Special Issue

Nanomaterials for Biomedical and Environmental Applications

Message from the Guest Editors

Synthetic bola-amphiphiles (BAs) are molecules mimicking archaeal membrane lipids. Traditionally, BAs bear two or more, equal or different, polar head groups linked by one or more hydrophobic chains. BAs possess nonpareil colloidal properties able to self-assemble in solution in nanosized micelles that are capable of entrapping drugs, thus enhancing their solubility and stability or reducing toxicity. These properties could depend on complex and different interactions among hydrophilic or polar heads and on different hydrophobic, van der Waals, and π–π interactions between chains. Although reviews exist summarizing the synthetic methods to prepare BAs, their self-assembling ability, their use as pore-forming and electron-conducting materials, drug delivery systems, hydrogels constituents, and cell membrane-active compounds effective against both pathogens and cancer, are still insufficiently explored. The goal of this Special Issue is to collect contributions, including full articles, reviews, featured articles, communications, and reports, on the development of BAs in the biomedical and environmental fields.

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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

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