

Supporting Information

Fabrication of Mesoporous Silica Nanospheres with Radially Oriented Mesochannels by Microemulsion Templating for Adsorption and Controlled Release of Aspirin

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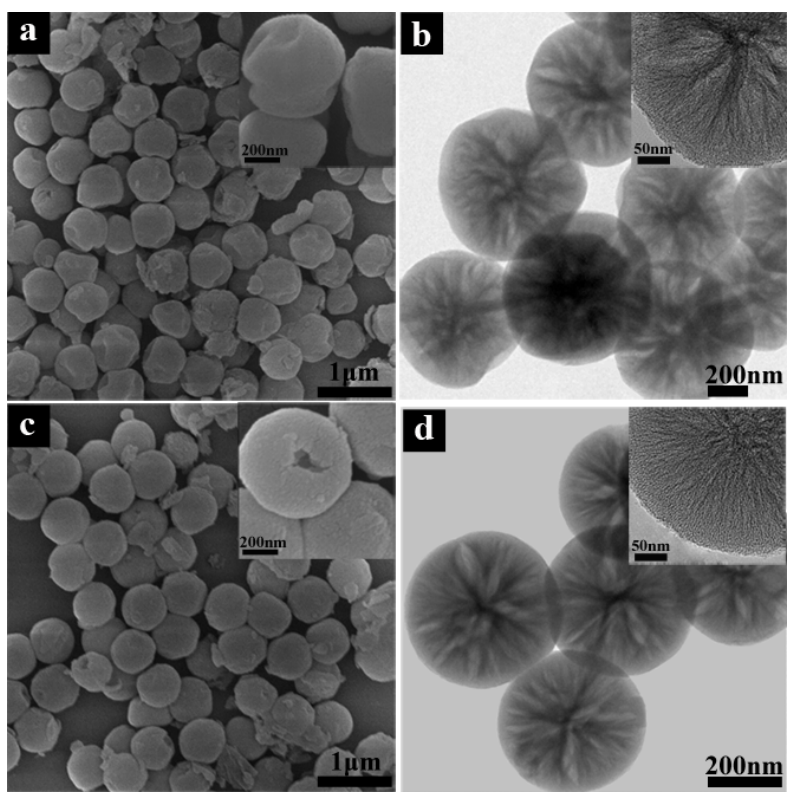


Figure S1. FESEM (a, c) and HRTEM (b, d,) images of MSNsV1 (a, b) and MSNsV3 (c, d), the insets are the corresponding magnified images of (a), (b), (c) and (d), respectively.

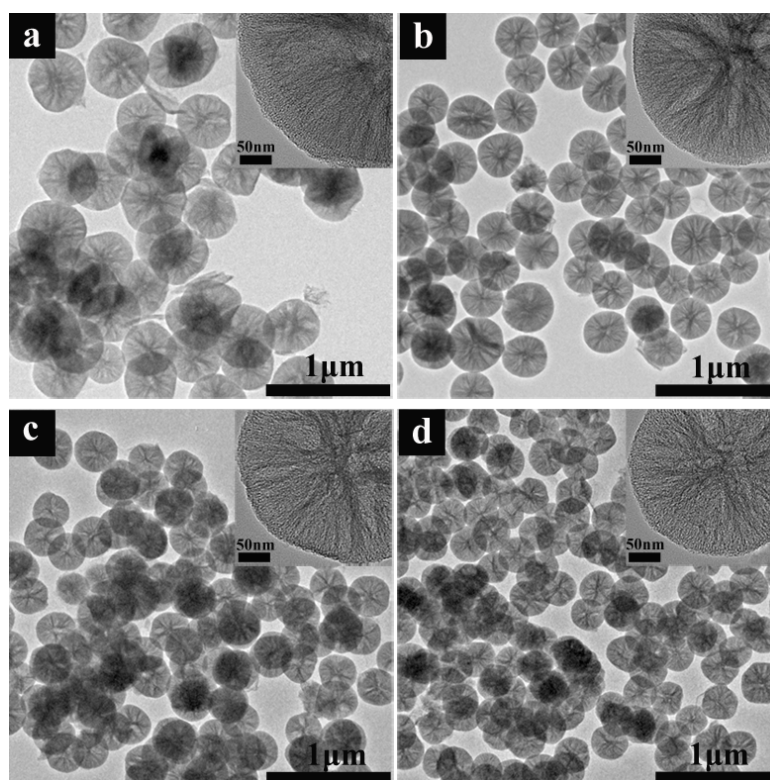


Figure S2. HRTEM images of MSNsM1 (a), MSNsM2 (b), MSNsM3 (c) and MSNsM4 (d), the insets are the corresponding magnified images of (a), (b), (c) and (d), respectively.

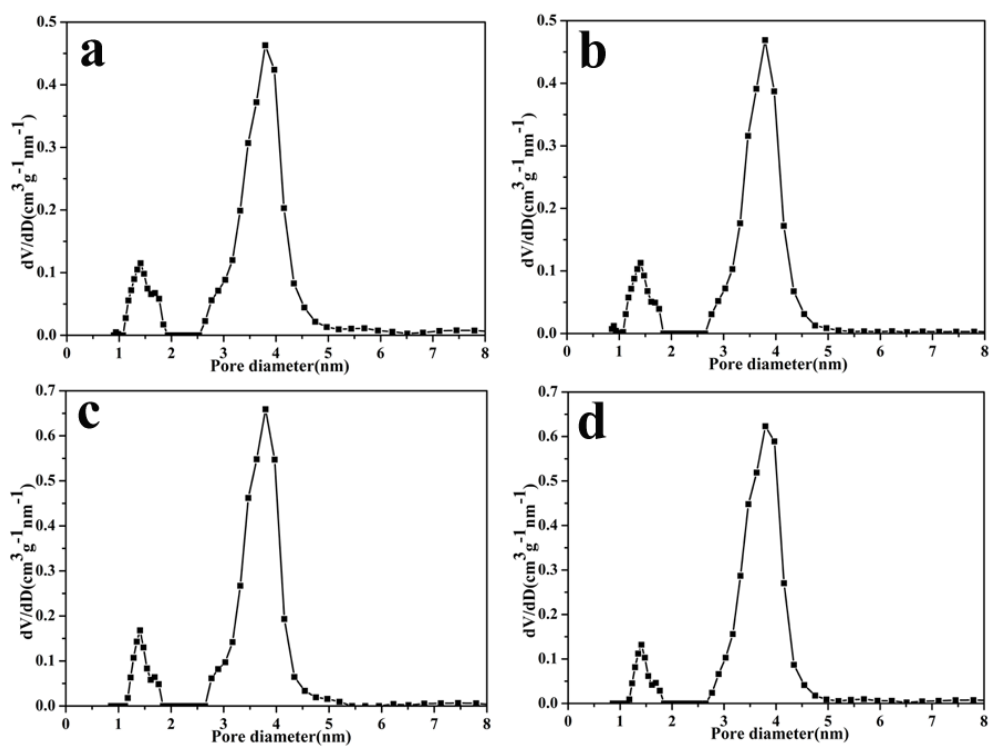


Figure S3. The pore size distribution (a, b, c, d) of MSNsV3 (a), MSNsV4 (b) MSNsM3 (c) and MSNsM4 (d)

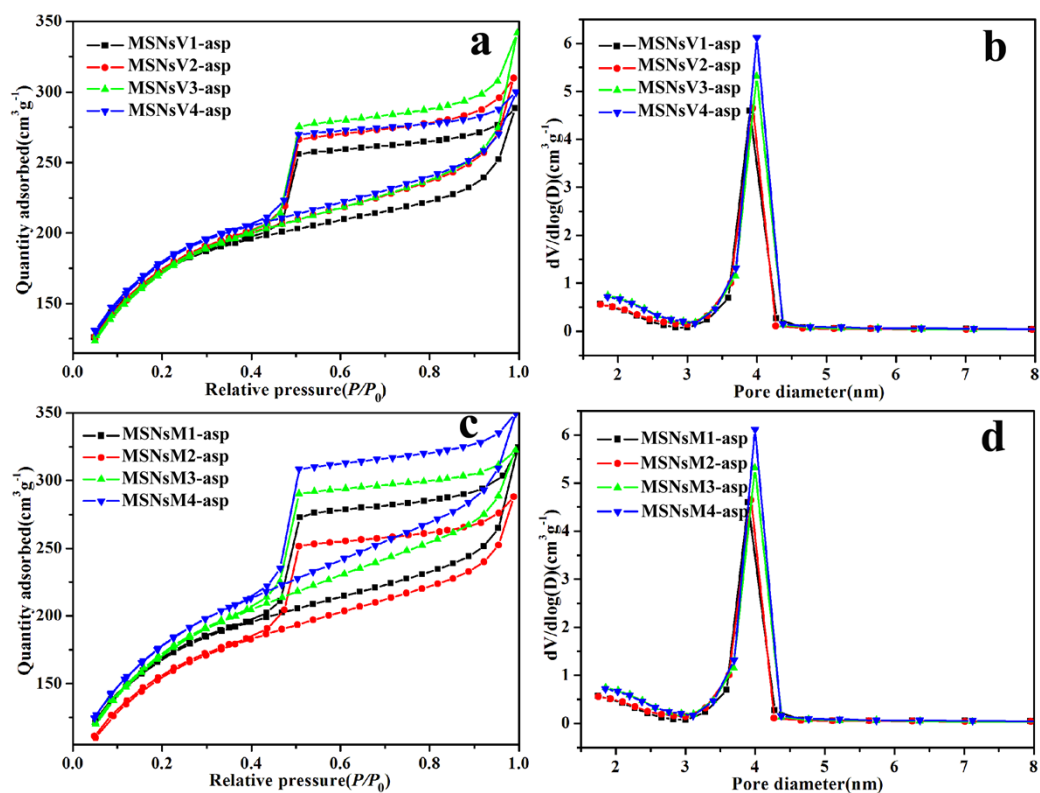


Figure S4. The N₂ adsorption-desorption isotherms (a, c) and corresponding BJH pore size distribution (b, d) of MSNsV1-4 (a, b) and MSNsM1-4 (c, d) after aspirin-loading

Table S1 Physicochemical properties of the MSNs after aspirin (asp) loading

Sample	S_{BET} ($\text{m}^2 \text{g}^{-1}$) ^a	V ($\text{cm}^3 \text{g}^{-1}$) ^a	D (nm) ^a	Asp loading amounts (g)	Loading content (%)	EE (%)	RSD (%)
MSNsV1-asp	619	0.33	3.91	0.327	24.64	87.75	2.84
MSNsV2-asp	627	0.38	3.95	0.358	26.36	86.58	3.97
MSNsV3-asp	622	0.44	3.89	0.497	33.19	81.36	3.16
MSNsV4-asp	645	0.36	3.93	0.467	31.83	82.24	3.68
MSNsM1-asp	609	0.42	3.90	0.502	33.42	81.18	1.59
MSNsM2-asp	564	0.37	3.94	0.538	34.98	79.83	2.43
MSNsM3-asp	628	0.46	3.99	0.542	35.15	79.68	3.42
MSNsM4-asp	650	0.51	3.99	0.572	36.39	78.55	2.47

^a D , S_{BET} , and V stand for average BET pore diameter, surface area, and pore volume after aspirin loading, respectively.

Asp loading amounts stands for aspirin loading amount (g) /g MSNs.

EE stands for the encapsulation efficiency of aspirin in MSNs.

RSD stands for the relative standard deviation from the mean value.