

Assistant Professor
Department of Chemistry
School of Basic and Applied Sciences
Central University of Tamilnadu
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Professional Experiences

- Feb'2024- Mar'2024** **Research Associate**
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
Research Supervisor: Prof. Sarit S. Agasti
- Mar'2022- Sep'2023** **Post-Doctoral Researcher**
Biological and Chemical Research Centre, University of Warsaw
Research Supervisor: Prof. Michał Chmielewski
Research Title: Gold Nanoparticles As Synthetic Nanomachine for Anion Transporter
- Oct'2021- Feb'2022** **Research Associate**
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
Research Supervisor: Prof. Sarit S. Agasti
Research Title: Host-Guest Chemistry Mediated Transient Assembly of Surface Functionalized Gold Nanoparticles (AuNPs)

Academic Qualification

- 2015-2021** **Ph.D.**
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
Research Supervisor: Prof. Sarit S. Agasti
Thesis Title: Engineering Nanoparticle Surface Monolayer via Molecular Recognition and Self-Assembly for Biological Applications
- 2013-2015** **M.Sc. (Chemistry)**, Hindu College, Department of Chemistry, Delhi University, Delhi, India
Research Supervisor: Prof. A. Shaktivel
Thesis title: Silicoaluminophosphate Based Molecular Sieves as Potential Catalyst
- 2010-2013** **B.Sc. (Chemistry Hons.)**
Hindu College, Delhi University, Delhi, India

List of Publications**Research articles:**

1. R. Sasmal, A. Som, P. Kumari, **M. Pahwa**, N. D. Saha, S. Rao, V. Sheeba, S. S. Agasti; "Supramolecular catch-and-release strategy for bioorthogonal fluorogenic imaging across the visible spectrum", *bioRxiv*, **2023**.
2. N. Das Saha, S. Pradhan, R. Sasmal, A. Sarkar, C. M. Berač, J.C. Kölsch, **M. Pahwa**, S. Show, Y. Rozenholc, Z. Topçu, V. Alessandrini, J. Guibourdenche, V. Tsatsaris, N. G. Eilstein, S. S. Agasti; "Cucurbit[7]uril Macrocyclic Sensors for Optical Fingerprinting: Predicting Protein Structural Changes to Identifying Disease Specific Amyloid Assemblies", *JACS*, **2022**, 144, 14363-14379.
3. **M. Pahwa**, P. Jain, N. Das Saha, C. Narayana and S. S. Agasti, "Interfacial Tetrazine Click Chemistry Mediated Assembly of Multifunctional Colloidosomes" *Chem. Commun.*, **2021**, 57, 9534-9537.
4. A. Som, **M. Pahwa**, S. Bawari, N. Das Saha, R. Sasmal, M. S. Bosco, J. Mondal, and S. S. Agasti, "Multiplexed Optical Barcoding of Cells via Photochemical Programming of Bioorthogonal Host-Guest Recognition" *Chem. Sci.*, **2021**, 12, 5484-5494.
5. **M. Pahwa**, M. Sharma, S. K. Meethal and S. S. Agasti, "Reversible Regulation of Esterase Activity

via Host–Guest Molecular Recognition at the Nanoparticle Surface” *Bull. Mater. Sci.*, **2020**, 43, 1-7.

6. R. Sasmal, N. Das Saha, **M. Pahwa**, S. Rao, D. Joshi, M. S. Inamdar, V. Sheeba and S. S. Agasti, “Synthetic Host–Guest Assembly in Cells and Tissues: Fast, Stable, and Selective Bioorthogonal Imaging via Molecular Recognition” *Anal. Chem.*, **2018**, 90, 11305-11314.
7. S. K. Meethal, R. Sasmal, **M. Pahwa**, S. Chandrasekhar, N. Das Saha and S. S. Agasti, “Cucurbit[7]uril Directed Assembly of Colloidal Membrane and Stimuli Responsive Microcapsules at the liquid-liquid Interface” *Langmuir*, **2018**, 34, 693-699.

Book chapter:

1. **M. Pahwa**, Athira M. P. and S. S. Agasti; “Organic/Inorganic Hybrid Nanostructures for Biological Imaging and delivery” Encyclopedia of Nanomaterials, *Elsevier*, **2023**, V2, 478-495.
ISBN: 9780128224250, Editors: Younan Xia, Yadong Yin

Awards

- Shortlisted for AWSAR story writing competition, DST, Delhi, India **2021**
- Best Poster Award at In House Symposium, JNCASR, Bangalore, India **2018**
- Best Poster Award at International Winter School on Frontiers in Material Science, JNCASR, Bangalore, India **2017**
- Qualified in National Eligibility Test (NET) for junior research fellowship and lectureship conducted by Council of Scientific and Industrial Research (CSIR) with 77 rank, India **2014**
- Appreciation certificate for successful completion of Summer Workshop on Innovative Projects for Science learning in Hindu College, Delhi, India **2011**

Organizational Experiences

- During PhD (**2020**): Organized In House Symposium at JNCASR, India with team of 8 members.
- During PhD (**2018-2019**): Appreciation certificate for serving as a mess committee member at JNCASR Hostel, Bangalore, India.
- During PhD (**2017-2018**): Mentored science students under Student Mentoring Program, C.N.R. Rao Education Foundation JNCASR, Bangalore, India.
- During Bachelors (**2010-2013**): participated as an organizational member in the department Fest, TATVA -The Chemistry Society’13, College Annual Fest Mecca’12 and participated in Central Admission Committee as an admission counsellor, Hindu College, Delhi University.

Conferences

- Participated in National Conference on Synthetic and Biological Peptides: Structures and Strategies for the Development of Drugs, Biologics and Materials, Bangalore, India **2019**
- Participated in RSC Road Shows, JNCASR, Bangalore, India **2019**
- **Poster presentation and selected speaker:** Chemical Frontiers Conference, “Templated Non-Ribosomal Peptide Synthesis via Surface Functionalized Nanoparticle Based Molecular Assembler” Goa, India **2018**
- **Speaker** at Chemistry and Physics of materials Unit Day, JNCASR, Bangalore, India **2017**
- **Speaker** at International Winter School, JNCASR, Bangalore, India **2017**
- **Poster Presentation:** 12th JNCASR Kerala Conference, “Fabrication of Stable Biocompatible Microcapsules via Bioorthogonal Directed Assembly of Nanoparticles at Oil-Water Interface.”, India **2016**
- Participated in International Winter School, JNCASR, Bangalore, India **2016**
- Participated in 5th Indian Peptide Symposium, JNCASR, Bangalore, India **2015**

Dr. Meenakshi Pahwa
Place: Thiruvapur, India