

Special Issue

Advances in Supramolecular Assembly: From Bioactive Peptides to Proteins for Drug Delivery and Vaccine Engineering

Message from the Guest Editor

Along with the fast development of novel effective drugs or therapeutic vaccines worldwide, the safe and high-efficient delivery of them into targeted cells or organisms is more challenging for therapeutics. Recently, well-designed peptides or protein assemblies have attracted much attention for drug delivery and vaccine engineering. Peptides or proteins can self-assemble various morphologies such as nanospheres, nanofibers, nanolayers, micelles, and hydrogels, with good biocompatibility, excellent capacity, feasible molecular design modification, and even stimuli responsiveness. Condensing versatile drugs (organic small molecules, peptides, or antigens) into compacted nanoparticles can essentially protect them from enzymatic digestion, overcome biological barriers, and can consequently improve drug delivery efficiency. Contributions providing new insights into the molecular design strategies of subunits and the assembly technologies, to meet the criteria of drug condensation, eliminating degradation, improvement of the cellular uptake, intracellular release, and therapeutic efficiencies, will be encouraged in this Special Issue.

Guest Editor

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