

Supporting Information

Cytosine-phosphodiester-Guanine Oligodeoxynucleotide (CpG ODN)-Capped Hollow Mesoporous Silica Particles for Enzyme-Triggered Drug Delivery

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Preparation of hollow mesoporous spheres (HMS) particles:

Preparation of iron precursor: 1 ml of $\text{Fe}_3\text{Cl}_3 \cdot 6\text{H}_2\text{O}$ (3mol/l), 3 ml of HCl (0.2mol/l) and 296 ml of H_2O were added in a flask. The solution was refluxing for 2 h, followed by evaporating for several hours to get ca. 50 ml of red solution using rotary evaporator.

Preparation of carbon spheres adsorbed with iron precursor: 3 g of glucose and 3 ml of iron precursor were dissolved in 28 ml of H_2O to form a red transparent solution, which was then put in a 50-ml Teflon-sealed autoclave and maintained at 170 °C for 6 h. The products were isolated by centrifugation, cleaned by four cycles of centrifugation/washing/redispersion in ethanol, and dried at 100 °C.

Preparation of HMS particles: 0.2 g of carbon spheres adsorbed with iron precursor was dispersed in a solution composed of 200 ml of isopropanol, 40 ml of H_2O , and 6.0 ml of $\text{NH}_3 \cdot \text{H}_2\text{O}$ (28 wt%). After stirring for 30 min, 0.6 ml of a mixture of tetraethoxysilane (TEOS) and *n*-octadecyltrimethoxysilane (C18TMS) with a molar ratio of 4.7 TEOS : 1 C18TMS was added drop-wise with a 1-ml syringe to the reaction mixture under vigorous stirring and subsequently stirred at room temperature for 8 h. The resultant particles were separated by centrifugation, washed by three cycles of centrifugation/washing/redispersion in ethanol, and dried at room temperature for 24 h. Finally, HMS particles were obtained after the calcination of the as-prepared products in air at 550 °C for 6 h, and the reduction in 5% H_2 /95% Ar at 400 °C for 2 h.