Electronic Supplementary Information

Preparation of Aqueous Colloidal Mesostructured and Mesoporous Silica Nanoparticles with Controlled Particle Size in a Very Wide Range from 20 nm to 700 nm

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*Notes : The data of particle size distributions were obtained from TEM micrographs.
Z = 0, 5.5, 11, 22, 44, 88, 176, and 352, where Z means the amount of BuOH as an additive alcohol.

Table S1 ζ-potential and hydrodynamic diameter data of M-Me-as, E-Et-as, P-Pr-as, and B-Bu-as.

Sample	ζ-potential (mV)	Hydrodynamic diameter (nm)
M-Me-as	+42	31
E-Et-as	+39	50
P-Pr-as	+51	110
B-Bu-as	+63	480

Table S2 Physicochemical properties of M-Me-dia, E-Et-dia, P-Pr-dia, and B-Bu-dia.

Sample	ζ-potential (mV)	Hydrodynamic diameter (nm)	S_{BET} ($m^2\ g^{-1}$)	V_{total} ($cm^3\ g^{-1}$)	D_{NLDFT} (nm)
M-Me-dia	-8.1	46	990	0.92	4.1
E-Et-dia	-7.3	47	920	1.2	4.1
P-Pr-dia	-8.6	110	900	0.98	4.3
B-Bu-dia	-12	560	770	0.86	4.4

Table S3 ζ-potential and hydrodynamic diameter data of M-Bu-as, E-Bu-as, P-Bu-as, and B-Bu-as.

Sample	ζ-potential (mV)	Hydrodynamic diameter (nm)
M-Bu-as	+28	54
E-Bu-as	+52	89
P-Bu-as	+23	190
B-Bu-as	+63	480

Table S4 Physicochemical properties of M-Bu-dia, E-Bu-dia, P-Bu-dia, and B-Bu-dia.

Sample	ζ-potential (mV)	Hydrodynamic diameter (nm)	S_{BET} ($m^2\ g^{-1}$)	V_{total} ($cm^3\ g^{-1}$)	D_{NLDFT} (nm)
M-Bu-dia	-5.6	52	940	1.5	3.8
E-Bu-dia	-5.9	79	840	0.93	4.1
P-Bu-dia	-7.2	160	820	1.1	4.3
B-Bu-dia	-12	560	770	0.86	4.4

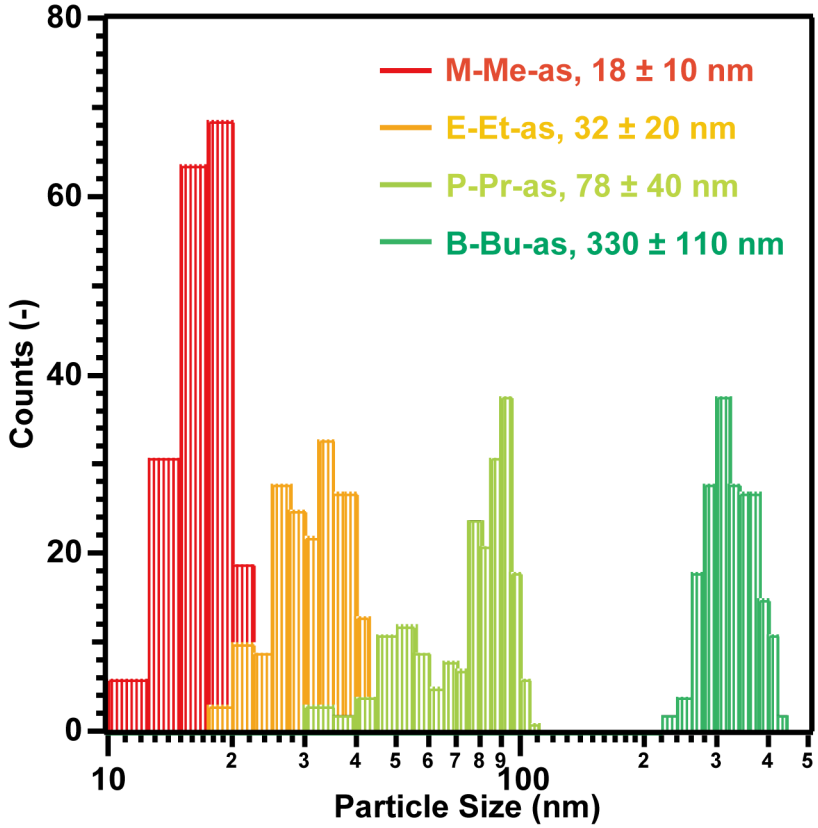

Figure S1 Particle size distributions of M-Me-as, E-Et-as, P-Pr-as, and B-Bu-as. The data from TEM micrographs.

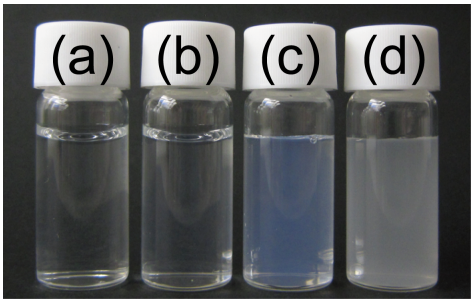

Figure S2 Appearance of (a) M-Me-dia, (b) E-Et-dia, (c) P-Pr-dia, and (d) B-Bu-dia.

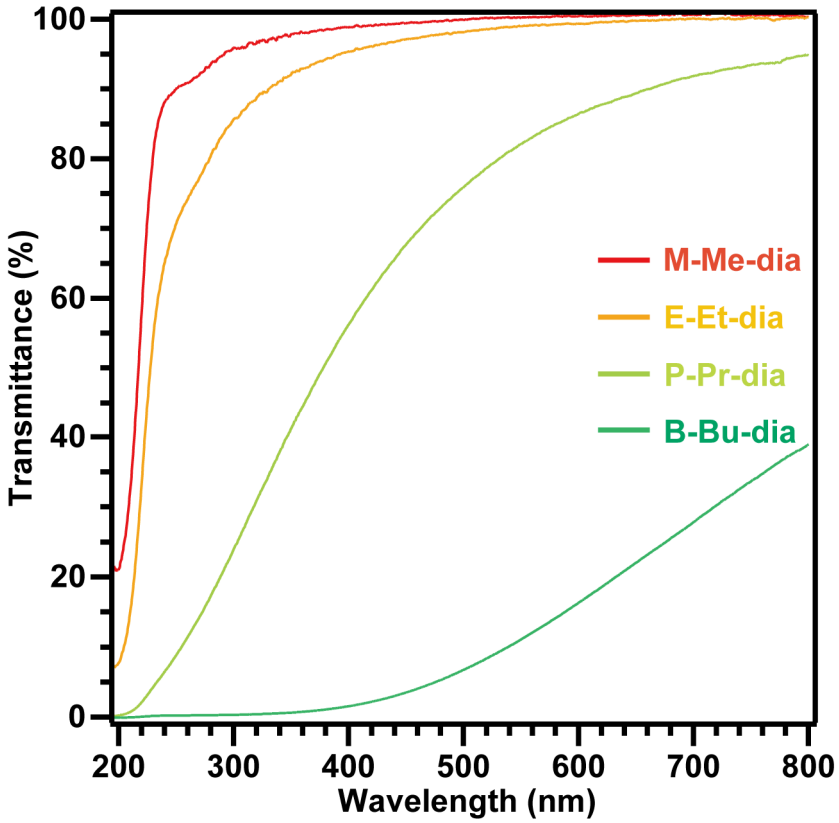

Figure S3 UV-vis transmittance spectra of M-Me-dia, E-Et-dia, P-Pr-dia, and B-Bu-dia.

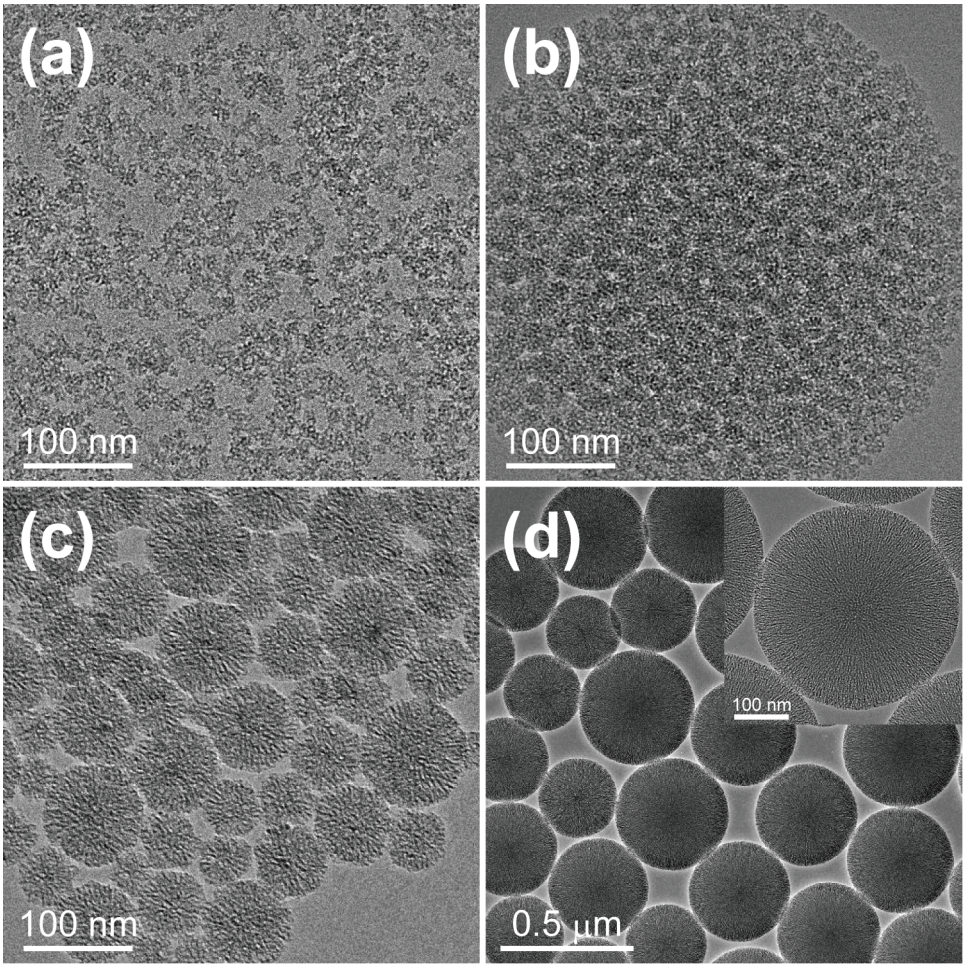

Figure S4 TEM images of (a) M-Me-dia, (b) E-Et-dia, (c) P-Pr-dia, and (d) B-Bu-dia.

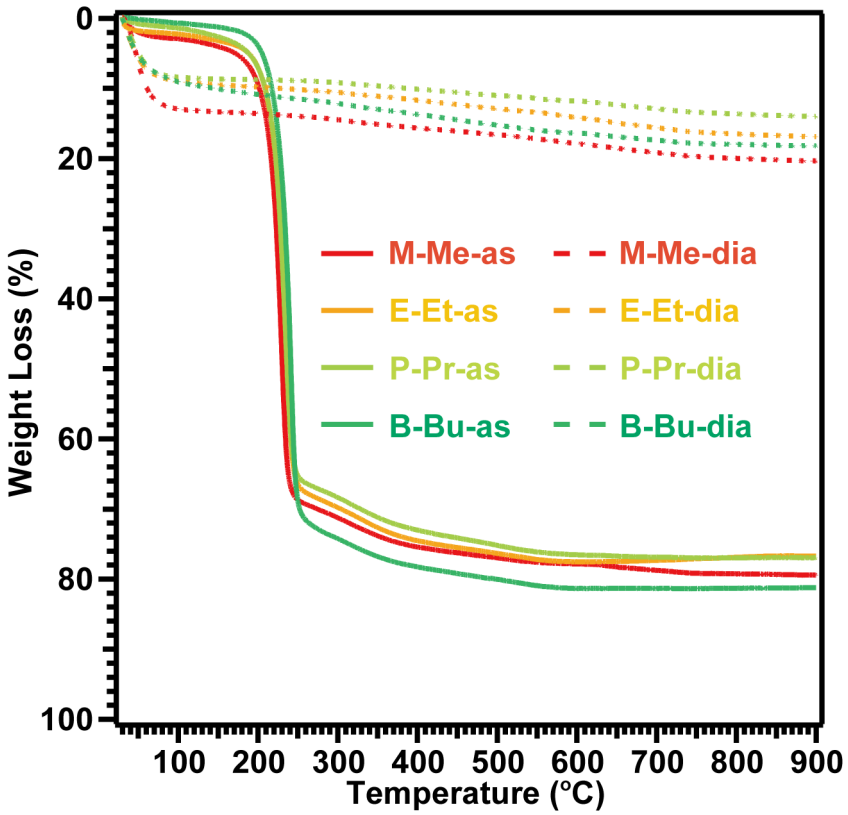

Figure S5 TG curves of CMSS (solid lines: M-Me-as, E-Et-as, P-Pr-as, and B-Bu-as) and CMPS (dotted lines: M-Me-dia, E-Et-dia, P-Pr-dia, and B-Bu-dia).

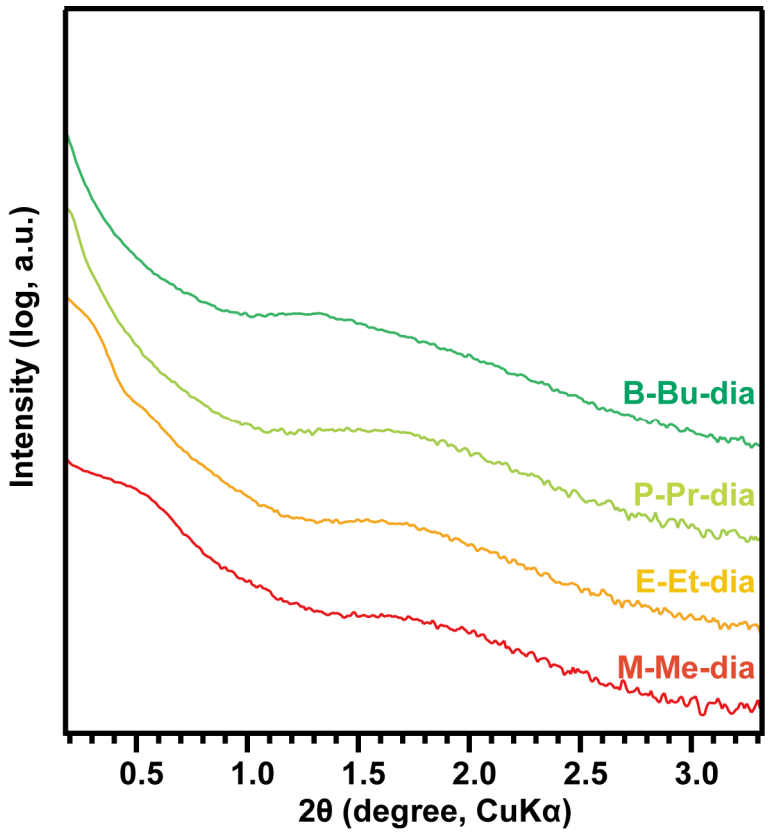

Figure S6 XRD patterns of M-Me-dia, E-Et-dia, P-Pr-dia, and B-Bu-dia.

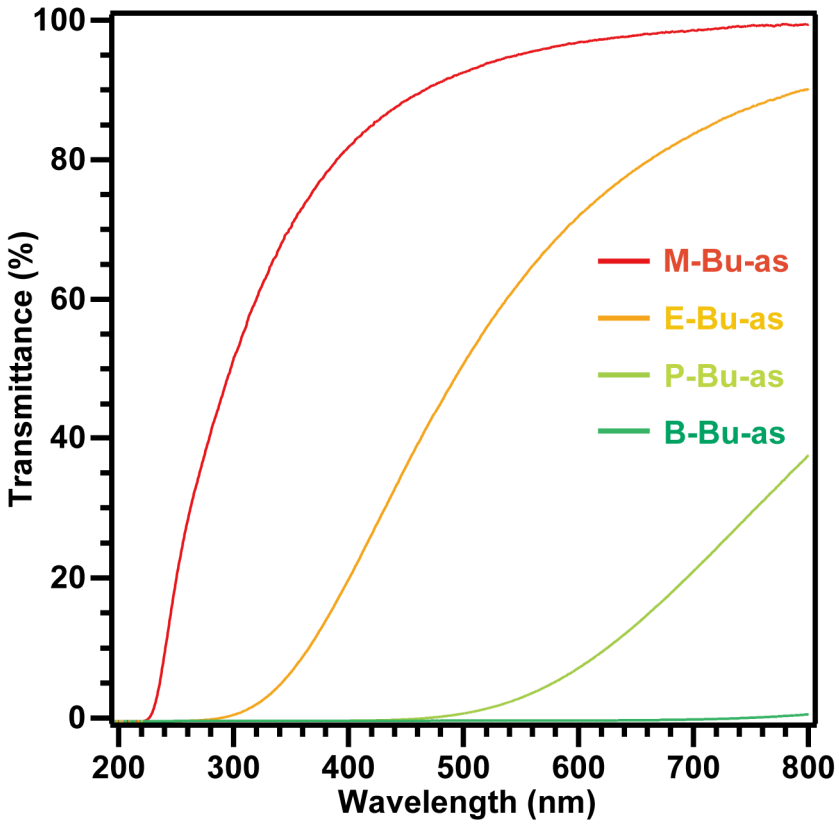

Figure S7 UV-vis transmittance spectra of M-Bu-as, E-Bu-as, P-Bu-as, and B-Bu-as.

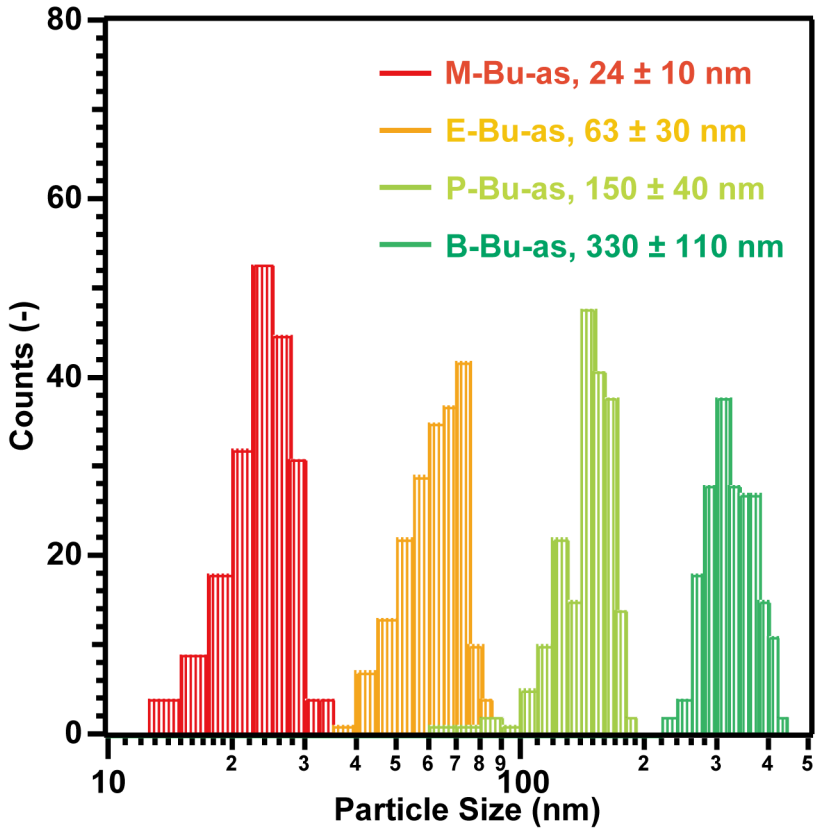

Figure S8 Particle size distributions of M-Bu-as, E-Bu-as, P-Bu-as, and B-Bu-as. The data from TEM micrographs.

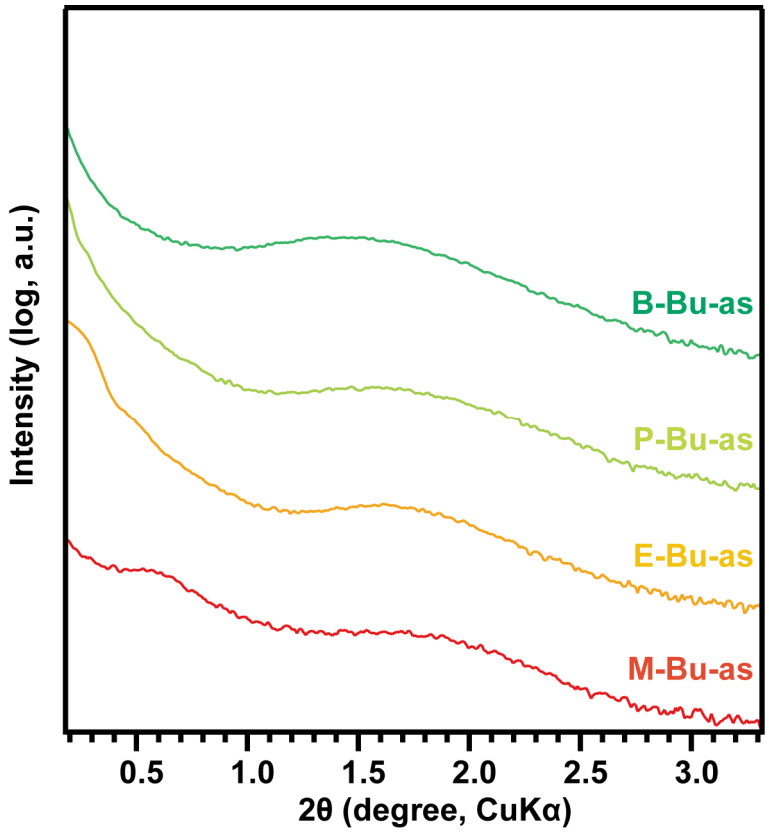

Figure S9 XRD patterns of M-Bu-as, E-Bu-as, P-Bu-as, and B-Bu-as.

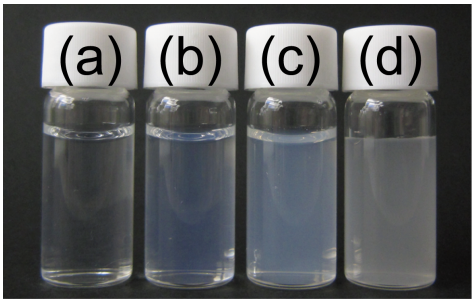

Figure S10 Appearance of (a) M-Bu-dia, (b) E-Bu-dia, (c) P-Bu-dia, and (d) B-Bu-dia.

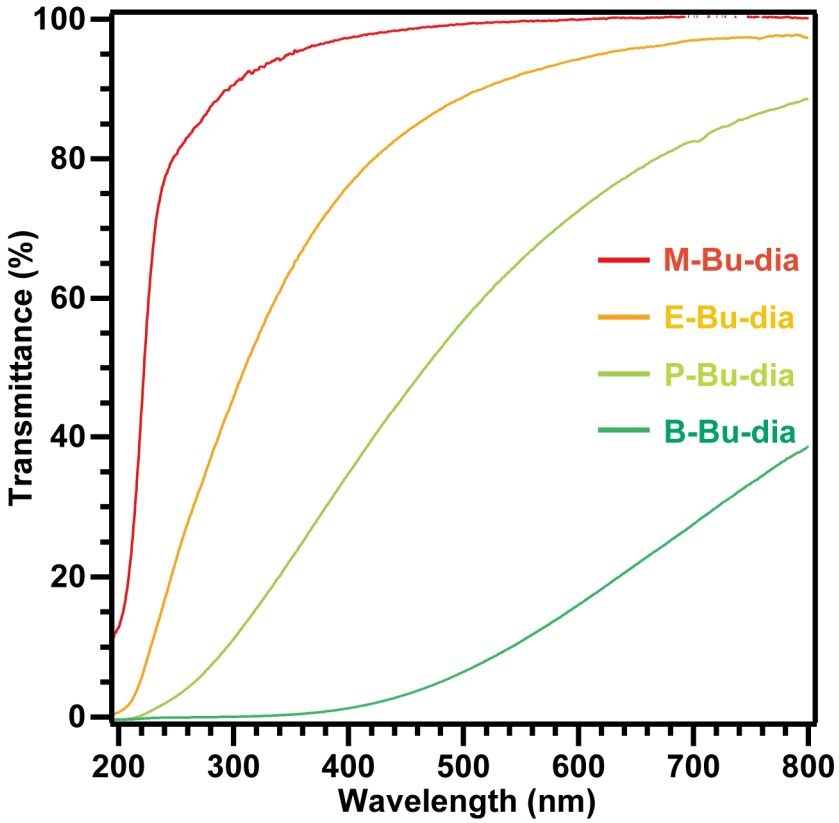

Figure S11 UV-vis transmittance spectra of M-Bu-dia, E-Bu-dia, P-Bu-dia, and B-Bu-dia.

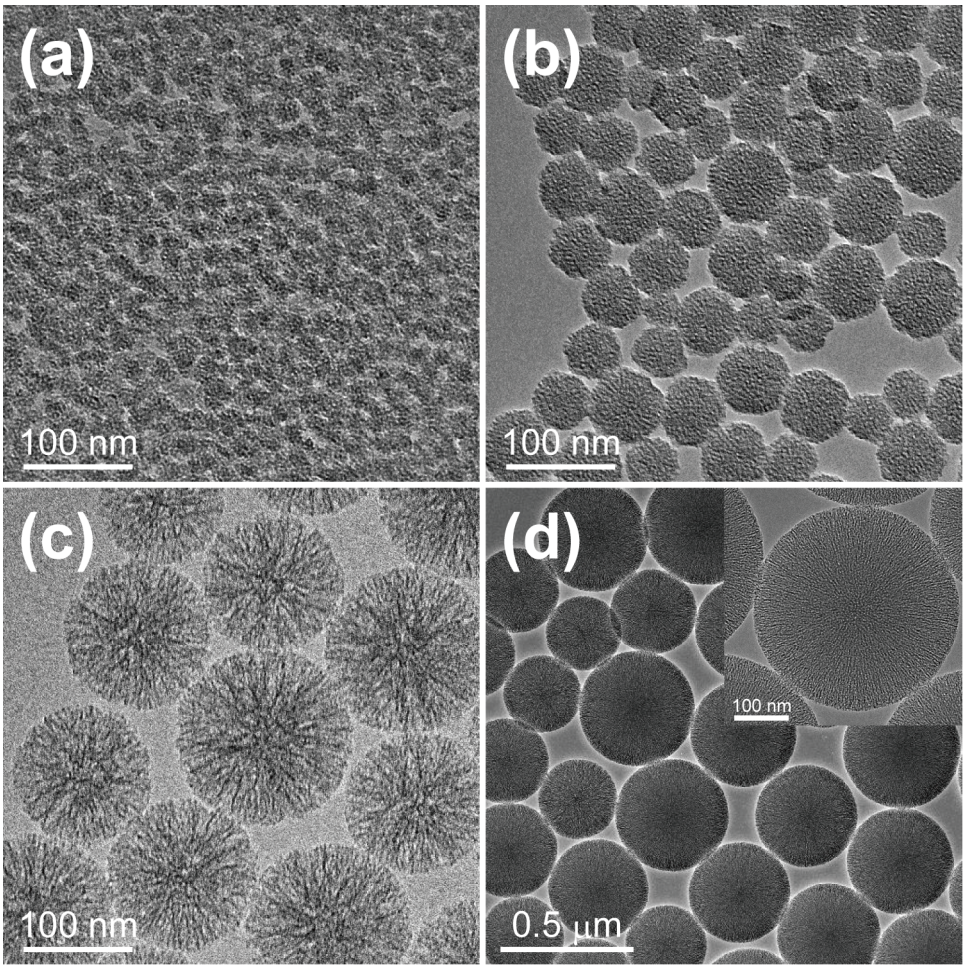

Figure S12 TEM images of (a) M-Bu-dia, (b) E-Bu-dia, (c) P-Bu-dia, and (d) B-Bu-dia.

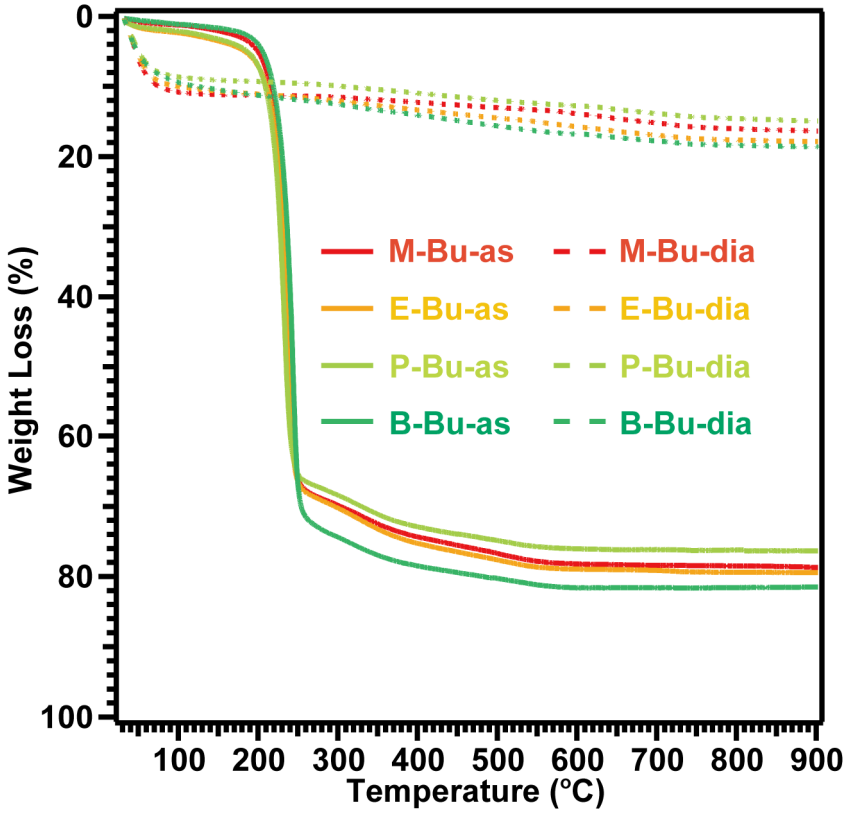

Figure S13 TG curves of CMSS (solid lines: M-Bu-as, E-Bu-as, P-Bu-as, and B-Bu-as) and CMPS (dotted lines: M-Bu-dia, E-Bu-dia, P-Bu-dia, and B-Bu-dia).

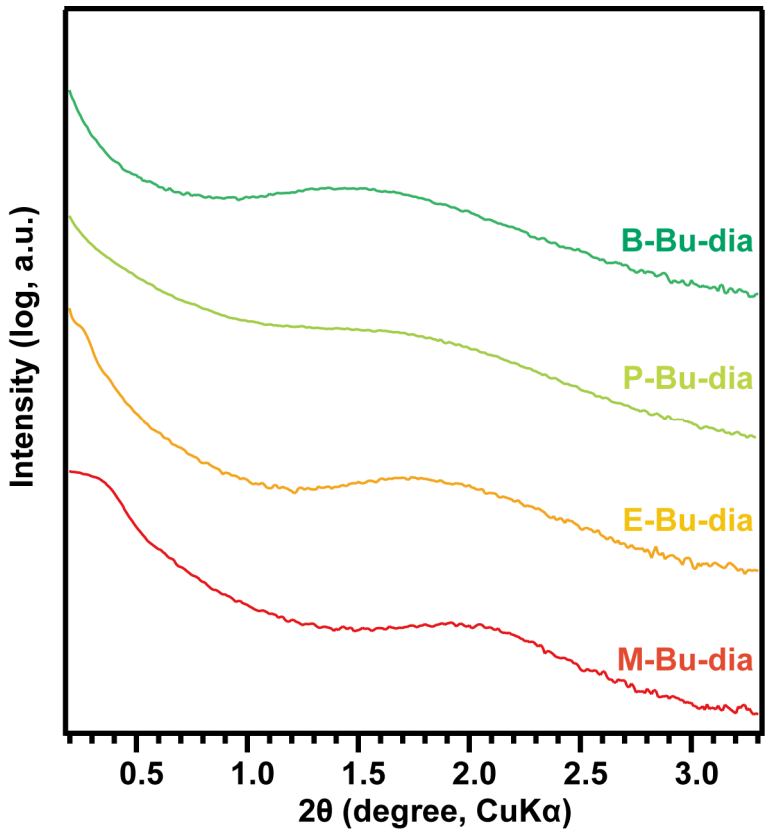

Figure S14 XRD patterns of M-Me-dia, E-Et-dia, P-Pr-dia, and B-Bu-dia.

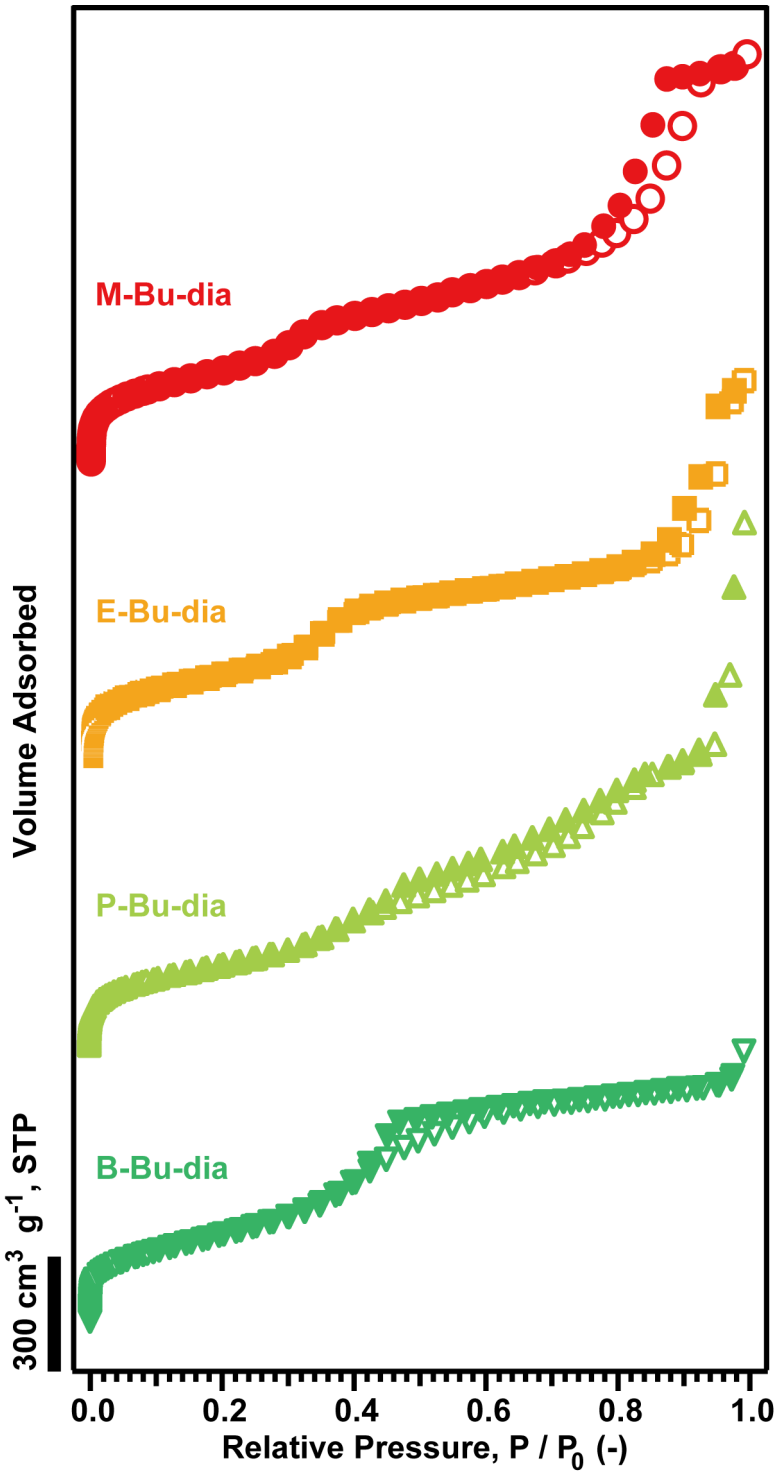

Figure S15 N_2 adsorption-desorption isotherms of M-Bu-dia, E-Bu-dia, P-Bu-dia, and B-Bu-dia. (open symbol: adsorption, closed symbol: desorption)

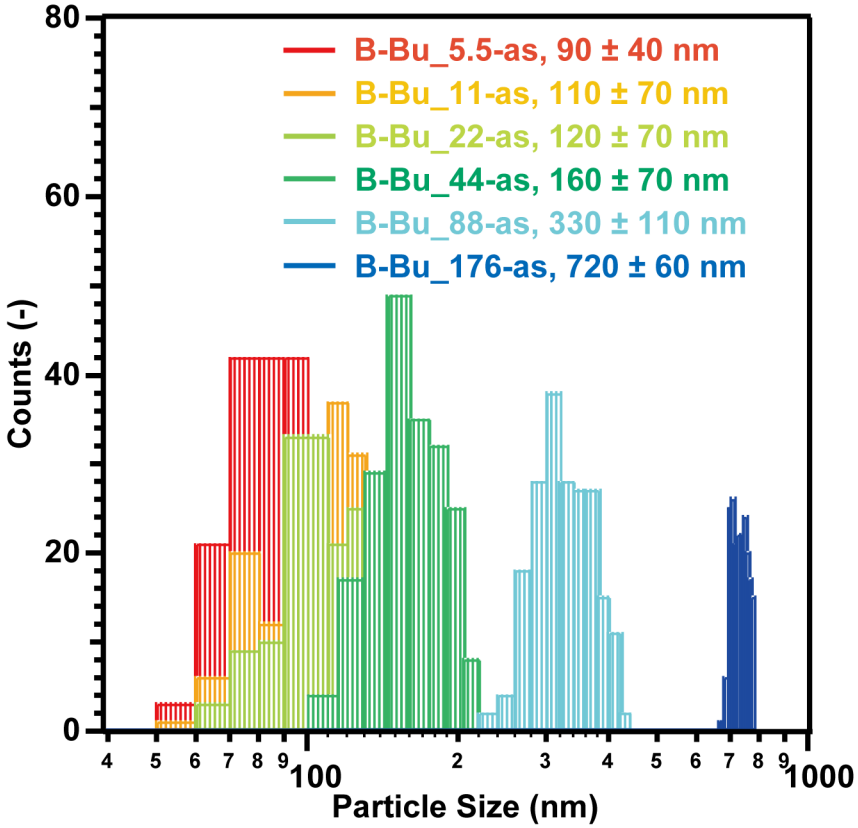

Figure S16 Particle size distributions of B-Bu_Z-as; Z = 0, 5.5, 11, 22, 44, 88, and 176, where Z means the amount of BuOH as an additive alcohol. The data from TEM micrographs.

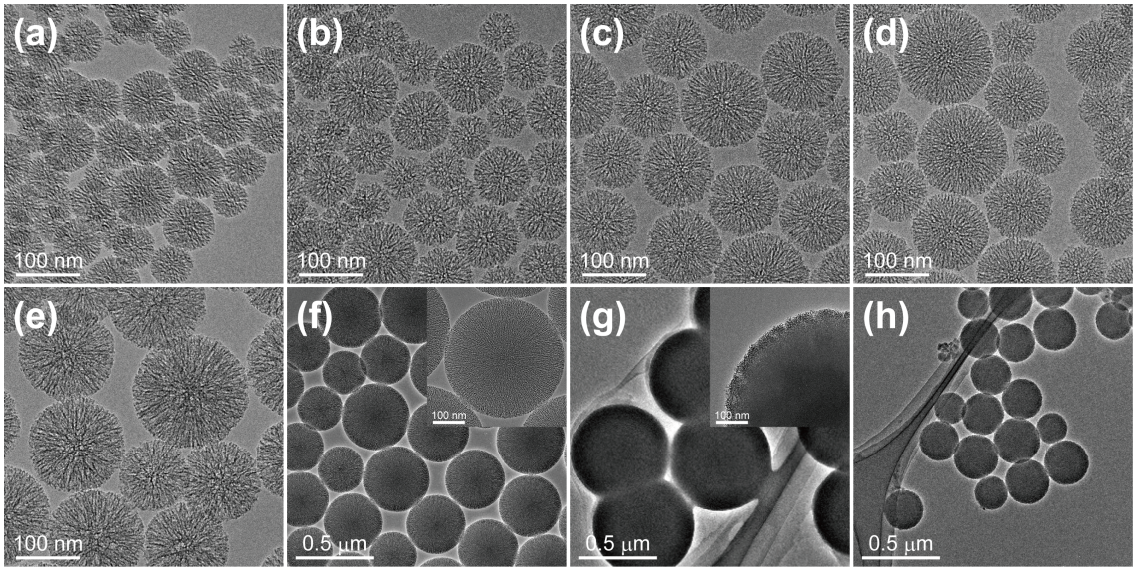

Figure S17 TEM images of B-Bu_Z-dia; Z = (a) 0, (b) 5.5, (c) 11, (d) 22, (e) 44, (f) 88, (g) 176, and (h) 352, where "Z" means the amount of BuOH as an additive alcohol.