

Special Issue

Fabrication of Noble Metal-Based Heterogeneous Nanomaterials: Toward High-Efficiency Catalysis

Message from the Guest Editor

The Special Issue entitled “Fabrication of Noble Metal-Based Heterogeneous Nanomaterials: Toward High-Efficiency Catalysis” calls for papers on the design, synthesis and catalytic use of noble-metal nanostructures—hollow, core-shell, yolk-shell, alloy, high-entropy-alloy, metal-semiconductor and single-atom configurations—and their integration with OD–3D supports (oxide dots, CNTs, graphene, MOFs, mesoporous silica/carbon) for plasmon-enhanced photocatalysis, electrocatalysis (HER, OER, ORR, CO₂RR), fuel cells and thermocatalytic reactions. Emphasis is placed on morphology-, composition- and interface-directed activity/selectivity/stability, advanced operando characterization, theoretical calculations, and frontier topics such as single-atom catalysis. Original research, reviews, short communications and perspectives are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (5 March 2026)



Catalysts

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Impact Factor 4.0
CiteScore 7.6



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