

Special Issue

Characterization and Interaction of Nanoparticles in Biological Matrices

Message from the Guest Editors

Nanoparticles show considerable potential for applications in many technological sectors, including pharmaceuticals, medical diagnostics, cosmetics, and food technology. Either purposefully or unintentionally, nanoparticles will eventually come into contact with physiological and biological matrices, such as intra- and extracellular fluids and blood plasma, which themselves are complex colloidal media with a multitude of components that readily interact with nanoparticles. Accordingly, the physicochemical properties of the particles, such as physical stability and chemical composition, may be affected, which impacts functionality and integrity and may result in unintended adverse reactions. Owing to such interactions, the behavior and the characterization of the particle system should not be decoupled from the given physiological/biological matrix. This Special Issue aims to collect studies addressing the characterization of nanoparticles and interactions in such environments. Experimental, theoretical, and computational studies addressing physicochemical factors are most welcome.

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