Electronic Supplementary Information (Table S1, Fig. S1~S3)

Preparation of mesostructured silica-micelle hybrids and their conversion to mesoporous silica modified controllably with immobilized hydrophobic blocks by using triethoxysilyl-terminated PEO-PPO-PEO triblock copolymer

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Table S1 Textural properties of SMHs.
[a] Specific surface area calculated by the BET method. [b] Pore size calculated by the NLDFT method. [c] Pore size calculated by the BJH method. [d] Total pore volume calculated at P/P_0 =ca. 0.95. [e] Micro pore volume evaluated using the *t*-plot method. [f] Weight percent of P123 derived species in the samples estimated from the TG-DTA data.

sample	x	*d*-spacing nm	S_{BET} [a] $m^2\ g^{-1}$	D_{NLDFT} [b] nm	D_{BJH} [c] nm	V_{total} [d] $cm^3\ g^{-1}$	V_{micro} [e] $cm^3\ g^{-1}$	Organics[f] wt %
asSMH	100	9.4	-	-	-	-	-	49
	75	9.5	-	-	-	-	-	52
	50	9.4	-	-	-	-	-	51
	25	9.4	-	-	-	-	-	53
	0	9.6	-	-	-	-	-	57
exSMH	100	10	130	7.3	7.9	0.29	0	48
	75	10	160	6.8	6.7	0.31	0	43
	50	9.4	230	6.5	6.1	0.39	0	37
	25	8.9	290	6.0	5.3	0.42	0	21
	0	8.7	590	5.4	4.7	0.57	0.065	7.9
ascalSMH	100	7.7	290	5.2	3.9	0.30	0.004	-
	75	7.8	280	4.9	3.8	0.31	0.018	-
	50	7.9	320	5.2	4.2	0.37	0.012	-
	25	7.8	280	5.2	3.8	0.31	0.009	-
	0	7.7	310	5.2	4.1	0.40	0.004	-
excalSMH	100	10	480	6.7	6.8	0.63	0	-
	75	8.9	440	6.5	6.2	0.51	0.018	-
	50	8.7	430	6.0	5.4	0.52	0.016	-
	25	8.2	350	5.3	4.4	0.39	0.028	-
	0	7.9	320	5.0	4.1	0.37	0.015	-

Fig. S1 TEM images of the (a) asSMH_100, (b) exSMH_100, (c) ascalSMH_100, (d) excalSMH_100 (Scale bar : 200 nm)

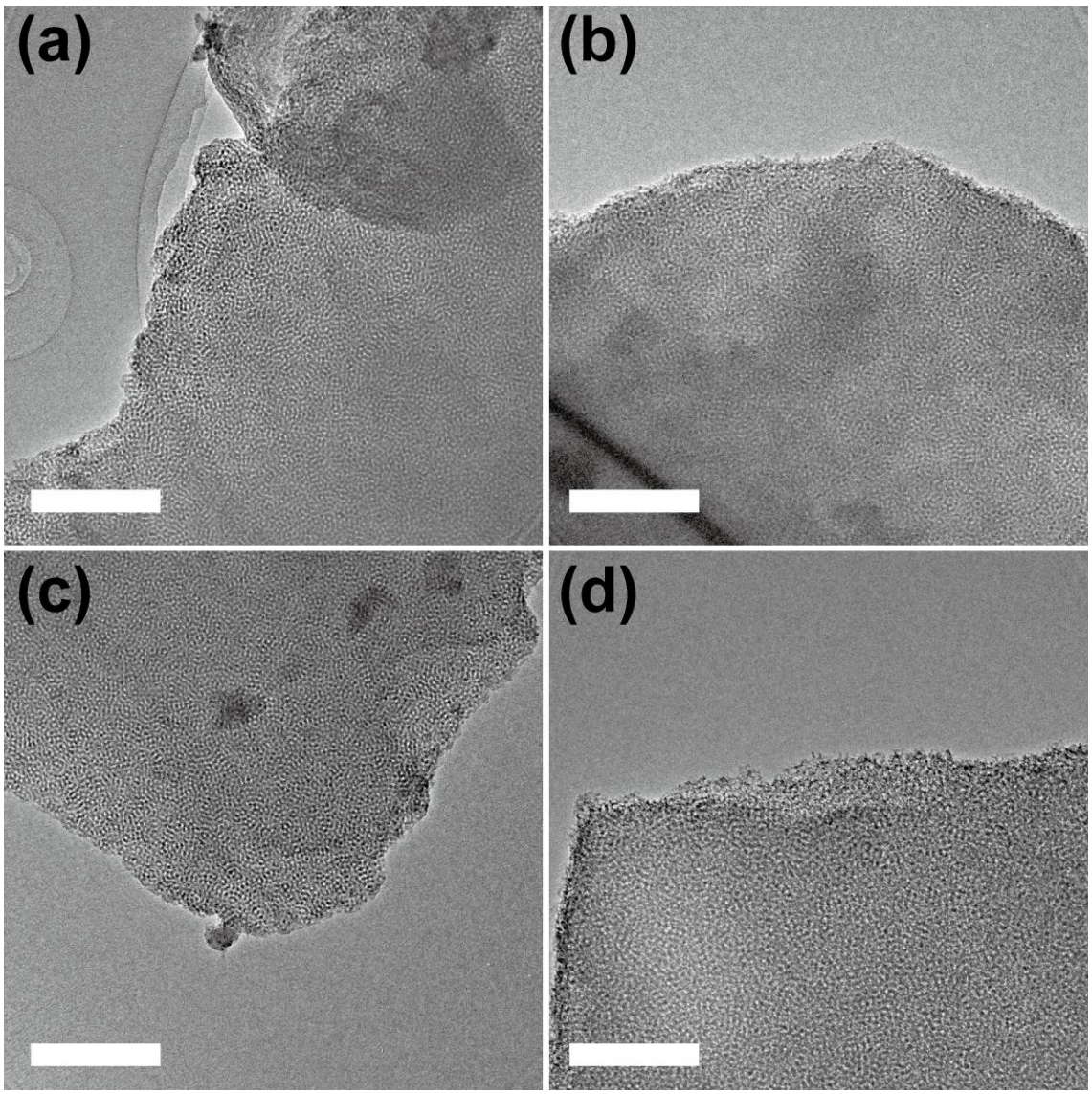
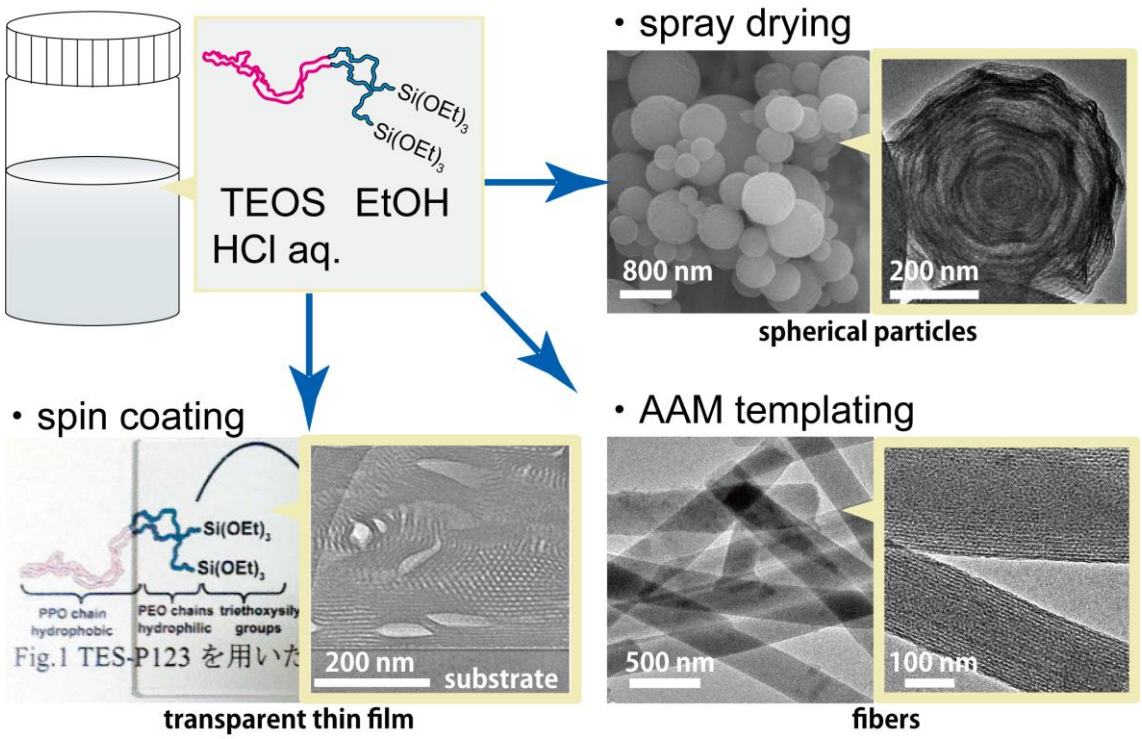


Fig. S2 Illustration of several asSMHs obtained by spray drying, spin coating, and anodic alumina membrane templating methods.



Experimental conditions

Spray drying: The spray dry apparatus used in this study is a laboratory-made one altered from a Spray Dryer GA32 (Yamato Scientific Co.). Droplets of a precursor solution for SMH_100 were generated from a two-flow spray nozzle (the diameters of the spray drying nozzles are 406 and 1270 μm). The droplets were carried by an air flow (250 °C) and dried in a heating zone. Finally, powdery samples were collected by a cyclone separator.

Spin coating: A precursor solution for SMH_100 was spin-coated on glass substrates at 2000 rpm for 10 seconds and air-dried at room temperature for 2 days.

Anodic alumina membrane (AAM) templating: A precursor solution for SMH_100 was dropped on AAM (Whatman, Anodisc 25, pore diameter ca. 200 nm, thickness 60 μm) and infiltrated into the AAM channels and air-dried at room temperature for 2 days. The AAM was dissolved by 5 wt % H_3PO_4.

Fig. S3 SAXD patterns and TEM images (inset) of asSMH_0-IBU and asSMH_100-IBU