Name: Dr. Tufan Singha Mahapatra

Designation: Assistant Professor

Branch: Chemistry

Educational Qualification(s):

Qualification(s)	University
Bachelor of Science (Chemistry)	**Presidency College, University of Calcutta**
Master of Science (Chemistry)	**IITMadras**
Doctor of Philosophy(Inorganic Chemistry)	**IITKharagpur**
Post-doctorate	**CSIR-Central Salt and Marine Chemicals Research Institute**

Experience in years:

Academic:6 years

Details:

Sl. No.	Organization	Position Held	Duration	
			From	To
1.	**CSIR-Central Salt and Marine Chemicals Research Institute**	**SERB-National Post-Doctoral Fellow**	07-03-2017	06-03-2019
2.	**CSIR-Central Salt and Marine Chemicals Research Institute**	**Research Associate**	26-03-2019	05-08-2019
3	**ICFAI University Tripura, Agartala-799210, Tripura**	**Assistant Professor**	12-08-2019	Continuing

Industrial: **NIL**

RESEARCH AREAS

- Inorganic supramolecular and materials chemistry
- Luminescent Supramolecular metallogels
- Self-Assembly &Lanthanide (4f) metals
- Ultrathin two-dimensional nanomaterials

- ❖ Cluster coordination chemistry and crystal structures
- ❖ Synthesis of ferromagnetic and single molecule magnetic metal complexes.

EXPERTISE AND SKILLS

- ✓ **Analytical Instrument:** Operating experience on NMR, FT-IR, UV-Vis-NIR spectrophotometer, Fluorescence spectrometer, Rheometer, HPLC, ESI-MS spectrometer,GC-MS,DLS etc.
- ✓ **Specialised Instrument:**Transmission Electron Microscope (TEM), Atomic force microscope (AFM), Scanning Electron Microscope (SEM),Single crystal X-ray diffractometer, Powder X-ray diffractometer, Time resolved fluorescence spectrometer (TCSPC instrument), FT-Raman, X-ray photoelectron spectroscopy (XPS) etc.
- ✓ **Computer Skills:** Adept in using various packages such as MS Office, Scifinder, ChemDraw, Power point, Origin,WinGX, Mercury, POV-Ray, Diamond, ORTEP, CrystalExplorer, Nova P9 etc.

PUBLICATIONS (Average impact factors = 4.7, SCI & SCOPUS)

1. Recent Advances in the Development of Europium (III) and Terbium (III)-based Luminescent Supramolecular Metallogel (***Front Cover for Issue 10***)
   Bilash Chandra Roy and **T. Singha Mahapatra***
   Soft Matter, 2023, **19**, 1854–1872. **(Impact Factor: 4.046)**
   (*corresponding authour*).
2. Two-dimensional lanthanide coordination polymer nanosheets for detection of FOX-7
   T. Singha Mahapatra,* A. Dey, H. Singh, S. S. Hossain, A. K. Mandal* and A. Das*
   Chemical Science, 2020, **11**, 1032-1042. **(Impact Factor: 9.969)**
   (*First cum corresponding authour*)
3. White-Light-Emitting Lanthanide and Lanthanide-Iridium Doped Supramolecular Gels: Modular Luminescence and Stimuli-Responsive Behaviour
   T. Singha Mahapatra,* H. Singh, A. Maity, A. Dey, S. K. Pramanik, E. Suresh and A. Das*
   Journal of Materials Chemistry C, 2018, 6, 9756-9766. **(Impact Factor: 8.067)**
   (*First cum corresponding authour*)
4. Crystalline Free-Standing Two-Dimensional Zwitterionic Organic Nanosheets for Efficient Conduction of Lithium Ions
   A. Dey, V. R. Ramlal, S. S. Sankar, **T. Singha Mahapatra**, E. Suresh, S. Kundu, A. K. Mandal and A. Das, *ACS Applied Materials & Interfaces*, 2020, **12**, 58122-58131.**(Impact Factor: 10.38)**
5. Mitochondriotropic Lanthanide Nanorods: Implications forMultimodal Imaging
   H. Singh, S.Sreedharan, E. Oyarzabal, **T. Singha Mahapatra**, N. Green, S. Yen-Yu Ian, M. Das, J. A. Thomas, S. K.Pramanik and A. Das, *Chem. Commun.,* 2020, 56, 7945.**(Impact Factor: 6.065)**

6. Competitive coordination aggregation for V-shaped [Co_3] and disc-like [Co_7] complexes: synthesis, magnetic properties and catechol oxidase activity
   T. Singha Mahapatra,D. Basak, S. Chand, J. Lengyel,M. Shatruk, V. Bertolasi and D. Ray
   Dalton Transactions, 2016, **45**, 13576-13589 **(Impact Factor:4.390)**
7. Direct C−N coupling in an in situ ligand transformation and the self-assembly of a tetrametallic [Ni^{II}_4] staircase
   A. K. Ghosh, **T. Singha Mahapatra**, R. Clérac, C. Mathonière, V. Bertolasi and D. Ray
   Inorganic Chemistry, 2015, **54**, 11, 5136–5138 (**Impact Factor**: **5.436**)
8. Dinuclear nickel complexes of divergent Ni···Ni separation showing ancillary ligand addition and bio-macromolecular interaction
   T. Singha Mahapatra, S. Chaudhury, S. Dasgupta, V. Bertolasi and D. Ray
   New Journal of Chemistry, 2016, **40**, 2268–2279 **(Impact Factor:3.591**)
9. Tuneable Hierarchical Self-Assembly of C3-SymmetricTriaminoguanidium-derivative into Rhombic DodecahedralMorphology
   A. Dey, A. Maity, **T. Singha Mahapatra**, E. Suresh, A. K. Mandal, and A. Das
   CrystEngComm, 2020,**22**, 5117-5121**(Impact Factor:3.545**)
10. Trapping of Methanoato Bridge in μ-1,1,3,3 Mode for [Cu_4] Aggregate Formation: Synthesis, Steric Control on Nuclearity, Antimicrobial Activity, and DNA-Interaction Properties
    T. Singha Mahapatra, A. Roy, S. Chaudhury, S. Dasgupta,S. L. Shrivastava, V. Bertolasi, and D. Ray
    European Journal of Inorganic Chemistry, 2017, 769–779 (**Impact Factor**: **2.551**)
11. Carboxylate Coordination Assisted Aggregation for Quasi-Tetrahedral and Partial-Dicubane [Cu_4] Coordination Clusters
    T. Singha Mahapatra,A. Bauzá, D. Dutta, S. Mishra, A. Frontera and D. Ray
    ChemistrySelect, 2016, **1**, 64–74 (**Impact Factor**:**2.109**)
12. Forced ether oxygen coordination from reduced Schiff base ligand in [Cu_2] complexes: Synthetic preference, trapping of carboxylates and catechol oxidation
    T. Singha Mahapatra, K. Chattopadhyay, D. Basak, M. Das, A. Bhanja, M. Biswas and D. Ray
    Journal of the Indian Chemical Society, 2015, **92**, 1939–1947 (*Invited Article*)
13. A square pyramidal copper(II) complex of a Schiff base ligand: synthesis, crystal structure, antibacterial and DNA interaction studies
    K. Jana, T. Maity, **T. Singha Mahapatra**, P. K. Das Mohapatra, S. C. Debnath, S. Das, M. Hossain and B. C. Samanta
    Transition Metal Chemistry, 2017,**42***,* 69–78 (**Impact Factor**: **2.31**)
14. Rhomboidal [Cu_4] coordination cluster from self-assembly of two asymmetric phenoxido-bridged Cu_2 units: Role of $\mu_{1,1}$-azido clips
    A. Sarkar, A. K. Ghosh, M. Pait, H. Mandal, **T. Singha Mahapatra**, B. Sharangi, M. Sarkar and D. Ray
    Journal of Chemical Sciences, 2012, **124**, 1377–1383 (**Impact Factor**: **1.496**) doi: https://www.ias.ac.in/article/fulltext/jcsc/124/06/1377-1383

AWARDED PATENTS

1. **Patent Awarded**- Patent No. 398431; Indian Patent Application No.: 201811029277; Publication Date: 07/08/2020, Date of Grant: 02/06/2022, Patent authority: CSIR
Title: Transparent and Flexible Poly(Methyl Methacrylate) Composite Films With UV-Shielding Performances and Process For Preparation Thereof
Inventors: **Tufan Singha Mahapatra**, Sumit Kumar Pramanik and Amitava Das

2. **Patent Awarded**-Patent No. 404135, Indian Patent Application No.: 201911036793;Publication Date:19/03/2021. Date of Grant: 05/09/2022, Patent authority: Chairman, DRDO and CSIR.
Title:A novel terbium-based coordination polymer for the detection of FOX-7 and process for preparation thereof.
Inventors: **Tufan Singha Mahapatra**, Harwinder Singh, Ananta Dey, and Amitava Das

BOOK CHAPTER

Chapter:CONTEMPORARY TRENDS IN THE SYNTHETICASPECTS, AND MAGNETIC PROPERTIES OF 3d-4fHETEROMETALLIC CUBANE, PARTIAL DICUBANE,AND PARTIAL TETRACUBANE CORE-TYPECOORDINATION COMPOUNDS
Book Title: Futuristic Trends in Chemical, Material Sciences & Nano Technology
ISBN: 978-93-95632-67-6
IIP Proceedings, Volume 2, Book 13, Part 4, Chapter 1

ACADEMIC DISTINCTIONS/HONORS AND AWARDS

- **Best Faculty Award**on the occasion of ICARIA-2022 at the **ICFAI University, Tripura** for the academic year 2021-2022
- **Managing Editor in IUT Journal of Advanced Research and Development** (IUT-JARD) journal
- **Peer Reviewer in various reputed journals**
- Awarded**UGC-Dr. D. S. Kothari Post-Doctoral Fellowship** (DSKPDF)-2019
- Awarded**Research Associateship (2019)** in CSIR-Central Salt and Marine Chemicals Research Institute
- Awarded**SERB-National Post-Doctoral Fellowship**(**NPDF**) (2017), CSIR-Central Salt and Marine Chemicals Research Institute
- Awarded International Travel Support by the Science and Engineering Research Board (SERB) for participating in **"7th EuCheMS Chemistry Congress – Molecular frontiers & global challenges, United Kingdom (26 August, 2018 to 30 August, 2018)"**
- Awarded **UGC-JRF** Fellowship (19-12-2010) and **CSIR-JRF** Fellowship (19-06-2011, **All India Rank - 26**) in Chemical Sciences

- Graduate Aptitude Test in Engineering (**GATE**) in Chemistry: GATE-2011(All India rank - 341), GATE-2015(**All India rank - 33**), GATE-2016(**All India rank - 76**).
- **JAM**: Joint Admission Test, IIT, 2009 **(All India Rank - 86)**

CONTRIBUTIONS TO SCIENTIFIC CONFERENCES:

1. Poster Presented at International conference on "**Modern Trends in Inorganic Chemistry (MTIC-XVIII)**",**IIT Guwahati** (11-14 December 2019)
2. Participated at '**International conference on Indo-German Bilateral Workshop on Membranes for Water and Energy (IGSTC-2019)'**, **CSIR-CSMCRI Bhavnagar** (18-2-2019 to 20-2-2019)
3. Poster Presented at International conference on "**Modern Trends in Inorganic Chemistry (MTIC-XVII)**",**IISER and NCL PUNE** (11-14 December 2017)
4. Poster Presented at International conference on "**Modern Trends in Inorganic Chemistry (MTIC-XVI)**",**Jadavpur University** (3-5 December 2015).
5. **Oral presentation** in Research Scholars' Day 2015 organized by Department of Chemistry, **Indian Institute of Technology Kharagpur** (August 2015).
6. Poster Presented at International conference on "**Diamond Jubilee Symposium on Recent Trends in Chemistry (DJSRTC-2011)**", **Indian Institute of Technology Kharagpur** on 21-23 October 2011.

INVITED TALK & SEMINAR PRESENTATIONS

1. **Invited Talk** at "Emergent Materials for Energy and Environment (EMEE-2023)" during March 04-05, 2023 organized by **IIT Roorkee** on topic: Two-Dimensional Lanthanide Coordination Nanosheets for 1,1-Diamino-2,2-dinitroethene (FOX-7) Explosive Detection.
2. '**Women of The Periodic Table',**Feb 28, 2020,ICFAI University Tripura, on the occasion of "National Science Day-2020".
3. '**A Brief History of The Development of Periodic Table**',October 23, 2019, ICFAI University Tripura, on the occasion of Mole Day and International Year of Periodic Table Celebration.
4. '**Light-Emitting Supramolecular Metallogels: Modular Luminescence and Stimuli-Responsive Behaviour',**April 12, 2019, CSIR-CSMCRI Bhavnagar.