Journal of Nanomaterials

Special Issue on

Advances in Nanocrystals for Energy Conversation and Environmental Remediation

CALL FOR PAPERS

Nanocrystals with specific morphologies show unique surface and structural properties, thus receiving extensive attention in the areas of catalysis, magnetics, and plasmonics. Rational design of nanocrystals for enhanced physical and chemical functionalities still remains a grand challenge for energy and environmental applications. In the past decade, significant progress has been made for the fundamental understanding on synergistic nanocrystals in terms of synthetic protocols, growing mechanisms, interfacial electronic configuration, and applications in energy conversion and environmental remediation.

This special issue aims to provide recent advances in synthesis and characterization of nanocrystals that have unique catalytic, magnetic, and plasmonic properties favorable for harvesting and storing clean energy. This issue also focuses on fabricating such materials to control environment pollution.

Potential topics include but are not limited to the following:

- Synthesis and characterization of novel metallic, bimetallic, and multimetallic nanocrystals
- Lattice engineered techniques for precise control of bimetallic and multimetallic nanocrystals for synergistic catalysis using wet chemistry, chemical vapor deposition, and so forth
- Application of nanocrystals in catalysis, magnetics, and plasmonics and exploring underlying mechanisms and kinetics during energy and environmental applications
- Strain engineering of bi- or multimetallic nanocrystals for biomass conversion, water splitting, and other energy conversion
- Bimetallic nanocrystals for advanced oxidation catalysis in air and water pollution control

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Papers are published upon acceptance, regardless of the Special Issue publication date.

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