Special Issue

Nanoscale Metal–Organic Frameworks for Cancer Therapy

Message from the Guest Editor

In recent years, nanoscale metal–organic frameworks (NMOFs) have emerged amongst the most promising platforms in the field of cancer nanomedicine. Constructed from metal ions or clusters coordinated in relation to organic ligands, NMOFs offer unique advantages such as tunable porosity, high surface area, multifunctional capabilities, and ease of functionalization. These properties allow for the precise delivery of therapeutic agents, controlled drug release, imaging-guided therapy, and synergistic treatment approaches—including chemotherapy, photodynamic therapy (PDT), photothermal therapy (PTT), immunotherapy, and chemodynamic therapy (CDT). This Special Issue aims to highlight the latest developments and cutting-edge research in the design, synthesis, and biomedical applications of NMOFs for cancer therapy. It will cover novel strategies for enhancing biocompatibility, tumor-targeting efficiency, and stimuli-responsiveness, and overcoming physiological barriers in the tumor microenvironment. Additionally, contributions focusing on clinical translation challenges, toxicity evaluation, and multifunctional theranostic systems are encouraged.

Guest Editor

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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.

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