

Supporting Information

Facile Morphology Control during Rapid Fabrication of Nanosized Organosilica Particles

Zhinan Fu^a, Li Li^{a*}, Fen Li^b, Rizwan Ahmed Bhutto^a, Xiaofeng Niu^a, Dianhua Liu^{a*},

Xuhong Guo^{a,c,d*}

^a State Key Laboratory of Chemical Engineering, East China University of Science and Technology, 200237 Shanghai, P.R. China

^b School of Chemistry and Molecular Engineering, East China University of Science and Technology, 200237 Shanghai, P.R. China

^c International Joint Research Center of Green Energy Chemical Engineering, East China University of Science and Technology, 200237 Shanghai, P.R. China

^d Engineering Research Center of Materials Chemical Engineering of Xinjiang Bingtuan, Shihezi University, 832000 Xinjiang, P.R. China

*Correspondence: lili76131@ecust.edu.cn (L. Li); dhliu@ecust.edu.cn (D. H. Liu);

guoxuhong@ecust.edu.cn (X. H. Guo), Tel/Fax: +86-21-64253491.

Table S1 Nitrogen sorption analysis of the golf ball-like silica NPs before and after calcination.

	S_{BET} (m^2/g)	Pore size (nm)	Pore volume (cm^3/g)
Before calcination	2.8	6.85	0.005
After calcination	239.9	6.87	0.412

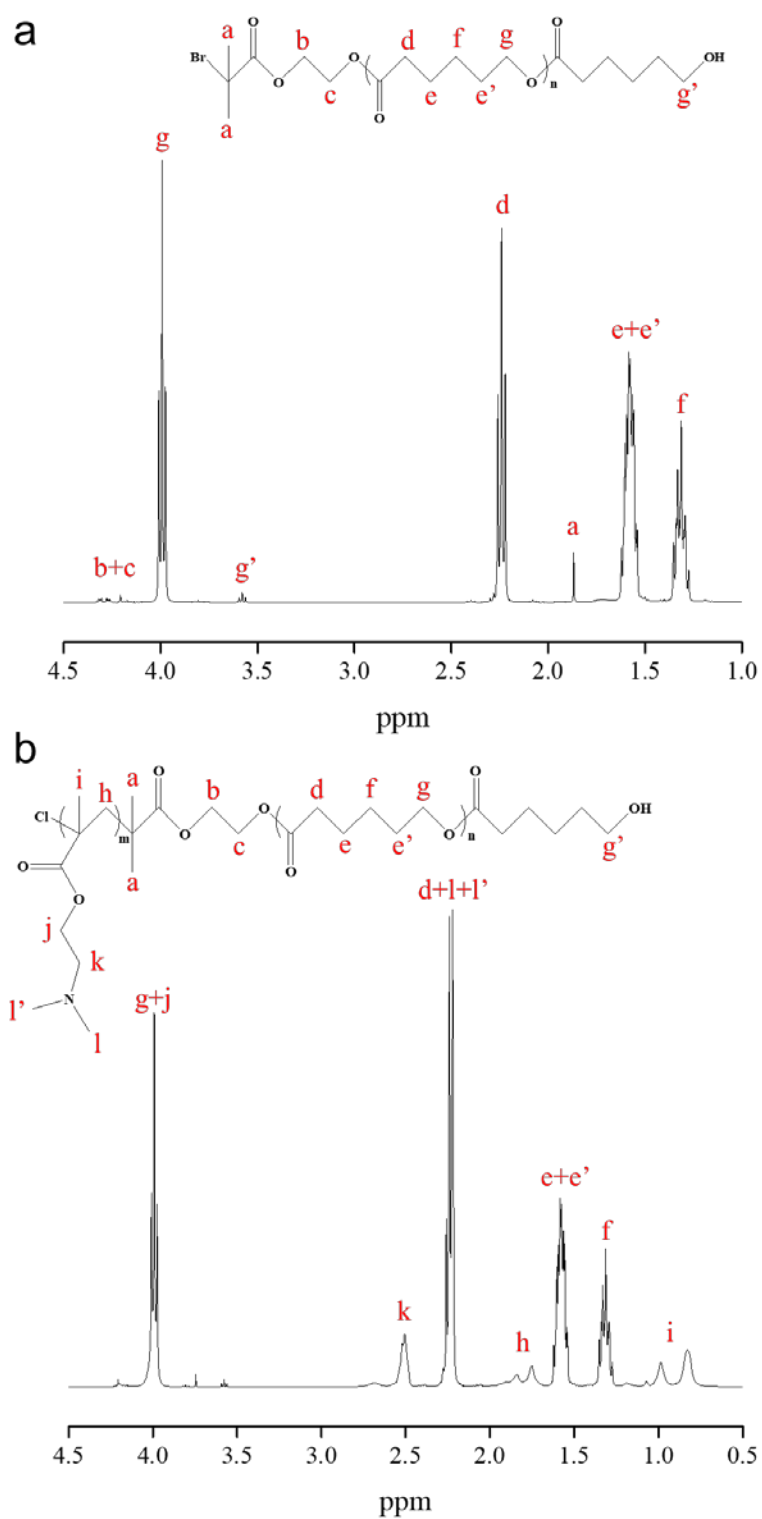


Figure S1. ^1H NMR spectra of (a) PCL-Br and (b) PDMAEMA-*b*-PCL in CDCl_3-d^1 .

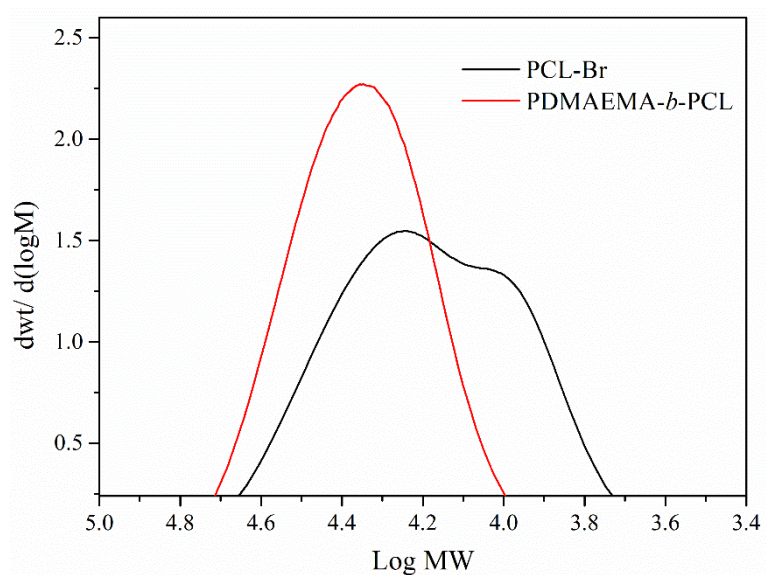


Figure S2. GPC curves of PCL-Br ($M_n = 13442$, $M_w = 17710$, PDI = 1.32) and PDMAEMA-*b*-PCL ($M_n = 21110$, $M_w = 24342$, PDI = 1.15).

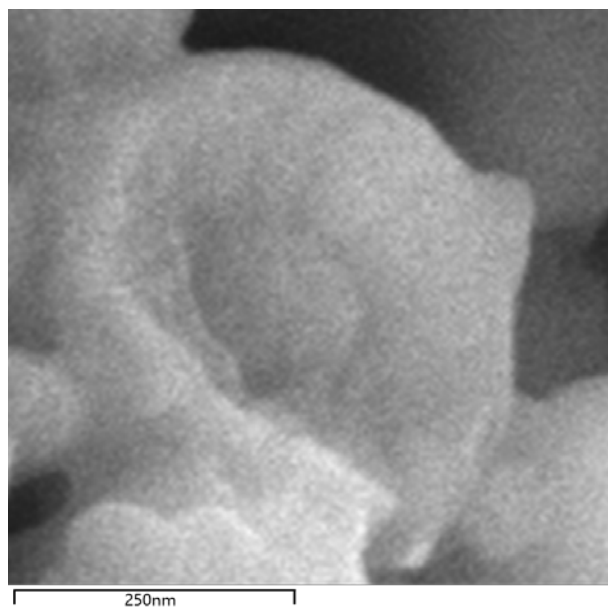


Figure S3. FESEM image of the partially crushed organosilica NPs prepared by using pure VTMS as silicon precursor.

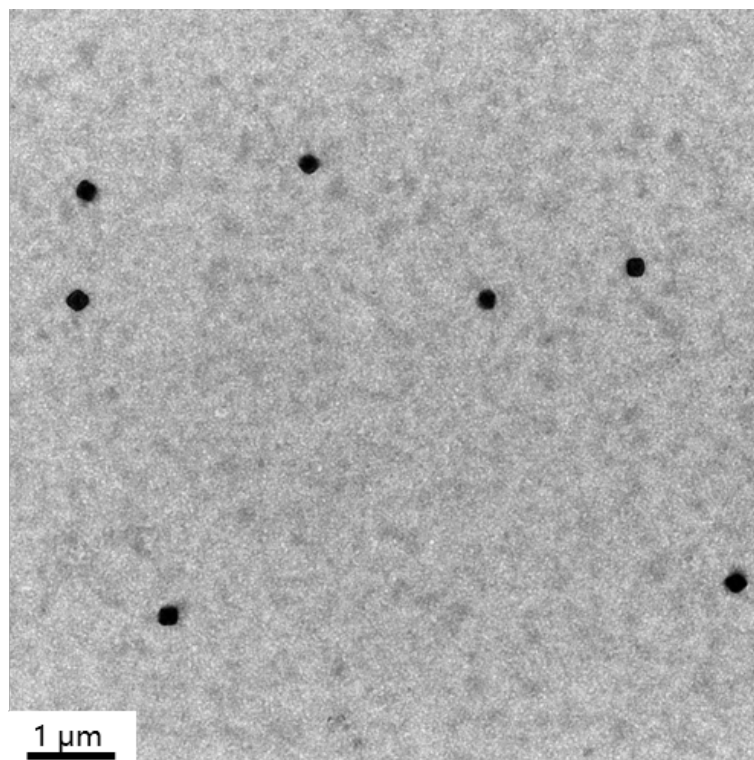


Figure S4. TEM image of the cube-shaped organosilica NPs.

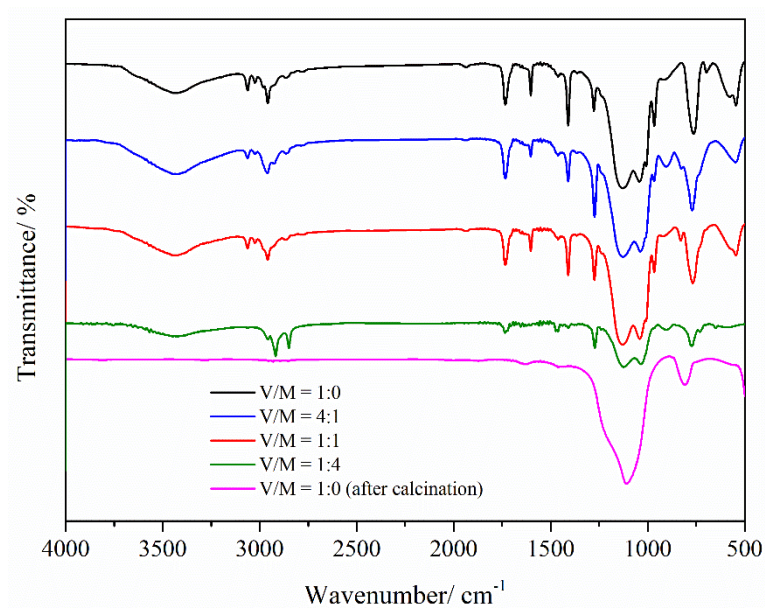


Figure S5. FTIR spectra of the organosilica NPs prepared with different weight ratios of MTMS to VTMS before and after calcination.

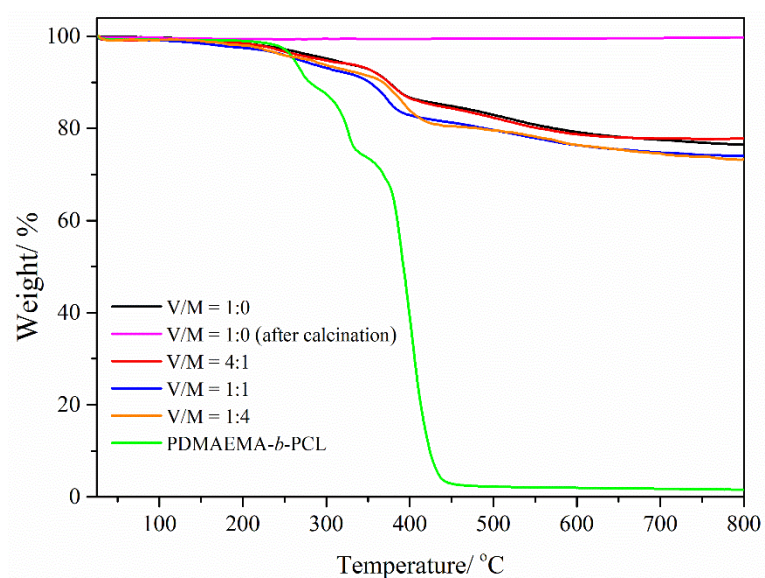


Figure S6. TGA of the PDMAEMA-*b*-PCL and the organosilica NPs prepared with different weight ratios of MTMS to VTMS before and after calcination.

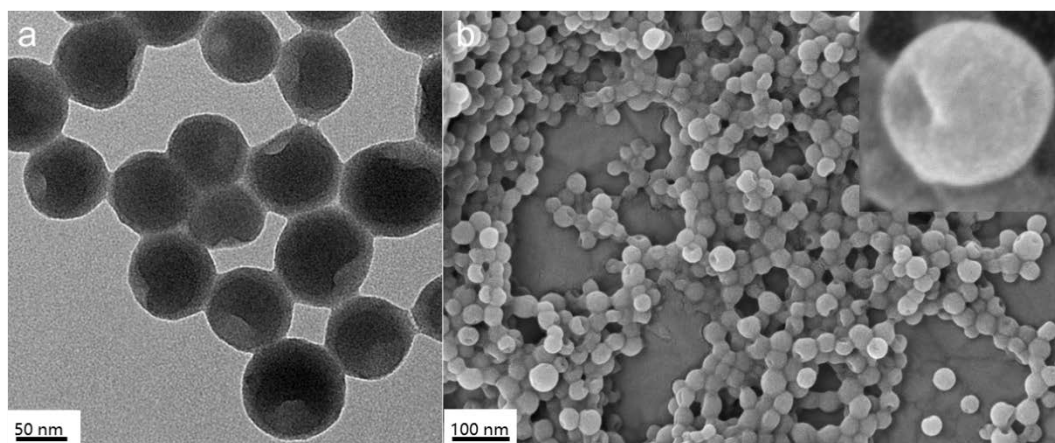


Figure S7. (a) TEM and (b) FESEM images of the organosilica NPs prepared at the mixing Re of 14134. The weight ratio of MTMS to PTMS is 1:4.

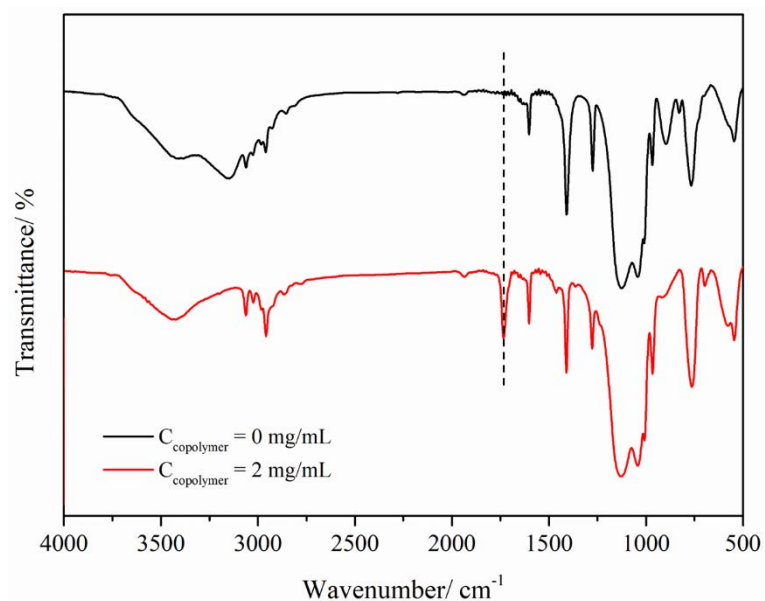


Figure S8. FTIR spectra of the organosilica NPs prepared at different concentrations of copolymer.

The pure VTMS is used in the reaction system.