

Dr. Minakshi Jha



Faculty of Chemistry

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Educational Background:

Ph.D., University of Mumbai.

Professional Experience:

Post-doc, Homi Bhabha National Institute in collaboration with BARC, Mumbai (2021-2024).

Assistant Professor, VESIT Mumbai (2019- 2021).

Research Interest:

The research focuses on cutting-edge areas under the broad umbrella of optical and functional materials for healthcare and energy applications. In particular, we design upconverting and downshifting nanophosphors, tune their luminescence property, and explore their potential in various dimensions including cytotoxicity, bioimaging, optical thermometry, luminescence enhancement, thermoluminescence, white-light emission, and photo-switching behavior for solar cell applications. Additionally, our group is keenly interested in structure-property correlations of inorganic materials based on high-pressure experimental studies to reveal novel functionalities.

Publications:

[One Phosphor, Many Possibilities: A nonlanthanoid host for optical thermometry, plasmon-enhanced upconversion luminescence and stable photoswitching performance](#)

Minakshi Jha* et al. ACS Appl. Opt. Mater. 2024, 2, 10, 2101–2117

[β-NaBiF₄:Yb³⁺,Er³⁺:Green synthesis, crystal structure, upconversion luminescence and optical thermometry](#)

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