Mesoscopically ordered organo-silica and carbon-silica hybrids with uniform morphology by surfactant-assisted self-assembly of organo bis-silanetriols

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Fig. S1 XRD pattern of the as-synthesized hybrid crystals HC. Recorded on a Siemens D500 diffractometer operating at 40 kV, 30 mA, Cu Kα radiation, λ=0.15406 nm.

Fig. S2 Nitrogen adsorption isotherms of the as-synthesized hybrid crystals HC, and carbonized hybrid HC-C. Measured at 77 K on a micromeritics ASAP 2010 analyzer.

Fig. S3 29Si MAS NMR spectrum of the as-synthesized hybrid crystal HC. The single peak at -53.4 ppm corresponds to the uncondensed, completely-hydrolyzed silanetriols. Measured on a Varian Inova 400 spectrometer.
**Fig. S4**  TGA curve of the as-synthesized hybrid crystals HC in oxygen performed on a TA Hi-Res TGA 2950 instrument.

**Fig. S5**  $^{29}$Si MAS NMR of the carbonized particles. The chemical shifts at -80 and -105 ppm are assigned to $T_3$ Si and $Q_4$ Si, respectively. Measured on a Bruker ASX300 spectrometer.
**Fig. S6**  TEM image (A) and the corresponding EELS Carbon- (B), Oxygen- (C), and Silicon-mapping (D) images of the carbonized particles. Taken on a JEOL 2010F microscope operated at 200 kV.