

Special Issue on **Synthesis, Characterization, and Applications of Bioinorganic-Based Nanomaterials for Environmental Pollution Hazards**

CALL FOR PAPERS

Environmental pollution is a vital issue to be addressed in today's world. In addition to sensing and degrading hazardous molecules in the atmosphere, it is crucial to avoid pollution of air, water, and soil by toxic materials, such as colors used in the paper, plastic, and textile industries, petrochemicals, and byproducts of medicine manufacturing. Given that nanotechnology-based materials have been proven to improve characteristics and effectiveness, they are particularly well suited for such operations due to their large surface area-to-volume ratio, causing them to be more reactive.

To detect and degrade environmental pollution, innovative methods are required. Due to their distinct physical and chemical properties, metal, oxide, and carbon-based nanomaterials perform a variety of activities. The role of chemical composition, surface active sites, and physio-chemical properties of materials, as well as current breakthroughs and the future direction of environmental research, should be highlighted. Sensing, adsorption, and absorption are all made easier using functionalized nanomaterials. Advanced materials that are innovative have a direct and positive impact on economic growth, the environment, and human quality of life. Advanced materials are used to improve processes and products, and they provide a number of possibilities for boosting sustainability.

The aim of this Special Issue is to collect the latest research on the synthesis, characterization, and application of bioinorganic-based nanomaterials for environmental pollution. We welcome original research and review articles addressing the current state of the art in the creation of multifunctional and hybrid composite materials for energy and environmental applications, as well as future challenges.

Potential topics include but are not limited to the following:

- ▶ Metal-based nanomaterials for photocatalytic process
- ▶ Techniques for synthesizing organic and inorganic nanomaterials
- ▶ Biodegradation of dyes and petroleum products
- ▶ Carbon-based materials for adsorption
- ▶ Environmentally friendly nanotechnologies for pollution control
- ▶ Advanced nano-techniques for hazardous materials
- ▶ Mechanisms of waste treatment
- ▶ Nano-based bioremediation processes

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=760669>.

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

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