# Special Issue

# Preparation, Characterization and Application of Functional Nanomaterials

### Message from the Guest Editors

The functionalization of nanomaterials enhances their stability, functionality, biocompatibility, and electrical, thermal, and mechanical properties, rendering them unique for a variety of applications. Due to this, functional nanomaterials are promising for applications in many fields ranging from catalysis, sensors (chemical, bio, gas, optical, etc.), water electrolyzers, energy storage, water treatment, and nanoscale electronic devices, among others. As a result, advanced synthetic and controllable characterization methods have been developed to evaluate the suitability of functional materials for a wide range of applications. These advances have played a key role in the agricultural, environmental, water, and technological sectors, among others. This Special Issue aims to highlight developments in the preparation, characterization, and application of functional nanomaterials in various research fields. This Special Issue will cover (but will not be limited to) the following topics and their diverse applications: Polymer-based nanomaterials; Carbon-based nanomaterials; Metal-based nanomaterials; Silicon nanomaterials; Dendrimers; Nanocomposites.

### Guest Editors


Dr. Tshimangadzo Munonde

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### Deadline for manuscript submissions

closed (20 December 2025)


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# About the Journal

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Editor-in-Chief

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