

Silica Nanocontainers by Templating of Magnetic Assemblies for Drug Delivery Vehicles

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Novel hollow silica nanoparticles (HSNPs) for drug vehicles were synthesized using magnetic assemblies as templates. The cavity core was obtained by injection of hydrochloride and calcination at a high temperature. Doxorubicin was used as a model drug and loaded into the HSNPs. To overcome fast drug release, cationic surface charge-modified and PEGylated HSNPs were prepared and investigated. Sustained drug release from cationic surface charge-modified and PEGylated HSNPs was demonstrated.