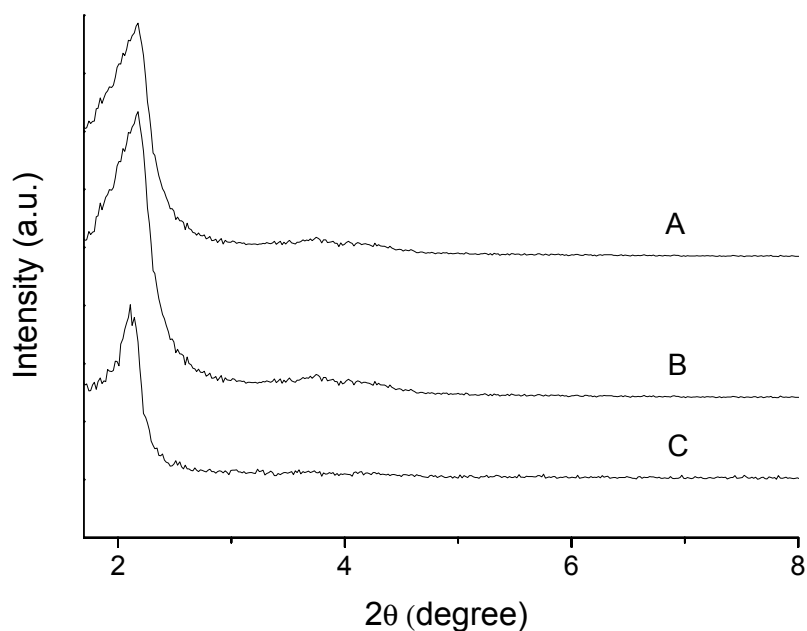


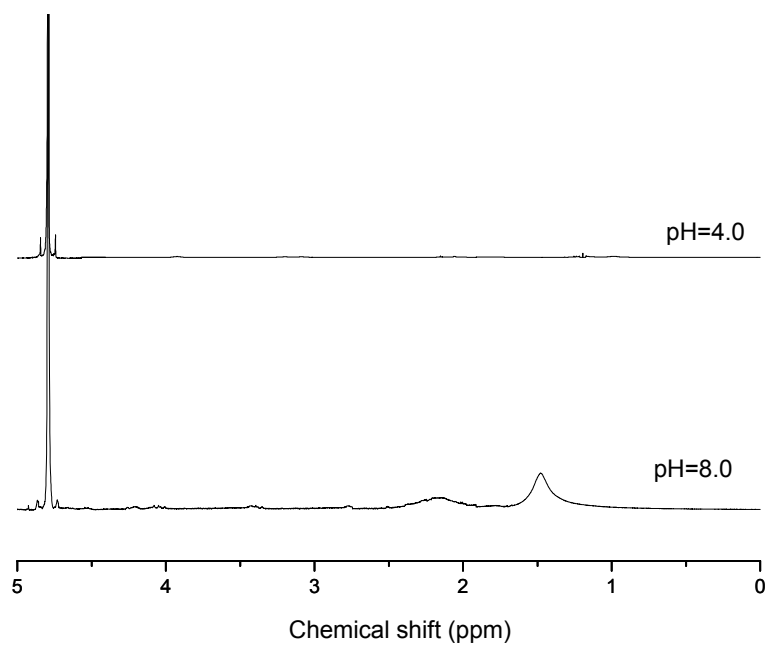
Supplementary Material (ESI) for Journal of Materials Chemistry

**Table S1.** Characters of the MSN-OH, MSN-RAFT and MSN-PAA

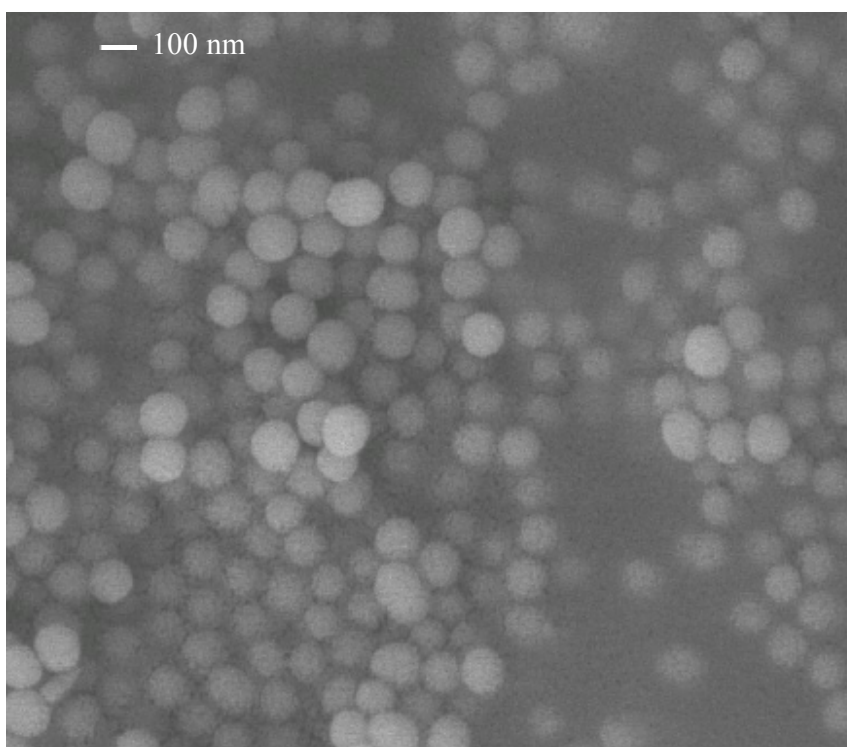
Material	BET Surface Area (m <sup>2</sup> /g)	BET Pore Volume (cm <sup>3</sup> /g)	BJH Pore Diameter (Å)	<i>d</i> <sub>100</sub> (Å)
MSN-OH	1130	0.48	21.3	21
MSN-RAFT	840	0.36	22.6	23
MSN-PAA	350	0.10	22.1	21



**Fig. S1** Powder X-Ray diffraction patterns of MSN-OH (A), MSN-RAFT (B), and MSN-PAA (C)



**Fig. S2**  $^1\text{H}$  NMR spectra of MSN-PAA with pH of 8.0 and 4.0 (in  $\text{D}_2\text{O}$ )



**Fig. S3** SEM image of MSN-PAA