

Partha Sarathi Mukherjee

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<https://scholar.google.com/citations?hl=en&pli=1&user=6szY5wQAAAAJ>

Present position: *Professor*, Inorganic & Physical Chemistry Dept., Indian Institute of Science, Bangalore.

Research fields: Inorganic chemistry, Supramolecular materials, Organic cages, Molecular sensors, Catalysis in nanocages.

Summary:

- 27 years of inorganic chemistry research in academia
- 22 years of teaching experience in chemistry at honours/PG level
- 237 publications in peer-reviewed journals
- Delivered over 300 lectures (invited, plenary, keynote, and institute/departmental colloquia) in India and abroad.

Educational Qualifications:

* **09/1998–01/2002** Doctor of Philosophy (Chemistry), Indian Association for the Cultivation of Science, Kolkata, India. **Thesis title:** “*Synthesis, crystal structure and low temperature magnetic behaviour of Cu(II) polynuclear complexes of amines and their derivatives using different bridging ligands*”. Supervisor: **Prof. Nirmalendu Ray Chaudhuri**

* **1996-1998** Master of Science with specialization in **Inorganic Chemistry** (class 1), Jadavpur University, Kolkata, India.

* **1992-1995** Bachelor of Science (Honours in Chemistry, class 1), The University of Burdwan, India.

Awards and Fellowships/Recognitions:

***2025** Elected as a fellow of the *Indian National Science Academy*, New Delhi

***2025** Rigaku International Prize-2025

***2024** Appointed as Editorial Advisory Board Member of *Aggregate*, a journal of the Wiley-VCH

***2023** J. C. Bose National Fellowship from the SERB (Govt. of India)

***2023** Elected fellow of *The World Academy of Sciences* (TWAS, Trieste, Italy) with effect from Jan 2023.

***2023** Editorial advisory board member of *Coordination Chemistry Research*, a journal of the Elsevier.

***2022** Featured by the DST as one of the 75 scientists below the age of 50 who are shaping today's India.

***2020** Joined the International Editorial Advisory Board of "*The Chemical Record*"-a journal of the Wiley-VCH.

***2020** Elected Fellow of the *Indian Academy of Sciences (FASc)*

***2020** Invited Fellow of the Royal Society of Chemistry under Leaders in the Field Category.

***2018** Member of the Editorial Advisory Board of *Inorganica Chimica Acta*, a journal published by *Elsevier*.

***2018** Selected for Deshpande National Award

***2016** *Shanti Swarup Bhatnagar* Prize in Chemical Sciences for the year 2016 (*award presented by the Prime Minister of India*)

***2016** Editorial Advisory Board Member of “*Inorganic Chemistry Frontiers*”, a journal published by the Royal Society of Chemistry (U. K.)

***2016** Associate Editor, *Inorganic Chemistry* (ACS-Journal).

***2015** Member of Editorial Advisory Board of “*Inorganic Chemistry*” (a journal published by the American Chemical Society)

***2016** Chemical Research Society of India Bronze Medal

***2014** Fellow, Royal Society of Chemistry (FRSC)

***2014** Member of the Editorial board of Scientific Reports, a journal of the Nature publishing group

***2014** JSPS visiting scientist, University of Kyoto (October-November, 2014)

***2014/2017** AvH visiting scientist at the University of Heidelberg (May-July 2014), and at the University of Bonn (May-July, 2017).

***2012** Swarnajayanti Fellowship in Chemical Sciences from the Govt. of India

***2012** NASI-SCOPUS Young Scientist Award-2011 in Chemistry

***2011** Young Affiliate Fellowship of the *World Academy of Science (TWAS)*, Trieste

***2010** Visiting Professorship from Ulsan University, Korea for two months

***2009** IUPAC Young Scientist award

***2008** Microsoft Research (MSR) India Outstanding Young Faculty Award

*** 2008** Indian National Science Academy Medal for the Young Scientists

*** 2007** Young Associate of the Indian Academy of Sciences, Bangalore

*** 2004** Alexander von Humboldt Fellowship, Bonn, Germany.

*** 2004** Marie-Curie International Fellowship (selected).

*** 1997** National Merit Scholarship for performance at undergraduate level.

Work Experience:

- * **3/2016-present:** Professor, Inorganic & Physical Chemistry Dept., Indian Institute of Science, Bangalore-560012.
- * **3/2010-2/2016:** Associate Professor, Inorganic &Physical Chemistry Dept., Indian Institute of Science, Bangalore-560012.
- * **7/2005-2/2010:** Assistant Professor, Inorganic &Physical Chemistry Dept., Indian Institute of Science, Bangalore-560012.
- * **2004-2005:** **Alexander von Humboldt Fellow** at the Institute of Inorganic Chemistry, University of Goettingen, Germany. (**Host: Prof. Herbert W. Roesky**). Main group chemistry.
- * **2003-2004:** Post-doctoral Fellow, Department of Chemistry, University of Utah, USA. Supervisor: **Prof. Peter J. Stang**. Supramolecular chemistry and crystal engineering.
- * **09/1998-12/2002:** Research student, Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata, India (Supervisor: **Prof. N. Ray Chaudhuri**).

Teaching: Taught Inorganic Chemistry-1 during 2005-09 and Inorganic Chemistry Lab course during 2009-12 for Int. PhD students. Taught inorganic chemistry for 4-yr BS (UG) students from 2012 till 2019. Has been teaching Inorganic Chemistry Lab course for M.Sc. and Int.PhD students since 2024.

Students mentored: 25 students have completed Ph.D. and nine students are currently working for Ph.D. Mentored 26 postdocs. Several of my former PhD students and postdocs are faculty members in IIT, IISER, NISER, NITs, central, state, and private universities, and in undergraduate colleges. A few of the former members are in R&D of reputed private/public industries. Five students have received MS degree from IISc working with me. Supervised seven external M.Sc. students and a M.Phil student for their M.Sc and M.Phil theses, respectively. Nine Ph.D. students and two postdoctoral fellows are working under my direct guidance. Supervised 49 short-term students/teachers.

Research Contributions: Mukherjee's group has extensively worked on the design and synthesis of discrete coordination and organic molecular architectures of defined shapes and sizes. He has developed water-soluble barrel-shaped Pd(II) and Pt(II) architectures and used them as molecular vessels to study chemistry of different chemical entities in the confined nanospace of the barrels in aqueous medium. He has used such molecular

barrels for photocatalytic reactions, other organic transformations, stabilization of reactive intermediates, unusual photochemistry of photo-sensitive molecules and stabilization/delivery of drugs. In the early stage of his career, he also worked on magnetic clusters, coordination polymers, and MOFs for sensing of explosives.

Complete List of Publications

**Citation Data: Total Publications: 237; Total Citations: 18,515; Average Citations per paper: 69.29.
h-index: 72; i10-index: 208**

Summary of publications:

- A) American Chemical Society's journals: Total publications: 99 (Inorg.Chem.-50, JOC-5, JACS-22, JACS-Au: 4, Orgmet-7, Chem. Rev. 2, Acc. Chem. Res. 1, Cryst Growth & Des. 3, ACS Omega 1, ACS Catalysis 2, Chem. Mater. 1, ACS-AMI. 1)
- B) Royal Society's journals: Total publications: 66 (Chem. Sci. 8, ChemComm: 25, Dalton Trans: 25, NJC: 3, J. Mater. Chem: 1, RSC Adv.: 2, Cryst Engg Comm. 1, OBC: 1)
- C) Elsevier's journals: Total Publications: 19 (ICAActa: 10, IC Comm: 3, Tet. Lett: 1, Polyhedron: 4, J. Orgmet. Chem: 1)
- D) Willey's journals: Total Publications: 43 (Angew Chem.: 14, Chem. Eur. J: 23, Eur J IC: 4, ChemPlusChem: 1; Israel J. Chem: 1)
- E) Indian Journals: Total Publications: 05 (Ind. J. Chem: 03, J. Chem. Sci. 1, PNAS India: 1)
- F) Other journals: Total publications: 05

Google Scholar Citation Link:

<https://scholar.google.com/citations?hl=en&pli=1&user=6szY5wQAAAAJ>

	Authors	Title	Journal
237	P. K. Maitra, V. A. Rinshad, N. Hickey, P. S. Mukherjee	Selective photocatalytic oxidative cleavage of terminal alkynes to carboxylic acids	Chem. Sci. 2026, 17, accepted article. SC-EDG-10-2025-008202.R1

		within a water-soluble Pd ₆ nanocage	
236	D. Prajapati, N. Kaur, P. K. Maitra, V. A. Rinshad, M. De, P. S. Mukherjee	Dual-Function Antibacterial and Antibiofilm Agent Based on a Confinement-Activated Fluorescent System in Water	<i>Angew Chem. Int. Ed.</i> 2025, 65, e21285.
235	S. Kumar, D. Prajapati, P. Singh, S. Ali, A. Panda, P. S. Mukherjee , V. Kaliginedi	Probing Host-Guest Interactions via Conductance and Thermopower Measurements	<i>Angew Chem. Int. Ed.</i> 2025, 64, e202510782.
234	S. Dey, R. Banerjee, N. Hickey, P. S. Mukherjee	Post-Assembly Modification of a Pd ₆ Host and C ₇₀ Encapsulation to Enhance its ROS Mediated Terpene Oxidation Ability Under Visible Light	<i>J. Am. Chem. Soc.</i> 2025, 147, 23904.
233	M. Aggarwal, S. Pradhan, P. S. Mukherjee	Aqueous Separation of Styrene from Ethylbenzene Using a Water-Soluble Cyclophane	<i>Angew Chem. Int. Ed.</i> 2025, 64, e202511368.
232	R. Banerjee, P. Bhandari, N. Hick, P. S. Mukherjee	Guest-Shape Directed Structural Switching Between Two Isomers of a Pd ₆ Host and its Structural Adaptability for Selective Photodimerization	<i>J. Am. Chem. Soc.</i> 2025, 147, 23049-23059.
231	S. Ali, D. Chakraborty, P. S. Mukherjee	Host-guest interaction-induced selective oxidation of substrate inside aqueous Pd ₆ L ₄ cage	<i>Chem. Sci.</i> 2025, 16, 15396-15403.

230	R. Banerjee, M. Ray, M. Aggarwal, S. Maji, D. Adhikari, P. S. Mukherjee	Transformation of a Pd_6 trifacial barrel to a Pd_8 tetrafacial barrel by C_{70} as guest and oxidative photolysis of alkenes using the C_{70} encapsulated barrel under red light	<i>Chem. Sci.</i> 2025 , 16, 12885 – 12895.
229	V. A. Rinshad, P.K. Mitra, S. Pradhan, Y.A. Lakshmann, P.S. Mukherjee	Modulation of Photoluminescence of BODIHY Dye Using Water-Soluble Coordination Cages with Different Shapes	<i>Angew Chem. Int. Ed.</i> 2025 , 64, e202505772.
228	M. Agarwal, R. Banerjee, N. Hickey, P. S. Mukherjee	Formation of a Pd_{16} Molecular Basket Architecture of Reduced Symmetry and Angular Deviation in a Fluorenone Scaffold to Govern the Host–Guest Chemistry of Pd_6 Trifacial Tubes	<i>JACS-Au</i> , 2025 , 5, 2368-2378.
227	V. A. Rinshad, S. Ali, N. Hickey, P. S. Mukherjee	Chemo-Selective Transformation of Anthracene Derivative within Water-Soluble Coordination Cages Having Different Cavities	<i>Inorg. Chem.</i> 2025 , 64, 5619.
226	S. Ali, V. A. Rinshad, P. S. Mukherjee	Solvent and concentration induced topological transformation of a Ru(II) based trigonal prism to a triply interlocked cage	<i>Inorg. Chem.</i> 2024 , 63, 21423.
225	M. Bashri, S. Kumar, P. Bhandari, S. Stephen, M. O'Connor, S. Gaber, T. Skorjanc, M. Finšgar, G. Luckachan, B.	Hydrazone-Linked Covalent Organic Framework Catalyst via Efficient Pd-recovery from Wastewater	<i>ACS Appl. Mater. & Interfaces</i> 2025 , 17, 17804.

	Belec, E. Alhseinat, P. S. Mukherjee , D. Shetty, Dinesh		
224	M. Aggarwal, R. Banerjee, N. Hickey, P. S. Mukherjee	Stimuli-Mediated Structural Interchange Between Pd ₆ and Pd ₁₂ Architectures: Selective Recognition of E-Stilbene by the Pd ₆ Architecture and its Photoprotection	<i>Angew Chem. Int. Ed.</i> 2024, 63, e202411513.
223	V. A. Rinshad, M. Aggarwal, J. Clegg, P. S. Mukherjee	Harnessing Pd ₄ Water-Soluble Molecular Capsule as a Size-Selective Catalyst for Targeted Oxidation of Alkyl Aromatics	<i>JACS-Au</i> , 2024, 4, 3238-3247.
222	D. Chakraborty, N. Kaur, J. Sahoo, N. Hickey, M. De, P. S. Mukherjee	Host-Guest Interactions Induced Enhancement of Oxidase-like Activity of Benzothiadiazole Dye Inside an Aqueous Pd ₈ L ₄ Barrel	<i>J. Am. Chem. Soc.</i> 2024, 146, 24901-24910.
221	D. Prajapati, J. K. Clegg, P. S. Mukherjee	Formation of low-symmetric Pd ₈ molecular barrel employing a hetero donor tetradeinate ligand and its use in binding and extraction of C ₇₀	<i>Chem. Sci.</i> 2024, 15, 12502-12510.
220	P. K. Maitra, S. Bhattacharyya, N. Hickey, P. S. Mukherjee	Self-assembly of a water-soluble Pd ₁₆ square bicupola architecture and its use in aerobic oxidation in aqueous media	<i>J. Am. Chem. Soc.</i> 2024, 146, 15301-15308.
219	S. Dey, M. Aggarwal, D. Chakraborty, P. S. Mukherjee	Uncovering tetrazoles as building blocks for constructing discrete and polymeric assemblies	<i>Chem. Commun.</i> 2024, 60, 5573-5585.
218	D. Chakraborty, S. Pradhan, J. Clegg, P. S. Mukherjee	Mechanically Interlocked Water-Soluble Pd ₆ Host for the Selective Separation of Coal	<i>Inorg. Chem.</i> 2024, 63, 14924-14932. <i>Highlighted on the front cover of the</i>

		Tar Based Planar Aromatic Molecules	issue.
217	D. Bokotial, K. Acharyya, A. Chowdhury, P.S. Mukherjee	Pt(II)/Pd(II)-based Metallosupramolecular Architectures as Light Harvesting Systems and their Applications	<i>Angew Chem. Int. Ed.</i> 2024, 63, e202401136.
216	D. Prajapati, Bhandari, Zangrando, P. E. S. Mukherjee	A water-soluble Pd ₄ molecular tweezer for selective encapsulation of isomeric quinones and their recyclable extraction.	<i>Chem. Sci.</i> 2024, 15, 3616-3624.
215	P. K. Maitra, S. Bhattacharya, P. P. Chaudhury, P. S. Mukherjee	Coordination-induced Emissive Poly-NHC Derived Metallacage for Pesticide Detection	<i>Inorg. Chem.</i> 2024, 63, 2569-2576.
214	P. Bhandari, S. Ahmed, R. Saha, P. S. Mukherjee	Enhancing Fluorescence in Both Solution and Solid States Induced by Imine Cage Formation	<i>Chem. Eur. J.</i> 2024, 30, e202303101.
213	A. Sainaba, Saha, Venkateswarulu, E. Zangrando, P. S. Mukherjee	R. M. A Pt(II) Tetrafacial Barrel with Aggregation Induced Emission for Sensing	<i>Inorg. Chem.</i> 2023, 62, 508-517.
212	A. Sainaba, M. Venkateswarulu, P. Bhandari, J. Clegg, P. S. Mukherjee	Self-Assembly of an $[M_8L_{24}]^{16+}$ Intertwined Cube and a Giant $[M_{12}L_{16}]^{24+}$ Orthobicupola	<i>Angew Chem. Int. Ed.</i> 2024, 63, e202315572.
211	D. Chakraborty, S. Ali, P. Chowdhury, N. Hickey, P. S. Mukherjee	Cavity Shape Dependent Divergent Chemical Reaction Inside Pd ₆ L ₄ Cages	<i>J. Am. Chem. Soc.</i> 2023, 145, 26973-26982.
210	P. Chaudhuri, P. K. Maitra, S. Bhattacharyya, P. S. Mukherjee	Rigidification-Induced Emissive Metal–Carbene Complexes for Artificial Light Harvesting	<i>Inorg. Chem.</i> 2023, 62, 11037-11043.
209	R. Banerjee, S. Bhattacharyya, P. S. Mukherjee	Synthesis of an Adaptable Molecular Barrel and Guest Mediated Stabilization of its	<i>JACS-Au</i> , 2023 3, 1998-2006.

		Metastable Higher Homologue	
208	D. Prajapati, P. Bhandari, H. Neil, P. S. Mukherjee	A Water-Soluble Pd_6L_3 Molecular Bowl for Separation of Phenanthrene from a Mixture of Isomeric Aromatic Hydrocarbons	<i>Inorg. Chem.</i> 2023 , 62, 9230-9239.
207	R. Banerjee, D. Chakraborty, W.T. Jhang, Y. T. Chan, P. S Mukherjee	Structural Switching of a Distorted Trigonal Metal-Organic Cage to a Tetragonal Cage and Singlet Oxygen Mediated Oxidations	<i>Angew Chem. Int. Ed.</i> 2023 , 61, e202305338.
206	P. Bhandari and P. S. Mukherjee	Covalent Organic Cages in Catalysis	<i>ACS Catalysis.</i> 2023 , 13, 6126-6143.
205	R. Banerjee, D. Chakraborty, P. S. Mukherjee	Molecular Barrels as Potential Hosts: From Synthesis to Applications	<i>J. Am. Chem. Soc.</i> 2023 , 145, 7692.
204	S. Ahmed, Kumar, P. S. Mukherjee	A. S. Benzothiadiazole-based Pt(II) coordination polymer as efficient heterogeneous photocatalyst for visible-light-driven aerobic oxidative coupling of amines	<i>Chem. Commun.</i> 2023 , 59, 3229–3232.
203	V. Rinshad, J. Sahoo, M. Venkateswarulu, N. Hickey, M. De, P. S. Mukherjee	J. M. Solvent Induced Conversion of a Self-Assembled Gyrobifastigium to a Barrel and Encapsulation of Zinc-Phthalocyanine within the Barrel for Enhanced Photodynamic Therapy	<i>Angew Chem. Int. Ed.</i> 2023 , 61, e202218226.
202	R. Saha, J. Sahoo, M. Venkateswarulu, M. De, P. S. Mukherjee	M. Shifting Triangle-Square Equilibrium of Self-Assembled Metallocycles by Guest Binding with Enhanced Photosensitization	<i>Inorg. Chem.</i> 2022 , 61, 17289-17298.
201	D. Chakraborty, R. Saha, J. Clegg, P. S. Mukherjee	Selective separation of planar and non-planar hydrocarbons using an aqueous Pd_6	<i>Chem. Sci.</i> 2022 , 13, 11764-11771.

			interlocked cage	
200	S. Ahmed, Kumar, P. Mukherjee	A. S.	Supramolecular Coordination Polymer Towards Artificial Light-Harvesting Systems with Sequential Energy Transfer	Chem. Mater. 2022 , 34, 9656-9665.
199	S. Ahmed, Howlader, Bhattacharyya, Mondal, Zangrando, P. Mukherjee	P. S. S. E. S.	Fluorescence enhancement via structural rigidification inside a self-assembled Pd ₄ molecular vessel	Chem. Commun. 2022 , 58, 11390.
198	P. Bhandari, P. S. Mukherjee		Post-Synthesis Conversion of an Unstable Imine Cage to a Stable Cage with Amide Moieties towards Selective Receptor for Fluoride	Chem. Eur. J. 2022 , 28, e202201901.
197	P. Howlader, S. Ahmad, S. Mondal, E. Zangrando, P. S. Mukherjee		Conformation-Selective Self-Assembly of Pd ₆ Trifacial Molecular Barrels Using a Tetra-pyridyl Ligand	Inorg. Chem. 2022 , 61, 8121.
196	B. S. Arppitha, M. Venkataswarulu, P. Bhandari, K. S. A. Arachchige, Clegg, P. Mukherjee	J. S.	An Adaptable Water-Soluble Molecular Boat for Selective Separation of Phenanthrene from Isomeric Anthracene	J. Am. Chem. Soc. 2022 , 144, 7504.
195	D. Chakraborty, P. S. Mukherjee		Recent Trends in Organic Cage Synthesis: Push Towards Water-Soluble Organic Cages	Chem. Commun. 2022 , 58, 5558-5573. (Invited Contribution)
194	R. Saha, B. Mondal, P. S. Mukherjee		Molecular Cavity for Catalysis and Formation of Metal Nanoparticles for Use in Catalysis	Chem. Rev. 2022 , 122, 12244-12307. (Invited Contribution)
193	K. Acharyya, S. Bhattacharyya, S. Lu, Y. Sun, P. S. Mukherjee , P. J. Stang		Emissive Platinum(II) Macrocycles as Tunable Cascade Energy Transfer Scaffolds	Angew Chem. Int. Ed. 2022 , 61, e202200715.

192	A. Kumar, Banerjee, Zangrando, P. Mukherjee	R. E. S.	Solvent and Counter-anion Assisted Dynamic Self-Assembly of Molecular Triangles and Tetrahedral Cages	<i>Inorg. Chem. 2022, 61</i> , 2368-2377.
191	P. Bhandari, Mondal, Howlader, P. Mukherjee	B. P. S.	Face-Directed Tetrahedral Organic Cage Anchored Palladium Nanoparticles for Selective Homocoupling Reaction	<i>Eur. J. Inorg. Chem. 2022</i> , e202100986.
190	P. P. Choudhury, M. Venkateswaralu, S. Bhattacharyya, P. S. Mukherjee	P. S.	Silver(I) – Carbene Bond Directed Rigidification Induced Emissive Metallacage for Picric Acid Detection	<i>Inorg. Chem. 2022, 61</i> , 713-722.
189	P. Bhandari, Modak, Bhattacharya, Zangrando, P. Mukherjee	R. S. E. S.	Self-assembly of Octanuclear Pt/Pd-Coordination Barrels and Uncommon Structural Isomerizatiuon of a Photochromic Guest	<i>JACS-Au, 2021</i> 1, 2242-2246.
188	P. Choudhury, M. Maity, S. Bhattacharyya, P. S. Mukherjee	P. S.	A Self-Assembled Pd(II) Barrel for Binding of Fullerenes and Photosensitization Ability of the Fullerene Encapsulated Barrel	<i>Angew Chem. Int. Ed. 2021</i> , 60, 14109.
187	D. Chakraborty, Modak, Howlader, P. Mukherjee	R. P. S.	<i>De novo</i> approach for the synthesis of water-soluble interlocked and non-interlocked organic cages	<i>Chem. Commun. 2021</i> , 57, 3995-3997.
186	A. Kumar, R. Saha, P. S. Mukherjee		Self-assembled metallasupramolecular cages towards light harvesting systems for oxidative cyclization	<i>Chem. Sci. 2021, 12</i> , 5319-5329.
185	P. Howlader, S. Mondal, S. Ahamad, P. S. Mukherjee		Guest-Induced Enantioselective Self-Assembly of a Pd ₆ Homochiral Octahedral Cage with a C ₃ -Symmetric Pyridyl Donor	<i>J. Am. Chem. Soc. 2020, 142</i> , 20968-20972.

184	S. Bhattacharyya, S.K. Ali, M. Venkateswarulu, P. Howlader, E. Zangrando, M. De, P. S. Mukherjee	Self-Assembled Coordination Photoregulated Cage as Pd ₁₂ Oxidase-Like Nanozyme	<i>J. Am. Chem. Soc.</i> 2020 , 142, 18981-18989
183	P. Howlader, P. Bhandari, D. Chakraborty, J. K. Clegg, P. S. Mukherjee	Self-Assembly of a Pd ₈ Macrocycle and Pd ₁₂ Homochiral Tetrahedral Cages Using Poly(tetrazolate) Linkers	<i>Inorg. Chem.</i> 2020 , 59, 15454-15459.
182	B. Mondal, Bhandari, P. S. Mukherjee	Nucleation of Tiny Silver Nanoparticles Using a Tetrafacial Organic Molecular Barrel for Potential Use in Visible Light Triggered Photocatalysis	<i>Chem. Eur. J.</i> 2020 , 26, 15007-15015.
181	S. Bhattacharyya, M. Venkateswarulu, J. Sahoo, M. De, P. S. Mukherjee	A Self-assembled Pt ^{II} ₈ Metallosupramolecular Tubular Cage as Dual Warhead Antibacterial Agent in Water	<i>Inorg. Chem.</i> 2020 , 59, 12690-12699.
180	P. Howlader, E. Zangrando, P. S. Mukherjee	Self-Assembly of Enantiopure Pd ₁₂ Tetrahedral Homochiral Nanocages with Tetrazole Linkers and Chiral Recognition	<i>J. Am. Chem. Soc.</i> 2020 , 142, 9070. <i>(Featured on the Front Cover of the JACS issue)</i> <i>Highlighted by the ACS as JACS-Spotlights</i>
179	A. Kumar, P. S. Mukherjee	Multicomponent Self-Assembly of Pd(II)/Pt(II) Interlocked Molecular Cages: Cage to Cage Conversion and Self-Sorting in Aqueous Medium	<i>Chem. Eur. J.</i> 2020 , 26, 4842.
178	S. Bhattacharya, M. Maity, A. Chaudhury, M. L. Saha, P. J. Stang, P. S. Mukherjee	Coordination Assisted Reversible Photoswitching of Spiropyran-Based Platinum Macrocycles	<i>Inorg. Chem.</i> 2020 , 59, 2083-2091.
177	R. Saha, P. S. Mukherjee	Chemistry of photoswitching	<i>Dalton Trans.</i> 2020 ,

	Mukherjee	molecules in confined nanospace of aqueous molecular vessels	49, 1716. (Invited Frontier Article)
176	W. B. Tolman, A. L. Balch, S. Bart, B. Cossairt, S. Dehnens, P. S. Halasyamani, H. Kageyama, F. Meyer, J. Morrow, P. S. Mukherjee , F. Nesse, P. P. Power, R. Sessoli, V. W. W. Yam, and H.-C. Zhou	What is Inorganic Chemistry? (Editorial)	<i>Inorg. Chem.</i> 2019, 58, 9515.
175	I. A. Bhat, E. Zangrando, P. S. Mukherjee	Coordination-Driven Self-Assembly of Discrete Molecular Nanotubular Architectures	<i>Inorg. Chem.</i> 2019, 58, 11172.
174	K. Acharyya, S. Bhattacharyya, H. Sepehrpour, S. Chakraborty, S. Lu, B. Shi, X. Li, P. S. Mukherjee and P. J. Stang	Self-Assembled Fluorescent Pt(II) Metallacycles as Artificial Light-Harvesting Systems	<i>J. Am. Chem. Soc.</i> 2019, 141, 14565.
173	P. P. Chowdhury, S. Bhattacharyya, M. Maity, S. Mukhopadhyay, P. Howlader, P. S. Mukherjee	Linkage induced enhancement in fluorescence in metal-carbene bond directed metallacycles and cages	<i>Chem. Commun.</i> 2019, 55, 8309.
172	R. Modak, B. Mondal, P. Howlader, P. S. Mukherjee	Self-assembly of a "Cationic-Cage" via formation of Ag-carbene bonds followed by imine condensation	<i>Chem. Commun.</i> 2019, 55, 6711 - 6714
171	R. Saha, A. Devaraj, S. Bhattacharya, S. Das, E. Zangrando, P. S. Mukherjee	Unusual behavior of Donor-Acceptor Stenhouse Adducts in Confined Space of a Pd(II) Molecular Vessel	<i>J. Am. Chem. Soc.</i> 2019, 141, 8638.
170	A. Kumar, E. Zangrando and P. S. Mukherjee	Self-assembled Pd_3L_2 cages having flexible tri-imidazole donors	<i>Polyhedron</i> , 2019, 172, 67. (Invited article)
169	K. Acharyya, P. S. Mukherjee	Organic Imine Cages: Molecular Marriage and	<i>Angew Chem. Int. Ed.</i> 2019, 58, 8640.

		Applications	
168	S. Bhattacharyya, A. Chowdhury, R. Saha, P. S. Mukherjee	Multifunctional Self-Assembled Macrocycles with Enhanced Emission and Reversible Photochromic Behaviour	<i>Inorg. Chem.</i> 2019 , <i>58</i> , 3968.
167	M. Siddiqui, R. Saha, P. S. Mukherjee	Ruthenium(II) Metalla[2]Catenanes and Macrocycles via Donor-Dependent Self-Assembly	<i>Inorg. Chem.</i> 2019 , <i>58</i> , 4491.
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53	A. K. Bar, R. Chakrabarty, G. Mostafa and P. S. Mukherjee	Self-assembly of a nanoscopic Fe ₁₂ Pt ₁₂ open hexagonal barrel containing six porphyrin walls	<i>Angew. Chem. Int. Ed.</i> 2008 , 47, 8455. <i>work highlighted in a Nature publishing group journal "Asia Materials" by the Editor of Nature Chemistry)</i>

52	K. C. Mondal, O. Sengupta, P. Dutta, S. K. Nayak and P. S. Mukherjee	3d-4f heterometallic hybrid 3D polymers: synthesis, structure and magnetism	<i>Inorg. Chim. Acta.</i> 2009 , 392, 1913.
51	A. K. Bar, R. Chakrabarty, and P. S. Mukherjee	Unusual hydrogenation of fumarate anion followed by metal-carbon bond formation: Synthesis and characterizations of two metallochelates	<i>Organometallics</i> , 2008 , 27, 3806.
50	K. C. Mondal and P. S. Mukherjee	Three new Cu-azido polymers and their systematic inter conversion: Role of the amount of the blocking amine on the structural diversity and magnetic behavior	<i>Inorg. Chem.</i> 2008 , 47, 4215.
49	S. Ghosh and P. S. Mukherjee	Self-assembly of a trigonal trism via a new organometallic Pt3 linker and its fluorescent detection of nitroaromatics	<i>Organometallics</i> , 2008 , 27, 316. [(a) This work was highlighted in a daily newspaper <i>The Telegraph</i> on 20 th Oct. 2008; (b) This paper was selected as one of the most accessed articles in the first quarter of 2008]
48	K. C. Mondal, O. Sengupta, M. Nethaji, and P. S. Mukherjee	Assembling metals with pyridylcarboxylates to form polynuclear extended materials	<i>Dalton Trans.</i> 2008 , 767.
47	S. Ghosh, R. Chakrabarty, and P. S. Mukherjee	Self-assembly of four new Pd(II) molecular boats using imidazole donor linker	<i>Dalton Trans.</i> 2008 , 1850.
46	S. Ghosh and P. S. Mukherjee	Self-assembly of a series of metallamacrocycles via a rigid phosphorus donor linker	<i>Organometallics</i> , 2007 , 26, 3362.
45	S. Ghosh, S. R. Batten and P. S. Mukherjee	Self-assembly of a nanoscopic Pt(II) double square	<i>Organometallics</i> , 2007 , 26, 3252.

44	K. C. Mondal, Y. Song, and P. S. Mukherjee	A Mn ₉ mixed valent single molecule magnet	<i>Inorg. Chem.</i> 2007, 46, 9736.
43	K. C. Mondal and P. S. Mukherjee	Synthesis of a Mn ₆ cluster and its self-assembly of an azido bridged chain	<i>Inorg. Chem.</i> 2007, 46, 5625.
42	S. Ghosh and P. S. Mukherjee	Self-assembly of metal-organic hybrid rectangles	<i>Dalton Trans.</i> 2007, 2542.
41	S. Ghosh, S. R. Batten and P. S. Mukherjee	Design and synthesis of a heterometallic triangle and self-selection for a single isomer	<i>Dalton Trans.</i> 2007, 1869. (Featured on the cover of the issue and was selected as one of the top-ten accessed papers).
40	P. S. Mukherjee , N. Lopez, F. C. Lee, J. C. Noveron	Single-crystal to single-crystals phase transition of bis(N-phenylisonicotinamide)silver(I) nitrate reveal cooperativity in porous materials	<i>Chem. Commun.</i> 2007, 1433.
39	K. C. Mondal and P. S. Mukherjee	Mn(II) azido chain using a new amide ligand: synthesis, crystal structure and variable temperature magnetic behavior	<i>Synthesis and reactivity of Inorganic, Metal-Organic, and Nano-metal Chemistry</i> , 2007, 39,735 (Invited article)
38	S. Ghosh and P. S. Mukherjee	Self-assembly of molecular nanoballs: Design, synthesis and characterization	<i>J. Org. Chem.</i> 2006, 71, 8412.
37	S. Ghosh and P. S. Mukherjee	The first Pt(II) TBP cage with ester functionality	<i>Tetrahedron Lett.</i> 2006, 47, 9297.
36	O. Sengupta, R. Chakrabarty and P. S. Mukherjee	Dual role of azido in the construction of a 3D Mn(II) polymer using bridging 5-pyrimidine carboxylate	<i>Dalton Trans.</i> 2007, 4514.

35	Sanjit Konar, P. S. Mukherjee , Ennio Zangrando, Talal Mallah, N. Ray Chaudhuri	Ni(II) dicyanamide 2D extended networks: synthesis, crystal structure and low temperature magnetic studies	<i>Inorg. Chim. Acta.</i> 2005 , 358, 957.
34	Sanjit Konar, P. S. Mukherjee , E. Zangrando, T. Mallah, N. Ray Chaudhuri	A porous 2D copper (II) polymer of trimesic acid	<i>Inorg. Chim. Acta.</i> 2005 , 358, 29.
33	P. S. Mukherjee , Neeladri Das, and Peter J. Stang	Self-assembly of nanoscopic 3D cages using a flexible tripodal amide containing linker	<i>J. Org. Chem.</i> 2004 , 69, 3526.
32	P. S. Mukherjee , Neeladri Das, Y. Kryeschenko, Atta M. Arif, Peter J. Stang	Design, Synthesis and Crystallographic Studies of Neutral Platinum Based macrocycles formed via self-assembly	<i>J. Am. Chem. Soc.</i> 2004 , 126, 2464.
31	P. S. Mukherjee , D. Ghoshal, E. Zangrando, T. Mallah and N. Ray Chaudhuri	Use of two different dicarboxylates towards the design of two new 3D and 2D networks	<i>Eur. J. Inorg. Chem.</i> 2004 , 4675.
30	P. S. Mukherjee , Kil Sik Min, Atta M. Arif and Peter J. Stang*	Synthesis and crystal structure of two discrete, neutral assemblies of manganese and zinc using a rigid organic clip	<i>Inorg. Chem.</i> 2004 , 43, 6345.
29	P. S. Mukherjee , Sanjit Konar, E. Zangrando, F. Lloret, N. Ray Chaudhuri	A single dicyanamide bridged Cu(II) dimer: synthesis, crystal structure and magnetic behavior	<i>Indian J. Chemistry</i> 2004 , 43A, 760.
28	Sudipta Dalai, P. S. Mukherjee , Ennio Zangrando, Joan Ribas, N. Ray Chaudhuri	Two new 3D architectures of Cu(II): synthesis, crystal structures and variable temperature magnetic studies	<i>Indian J. Chemistry</i> (Special issue), 2003 , 42A, 2250.

27	N. Das, P. S. Mukherjee , Atta M. Arif, Peter J. Stang	Facile self-assembly of neutral 2D Pt(II) macrocycles of a new class of rigid oxygen donor linkers	<i>J. Am. Chem. Soc.</i> 2003 , 125, 13950.
26	S. Konar, P. S. Mukherjee , M.G.B. Drew, J. Ribas, N Ray Chaudhuri	Synthesis of two new 1D and 3D networks of Cu(II) and Co(II) using malonate and eurotropine: crystal structures and magnetic studies	<i>Inorg. Chem.</i> 2003 , 42, 2545.
25	P. S. Mukherjee , S. Konar, E. Zangrando, T. Mallah, J Ribas and N. Ray Chaudhuri	Structural analyses and magnetic properties of two novel 3D networks of nickel(II) and manganese(II) using carboxylato as bridging ligand	<i>Inorg. Chem.</i> , 2003 , 42, 2695.
24	S. Dalai, P. S. Mukherjee , S. Geib, N. Ray Chaudhuri	Synthesis and crystal structure of two extensively hydrogen bonded network of Cu(II)	<i>Indian J. Chem.</i> , 2002 , 41A, 1363.
23	P. S. Mukherjee , S. dalai, E. Zangrando, F. Lloret, N. Ray Chaudhuri	A novel class of interpenetrated 3-D network of dimeric cupric-tetracarboxylate	<i>Dalton Trans.</i> , 2002 , 822. (Selected as one of the top-ten accessed papers).
22	P. S. Mukherjee , S. Konar, E. Zangrando, J. Ribas, N. Ray Chaudhuri	Two new bi-bridging 1D metal-organic chains of Cu(II)	<i>Dalton Trans.</i> 2002 , 3471.
21	S. Konar, P. S. Mukherjee , E. Zangrando, F. Lloret, and N. Ray Chaudhuri	A 3-D homometallic molecular ferrimagnet	<i>Angew. Chem. Int. Ed.</i> 2002 , 41, 1561
20	P. S. Mukherjee , S. Dalai, T. Mallah, N Ray Chaudhuri	A doubly end-to-end azido 1D ferromagnetic chain	<i>Inorg. Chem. Commun.</i> 2002 , 5, 472.

19	S. Dalai, P. S. Mukherjee , E. Zangrando, N. Ray Chaudhuri	Two 1D and 3D coordination polymer of Mn(II) with dicyanamide bridge: synthesis, crystal structure and magnetic behaviour	New J. Chem. 2002 , 26, 1185.
18	P. S. Mukherjee , T. K. Maji, R. Vicente, J. Ribas, N. Ray Chaudhuri	Three novel end-to-end single azido bridged 1D copper(II) chains: Syntheses, crystal structure determination and magnetic behavior	Eur. J. Inorg. Chem. 2002 , 943.
17	S. Dalai, P. S. Mukherjee , G. Rogez, T. Mallah, M. G. B. Drew N Ray Chaudhuri	Synthesis, crystal structures and magnetic properties of two new 1D copper(II) coordination polymers containing fumarate(-2) and chelating N, N-donor	Eur. J. Inorg. Chem. 2002 , 3292.
16	S. Dalai, P. S. Mukherjee , M. G. B. Drew, T. H. Lu, N. Ray Chaudhuri	Azido bridged two new ferromagnetic Cu(II) chains: synthesis, structure and variable temperature magnetic behaviour	Inorg. Chim. Acta , 2002 , 335, 85.
15	P. S. Mukherjee , T. K. Maji, G. Mostafa, J. Ribas, M. S. El Fallah, N. Ray Chaudhuri	Observation of dominant ferromagnetic interaction in fumarate bridged 1-D polymer of Cu(II)	Inorg. Chem. 2001 , 40, 928.
14	T. K. Maji, P. S. Mukherjee , G. Mostafa, T. Mallah, J.C. Boquera, N. Ray Chaudhuri	First observation of ferromagnetic interaction through end-to-end azido bridging pathway in 1D copper(II) system	Chem. Commun. 2001 , 1012.
13	T. K. Maji, P. S. Mukherjee , G. Mostafa, E. Zangrando, N. Ray Chaudhuri	1D porous framework of copper(II) using novel coordination mode of Ni(CN)42-	Chem. Commun. 2001 , 1368.

12	P. S. Mukherjee , S. Dalai, G. Mostafa, E. Zangrando, T. H. Lu, G. Rozeg, N. Ray Chaudhuri	A three-component fully interlocked 3-D network: crystal structure and magnetic behaviour	<i>Chem. Commun.</i> 2001 , 1346.
11	P. S. Mukherjee , S. Dalai, E. Zangrando, F. Lloret, N. Ray Chaudhuri	The first metamagnetic 1-D molecular material with nickel(II) and end-to-end azido bridge	<i>Chem. Commun.</i> 2001 , 1444.
10	T. K. Maji, P. S. Mukherjee , S. Koner, G. Mostafa, J. P. Tuchagues, N. Ray Chaudhuri	1 D coordination polymer of copper(II) containing m-1,1,3 azido ligand with alternating ferro-antiferromagnetic interaction	<i>Inorg. Chim. Acta</i> , 2001 , 314,111.
09	P. S. Mukherjee , T. K. Maji, T. Mallah, E. Zangrando, L. Randaccio, N. Ray Chaudhuri	A novel bimetallic alternating chain: synthesis, crystal structure and magnetic study	<i>Inorg. Chim. Acta</i> , 2001 , 315, 249.
08	P. S. Mukherjee , T. K. Maji, G. Mostafa, W. Hibbs, N. Ray Chaudhuri	A 1D coordination polymer of copper(II) with three different bridging anions: synthesis, crystal structure, and magnetic behaviour	<i>New J. Chem.</i> 2001 , 25, 760.
07	P. S. Mukherjee , S. Dalai, G. Mostafa, T. H. Lu, E. Rentschler, N. Ray Chaudhuri	Synthesis, crystal structure, and magnetic properties of two new Cu(II) complexes with end-to-end azido bridging	<i>New J. Chem.</i> 2001 , 25, 1203.
06	S. Dalai, P. S. Mukherjee , G. Rozeg, T. Mallah, M. G. B. Drew, N. Ray Chaudhuri	Synthesis, Crystal Structures and Magnetic Properties of two New 1D Copper(II) Coordination Polymers Containing Fumarate(- 2) and Chelating N,N¢-Donor as Ligands	<i>Eur. J. Inorg. Chem.</i> 2002 , 3292.

05	T. K. Maji, G. Mostafa, P. S. Mukherjee , A. Mondal, A. J. Welch, K. Okamoto, N. Ray Chaudhuri	Synthesis of triamine complexes of nickel(II) selenocyanate and their thermally induced dimerization	Polyhedron , 2000 , 19 , 1903.
04	J. Cheng, F. L. Liao, T. H. Lu, P. S. Mukherjee , T. K. Maji, N. Ray Chaudhuri	An oxalato-bridged copper(II) complex	Acta Cryst. , 2001 , <i>E57</i> , m263.
03	T. K. Maji, I. R. Laskar, G. Mostafa, A. J. Welch, P. S. Mukherjee , N. Ray Chaudhuri	An 1D thiocyanato bridge nickel (II) system: Crystal structure and magnetism	Polyhedron 2001 , 20 , 651.
02	P. S. Mukherjee , T. K. Maji, S. Koner, G. Rosair, N. Ray Chaudhuri	Synthesis and magnetic study of three new mu-oxalato dinuclear copper(II) complexes	Indian J. Chem. , 40A , 2001 , 451.
01	P. S. Mukherjee , T. Maji, G. Mostafa, T. Mallah, N. R. Chaudhuri	The first alternating single end-on and single end-to-end azido bridged Cu(II) chain	Inorg. Chem. , 2000 , 39 , 5147.

Editorial

“Special Issue: Self-assembled Molecules/Materials”

P. S Mukherjee

CHEMICAL RECORD Volume: 21 Issue: 3 Special Issue: SI Pages: 441-442.

Book Chapters

- 1) Book Chapter on “*Pd/Pt-ethynyl bond containing molecular architectures as sensors for nitroaromatics*”
Molecular Self-Assembly: Advances and Applications
Pan Stanford Publishing Pte. Ltd. 2011, Chapter-9
S. Pramanik, S. Shanmugaraju, **P. S. Mukherjee**
- 2) Applications of Self-Assembled Metallomacrocycles II: Catalysis and Sensing

L. Xu, Yi-Xiong Hu, **P. S. Mukherjee**
Self-Assembled Metallacycles
RSC, 2019, Chapter-10.

3) Self-assembled discrete coordination architectures towards biological applications
A. Banerjee and **P. S. Mukherjee**
Adv. Inorg. Chem. **2023**, **82**, 345-387. (Invited book chapter to the Special Volume devoted to 'Inorganic Chemistry in India')

Lectures delivered in last few years:

- 1) Finite and infinite polynuclear assemblies
TIFR, Mumbai, May-2005
- 2) A few examples of polynuclear assemblies
IPC Dept, IISc-Bangalore, July 28th, 2005
- 3) Self-assembly of Pt and Pd based molecular architectures
Annual meeting of the Chemical Sciences division IISc, Jan-2007
- 4) Molecular architectures via coordination
First ACCC conference, Okazaki, Japan, July-2007
- 5) Polynuclear magnetic materials
Department of Chemistry, Madurai Kamaraj University, Nov-2007
- 6) Metal-ligand coordination: an efficient tool to design large molecules
Department of Chemistry, Madurai Kamaraj University, Nov-2007
- 7) Discrete and extended polynuclear assemblies
MTIC conference, IIT-Chennai, Dec-2007
- 8) Self-assembly of polynuclear assemblies of diamagnetic and paramagnetic metal ions "INSA, New Delhi, April-2008".
- 9) Invited lecture on "Finite and Infinite Metal-Organic Assemblies"
in Chemistry of Materials conference organized by the Department of Chemistry, Gitam University, Vishakapatnam, July-2008
- 10) Invited lecture on "Self-assembly via coordination: an account of our recent research" Organic Chemistry Dept, Free University, Berlin, Germany, Sept-2008.
- 11) Invited lecture: Self-assembly via coordination: an account of our recent research
Vellore Institute of Technology, Vellore, Sept-2008.
- 12) Invited lecture: Coordination driven self-assembly: A tool to design assemblies of finite shapes and sizes
Department of Chemistry, University of Neuchatel, Switzerland, October-2008
- 13) Invited lecture: Coordination driven self-assembly: A tool to design assemblies of finite shapes and sizes
Department of Chemistry, University of Freiburg, Switzerland, October-2008
- 14) Invited lecture: Self-assembly of discrete diamagnetic and paramagnetic clusters
Department of Chemistry, University of Bern, Switzerland, October-2008
- 15) Invited lecture: Designing molecules via coordination

Kalna College, WB, November-2008

16) Invited lecture in an International conference ‘Functional materials’ held in Calcutta University on 7th Jan 2009.

17) Invited lecture “Discrete and finite supramolecular assemblies via coordination” in an Indo-German conference held in Delhi University, March 2009.

18) Invited Lecture “Functional materials” in a CSIR sponsored meeting at Periyakulam PG College (Tamil Nadu) in Feb, 2009.

19) Invited lecture “Discrete nanoscale magnetic materials” in a meeting arranged by the Microsoft Research India, Bangalore, in May 2009.

20) “Metal-organic hybrid macrocycles and cages: design and synthesis via coordination” in Emerging Trends in Chemistry-2009 held at IISc in May 2009.

21) Invited lecture on “Metal-ligand coordination driven nanostructures” in Platinum Jubilee meeting of the Indian Academy of Science, Bangalore held in Hyderabad (July 3rd, 2009)

22) “Metallacycles and cages via coordination” in an International conference “IRIS-12” held in Goa.

23) Invited lecture on “Supramolecular Metallacycles and Cages via Metal-Ligand Coordination” In an international conference “The 2nd ACCC” held in Nanjing, China, 3rd Nov, 2009.

24) Invited Lecture on “Matallacycles and Cages via directional self-assembly” Department of Chemistry, Ulsan University, Korea (December 21, 2009).

25) Invited Lecture on “Diamagnetic and Paramagnetic polynuclear clusters” Department of Chemistry, Kyungpook National University, Korea (January 8, 2010).

26) Invited Lecture on “Metal ligand coordination as a tool to design functional metallacycles and cages” Department of Chemistry, Hanyang University, Korea (January 15, 2010).

27) Invited Lecture on “Matallacycles and Cages via directional self-assembly” Department of Chemistry, Gyeongsong National University, Korea (January 28, 2010).

28) Invited lecture on “Discrete and polymeric inorganic-organic hybrid materials” Ulsan National Institute of Science and Technology (UNIST), Korea (February 1, 2010).

29) Invited lecture on “Matallacycles and Cages via directional self-assembly”, POSTECH, Korea (January 29, 2010).

30) Invited lecture on “Current trends in supramolecular chemistry” in a national conference organized by The American College, Madurai (February 13, 2010).

31) Invited lecture on “Smart molecular architectures and their functionalization” in 60th Anniversary of Coordination chemistry conference held in Osaka, Japan (Sept-2010).

32) Invited Lecture on “Functions through architectures” in Osaka City University, Japan (October-2010).

33) Invited lecture on “Self-assembly of smart molecular architectures and self-selection in multicomponent self-assembly” in Jadavpur University, Kolkata (November 2010).

- 34) Invited lecture on “Supramolecular coordination towards nano-architectures” in an international conference on nanomaterials held in Vizag, Dec 2010.
- 35) Invited lecture on “Self-selection in coordination self-assembly” in Humboldt Kolleg, IIAP (Bangalore) (Feb 2011)
- 36) Invited lecture on “Self- assembly of molecular architectures and self-sorting in multicomponents self-assembly” in 13th CRSI symposium in Bhubaneswar (Feb 2011).
- 37) Lecture on “Smart organometallic architectures as potential sensors” in the “First European Inorganic Chemistry Conference” held in Manchester, UK (Apr-2011)
- 38) Invited lecture on “Self-selection in coordination self-assembly” in IIT-Madras, June-2011.
- 39) Lecture on “Pt(II)-nanoarchitectures for explosives detection” in an international symposium “Advanced Complex Inorganic Nanomaterials” held in Namur, Belgium (Sept-2011).
- 40) Invited special lecture “Multicomponent self-assembly and electron rich sensors”, ISRO-IISc Space Technology Center, Sept 2011.
- 41) Invited lecture “Self-selection in coordination self-assembly” in an International Conference “3rd Asian Conference on Coordination Chemistry” held in Delhi, October 2011.
- 42) Invited lecture “Multicomponent self-assembly and functionalization” in the 22nd General meeting of TWAS held in International Centre for Theoretical Physics (ICTP), Trieste-Italy, November 2011.
- 43) Invited lecture “Self-sorting in self-assembly and electron rich sensors for explosives” in the Department of Chemistry, University of Trieste, Italy, November 2011.
- 44) Invited lecture “Self-selection in coordination self-assembly and organic reactions in confined nanospace in coordination cage” in the National conference MTIC-14 held in School of Chemistry, University of Hyderabad, December 2011.
- 45) Invited plenary lecture on “Engineering molecules for applications” in Shivaji University (Maharastra) on the occasion of Golden jubilee year of the University, Jan-2012.
- 46) Invited lecture on “Supramolecular Coordination” in a National symposium on research and teaching in chemistry held in Panskura College (W.B.) during Jan 17-18, 2012.
- 47) Invited lecture on “Versatility of supramolecular coordination” in meeting of Indian Academy of Science organized by St Joseph’s college, Kerala on March 7, 2012.
- 48) Invited lecture on “Magnetic clusters and electron rich sensors” in meeting of Indian Academy of Sciences organized by St Joseph’s college, Irinjalakula on March 8, 2012.
- 49) Invited lecture on “Supramolecular coordination-an accepted terminology” in Vidyasagar University under UGC sponsored lecture series, March 15, 2102.
- 50) Invited lecture on “Magnetic clusters and single molecule magnets” in Vidyasagar University under UGC sponsored lecture series, March 16, 2012.
- 51) Invited lecture on “Prospects of supramolecular chemistry” in INSPIRE programme held in Shivaji University-Kolhapur, on May 30, 2012.

52) Invited lecture on “Chemical reactions in confined nanospace of molecular cages” in Department of Chemistry, Nankai University, Sept 2012.

53) Invited lecture on “Electron rich sensors for nitroaromatic explosives and self-sorting in coordination self-assembly” in East China Normal University, Shanghai, Sept 2012.

54) Invited lecture on “Self-sorting in self-assembly and functionalization towards catalysis” in School of Chemistry, University of Hyderabad, October 2012.

55) Invited lecture on “Self-sorting in self-assembly and catalysis in confined space” in a conference organized by department of chemistry, IIT-Guwahati, December 2012.

56) Invited lecture on “Self-assembly of electron rich sensors for explosives” in a conference organized by department of chemistry, IIT-Delhi, December 2012.

57) Invited lecture on “Supramolecular coordination” in department of chemistry, Guru Nanak Dev University, December 2012.

58) Invited lecture on “Polynuclear magnetic assemblies” in the department of chemistry, Guru Nanak Dev University, December 2012.

59) Invited lecture on “Sensing explosives: A supramolecular approach” in the School of Physical Sciences, JNU, Delhi, March 2013.

60) Invited lecture on “Functional molecular architectures” in Pondicherry University, March 2013.

61) Invited lecture on “Sensing explosives and catalysis in confined nanospace” in Buenos Aires University, Argentina, October 2013.

62) Invited lecture on “Molecular marriage in covalent cage formation” in Asain Crystallographic conference, HKUST, Hong Kong, December 2013.

63) Invited lecture on “Supramolecular Coordination” in a refresher course in Jadavpur University, Jan 2014.

64) Invited lecture on “Catalysis in confined nanospace” in a national conference organized by NIT-Rourkela, Jan 2014.

65) Invited lecture on “Molecular marriage in covalent cages” in a national conference organized by the American College, Madurai, Jan 2014.

66) Invited lecture on “Self-sorting in covalent cage formation” in a national conference organized by IISER Mohali, Mohali, March 2014.

67) Invited lecture on “Supramolecular chemistry: basics and application” in an Indian Academy of Sciences’ workshop, BHU, Varanasi, April 2014.

68) Invited lecture on “Supramolecular Coordination” in an Indian Academy of Sciences’ workshop, Aurangabad Ambedkar University, Aurangabad, March 2014.

69) Invited lecture on “Catalysis in nanocavity” in an Indian Academy of Sciences’ workshop, Aurangabad Ambedkar University, Aurangabad, March 2014.

70) Invited lecture on “Explosive sensing and cage catalysis” at the Institute of Organic Chemistry, University of Seigen, Germany, May 2014.

71) Invited lecture on “MOF and supramolecular sensors for nitroaromatics” at the Institute of Inorganic Chemistry, University of Duesseldorf, Germany, May 2014.

72) Invited lecture on “Functional supramolecular nanoarchitectures” at the Max-Planck Institute for solid state research, Stuttgart, Germany, June 2014.

73) Invited lecture on “Supramolecular sensors for nitroaromatics” at the Technical University Munich, Germany, June 2014.

74) Invited lecture on “Explosives sensing by nanoarchitectures and chemical reactions in confined nanospace” at the Institute of Organic Chemistry, University of Würzburg, Germany, June 2014.

75) Invited lecture on “Explosives sensing by nanoarchitectures self-sorting in organic cage formation” at the Institute of Organic Chemistry, University of RWTH Aachen, Germany, June 2014.

76) Invited lecture on “Explosives sensing by nanoarchitectures and chemical reactions in confined nanospace” at the Institute of Organic Chemistry, University of Heidelberg, Germany, May 2014.

77) Invited lecture on “Functional self-assembled cages” at the Institute of Organic Chemistry, University of Mainz, Germany, July 2014.

78) Invited lecture on “Chemical reactions in confined nanospace of coordination cages”, in International Conference on Coordination Chemistry (ICCC41) in Singapore, July 2014.

79) Invited lecture on “Supramolecular Coordination” in UGC sponsored symposium on supramolecular chemistry in St. Philomous college, Mysore, Aug 2014.

80) Invited lecture on “Self-assembled functional materials” at Graduate school of Engineering Kyoto, Japan, November 2014.

81) Invited lecture on “Molecular sensors for explosives and chemical reactions in confined space” at the Institute of Molecular Science, Okazaki, Japan, November 2014.

82) Invited lecture on “Self-sorting in covalent and organic cages” at the department of chemistry of Osaka City University, Japan, November 2014.

83) Invited lecture on “Self-assembled discrete and extended functional materials” at Department of Chemistry, University of Kyoto, Japan, November 2014.

84) Invited lecture on “Supramolecular sensors and molecular flasks for organic transformations” at Department of chemistry, Hiroshima University, Japan, November 2014.

85) Invited lecture on “Self-sorting in covalent cage formation and chemical reactions in confined nanospace” in an international conference “structural chemistry: molecules and materials”, Kolkata, December 2014.

86) Invited lecture on “Molecular marriage of organic/coordination cages” in a symposium “New directions in main group synthesis” held at IIT-Bombay in Dec 2014.

87) Invited lecture on “Explosives sensing by supramolecular sensors” in India-China-Singapore symposium held at SSCU, IISc in Dec 2014.

88) Invited lecture on “Supramolecular self-assembly” in a national symposium on chemical sciences held in Shivaji University, Jan 2015.

89) Invited lecture on “Self-assembled discrete molecular architectures and their applications” in a workshop on organic and inorganic self-assembly, held at KIIT, Bhubaneswar, Feb 2015.

90) Invited lecture on “Learning the chemistry of small to large molecules” in “National Science day” programme organised by IACS, Kolkata, Feb 28, 2015.

- 91) Invited lecture on “Chemistry of complex inorganic and organic molecules” in a National symposium at Gandhigram University (Tamil Nadu), March 2015.
- 92) Invited lecture on “Molecular marriage in covalent cage formation” in a discussion meeting held at International center, Goa, July 2015.
- 93) Invited lecture on “Self-sorting in molecular cage formation” in an international conference “Asian Conference on Coordination Chemistry (ACCC-5)” held in University of Hong Kong, July 2015.
- 94) Invited lecture on “Chemical reactions in confined nanospace” in the department of chemistry, M S Baroda University (Gujarat), July 2015.
- 95) Invited Institute lecture on “Cage Catalysis” at the Department of Chemistry, NIT-Rourkela in Aug 2015.
- 96) Invited lecture on “Recent Trends in Supramolecular Chemistry” in a Science Academy’s workshop at the Department of Chemistry, Guru Ghasidas Central University, Bilaspur in August 2015.
- 97) Invited lecture on “Cage Catalysis” in the Department of Chemistry, East China Normal University, Shanghai in October 2015.
- 98) Invited lecture on “Cage catalysis and self-sorting in molecular cages” in the Department of Chemistry, Beijing University of Technology, Beijing in October 2015.
- 99) Invited lecture on “Cage catalysis and molecular marriage” in the Department of Chemistry, Zhejiang University, Huanzhou in October 2015.
- 100) Invited lecture on “Self-sorting in covalent cage formation” in the Department of Chemistry, Northwest University, Xi’en (China) in October 2015.
- 101) Invited lecture on “Cage Catalysis and Molecular Marriage” in the Department of Chemistry, Sun Yat-Sen University, Guanzhou in October 2015.
- 102) Invited lecture on “Chemical Reactions in Confined Nanospace” in the Institute of Structures and Matters, CAS, Fuzho (China) in October 2015.
- 103) Invited lecture on “Catalysis in confined nanospace” in IISER-Mohali in October 2015.
- 104) Invited lecture on “Self-assembled 3D architectures and use of their confined space” in MTIC conference held at Jadavpur University, Dec 2015.
- 105) Invited lecture on “Functional coordination architectures” in an International conference on nanomaterials held at Gitam University (Vishakapatnam), December 2015.
- 106) Invited lecture on “Supramolecular Chemistry” in DSU University Bangalore in December 2015.
- 107) Invited lecture on “Organic Reactions in Confined Nanospace” in annual meeting of the Indian Chemical Society held at Jaipur University in December 2015.
- 108) Invited lecture on “Catalysis in confined nanospace” in a national conference on supramolecular chemistry and nanomaterials held at Gujarat Forensic University in January 2016.
- 109) Invited lecture on “Molecular Vessels” in CRSI annual meeting held at Chandigarh in February 2016.
- 110) Invited lecture on “3D coordination Cages” in a national symposium held at Visva Bharati University in March 2016.
- 111) Invited lecture on “Functional Molecular Nanovessels” in an international conference (ISCAN 2016) organized by IISER Trivandrum in March 2016.

- 112) Invited lecture on “Chemical reactions in molecular cages” in an international workshop on “Chemical reactions under external fields” held at Xiamen University (China) in April 2016.
- 113) Invited lecture on “Molecular Nanovessels” in IISC-HUJI joint symposium held at University of Jerusalem (Israel) in April 2016.
- 114) Invited lecture on “Molecular Nanovessels and Molecular Marriage” at IIT-Guwahati in April 2016.
- 115) Invited lecture on “Chemical Reactions in Nanovessels” at IISER-Pune in April 2016.
- 116) Invited lecture on “Self-Assembled Molecular Nanovessels” in International Symposium on Macroyclic and Supramolecular Chemistry held in Seoul (South Korea) in July 2016.
- 117) Invited lecture on “Chemical Reactions in Confined Space and Self-Sorting in Organic Cage formation” at Ulsan University (South Korea) in July 2016.
- 118) Invited lecture on “Chemical Reactions in Confined Space and Molecular Marriage” at UNIST (South Korea) in July 2016.
- 119) Invited colloquium on “Chemical Reactions in Confined Space” at TIFR Mumbai in Aug 2016.
- 120) Invited lecture on “Supramolecular chemistry” in a UGC National seminar organized by Haldia Govt. College in Aug 2016.
- 121) Invited lecture on “Molecular vessels and molecular marriage” at IISER Bhopal in September 2016.
- 122) Invited lecture on “Molecular Marriage” in a one-day symposium held at IIT-Kanpur in October 2016.
- 123) Invited lecture on “Nanovessels” in an Indo-German conference held at Khajuraho in November 2016.
- 124) Invited lecture on “Supramolecular Coordination –An Introduction” at University of Munster, Germany in November 2016.
- 125) Invited lecture on “Catalysis in confined nanospace” at University of Munster, Germany in November 2016.
- 126) Invited lecture on “Supramolecular sensors and self-sorting in cage formation” at University of Munster, Germany in November 2016.
- 127) Invited colloquium on “Supramolecular Coordination Architectures” at IISER Trivandrum in Dec 2016.
- 128) Invited lecture on “Cage catalysis” at a conference “Recent Trends in Organometallic Chemistry” held in Trivandrum in Dec 2016.
- 129) Invited lecture on “Molecular Vessels” in “Chemical Science” session of SABIC conference held in Kolkata in Jan 2017.
- 130) Invited lecture on “Catalysis in confined space” at an ACS On-campus event held at IISER Pune in Jan 2017.
- 131) Invited Plenary lecture on “Self-assembled molecular flasks” at a national symposium held at National Forensic University, Gandhinagar in Jan 2017.
- 132) Invited lecture at Kalna College on “Engineering nano-molecules” Feb 2017.
- 133) Invited lecture on “Molecular vessels” at Jadavpur University in UGC-CAS symposium, Feb 2017.
- 134) Invited lecture on “Functional Coordination Assemblies” at IIT-Patna, Feb 2017.
- 135) Invited lecture on “Molecular Nano-flasks” in a symposium organized by NIT-Patna, Feb 2017.

136) Invited lecture on “Supramolecular materials” at National Taiwan University in February 2017

137) Invited lecture on “Self-sorting and coordination flasks” at National Tsing-Hua University, Taiwan, in Feb 2017.

138) Invited lecture on “Molecular nano-vessels” at Academia Sinica, Taiwan in Feb 2017.

139) Invited Plenary lecture on “Molecular Vessels” at Chandigarh Science Congress, Punjab University, March 2017.

140) Invited lecture on “Supramolecular architectures” at IIT-Ropar, March 2017.

141) Invited Plenary lecture on “Molecular self-assembly” at a conference held at Central University of Jharkhand in March 2017.

142) Invited lecture on “Functional supramolecules” at the BITS Pilani, April 2017.

143) Invited lecture on “Chemistry in confined space” at Organic Chemistry Institute, University of Essen (Germany), May 2017

144) Invited lecture on “Catalysis in confined self-assembled cages” at Institute of Organic Chemistry, Siegen University (Germany), May 2017

145) Invited lecture on “Molecular vessels” at Institute of Inorganic Chemistry, Technical University Dortmund (Germany), June 2017

146) Invited lecture on “Chemistry in confined space” at the Institute of Organic Chemistry, University of Heidelberg (Germany), June 2017

147) Invited lecture on “Molecular Flasks” at the Kekule Institute of Organic Chemistry, University of Bonn (Germany), June 2017

148) Invited lecture on “Chemical Reactions in Confined Nanospace” at Otto Diels Institute of Organic Chemistry, University of Kiel (Germany), July 2017

149) Invited Plenary lecture on “Supramolecular Chemistry” at JBNST, Kolkata, April 2017.

150) Invited lecture on “Molecular flasks” at TDB College on the occasion of its diamond jubilee celebration, Aug 2017.

151) Invited lecture on “Self-assembled molecular vessels” at “Chemical Frontiers” conference held in Goa in Aug 2017.

152) Invited lecture on “Coordination flasks” at a conference on structural chemistry held at IISER Kolkata in Aug 2017.

153) Invited lecture on “Supramolecular Chemistry” in an INSPIRE programme at Visva Bharati University, Sept 2017.

154) Invited lecture on “Chemistry in confined space” at a national conference organized by INST-Mohali in Sept 2017.

155) Invited lecture on “Chemistry in self-assembled cages” at IISER Kolkata in October 2017.

156) Invited lecture and interactive session on “Scope of Inorganic Chemistry” at IIT-Madras, October 2017.

157) Invited lecture on “Chemistry in confined nanospace” at a symposium in IIT-Kharagpur, November 2017.

158) Invited lecture on “Catalysis in a greener way” in a Humboldt Kolleg held at Kolkata in Feb 2018.

159) Invited Plenary lecture on “Chemistry in Confined Space” in a Supramolecular Chemistry conference held at Gujarat Forensic University in Feb 2018.

160) Invited Special lecture on “Chemistry in confined nanospace of molecular architectures” in New York University, Abu-Dhabi in Feb 2018.

- 161) Invited Keynote lecture on “Supramolecular self-assembly of discrete architectures” at Mumbai University in March 2018.
- 162) Invited lecture at Dalian University of Technology (China) on “Chemistry in confined space of molecular assemblies” in May 2018
- 163) Invited lecture on “Chemistry in confined nanospace” at Tsinghua University (Beijing, China) in May 2018.
- 164) Invited lecture on “Chemistry in confined cages” at NIMHANS (Bangalore) in June 2018.
- 165) Invited lecture on “chemical transformation in cages” at an international conference organized by IISER Trivandrum in July 2018.
- 166) Invited lecture on “Chemistry in confined molecular barrels” at ICCC-2018 held in Sendai (Japan) in Aug 2018.
- 167) Invited lecture on “Supramolecular coordination architectures” at IISER Kolkata in August 2018.
- 168) Invited lecture on “Catalysis in confined molecular space” in a symposium on catalysis held at CSMCRI, Bhavnagar (Gujarat), September 2018.
- 169) Invited “Despande National Award Lecture” in Indore, October 2018.
- 170) Lecture on “Chemistry in confined nanospace” at IIT-Indore, October 2018.
- 171) Invited lecture on “Chemistry in molecular flasks” at NIT-Srinagar, October 2018.
- 172) Invited lecture on “Chemistry in confined space” at Shanghai Jiatong University (China) in November 2018.
- 173) Invited lecture on “Chemistry in confined space” at Fujian Institute of Structure of Matter (China) in November 2018.
- 174) Invited lecture on “Chemistry in the confined pocket of coordination and organic cages” at Central China Normal University, Wuhan (China) in November 2018.
- 175) Invited lecture on “Chemistry in confined space” at Xi’An Jiatong University (China) in November 2018.
- 176) Invited lecture on “Catalysis in molecular vessels” at Northwest University (China) in November 2018.
- 177) Invited lecture on “Chemical reactions in molecular vessels” at an International Conference (ICOC-2018) held at Goa in Dec. 2018.
- 178) Invited lecture on “Chemistry in self-assembled molecular architectures” in a symposium RDC-2018 held at NIT-Durgapur in Dec. 2018.
- 179) Invited lecture on “Supramolecular coordination” in a science academy workshop held at NIT Rourkela in Jan 2019.
- 180) Invited lecture on “Molecular Barrels” in a workshop organized by Vidyasagar University (Midnapur) in Jan 2019.
- 181) Invited “S S Bhatnagar” name lecture at IIT-Ropar in Jan 2019 on “Catalysis in molecular vessels”.
- 182) Invited lecture in a symposium on “Supramolecular Chemistry and Application” organized by Tata Steel in Feb 2019.
- 183) Invited lecture at Tokyo Institute of Technology (Japan) on “Chemistry in molecular cages” in Feb 2019.
- 184) Invited lecture at NIMS, Tsukuba (Japan) on “Chemistry in molecular cages” in Feb 2019.
- 185) Invited lecture at the University of Tokyo (Japan) on “Stereoselective reactions in confined space” in Feb 2019.
- 186) Invited lecture at IIT-Kharagpur on “Chemistry in molecular vessels” in March 2019.

187) Invited lecture at IIT-Bombay on “Chemical transformations in confined nanospace” in April 2019.

188) Invited lecture at IIT-Bhuvaneswar on “Chemical reactions in confined nanospace” in April 2019.

189) Invited lecture at Kyungpook National University (South Korea) on “Chemistry in molecular nano-vessels” in May 2019.

190) Invited lecture at Chonnam National University (South Korea) on “Chemistry in molecular nano-vessels” in May 2019.

191) Invited lecture at Korea University (South Korea) on “Unusual behavior of photochromic compounds in confined space” in May 2019.

192) Invited lecture at Seoul National University (South Korea) on “Catalysis in confined nanospace” in May 2019.

193) Invited lecture at JBNSTS (Kolkata) on “Supramolecular Coordination and its Application” in June 2019.

194) Invited lecture at IIT-Indore on “Chemical transformations in coordination flasks” in a conference to celebrate 10th year of IIT-Indore (July 2019).

195) Invited lecture on “Supramolecular Coordination” at NIT-Manipur in August 2019.

196) Invited lecture on “Chemistry in confined space” In Russia in an international conference on organometallic chemistry and supramolecular chemistry to mark the international year of periodic table in September 2019.

197) Invited lecture on “Self-assembled molecular vessels” at Northwest University in Xi'an (China) in a China-German symposium in supramolecular chemsity in September 2019.

198) Invited lecture on “Supramolecular Coordination” at Xi'an Jiatong University (China) in September2019.

199) Invited lecture on “Chemistry in molecular vessels” at Xi'an Shanxi national University (China) in September2019.

200) Invited lecture on “photochemical transformations in molecular barrels” at Asian Conference on Coordination Chemistry (ACCC-7) in Kuala Lumpur, October 2019.

201) Invited Keynote lecture on “Photochromism in confined space” at Asian conference on Chemosensing and imaging held In Amritsar in November 2019.

202) Invited lecture on “Photochromism in cages” at an International conference on Spins in Molecules held at IISc, November 2019.

203) Invited lecture on “Chemistry in Molecular Vessels” at Modern Trends in Inorganic Chemistry held at IIT-Guwahati in December 2019.

204) Invited lecture on “Chemical reactions in confined space” at a National conference held at IIT-Kharagpur in January 2020.

205) Invited plenary talk on “Supramolecular materials” at BMS college (Bangalore) in January 2020.

206) Invited lecture on “Chemistry in self-assembled architectures” at a national symposium held at CUSAT (Cochin) in February 2020.

207) Invited Keynote talk on “Use of molecular chemistry in environment and IOT technology” at CMERI-Durgapur in February 2020.

208) Invited Keynote talk on “Self-assembled materials towards molecular vessels and sensors for explosives” at Gitam University (Bangalore campus) in March 2020.

209) Invited lecture organized by IISc UG students on “Chemistry in molecular vessels” in Sept 2020.

210) Invited online lecture organized by B. R. Ambedkar National Institute of Technology, Jalandhar on “Self-assembled functional molecular architectures” in Sept 2020.

211) Invited lecture on “Chemistry in confined molecular space” organized by NIT-Manipur in November 2020.

212) Invited lecture on “Molecular Vessels” in an online conference organized by NIT-Durgapur.

213) Invited Keynote lecture in Shadong University (China) on “Chemical transformations in self-assembled molecular vessels” in Jan 2021.

214) Invited colloquium in BITS Goa on “Self-assembled aqueous molecular vessels” in March 2021.

215) Keynote lecture on “Porous cages for catalysis” in an international conference on porous materials organized by NISER/VIT in July 2021.

216) Invited lecture on “Scope of Inorganic Chemistry” at GNDU-Amritsar in October 2021.

217) Plenary lecture on “Molecular Vessels” at a conference “Recent Advances in Inorganic Chemistry” at IIT-Bhubaneswar in March 2022.

218) Invited lecture on “Coordination vessels” in an international e-conference organized by Deshbandu College, Delhi, in April 2022.

219) Invited lecture on “Supramolecular self-assembly towards functional coordination architectures” at North Bengal University in a SERB workshop in May 2022.

220) Invited lecture on “Good practices in publication” at a DST-ACS workshop held in BIT Mesra in July 2022.

221) Invited lecture on “Chemistry in aqueous molecular flasks” at FORCE-IICS conference held in Agra in July 2022.

222) Invited lecture on “Functional self-assembled discrete architectures” at a conference held in Bangalore University in August 2022.

223) Invited lecture on “Self-assembled molecular vessels” at International Conference on Coordination Chemistry (ICCC-44) held in Rimini (Italy) in August 2022.

224) Invited Keynote lecture on “Aqueous molecular vessels” at Asian Conference in Coordination Chemistry (ACCC-7) held at National Taiwan University (Taipei) in August 2022.

225) Invited special lecture on “Self-assembled Pd(II) architectures” at the University of Adam Mickiewicz in Poznań (Poland) in July 2022 (Lecture delivered online).

226) Invited lecture on “Chiral architectures for separation of analytes” at a conference Chem@Nano '22 held at INST-Mohali in September 2022.

227) Keynote lecture at Asian Crystallographic Association’s conference (AsCA-2022) held in Jeju (South Korea) in October, 2022.

228) Plenary lecture in an international conference (ISCB-2022) of the Indian society of chemists and biologists held at BIT-Mesra in November, 2022.

229) Invited lecture on “Self-assembled vessels” in conference on “Spin in Molecular Systems” held in December 2022 at IISc, Bangalore.

230) Invited lecture on “Chemistry in Confined Nanospace of Molecular Vessels” in an international conference on Modern Trends in Molecular Magnetism held at IIT-Kharagpur in December 2023.

- 231) Invited Keynote lecture on “Self-assembled materials for catalysis and separation” at a national conference on “Recent Advancement in Physical Sciences” held at NIT-Uttarakhand in December 2022.
- 232) Invited special lecture on “Molecular Vessels for Catalysis, Chiral Recognition, and Separation of Isomers” in December 2022 at IIT-Bhuvaneswar.
- 233) Invited lecture on “Functional Molecular Vessels” at NISER Bhuvaneswar in December 2022.
- 234) Keynote lecture on “Catalysis, chiral recognition and separation of isomers by molecular barrels” at a national conference InAdvanCS 2023 held at IACS (Kolkata) in Jan 2023.
- 235) Invited chemistry colloquium at IISER Tirupati on “Chemistry in self-assembled molecular barrels” in February 2023.
- 235) Invited special lecture (online) on “Molecular Vessels for Catalysis, Chiral Recognition, and Separation of Isomers” at Khalifa University (Abu Dhabi) in February, 2023.
- 236) Plenary lecture on “Chemistry in confined molecular space” at an international conference “ETCS-23” held at NEHU (Shillong) in March 2023.
- 237) Invited lecture on “Molecular vessels for chiral recognitions and separation of isomers” at national conference EDCS-23 held at Kalyani University in March 2023.
- 238) Invited lecture on “Molecular vessels for catalysis, chiral recognition and isomers separation” at IIT-Jammu in April 2023.
- 239) Invited online special lecture on “Functional Molecular Vessels” organized by the ACS-IACS students forum.
- 240) Invited lecture (Aqueous molecular vessels) at International Symposium on Macroyclic and Supramolecular Chemistry (ISMSC-2023) held in Iceland in June 2023.
- 241) Invited lecture on “Molecular vessels” at CRSI meeting held at NIT-Rourkela in July 2023.
- 242) Invited lecture on “Functional molecular barrels” at a conference “Emerging Materials” held at IISER-Pune in July 2023.
- 243) Invited lecture on “Functional coordination architectures” at University of Calcutta on the occasion of 162nd birth anniversary of Acharya P. C. Ray organized by the Indian Chemical Society.
- 244) Invited lecture on “Functional aqueous molecular vessels” at Adam Mickiewizi University in Poznan (Poland) in Sept 2023.
- 245) Invited seminar on “Chemistry in confined nanospace” at TIFR-Hyderabad, in October 2023.
- 246) Invited lecture on “Self-assembled molecular vessels” at School of Chemistry, University of Hyderabad, in October 2023.
- 247) Invite lecture on “Aqueous molecular cages for catalysis and separation of isomers” at IIT-Indore, in October 2023.
- 248) Keynote lecture at international conference on organometallic and catalysis (ICOC-2023) held in Goa in November 2023.
- 249) Plenary lecture at a conference held at Guru Ghasidas University in Bilaspur in November 2023.
- 250) Plenary lecture on “Self-assembled functional architectures” at a conference held at Pt. Ravishankar University in Raipur in November 2023.

- 251) Keynote lecture on “Molecular vessels photochemical reactions” for at SABIC International conference held in Kolkata in Jan 2024.
- 252) Invited lecture “Self-assembled aqueous barrels” at Gordon Conference on Atomically precise nanochemistry held in Texas (USA) in Feb 2024.
- 253) Plenary lecture at Asian Coordination Chemistry conference held in Bangkok in Feb 2024 on “Chemistry in Confined space”
- 254) Invited special lecture on “Supramolecular materials” at Raniganj TDB College in Jan 2024.
- 255) Invited lecture on “Chemical reactions in confined nanospace” at IACS-Kolkata in a conference held in March 2024.
- 256) Invited lecture on “Chemical transformations in molecular vessels” at SRM Amravati in March 2024.
- 257) Plenary lecture on “Self-assembled molecular vessels” at a symposium on supramolecular chemistry held Hunan University, China, in May 2024.
- 258) Invited lecture on “Oxidation reaction in aqueous molecular vessels” at International Symposium on Macroyclic and Supramolecular Chemistry (ISMSC-2024) held in Zhejiang, China, in May 2024.
- 259) Invited lecture on “Self-assembled functional cages” at an international conference FARC-2024 held at IIT Mandi in June 2024.
- 260) Keynote lecture on “Oxidation reactions in aqueous cages” at international conference on organometallic chemistry (ICOMC-2024) held in Agra (India) in July, 2024.
- 261) Prof. Sripati Pani Memorial Endowment Lecture 2024 at Sambalpur University in August 2024.
- 262) Keynote online lecture on “Molecular Vessels” at VIT Andhra Pradesh in Aug 2024.
- 263) TIFR Colloquium on “Chemistry in Molecular Vessels” at TIFR Mumbai in August 2024.
- 264) Invited lecture on “Self-assembled functional aqueous architectures” at Incheon National University (South Korea) in September 2024.
- 265) Invited lecture on “Water soluble molecular vessels” at Hannan University (South Korea) in October 2024.
- 266) Keynote lecture on “Chemical reactions in molecular vessels” at a symposium on supramolecular self-assembly held at Chonnam National University (South Korea) in October 2024.
- 267) Invited lecture on “Chemistry in the confined space of coordination architectures” at New South Wales University, Australia, in December 2024.
- 268) Invited lecture on “Oxidation reactions in molecular cages” at IC-24 conference of the RACI, Australia (held in Sydney) in December 2024.
- 269) Plenary lecture at Modern Trends in Inorganic Chemistry (MTIC) held at IIT Kharagpur in December 2024.
- 270) Keynote lecture on “Aqueous Vessels” at a symposium held at IEST, Kolkata , in November 2024.
- 271) Invited lecture on “Chemistry in confined space” at a conference of the Asian Crystallographic Association held at Shivnadar University in Nov 2024.
- 272) Keynote lecture on “Crystalline molecular vessels” at a National symposium at VIT- Nagpur in November 2024.
- 273) Keynote lecture on “Self-assembled molecular cages” at a symposium held at RK Mission, Narendrapur, in November 2024.

274) Invited special lecture at NIT-Tripura on “Self-assembled functional architectures” in November 2024.

275) Plenary lecture on “Aqueous Molecular Vessels” at an International conference “Modern Trends in Inorganic Chemistry” held at IIT-Kharagpur in December 2024.

276) Invited lecture at IIT Bombay on “Functional Molecular Vessels” in January 2025.

277) Invited lecture on “Oxidation reactions in coordination cages” at a national conference held in BARC (Mumbai) in January 2025.

278) Keynote lecture on “Self-assembled molecular flasks” at a conference on “Emerging Materials for Energy & Sustainability” held at VIT-Chennai in February, 2025.

279) Invited colloquium at IIT-Tirupati in April 2025 on “Functional molecular architectures”.

280) Keynote lecture on “Oxidation reactions in aqueous molecular vessels” at a symposium held at Jadavpur University in April 2025.

281) Plenary lecture at a conference held at L. J. University in Gujarat in Feb 2025.

282) Keynote lecture at a conference on emerging materials at BITS Goa held in Feb 2025.

283) Invited lecture on “Functional Aqueous Molecular Vessels” at Kyoto University (Japan) in May 2025.

284) Invited special lecture on “Chemical transformations in molecular cages” at Osaka University (Japan) in May 2025.

285) Keynote lecture on “Functional molecular architectures for catalysis and separation of isomers” in a conference organized by Tripura University, July 2025.

286) Plenary lecture at a conference FCA-2025 held at Presidency University in Kolkata (Sept 2025)

287) Plenary lecture at an international conference held at North Bengal University held in Sept 2025.

288) Invited lecture at ISNSC-14 international conference held in Santiago (Chile) in Sept 2025.

289) Plenary lecture on “Chemical reactions in coordination cages” at a conference held in North Bengal University in September 2025.

290) Plenary lecture on “Functional molecular cages” at a conference held in Presidency University (Kolkata) in September 2025.

291) Keynote lecture on “Supramolecular Self-assembly and its Applications” at a conference held in St. Xavier’s college, Kolkata, in October 2025.

292) Keynote lecture on “Chemical Transformations in Confined Cage” at Asian Conference in Coordination Chemistry (ACCC-10) held in Hanoi, Vietnam, in October 2025.

293) Invited Keynote lecture on “Chemical Reactions in Molecular Vessels” at departmental annual symposium at IISER Berhampur in November 2025.

294) Invited lecture on “Molecular vessels for catalysis” at Xi’an University in China, in November 2025.

295) Invited lecture on “Molecular vessels and their applications” at Zhengzhou University in China, in November 2025.

296) Invited lecture on “Functional Molecular vessels” at Shandong University in China, in November 2025.

297) Invited lecture on “Molecular vessels for catalysis” at Sichuan University (Chengdu) in China, in November 2025.

298) Rigaku International Award Lecture on “Oxidation reactions in molecular flasks” at an international conference SIMS held in Kolkata in November 2025.

- 299) Invited lecture on “Molecular Flasks” at University of Delhi (as part of INSA General meeting) in December 2025.
- 300) Invited lecture on “Molecular vessels for applications” at IISER-Pune in December 2025.