



Advances in Janus Nanoparticles: Synthesis, Characterization and Applications

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Deadline for manuscript
submissions:

closed (30 November 2020)

Message from the Guest Editors

Janus nanoparticles have attracted increasing attention in the past two decades in the field of nanoscience due to their interesting properties, for academic as well as for technological reasons. Janus nanoparticles (JNPs) are defined as amphiphilic colloid-sized particles with two regions of different surface chemical composition. Due to their anisotropic architecture, these objects have been used successfully for catalytic or sensing applications, to stabilize Pickering emulsions and for drug delivery or regenerative medicine. More recently, JNPs were used as a compatibilizer for immiscible polymer blends. There are still remaining questions regarding their synthesis and their potential applications. One main issue is the synthesis of JNPs with the ability to control their geometry and surface chemistry and to scale up their production at an industrial scale. Another issue is to characterize their role as a compatibilizer in polymer blends and to evaluate the influence of their interfacial localization for composites final properties.





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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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