



Showcasing research from Professor Libo Zhang's laboratory, State Key Laboratory of Green Pesticide, Guizhou University, Guiyang 550025, China.

Spatial organization of an enzyme cascade in a Ni-ZIF-8 framework for efficient sugar nucleotide synthesis

Inspired by natural metabolons, a dual-enzyme cascade is precisely anchored within a Ni-ZIF-8 framework *via* specific metal-histidine affinity. This biomimetic spatial organization creates a substrate-channelling-like microenvironment, boosting cascade efficiency by 4.4-fold and enabling near-quantitative conversion under mild conditions. This sustainable nano-reactor exemplifies green chemistry by minimizing intermediate diffusion, enhancing stability, and reducing reliance on costly substrates.

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See Jie Hong, Libo Zhang *et al.*, *Green Chem.*, 2026, **28**, 4474.