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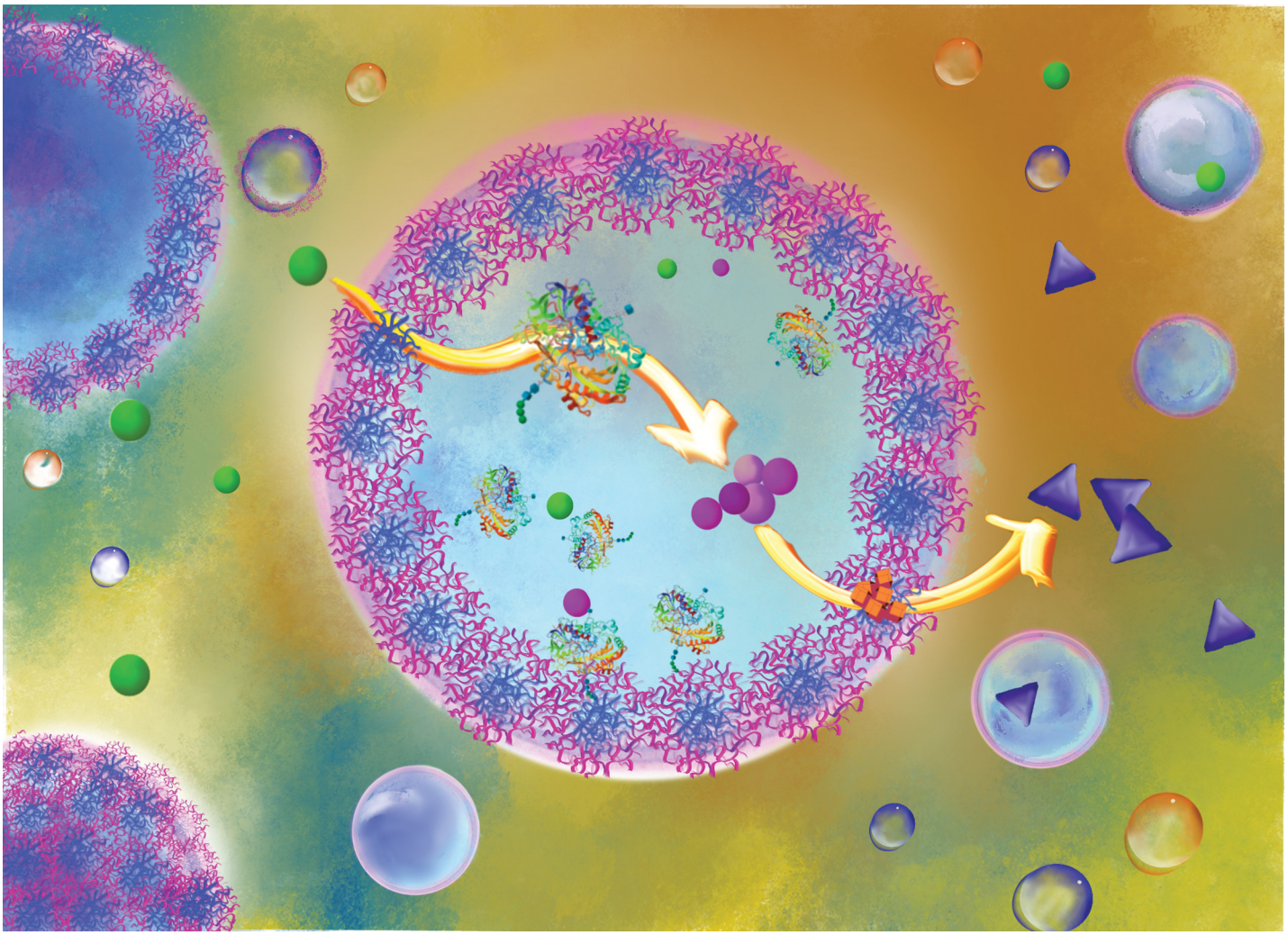

**Showcasing research from Professor Bijay P. Tripathi's laboratory, Department of Materials Science & Engineering, Indian Institute of Technology Delhi, New Delhi, India.**

Modular coupling of iron nanozymes and natural enzymes in responsive microgel reactors for enhanced cascade catalysis

$Fe_3O_4$ nanozyme-loaded poly(*N*-isopropylacrylamide-*co*-serine) microgels were assembled at oil–water interfaces to generate functional Pickering microcapsules. The iron nanozyme embedded within the microgel membrane worked in concert with enzymes sequestered in the aqueous core, creating a confined yet highly interactive reaction environment. This engineered spatial compartmentalization intensified cascade efficiency, establishing a responsive soft-matter reactor that unites structural precision with catalytic synergy for enhanced chemo-enzymatic transformations.

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## As featured in:


See Divya Gaur and Bijay P. Tripathi, *Soft Matter*, 2026, **22**, 2364.

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