-inflammatory, Anticancer and Drug Delivery. **K. Sarkar** and P. Dastidar, ***Chem. Asian J.* 2019, *14*, 194 – 204**. (**I.F: 4.568)**
9. Self-assembly of Spherical Organic Molecules to form Hollow Vesicular Structure in Water for Encapsulation of an Anti-cancer Drug and Its Release. **K. Sarkar**, S. Ahmed and P. Dastidar, ***Chem. Asian J.* 2019, *14*, 1992-1999**. (**I.F: 4.568)**
10. Synthesis, structure and phenoxazinone synthase-like activity of three unprecedented alternating Co^{II}–Co^{III} 1D chains. S. Ganguly, P. Kar, M. Chakraborty, **K. Sarkar** and A. Ghosh, ***New J. Chem.* 2019, *43*, 18780-18793**. (**I.F: 3.591)**

11. Design and Synthesis of Zn^{II}-Coordination Polymers Anchored with NSAIDs: Metallovesicle Formation and Multi-drug Delivery. S. Bera, A. Chowdhury, **K. Sarkar** and P. Dastidar, ***Chem. Asian J.* 2020, *15*, 503-510**. (**I.F: 4.568)**
12. Cu(II)-Metallacryptands Self-Assembled to Vesicular Aggregates Capable of Encapsulating and Transporting an Anticancer Drug Inside Cancer Cells. P. Biswas, **K. Sarkar**, P. Dastidar, ***Macromol. Biosci.* 2020, *20*, 2000044**. (**I.F: 3.850)**
13. Influence of Triazole Substituents of Bis-Heteroleptic Ru(II) Probes toward Selective Sensing of Dihydrogen Phosphate. ***Inorg. Chem. 2021, 60, 12, 9084–9096***. (**I.F: 5.165)**

Reviews:

14. Metallogels from Coordination Complexes, Organometallic, and Coordination Polymers. P. Dastidar, S. Ganguly and **K. Sarkar**, ***Chem. Asian J.* 2016, *11*, 2484 – 2498**. (**I.F: 4.568)**
15. Supramolecular Synthon Approach in Designing Gels for Advanced Therapeutics. P. Dastidar, R. Roy, R. Parveen and **K. Sarkar**, ***Advanced Therapeutics* 2019, *2*, 1800061.**

Book Chapter:

16. Nitrogen Ligand based Molecular Building Block. P. Dastidar, S. Ganguly and **K. Sarkar**, ***Comprehensive Supramolecular Chemistry-II*, Elsevier, 2017, *7*, 207 – 242**.