

Special Issue

Molecular Insights into Emerging Nanomaterials and Their Environmental Implications

Message from the Guest Editor

The advent of emerging nanomaterials has revolutionized numerous fields, including electronics, medicine, and environmental remediation. However, their increasing use raises critical questions regarding their environmental implications and potential risks. This Special Issue provides molecular insights into the interactions of these nanomaterials with biological and ecological systems. Utilizing advanced analytical techniques, we focus on the physicochemical properties of emerging nanomaterials and their influence on environmental behavior, including mobility, bioaccumulation, and toxicity. The nanoscale dimensions and surface characteristics of these materials significantly affect their reactivity and interaction mechanisms in various environmental matrices, which should be demonstrated. In addition, we look forward to discussing the impact of molecular interaction on ecosystem health and sustainability and emphasize the need to establish a sound risk assessment framework. By integrating molecular-level insights with ecological considerations, this research aims to inform the development of safer nanomaterials and guide regulatory policies.

Guest Editor

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