

Abstract Submitted  
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**The Assembly of Cyclopeptide-Polymer Conjugates and Block Polymer** NANA ZHAO, Department of Materials Science and Engineering, University of California, BRETT HELMS, Material Sciences Division, Lawrence Berkeley National Laboratory, TING XU, Materials Science and Engineering, Department of Chemistry, University of California, Material Sciences Division, Lawrence Berkeley National Lab — The co-assembly of cyclopeptide-polymer conjugates and block polymer affords a simple route to generate hierarchical structures with molecular level control over the assemblies. By coupling synthetic homopolymer to a preformed cyclic (D-alt-L)-R- octapeptide, a family of coil-ring-coil bioconjugates was synthesized. The controlled self-assembly of the conjugate leads to uniform nanoparticle structures, 2.5-3nm in height and 25- 30nm in diameter. The assembly of blends of cyclopeptide-polymer conjugates and block polymer has been further investigated. The co-assembly of cyclopeptide-polymer conjugates and diblock copolymer provide a base to generate nanoporous materials and improve our understanding in the self-assembly of mutli- component hybrid systems.

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