

Special Issue

Low-Dimensional Nanocarbon Multifunctional Composites

Message from the Guest Editors

Over the past few decades, carbon-based nanomaterials and, specifically, low-dimensional nanocarbon allotropes have revolutionized the field of materials science. The properties of carbon-based nanomaterials depend on their 3D nano-architecture. Differently hybridized carbon atoms are capable of forming graphite, diamond, graphene, carbyne chains, and many other specific allotropes. Each carbon allotrope has notably different structural, mechanical, and electronic properties. Low-dimensional nanocarbon allotropes represent promising building blocks for both the nano-hybrid systems and for macroscopic assembly of emerging multifunctional composites, as they possess a unique nano-architecture, a set of chemical and physical properties, and abundant functionalities that are of great interest for high-end applications in the emerging fields of nanoscience and nanotechnology. This Special Issue will focus on the most recent advances in synthesis and nano-hybridization techniques, advanced characterization, data-driven predictive designing, and high-end applications of low-dimensional nanocarbon-based multifunctional composites as well as nanohybrid systems.

Guest Editors

Prof. Dr. Oguz Gulseren

Dr. Bergoi Ibarlucea

Prof. Dr. Haroldo Cavalcanti Pinto

Dr. Alexander Lukin

Dr. Mariya Aleksandrova

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

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About the Journal

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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