

Special Issue

Transition-Metal-Based Nanoparticles: Synthesis, Properties and Applications

Message from the Guest Editors

This Special Issue aims to highlight the latest advances in the synthesis, characterization, functionalization and theoretical understanding of transition metal nanoparticles. Emphasis will be placed on contributions that elucidate structure–property relationships and their implications for applications in energy, environment, health and information technologies. The submission of studies involving computational modeling, mechanistic insights, toxicity assessments and sustainable synthesis routes is also highly encouraged.

- Biomedical applications: antimicrobial, anticancer, tissue engineering, biosensing and drug delivery;
- Catalysis: heterogeneous catalysis, photocatalysis and electrocatalysis;
- Energy storage and conversion: batteries, capacitors and supercapacitors;
- Renewable energy: fuel cells, hydrogen evolution and solar-driven water splitting;
- Environmental applications: remediation, pollutant degradation and CO₂ reduction;
- Sensors and detectors: chemical, biological and environmental sensing;
- Magnetic nanomaterials: spintronic, magnetic resonance and high-density data storage;
- Plasmonic and optics: localized surface plasmon resonance, nonlinear optics and photonic devices.

Guest Editors

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Message from the Editor-in-Chief

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