Special Issue

Green Synthesis of Plant-Based Nanoparticles: Influence of Physicochemical Factors on Formation and Stability

Message from the Guest Editors

The sustainable and eco-friendly synthesis of nanoparticles using plant extracts has emerged as a promising approach in nanotechnology, offering advantages such as biocompatibility, reduced toxicity, and cost-effectiveness compared with conventional chemical or physical methods. However, the characteristics and properties of the resulting nanomaterials are highly dependent on several experimental parameters. This Special Issue aims to highlight recent advances in the green synthesis of nanoparticles using various plant extracts, with a particular focus on how factors such as pH, molar ratios of precursors, reaction time, and temperature influence particle formation, morphology, stability, and biological activity. Contributions addressing systematic optimization, mechanistic insights, and structure–function relationships are especially encouraged. Both original research articles and comprehensive reviews are welcome. By gathering the current knowledge in this area, the Special Issue intends to provide valuable perspectives on tailoring plant-based nanoparticles for biomedical, environmental, and technological applications, thus advancing the field of green nanotechnology.

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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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