Special Issue

Polymeric and Organic/Inorganic Hybrid Nano-Vehicles for the Delivery of Multiple Drugs and RNA

Message from the Guest Editor

The combined administration of drugs and RNA has many potential applications in biomedicine for the treatment of genetic disorders and cancer. The general principle of combination therapy is the administration of more than one drug, with an independent mechanism of action, with the aim to enhance the efficiency of the treatment. For an optimal performance, the implementation of such therapies requires the delivery of the correct combination of drugs to a specific cellular target, which minimize undesirable side-effects. In this context, the use of polymeric and organic/inorganic hybrid nanoparticles as nano-vehicles for the codelivery of multiple drugs have emerged as a promising strategy. This Special Issue is open to new advances in the application of polymeric and organic/inorganic hybrid nano-vehicles for multiple drugs and RNA delivery, involving:

- Design and preparation of polymeric or hybrid nanovehicles
- Decoration of the nanoparticles using bio-conjugation technics
- Assessment of the stability, biocompatibility and safety of the nano-vehicles
- Study of the effective delivery of the drugs and RNA in vitro and in vivo

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 nanometerscale 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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