

Supplementary Information

Silica-assisted incorporation of polydopamine into the framework of porous nanocarriers by a facile one-pot synthesis

Xianying Zheng, Feng Chen, Jixi Zhang*, Kaiyong Cai*

Key Laboratory of Biorheological Science and Technology, Ministry of Education, College of Bioengineering, Chongqing University. E-mail: jixizhang@cqu.edu.cn

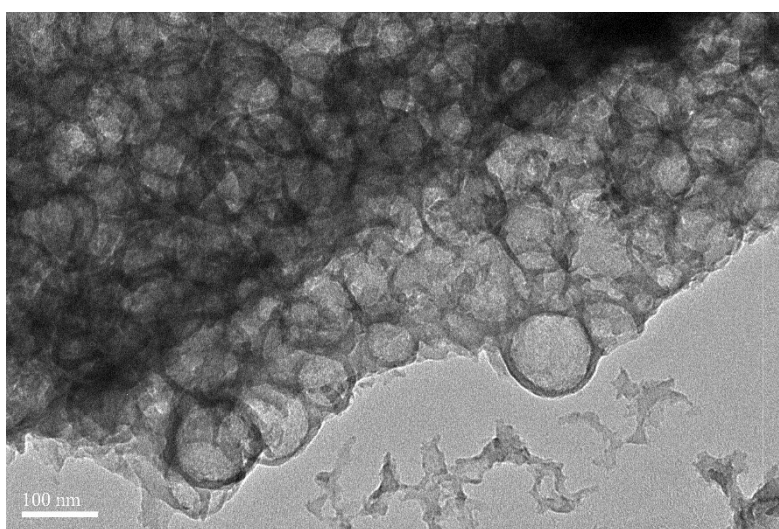


Fig. S1 TEM image of PDA-MSN particles after carbonization and subsequent etching by HF.

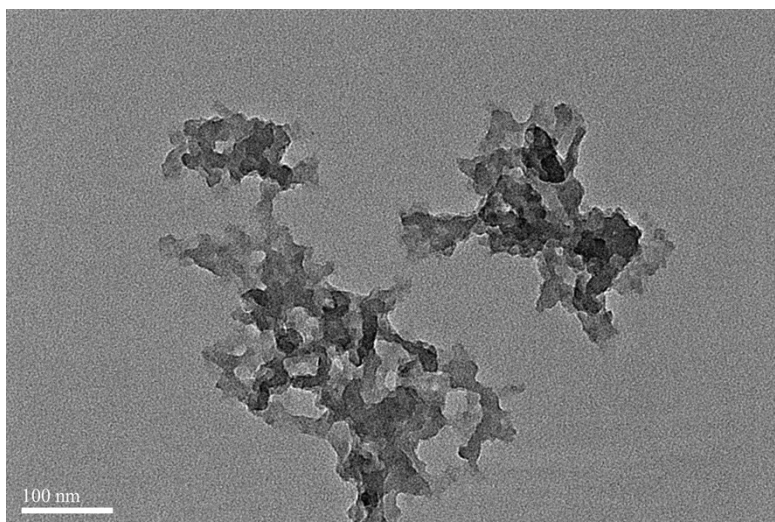


Fig. S2 TEM image of PDA-MSN particles after etching by HF.

Table. S1 Comparison of textual parameters for MSN, PDA-MSN, and carbonized PDA-MSN.

	Surface area	C-value	Peak pore size
MSN	963	85	3.8
PDA-MSN-1	900	50	4.3
PDA-MSN-2	830	49	4.3
PDA-MSN-2	880	51	4.3
Carbonized PDA-MSN	1048	70	3.7

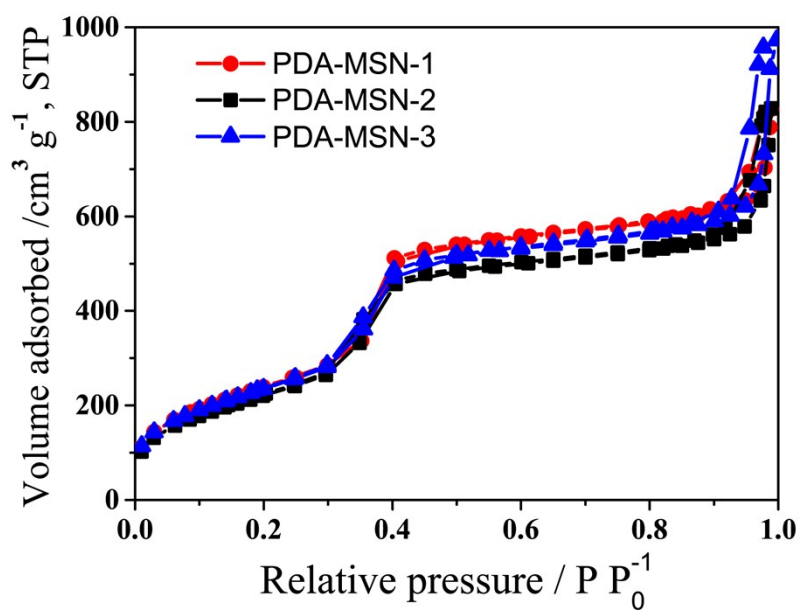


Fig. S3 Comparison of nitrogen sorption isotherms for MSN-PDA particles synthesized with varying dopamine ratio in the reaction solution (1, 2, 3 represents 1.25, 2.5, and 5 mol%,

respectively).

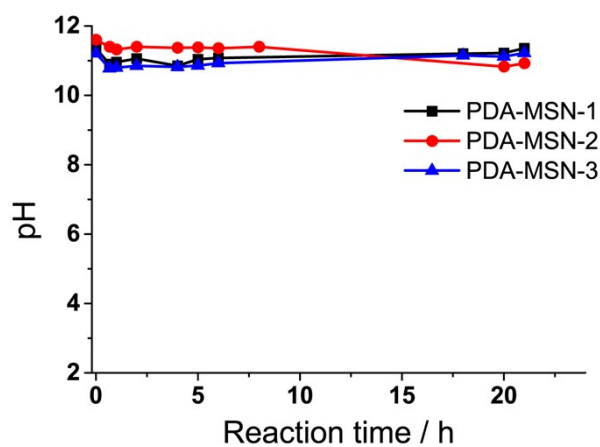


Fig. S4 In situ pH values of the reaction solutions for PDA-MSN-1, PDA-MSN-2, and PDA-MSN-3.

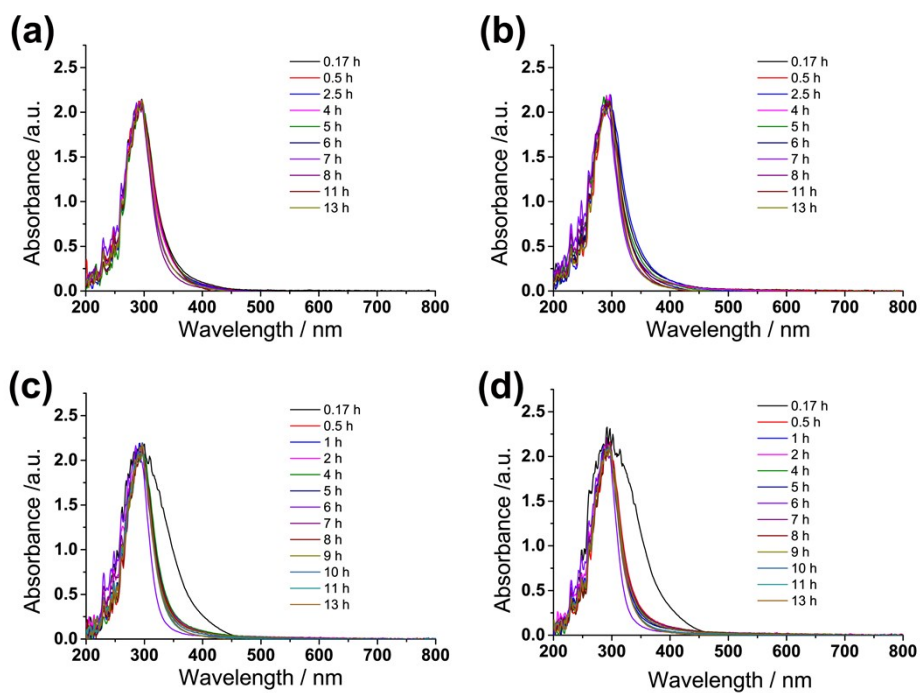


Fig. S5 In situ evolution of the UV-vis absorption spectra of the solutions in the molybdosilicate method for MSN (a), PDA-MSN-1 (b), PDA-MSN-2 (c), PDA-MSN-3 (d).

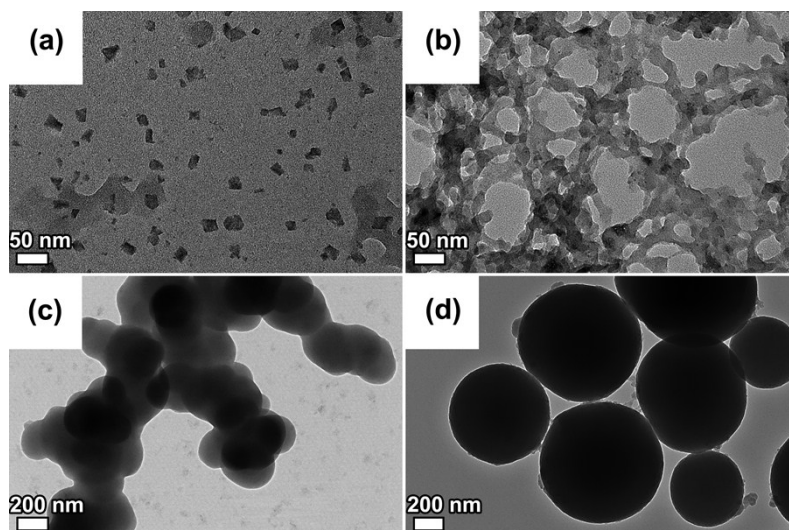


Fig. S6 Comparison of nitrogen sorption isotherms for PDA particles synthesized with fixed reaction conditions of PDA-MSN (in the absence of TEOS), while varying ethanol/water volume ratio in the reaction solution (a, b, c, and d represents 30/150, 40/140, 60/120 and 80/100, respectively).

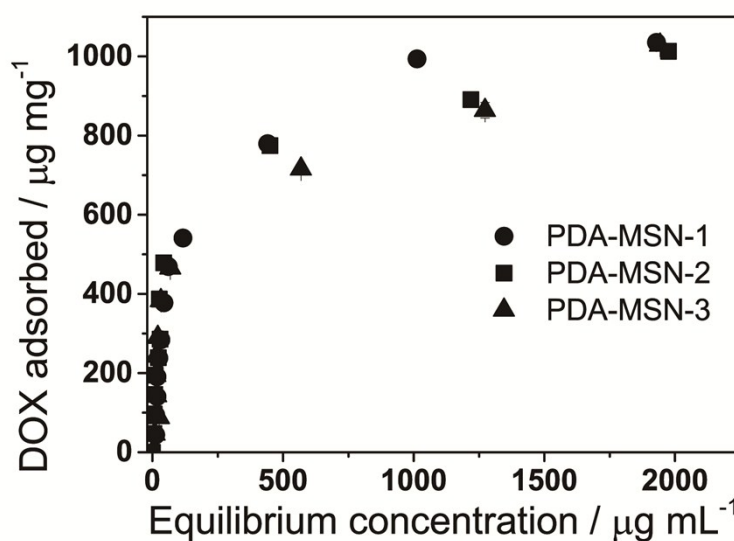


Fig. S7 Comparison of DOX adsorption isotherms for MSN-PDA particles synthesized with varying dopamine ratio in the reaction solution (1, 2, 3 represents 1.25, 2.5, and 5 mol%, respectively).