Biomimic Peptide Self-assembled Nanostructures for Biomedical Applications

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Peptides with the specific sequence form certain assemblies like spheres, fibers, micelles and cylinders, etc. So, many research groups have studied on peptide self-assemblies to use them for several biomedical applications. The delicate shape control of peptide assembly is quite difficult, and certain conditions such as a carbon tail at the end of peptide sequence or long peptide sequence, long reaction time and high temperature are demanded to achieve it. Here, we report the facile preraparation of peptide self-assembled nanostructure based on the short peptide sequence and simple assembling conditions including short reaction time and low temperature. Furthermore, we present the biomedical applicatins of peptide self-assembled nanostructures complexed with metal nanoparticles.