Special Issue

Synthesis, Characterization and Upscaling of Nanomaterials

Message from the Guest Editors

Several methods have been employed for the production of nanomaterials, which can be classified into two categories: top-down and bottom-up. Bottom-up techniques start from the smallest units, such as atoms or molecules, to produce nanoparticles, and top-down techniques start from the larger unit, the bulk, to produce nanoparticles through size reduction. Both techniques have advantages and disadvantages, but top-down approaches are the most reliable when considering the upscaling of certain nanomaterials. This Special Issue intends to present research on different nanomaterial production approaches for various applications and the most effective methods for upscaling. Authors are encouraged to submit papers on the following topics:

- The synthesis and characterization of nanomaterials.
- Nanomaterial synthesis approaches for upscaling.
- Nanomaterial applications—synthesis, characterization, and upscaling.
- Using AI to understanding how to upscale the synthesis process of nanomaterials.

See more information in https://www.mdpi.com/si/239003

Guest Editors

Dr. Ioana Dorina Vlaicu
National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Romania

Dr. Andrei Cristian Kuncser
National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Romania

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Nanomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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