

Curriculum Vitae

Bijnaneswar Mondal

Assistant Professor, Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh 495009, India.

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Personal Details:

Name	Bijnaneswar Mondal
Date of Birth	5 th April, 1992
Nationality	Indian
Language	English, Bengali, Hindi
Sex/Marital Status	Male/Married



Academic Profile:

Oct 2019 – Present	Assistant Professor Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India
Aug 2014 – July 2019	Ph.D. (Supramolecular Chemistry) Indian Institute of Science, Bangalore, India Thesis Supervisor – Prof. Partha Sarathi Mukherjee Thesis Title – “Covalent organic cages: templates for metal nanoparticles, heterogeneous catalysis and solid state photochromism”
Aug 2012 – July 2014	M.Sc. (Chemistry) Indian Institute of Technology Madras, Chennai, India Project Supervisor – Prof. Sundargopal Ghosh Project Title – “A new look to heterometallic borides”
Aug 2009 – July 2012	B.Sc. (Chemistry) Visva Bharati University, Santiniketan, West Bengal, India

Research Experience:

- Design and synthesis of various discrete and functionalized porous organic cages.
- Exploration of organic cages as templates to prepare size-tuned metal nanoparticles.
- Experimental analysis of cage supported nanoparticles as heterogeneous catalyst in various organic transformation.
- Functionalization of organic cage to incorporate multi-stimuli responsive character in solid and solution.
- Design and synthesis of porous cationic organic cages for selective molecular recognition and catalysis.
- Exploration of the stability of meta-stable photochromic molecules inside the molecular barrels.
- Morphological modulation of porous organic materials by altering building blocks.

Research Interest:

- ❖ Porous organic materials
- ❖ Photochromic materials
- ❖ Host-Guest chemistry
- ❖ Heterogeneous photocatalysis

Additional Qualifications:

CSIR-UGC JRF-NET: June 2013, All India Rank 54

GATE: March 2014, All India Rank 319

Teaching Assistantship: January-July 2017, Indian Institute of Science, India.

Course UC103– Basic inorganic chemistry laboratory for undergraduate students

Teaching Assistantship: August - September 2019, Indian Institute of Science, India.

Course CD215 - Laboratory course in chemistry for integrated PhD students

List of Research Publications:

1. **Mondal, B.**; Acharyya, K.; Howlader, P.; Mukherjee, P. S., *Molecular cage impregnated palladium nanoparticles: efficient, additive-free heterogeneous catalysts for cyanation of aryl halides.* **J. Am. Chem. Soc.** **2016**, **138** (5), 1709-1716.
2. **Mondal, B.**; Ghosh, A. K.; Mukherjee, P. S., *Reversible Multistimuli Switching of a Spiropyran-Functionalized Organic Cage in Solid and Solution.* **J. Org. Chem.** **2017**, **82** (15), 7783-7790.

3. **Mondal, B.;** Mukherjee, P. S., *Cage Encapsulated Gold Nanoparticles as Heterogeneous Photocatalyst for Facile and Selective Reduction of Nitroarenes to Azo Compounds.* **J. Am. Chem. Soc.** 2018, **140** (39), 12592-12601.
4. Mondal, B.; **Mondal, B.;** Pal, K.; Varghese, B.; Ghosh, S., *An electron-poor dimolybdenum triple-decker with a puckered [B₄Ru₂] bridging ring is an oblate-closo cluster.* **Chem. Commun.** 2015, **51** (18), 3828-3831.
5. Howlader, P.; **Mondal, B.;** Purba, P. C.; Zangrando, E.; Mukherjee, P. S., *Self-Assembled Pd(II) Barrels as Containers for Transient Merocyanine Form and Reverse Thermochromism of Spiropyran.* **J. Am. Chem. Soc.** 2018, **140** (25), 7952-7960.
6. Modak, R.; **Mondal, B.;** Howlader, P.; Mukherjee, P. S., *Self-assembly of a "Cationic-Cage" via formation of Ag-carbene bonds followed by imine condensation.* **Chem. Commun.** 2019, **55**, 6711-6714.
7. Anju, V.; Barik, S. K.; **Mondal, B.;** Ramkumar, V.; Ghosh, S., *Metallaboranes from Metal Carbonyl Compounds and Their Utilization as Catalysts for Alkyne Cyclotrimerization.* **ChemPlusChem** 2014, **79** (4), 546-551.
8. Acharyya, K.; Chowdhury, A.; **Mondal, B.;** Chakraborty, S.; Mukherjee, P. S., *Building Block Dependent Morphology Modulation of Cage Nanoparticles and Recognition of Nitroaromatics.* **Chem.-Eur. J.** 2017, **23** (35), 8482-8490.
9. Yuvaraj, K.; Roy, D. K.; Anju, V.; **Mondal, B.;** Varghese, B.; Ghosh, S., *Mixed-metal chalcogenide tetrahedral clusters with an exo-polyhedral metal fragment.* **Dalton Trans.** 2014, **43** (45), 17184-17190.
10. Yuvaraj, K.; Roy, D. K.; Arivazhagan, C.; **Mondal, B.;** Ghosh, S., *Chemistry of early and late transition metallaboranes: synthesis and structural characterization of periodinated dimolybdaborane [(Cp*Mo)₂B₄H₃I₅].* **Pure Appl. Chem.** 2015, **87** (2), 195-204.

Conferences attended:

1. Poster Presentation at 14th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC-2019), June 2 – 6, 2019, Lecce, Italy.
2. Poster Presentation at 16th CRSI National Symposium in Chemistry (NSC-16), December 7 – 9, 2014, IIT Bombay, India.