

Special Issue

Recent Advancements in Mesoporous Nanomaterials: Synthesis, Characterization and Catalytic Applications

Message from the Guest Editor

Recent advances in nanomaterials synthesis are outstanding in terms of the possibility to have better control on size, morphology and structure. Depending on these properties, nanomaterials have led to many interesting applications in catalysis because of their special physical and chemical properties compared with bulk materials. This Special Issue will focus on recent advances in mesoporous nanomaterials: synthesis, characterization and catalytic applications. A special emphasis will be given to mesoporous nanomaterials such as modified oxide supports, metal-incorporated oxide supports, transition metals oxides, composites and hybrid materials. A variety of novel synthetic strategies, advanced characterization techniques and new catalytically active species that may modify and justify the activity and selectivity of mesoporous oxides in catalytic reactions of interest performed in gas or liquid phase can be directions of interest. The interaction between active sites and support with their electronic structure modulation with a significant promoting effect on activity and selectivity, can be another topic of interest.

Guest Editor

Dr. Viorica Pârvulescu

Department Chemistry of Surface and Catalysis, "Ilie Murgulescu"
Institute of Physical Chemistry, Romanian Academy, 060021 Bucharest,
Romania

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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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