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Biosynthesis and Green Synthesis of Nanomaterials: New Methodologies and Results

Guest Editor:

Prof. Dr. Juan Manuel López Romero

Department of Organic Chemistry, Faculty of Sciences, University of Málaga, 29071 Málaga, Spain

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Message from the Guest Editor

The biosynthesis of nanomaterials has recently attracted interest as a new approach to the development of green nanomanufacturing. The biosynthesis processes are environmentally friendly, cost-effective, and easy to be scaled up, and can also bring biocompatibility to the nanomaterials.

The use of living organisms, such as bacteria, fungi, molds, viruses or microalgae; their components or extracts; and plant extracts or biomolecules (enzymes, peptides, polysaccharides, and poly-amino acids) as catalysts for the sustainable production of nanomaterials, mainly as reducing agents, has significantly expanded during the last few years, and a variety of fabricated nanomaterials have been developed. Nanoparticles made from copper, manganese, selenium, cobalt, silver, gold, platinum, zirconium, palladium, iron, cadmium, yttrium, titanium oxides, zinc oxides, carbon dots, tellurium nanorods or metal sulfide have been prepared.

This Special Issue provides insight into the biosynthesis and green synthesis of nanomaterials, together with their chemical, biological, therapeutic, and diagnostic applications.



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Special Issue



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Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science,
University of Birmingham,
Birmingham B15 2TT, UK

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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Nanomaterials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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