Special Issue

Nanomaterials in Metal–Organic Frameworks: Toward the Establishment of Multifunctional Applications and Advanced Materials

Message from the Guest Editors

One of the most compelling illustrations of structure–property relationships at the nanoscale is found in metal–organic frameworks (MOFs), where the precise arrangement of molecular building units gives rise to exceptional porosity and functionality. One of the major challenges in this field is achieving precise control over the size, distribution, and stability of functional nanodomains within MOF architectures, and understanding the synergistic effects that arise from their integration. The present Special Issue of *Nanomaterials* aims to demonstrate the current state of the art in the development and application of MOF-based nanomaterials, a field that has expanded rapidly since the late 1990s and continues to evolve through interdisciplinary innovation. MOFs represent a unique platform for constructing advanced materials with tailored properties, effectively bridging the gap between molecular chemistry, nanoscience, and materials engineering. In this Special Issue, we welcome contributions from leading research groups to provide a comprehensive and balanced overview of the latest advancements and future directions in this dynamic discipline.

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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