

588f Mesoporous Calcium Phosphate Nanomaterials

Agnes Ostafin and Stephanie Schmidt

While a variety of synthetic approaches are available to synthesize solid crystalline or amorphous calcium phosphate nanoparticles are available, a reliable method for the synthesis of mesoporous calcium phosphate materials has yet to be established. Such materials have great potential as drug and gene delivery agents, either in the bloodstream or as part of a therapeutic implant, and would be both biocompatible as well as biodegradable. Here we describe a surfactant-based synthesis approach for the formation of mesoporous calcium phosphate nanoparticles and nanorods exhibiting ordered surfactant arrays embedded in amorphous calcium phosphate, mainly of brushite stoichiometry.