

Partha Sarathi Mukherjee

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

Research fields: Supramolecular nanomaterials, Organic nanomaterials, Molecular sensors, Catalysis in nanocages.

Summary:

- 24 years inorganic chemistry research in academia
- 18 years teaching experience in chemistry at honours/PG level
- 202 publications in peer-reviewed journals
- Delivered over 225 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:

- ***2022** Elected fellow of *The World Academy of Sciences* (TWAS, Trieste, Italy) with effect from Jan 2023.
- ***2022** Featured by 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 the *Elsevier*.
- ***2018** Selected for Deshpande National Award
- ***2016** *Shanti Swarup Bhatnagar* Prize in Chemical Sciences for the year 2016
- ***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 the performance at undergraduate level.

Awards by group members:

- 1) A poster on “functional discrete supramolecules” by S. Shanmugamraju and P. S. Mukherjee was selected for poster award in 13th CRSI annual meeting held in Bhubaneswar, Feb 2011.
- 2) A poster by A. K. Bar and P. S. Mukherjee on “Self-sorting in coordination self-assembly” was selected for poster award in an international conference “Frontiers in inorganic chemistry” held in Kolkata, Dec 2010.
- 3) A poster by A. K. Bar and P. S. Mukherjee on “Porphyrin functionalized molecular barrels” was selected for best poster award in the annual meeting of CRSI, India, in Feb 2009.

- 4) A poster by K. C. Mondal and P. S. Mukherjee on “Mn₉ single molecule magnets” was selected for best poster award in “Modern Trends in Inorganic Chemistry conference” held in Dec 2007 at IIT-Chennai.
- 5) A poster on “Covalent marriage of two interlocked molecular cages and their easy separation” was selected for best prize in an international conference on Molecules and materials held in Calcutta, December 2014.
- 6) Dr. Shanmugaraju, Prodip Howlader, Bijñaneswar Mondal received best thesis award of IPC department (IISc) in 2013, 2018, 2019, respectively.
- 7) Dr. Aniket Chaudhury was selected by SERB for attending Nobel Laureates’ meeting in Lindau (Germany)-2017.
- 8) Sushobhan Ghosh, Arun Bar, S. Shanmugaraju were selected for Newton international fellowship. Dr. Anbu and Dr. Indranil Sinha were selected for Marie-Curie fellowship. Dipak Samanta and Arppitha B S received SPM fellowship. Sushobhan Ghosh and Prodip Howlader were selected for Humboldt Fellowship
- 9) Prodip Howlader and Bappaditya Gole were selected for Bristol-Myers Squibb fellowship.
- 10) Soumalya Bhattacharya has received best poster prize in MTIC-XIV held at IIT Guwahati in Dec 2019.
- 11) Debsena Chkraborty and R. Rinshad have been selected for PMRF (Prime Minister’s Research Fellowship) fellowship in 2020. Pranay Mitra and Ranit Banerjee have been selected for PMRF fellowship in 2021.

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 2005-08 and Inorganic Chemistry Lab course during 2009-12 for Int. PhD students. Teaching inorganic chemistry for 4-yr BS (UG) students since 2013.

Students mentored: Eighteen (18) students have completed Ph.D. and nine students are currently working for Ph.D. Mentored 23 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. Six 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 four postdoctoral fellows are working under my direct guidance. Supervised 45 short-term students/teachers.

Complete List of Publications

**Citation Data: Total Publications: 202; Total Citations: 13,954; Average Citations per paper: 64.17.
h-index: 65**

Summary of publications:

- A) American Chemical Society's journals: Total publications: 80 (IC-42, JOC-5, JACS-16, JACS-Au: 1, Orgmet-7, Chem. Rev. 2, Acc. Chem. Res. 1, Cryst Growth & Des. 3, ACS Omega 1, ACS Catalysis 1, Chem. Mater. 1)

- B) Royal Society's journals: Total publications: 59 (Chem. Sci. 3, ChemComm: 23, 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 (ICActa: 10, IC Comm: 3, Tet. Lett: 1, Polyhedron: 4, J. Orgmet. Chem: 1)
- D) Willey's journals: Total Publications: 33 (Angew Chem: 5, Chem. Eur. J: 22, 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: 06

Google Scholar Citation Link:

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

	Authors	Title	Journal
202	R. Saha, J. Sahoo, M. Venkateswarulu, M. De, P. S. Mukherjee	Shifting Triangle-Square Equilibrium of Self-Assembled Metalloporocycles 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 interlocked cage	<i>Chem. Sci.</i> 2022, 13, 11764-11771.
200	S. Ahmed, A. Kumar, P. S. Mukherjee	Supramolecular Coordination Polymer Towards Artificial Light-Harvesting Systems with Sequential Energy Transfer	<i>Chem. Mater.</i> 2022, 34, 9656-9665.
199	S. Ahmed, P. Howlader, S. Bhattacharyya, S. Mondal, E. Zangrando, P. S. Mukherjee	Fluorescence enhancement via structural rigidification inside a self-assembled Pd ₄ molecular vessel	<i>Chem. Commun.</i> 2022, 58, 11390.
198	P. Bhandari, P. S. Mukherjee	Post-Synthesis Conversion of an Unstable Imine Cage to a Stable Cage with Amide	<i>Chem. Eur. J.</i> 2022, 28, http://dx.doi.org/10.10

		Moieties towards Selective Receptor for Fluoride	<i>02/chem.202201901.</i>
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	<i>Inorg. Chem. 2022, 61, 8121.</i>
196	B. S. Arppitha, M. Venkataswarulu, P. Bhandari, K. S. A. Arachchige, J. Clegg, P. S. Mukherjee	An Adaptable Water-Soluble Molecular Boat for Selective Separation of Phenanthrene from Isomeric Anthracene	<i>J. Am. Chem. Soc. 2022, 144, 7504.</i>
195	D. Chakraborty, P. S. Mukherjee	Recent Trends in Organic Cage Synthesis: Push Towards Water-Soluble Organic Cages	<i>Chem. Commun. 2022, 58, 5558-5573. (Invited Contribution)</i>
194	R. Saha, B. Mondal, P. S. Mukherjee	Molecular Cavity for Catalysis and Formation of Metal Nanoparticles for Use in Catalysis	<i>Chem. Rev. 2022, 122, 12244-12307. (Invited Contribution)</i>
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	<i>Angew Chem. Int. Ed. 2022, 61, https://doi.org/10.1002/anie.202200715</i>
192	A. Kumar, R. Banerjee, E. Zangrando, P. S. Mukherjee	Solvent and Counter-anion Assisted Dynamic Self-Assembly of Molecular Triangles and Tetrahedral Cages	<i>Inorg. Chem. 2022, 61, 2368-2377.</i>
191	P. Bhandari, B. Mondal, P. Howlader, P. S. Mukherjee	Face-Directed Tetrahedral Organic Cage Anchored Palladium Nanoparticles for Selective Homocoupling Reaction	<i>Eur. J. Inorg. Chem. 2022, https://doi.org/10.1002/ejic.202100986</i>
190	P. P. Choudhury, M. Venkateswaralu, S. Bhattacharyya, P. S. Mukherjee	Silver(I) – Carbene Bond Directed Rigidification Induced Emissive Metallacage for Picric	<i>Inorg. Chem. 2022, 61, 713-722.</i>

		Acid Detection	
189	P. Bhandari, R. Modak, S. Bhattacharya, E. Zangrando, P. S. Mukherjee	Self-assembly of Octanuclear Pt/Pd-Coordination Barrels and Uncommon Structural Isomerization of a Photochromic Guest	JACS-Au, 2021 1, 2242-2246.
188	P. Choudhury, M. Maity, S. Bhattacharyya, P. S. Mukherjee	A Self-Assembled Pd(II) Barrel for Binding of Fullerenes and Photosensitization Ability of the Fullerene Encapsulated Barrel	Angew Chem. Int. Ed. 2021 , 60, 14109.
187	D. Chakraborty, R. Modak, P. Howlader, P. S. Mukherjee	<i>De novo</i> approach for the synthesis of water-soluble interlocked and non-interlocked organic cages	Chem. Commun. 2021 , 57, 3995-3997.
186	A. Kumar, R. Saha, P. S. Mukherjee	Self-assembled metallasupramolecular cages towards light harvesting systems for oxidative cyclization	Chem. Sci. 2021 , 12, 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	J. Am. Chem. Soc. 2020 , 142, 20968-20972.
184	S. Bhattacharyya, S.K. Ali, M. Venkateswarulu, P. Howlader, E. Zangrando, M. De, P. S. Mukherjee	Self-Assembled Pd ₁₂ Coordination Cage as Photoregulated Oxidase-Like Nanozyme	J. Am. Chem. Soc. 2020 , 142, 18981-18989
183	P. Howlader, P. Bhandari, D. Chakraborty, J. K. Clegg, P. S. Mukherjee	Self-Assembly of a Pd ₈ Macrocyclic and Pd ₁₂ Homochiral Tetrahedral Cages Using Poly(tetrazolate) Linkers	Inorg. Chem. 2020 , 59, 15454-15459.
182	B. Mondal, P. Bhandari, P. S. Mukherjee	Nucleation of Tiny Silver Nanoparticles Using a Tetrafacial Organic Molecular Barrel for Potential Use in	Chem. Eur. J. 2020 , 26, 15007-15015.

		Visible Light Triggered Photocatalysis	
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 , <i>59</i> , 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 , <i>142</i> , 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 , <i>26</i> , 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 , <i>59</i> , 2083-2091.
177	R. Saha, P. S. Mukherjee	Chemistry of photoswitching molecules in confined nanospace of aqueous molecular vessels	<i>Dalton Trans.</i> 2020 , <i>49</i> , 1716. (Invited Frontier Article)
176	W. B. Tolman, A. L. Balch, S. Bart, B. Cossairt, S. Dehnen, P. S. Halasyamani, H. Kageyama, F. Meyer, J. Morrow, P. S. Mukherjee , F. Nee se, P. P. Power, R. Sessoli, V. W. W. Yam, and H-C. Zhou	What is Inorganic Chemistry? (Editorial)	<i>Inorg. Chem.</i> 2019 , <i>58</i> , 9515.
175	I. A. Bhat, E. Zangrando, P. S.	Coordination-Driven Self-Assembly of Discrete Molecular	<i>Inorg. Chem.</i> 2019 , <i>58</i> , 11172.

	Mukherjee	Nanotubular Architectures	
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	J. Am. Chem. Soc. 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	Chem. Commun. 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	Chem. Commun. 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	J. Am. Chem. Soc. 2019, 141, 8638.
170	A. Kumar, E. Zangrando and P. S. Mukherjee	Self-assembled Pd ₃ L ₂ cages having flexible tri-imidazole donors	Polyhedron, 2019, 172, 67. (Invited article)
169	K. Acharyya, P. S. Mukherjee	Organic Imine Cages: Molecular Marriage and Applications	Angew Chem. Int. Ed. 2019, 58, 8640.
168	S. Bhattacharyya, A. Chowdhury, R. Saha, P. S. Mukherjee	Multifunctional Self-Assembled Macrocycles with Enhanced Emission and Reversible Photochromic Behaviour	Inorg. Chem. 2019, 58, 3968.
167	M. Siddiqui, R. Saha, P. S. Mukherjee	Ruthenium(II) Metalla[2]Catenanes and Macrocycles via Donor-Dependent Self-Assembly	Inorg. Chem. 2019, 58, 4491.
166	T. Prakasam, A. Devaraj, R. Saha, M. Lusi, J. Brandel, D. Esteban-Gómez, C. Platas-Iglesias, P	Metal-Organic Trefoil Knots for C-Br Activation	ACS Catalysis, 2019, 9, 1709.

	S. Mukherjee and A. Trabolsi		
165	P. Howlader and P. S. Mukherjee	Solvent directed synthesis of molecular cage and MOF of Cu(II) paddlewheel cluster	<i>Israel J. Chem.</i> 2019 , <i>59</i> , 292. (Invited contribution in honor of Prof. M. Fujita's Wolf Prize)
164	P. Das, A. Kumar, A. Chowdhury, P. S. Mukherjee	Aggregation Induced Emission and White Light Emission from a Combination of π -Conjugated Donor-Acceptor Organic Luminogens	<i>ACS Omega</i> , 2018 , <i>3</i> , 13757. (Invited article)
163	B. Mondal, P. S. Mukherjee	Cage Encapsulated Gold Nanoparticles as Heterogeneous Photocatalyst for Facile and Selective Reduction of Nitroarenes to Azo compounds	<i>J. Am. Chem. Soc.</i> 2018 , <i>140</i> , 12592.
162	M. Maity, P. Howlader, P. S. Mukherjee	Coordination-Driven Self-Assembly of Cyclopentadienyl Capped Heterometallic Zr-Pd Cages	<i>Cryst. Growth & Des.</i> , 2018 , <i>18</i> , 6956.
161	A. Aderonke, P. S. Mukherjee	Coordination self-assembly of discrete Pt-Ru prismatic cages	<i>Biel. J. Org. Chem.</i> 2018 , <i>14</i> , 2242.
160	A. Aderonke, A. Shettar, A. A. Bhat, P. Kondaiah, P. S. Mukherjee	Coordination self-assembly of Ru(II) architectures: Synthesis, characterization and cytotoxicity studies	<i>Dalton Trans.</i> 2018 , <i>47</i> , 8466
159	A. Bhat, A. Devaraj, E. Zangrando, P. S. Mukherjee	A Discrete Self-Assembled Pd ₁₂ Triangular Orthobicupola Cage and its Use for Intramolecular Cycloaddition	<i>Chem. Eur. J.</i> 2018 , <i>23</i> , 13938.
158	P. Howlader, B. Mondal, P. P. Chowdhury, E. Zangrando, P. S. Mukherjee	Self-assembled molecular barrels as containers for transient merocyanine and reverse photochromism	<i>J. Am. Chem. Soc.</i> 2018 , <i>140</i> , 7952.
157	R. Saha, A. K. Ghosh, R. Samajder, P. S. Mukherjee	Self-assembled molecular spheroids and their proton conduction	<i>Inorg. Chem.</i> 2018 <i>57</i> , 6540.
156	I. Sinha and P. S. Mukherjee	Chemical Transformations in Confined Space of Coordination Architectures	<i>Inorg. Chem.</i> 2018 , <i>57</i> , 4205 (Invited Viewpoint article)
155	I. A. Bhat, A.	A chiral Pt ₁₂ tetrahedral cage	<i>Chem. Commun.</i>

	Devaraj, P. Howlader and P. S. Mukherjee	and its use in catalytic Michael addition reaction	2018 54, 4814
154	B. Roy, A. Devaraj, R. Saha, S. Jharimune, K. W. Chi, P. S. Mukherjee	Catalytic intramolecular cycloaddition reaction using a discrete molecular architecture	Chem. Eur. J. 2017, 23, 15704.
153	P. Das, A. Kumar, P. Howlader, P. S. Mukherjee	A self-assembled trigonal molecular prismatic molecular vessel for catalytic dehydration reactions	Chem. Eur. J. 2017, 23, 12565
152	B. Mondal, A. K. Ghosh, P. S. Mukherjee	Reversible Multistimuli Switching of a Spiropyran Functionalized Organic Cage in Solid and Solution	J. Org. Chem. 2017, 82, 7783.
151	R. Saha, D. Samanta, A. J. Bhattacharyya, P. S. Mukherjee	Stepwise construction of self-assembled heterometallic cages showing high proton conductivity	Chem. Eur. J. 2017, 23, 8980.
150	I. A. Bhat, R. Jain, M. Siddiqui, D. Saini, P. S. Mukherjee	Water-soluble Pd ₈ L ₄ self-assembled molecular barrel as an aqueous carrier for hydrophobic curcumin	Inorg. Chem. 2017, 56, 5352.
149	B. Roy, R. Saha, A. K. Ghosh, Y. Patil, P. S. Mukherjee	Versatility of diimidazole building blocks in coordination self-assembly	Inorg. Chem. 2017, 56, 3579
148	K. Acharyya, A. Chowdhury, B. Mondal, S. Chakraborty, P. S. Mukherjee	Building block dependent morphology modulation of cage nanoparticles and detection of nitroaromatics	Chem. Eur. J. 2017, 23, 8482.
147	S. Dasgupta and P. S. Mukherjee	Carboxylatopillar[n]arenes: A versatile class of water soluble synthetic receptors	Org. Biomol. Chem. 2017, 15, 762.
146	A. A. Ademeyo, A. Shettar, I. A. Bhat, P. Kondaiah, P. S. Mukherjee	Self-assembly of discrete Ru ₈ molecular cages and their in-vitro anticancer study	Inorg. Chem. 2017, 56, 608
145	Chowdhury and P. S. Mukherjee	Vinylanthracene based compounds as electron rich sensors for explosives recognition	ChemPlusChem. 2016, 82, 1360.
144	P. Howlader and P. S. Mukherjee	Face and edge directed self-assembly Pd ₁₂ tetrahedral nanocages and their self-	Chem. Sci. 2016, 7, 5893.

		sorting	
143	A. Chowdhury, P. Howlader, P. S. Mukherjee	Aggregation induced emission of Pt(II) metallacycles and their nitroaromatics detection	Chem. Eur. J. 2016 , <i>22</i> , 7486.
142	B. Roy, E. Zangrando, P. S. Mukherjee	Self-assembly of a redox active water soluble Pd ₆ "Molecular Dice"	Chem. Commun. 2016 , 4489.
141	B. Gole, U. Sanyal, R. Banerjee, P. S. Mukherjee	High loading of Pd nanoparticles by interior functionalization of molecular pockets for heterogeneous catalysis	Inorg. Chem. 2016 , <i>55</i> , 2345.
140	P. Howlader, P. Das, E. Zangrando, P. S. Mukherjee	Urea functionalized self-assembled molecular prism for heterogeneous catalysis in water	J. Am. Chem. Soc. 2016 , <i>138</i> , 1668.
139	D. Samanta, A. Chowdhury, P. S. Mukherjee	Covalent Post-Assembly Modification and Water-Adsorption of Pd ₃ Self-Assembled Trinuclear Barrels	Inorg. Chem. 2016 , <i>55</i> , 1562.
138	B. Mondal, K. Acharyya, P. Howlader, P. S. Mukherjee	Molecular cage impregnated Pd nanoparticles: Efficient additive-free heterogeneous catalysts for cyanation of aryl halides	J. Am. Chem. Soc. 2016 , <i>138</i> , 1709.
137	A. Chowdhury, P. Howlader, P. S. Mukherjee	Crystallization induced emission enhancement of mechano-fluorochromic Pt(II) luminogen and its application for cysteine detection	Chem. Eur. J. 2016 , <i>22</i> , 1424.
136	P. Howlader, S. Mukherjee, R. Saha, P. S. Mukherjee	Conformation-selective coordination-driven self-assembly of a ditopic donor with Pd ^{II} acceptors	Dalton Trans. 2015 , 20493.
135	A. Adeyemo, S. Shanmugaraju, D. Samanta, P. S. Mukherjee	Template-free coordination-driven self-assembly of discrete hexanuclear prismatic cages employing half-sandwich octahedral Ru ^{II} ₂ acceptors and triimidazole donors	Inorg. Chim. Acta. 2016 , <i>440</i> , 62
134	S. Shanmugaraju, P. S. Mukherjee	π -electron rich small molecule sensors for the recognition of nitroaromatics	Chem. Commun. 2015 , <i>51</i> , 16014
133	S. Das Gupta, A.	Binding of carboxylatopillar	RSC. Adv. 2015 ,

	Chowdhury, P. S. Mukherjee	[5]arene with alkyl and aryl ammonium salts in aqueous medium	85791
132	B. Roy, S. Shanmugaraju, R. Saha, P. S. Mukherjee	Self-assembly of Metallamacrocycles Employing a New Benzil Based Organometallic Bisplatinum (II) Acceptor	CHIMIA, 2015, 69, 541 (Invited article)
131	B. Roy, A. K. Ghosh, S. Srivastava, P. D'Silva, P. S. Mukherjee	A Pd ₈ Tetrafacial Molecular Barrel as Carrier for Water Insoluble Fluorophore	J. Am. Chem. Soc. 2015, 137, 11916
130	I. A. Bhat, D. Samanta and P. S. Mukherjee	A Pd ₂₄ Pregnant Molecular Nanoball: Self-Templated Stellation by Precise Mapping of Coordination Sites	J. Am. Chem. Soc. 2015, 137, 9497
129	A. Chowdhuri, P. S. Mukherjee	Electron rich triphenylamine based sensors for picric acid detection	J. Org. Chem. 2015, 80, 4064
128	B. Gole, U. Sanyal and P. S. Mukherjee	A smart approach to achieve exceptionally high loading of metal nanoparticles supported by functionalized extended frameworks for efficient catalysis	Chem. Commun. 2015, 51, 4872.
127	K. Acharyya, P. S. Mukherjee	Post-synthetic exterior decoration of an organic cage by copper(I) catalyzed A ³ -coupling and detection of nitroaromatics	Chem. Eur. J. 2015, 21, 6823
126	K. Acharyya, P. S. Mukherjee	Shape and size directed self-selection in organic cage formation	Chem. Commun. 2015, 51, 4241.
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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	<i>Chem. Commun.</i> 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) ₄ ²⁻	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	Chem. Commun. 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	Chem. Commun. 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	Inorg. Chim. Acta , 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	Inorg. Chim. Acta , 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	New J. Chem. 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	New J. Chem. 2001 , 25, 1203.
06	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 ϕ -Donor as	Eur. J. Inorg. Chem. 2002 , 3292.

		Ligands	
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	<i>Polyhedron</i> , 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	<i>Acta Cryst.</i> , 2001 , E57, 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	<i>Polyhedron</i> 2001 , 20, 651.
02	P. S. Mukherjee , T. K. Maji, S. Koner, G. Rosair, N. Ray Chaudhuri	Synthesis and magnetic study of three new μ -oxalato dinuclear copper(II) complexes	<i>Indian J. Chem.</i> , 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	<i>Inorg. Chem.</i> , 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.

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 Kamraj University, Nov-2007
- 6) Metal-ligand coordination: an efficient tool to design large molecules
Department of Chemistry, Madurai Kamraj 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 Freiburgh, 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 matallacycles 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 (Maharashtra) 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 Asian 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 Macrocyclic 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 ICCO-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 “Deshpande 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-Bhubaneswar 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 chemistry in September 2019.
- 198) Invited lecture on “Supramolecular Coordination” at Xi’an Jiatong University (China) in September 2019.
- 199) Invited lecture on “Chemistry in molecular vessels” at Xi’an Shanxi national University (China) in September 2019.
- 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 Shandong 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.

