

Special Issue

Multifunctional Polymeric Materials for Drug and Gene Delivery: Design Concepts, Synthesis Strategies and Potential Applications

Message from the Guest Editor

Drug and gene delivery have shown their promise in the treatment of various inherited and acquired diseases, the development of vaccines and tissue regeneration. Safe and efficient drug and gene delivery to target cells and tissues remains a major challenge. The development of clinical reliable drug and gene delivery systems would greatly expedite the translation of drug and gene therapies from bench to bedside. Compared with other counterparts, multifunctional polymeric materials (such as polymers, liposomes, peptides and inorganic nanoparticles), due to their wide availability of starting materials, flexibility in composition and structure, high safety and non-immunogenicity and scalable synthesis, have attracted significant attention for drug and gene delivery during the last three decades. With the recent progress in chemistry, a series of advanced synthesis strategies have been proposed, many new multifunctional polymeric drug and gene delivery materials have been prepared, and the drug and gene delivery efficiency and safety profiles have been substantially improved. Especially, numerous clinical trials are ongoing.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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