Supporting Information

Hydrothermal Synthesis of Mesoporous Silica Spheres: the Effect of Cooling Process

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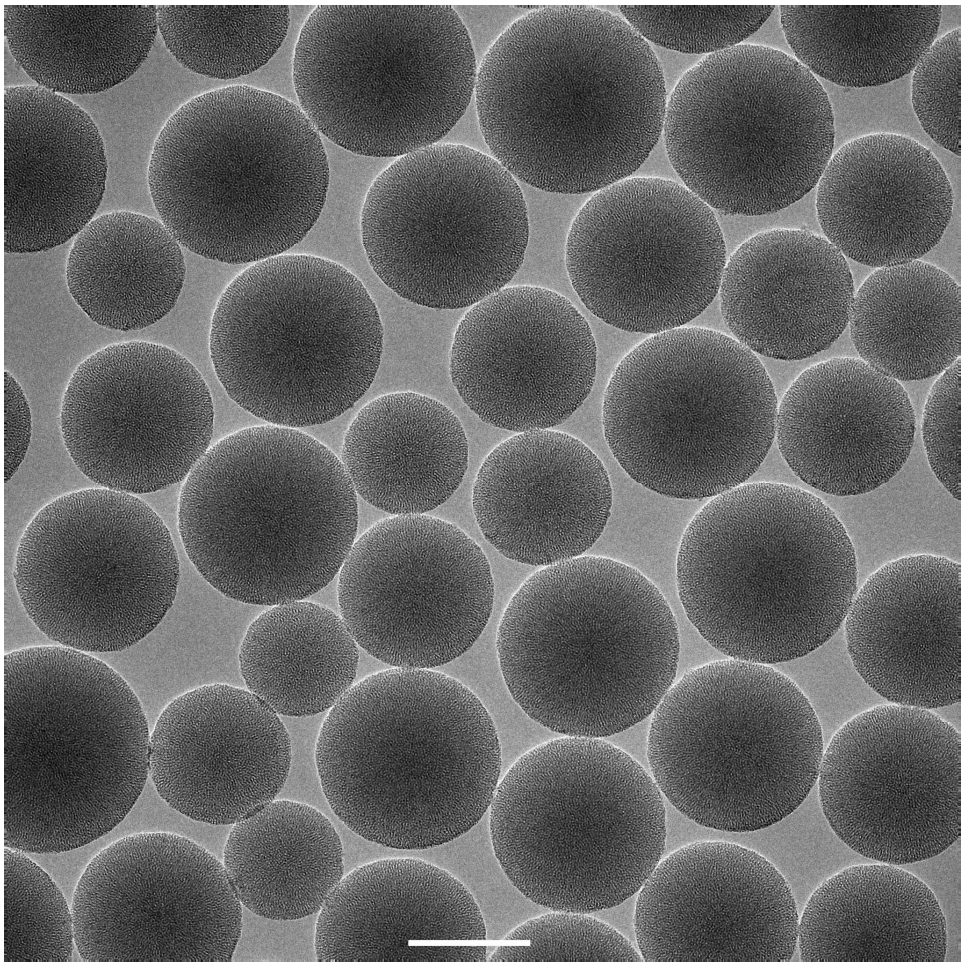

Fig. S1. A HRTEM image (at a low magnification) of the mesoporous silica spheres (after calcination) prepared using Stöber spheres as the starting material. Scale bar=200 nm.

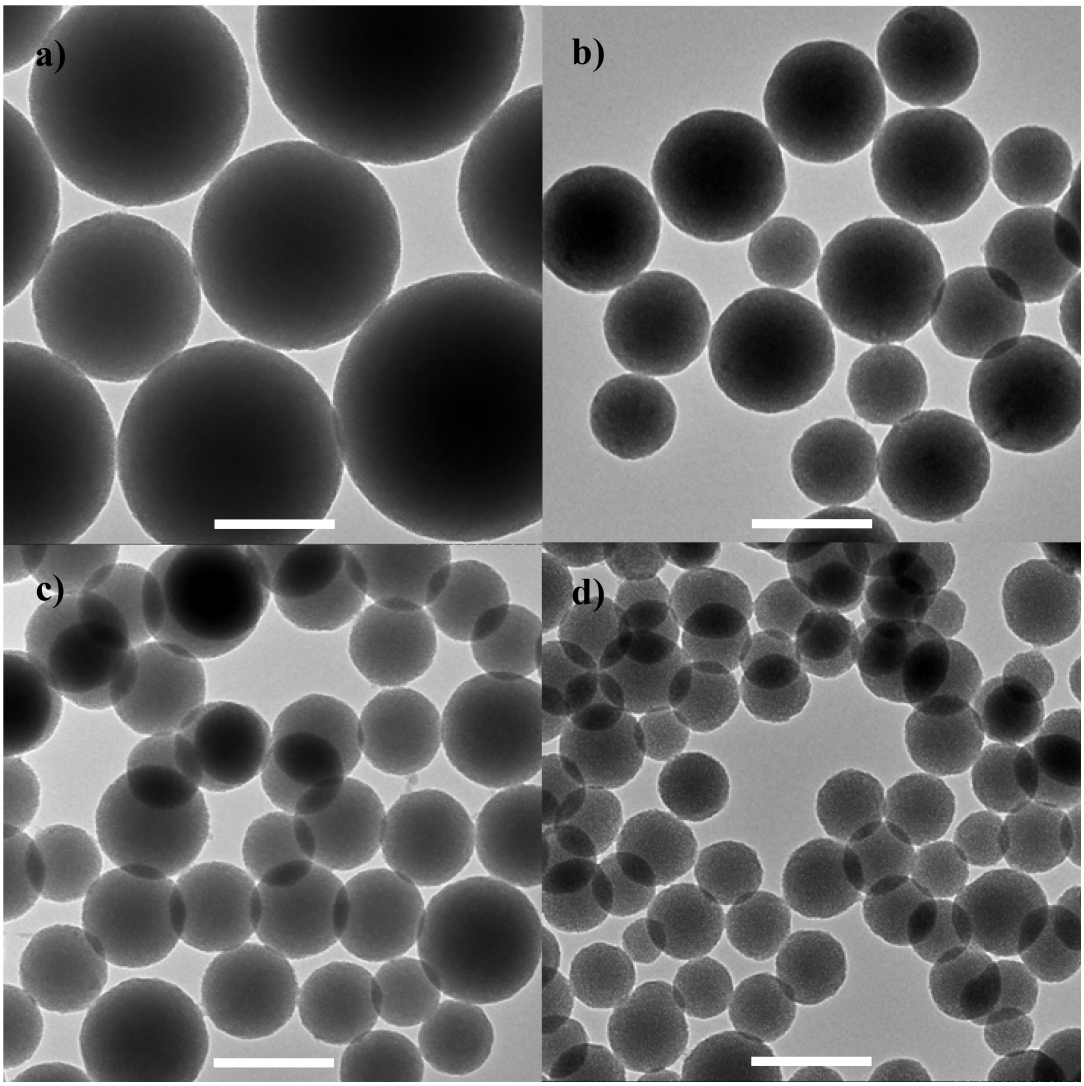

Fig. S2. Different sized $mSiO_2$/CTAB spheres obtained by using different amounts of CTAB: (A) 0.1g, (B) 0.2 g, (C) 0.8 g, (D) 1.2 g. Scale bar=200 nm.

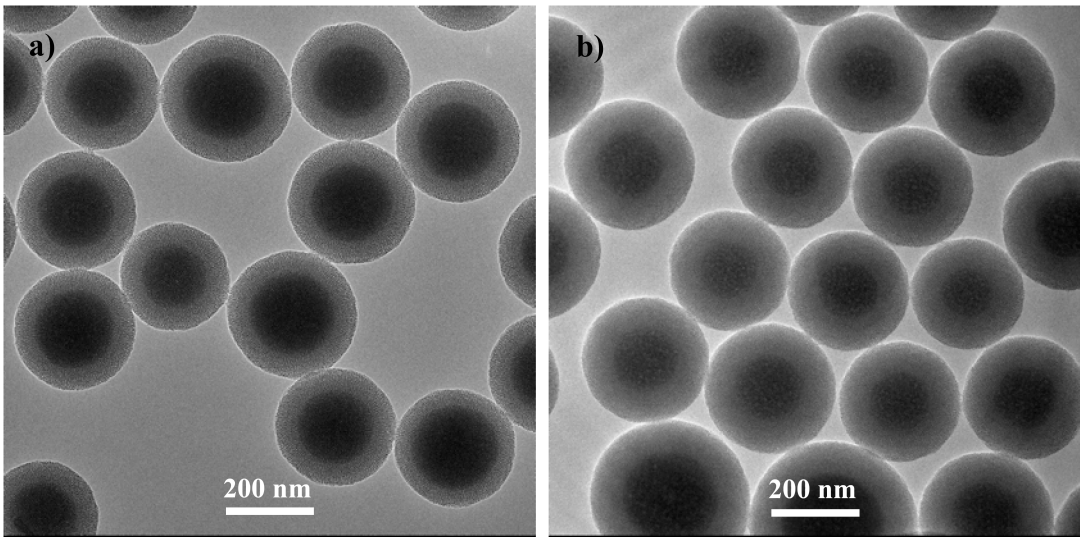

Fig. S3. $sSiO_2@mSiO_2$/CTAB prepared by hydrothermal treating of solid silica for 30 min and 60 min.

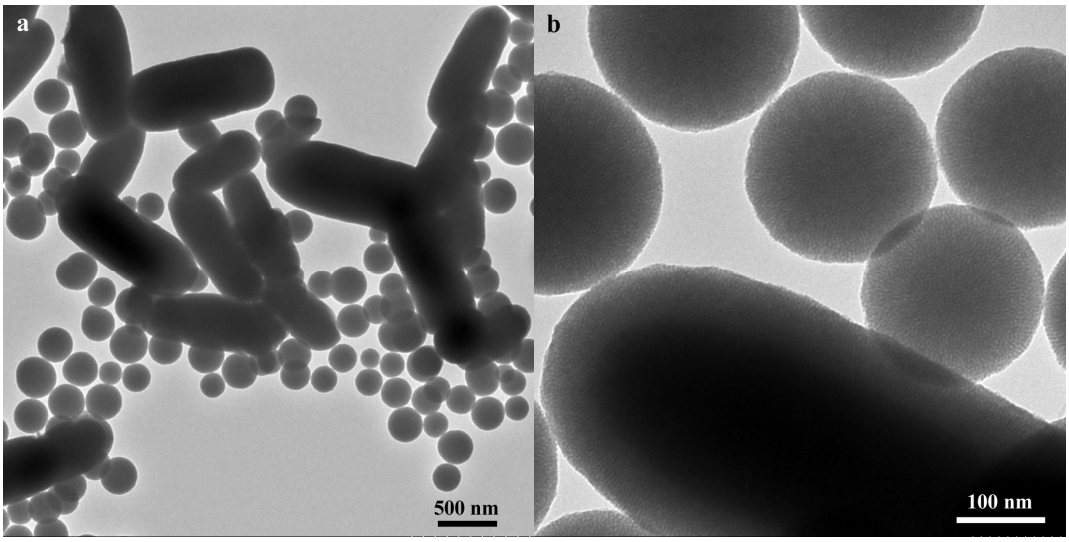

Fig. S4. TEM images (at different magnifications) of a typical intermediate product during the transformation from silica rods to mesoporous silca spheres.

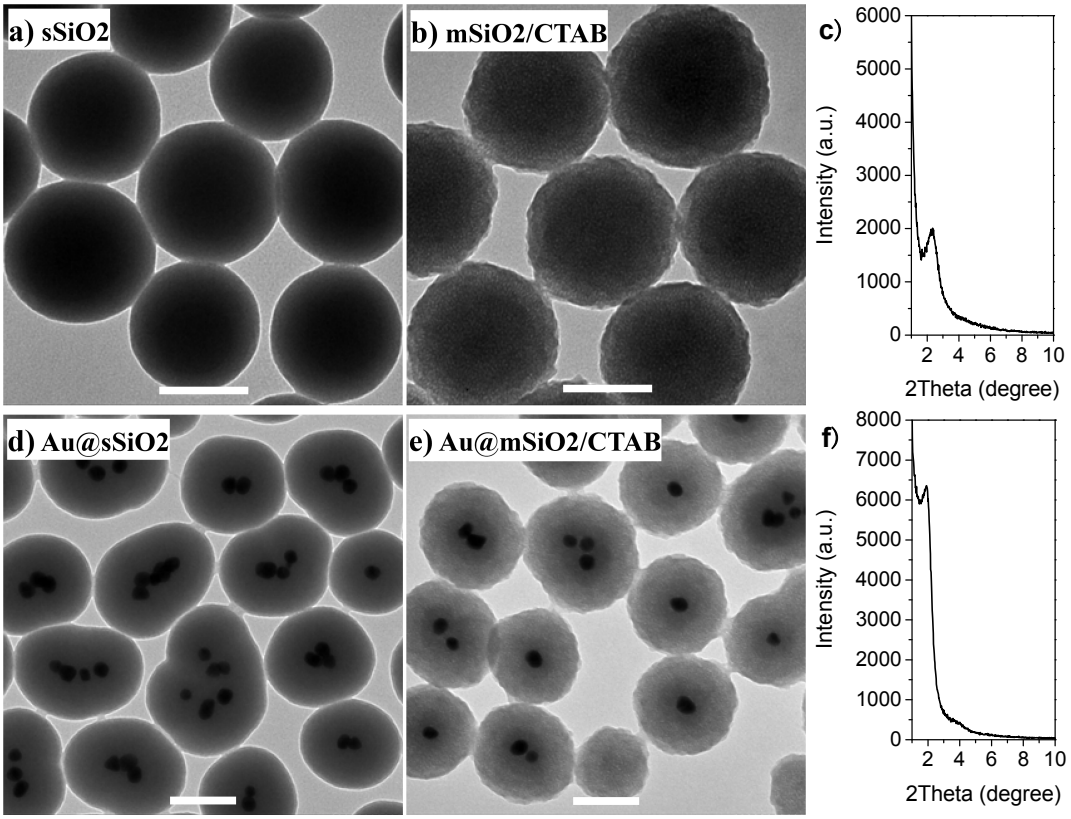

Fig. S5. TEM image of the $sSiO_2$ (a) and $Au@sSiO_2$ spheres (d), and correspondingly derived $mSiO_2$/CTAB (b) and $Au@mSiO_2$/CTAB spheres (e) via pseudomorphic transformation. Scale bar=100 nm. c, f are small-angle XRD patterns of b and e.

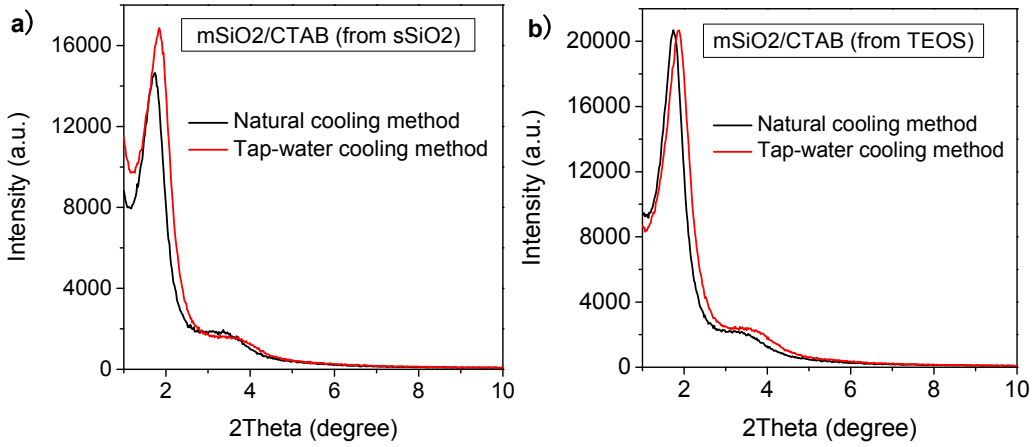

Fig. S6. Small-angle XRD patterns of the mesophase products prepared by using natural cooling method and tap-water cooling method.