

Supporting information

Synthesis of SBA-15 Rods with Small Sizes for Enhanced Cellular Uptake

Yannan Yang,^{a‡} Surajit Karmakar,^{a‡} Jun Zhang,^a Meihua Yu,^a Neena Mitter,^b and Chengzhong Yu^{*a}

^a*Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Brisbane, QLD 4072, Australia.*

Fax: +61 7 3346 3973; Tel: +61 7 3346 3283; E-mail: c.yu@uq.edu.au

^b*Queensland Alliance for Agriculture and Food Innovation, The University of Queensland, Australia.*

‡ These authors contribute equally to this paper.

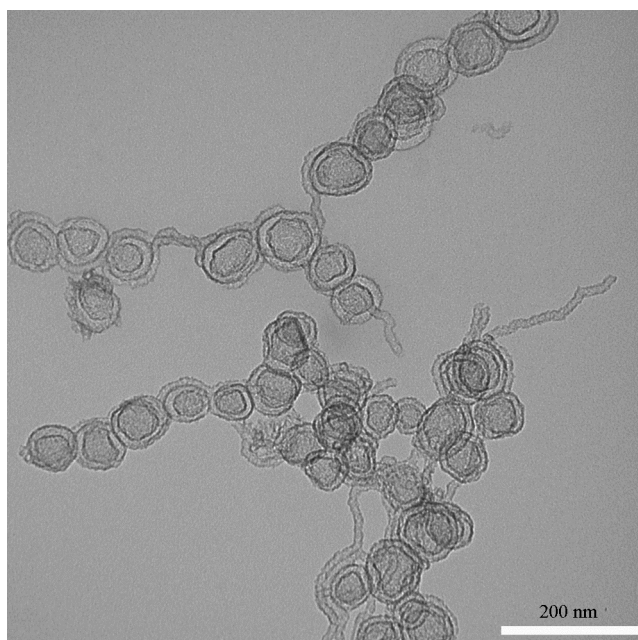


Fig. S1 TEM image of vesicular structure obtained at pH=3.98 while keep the other synthesis conditions the same as SR-X samples.

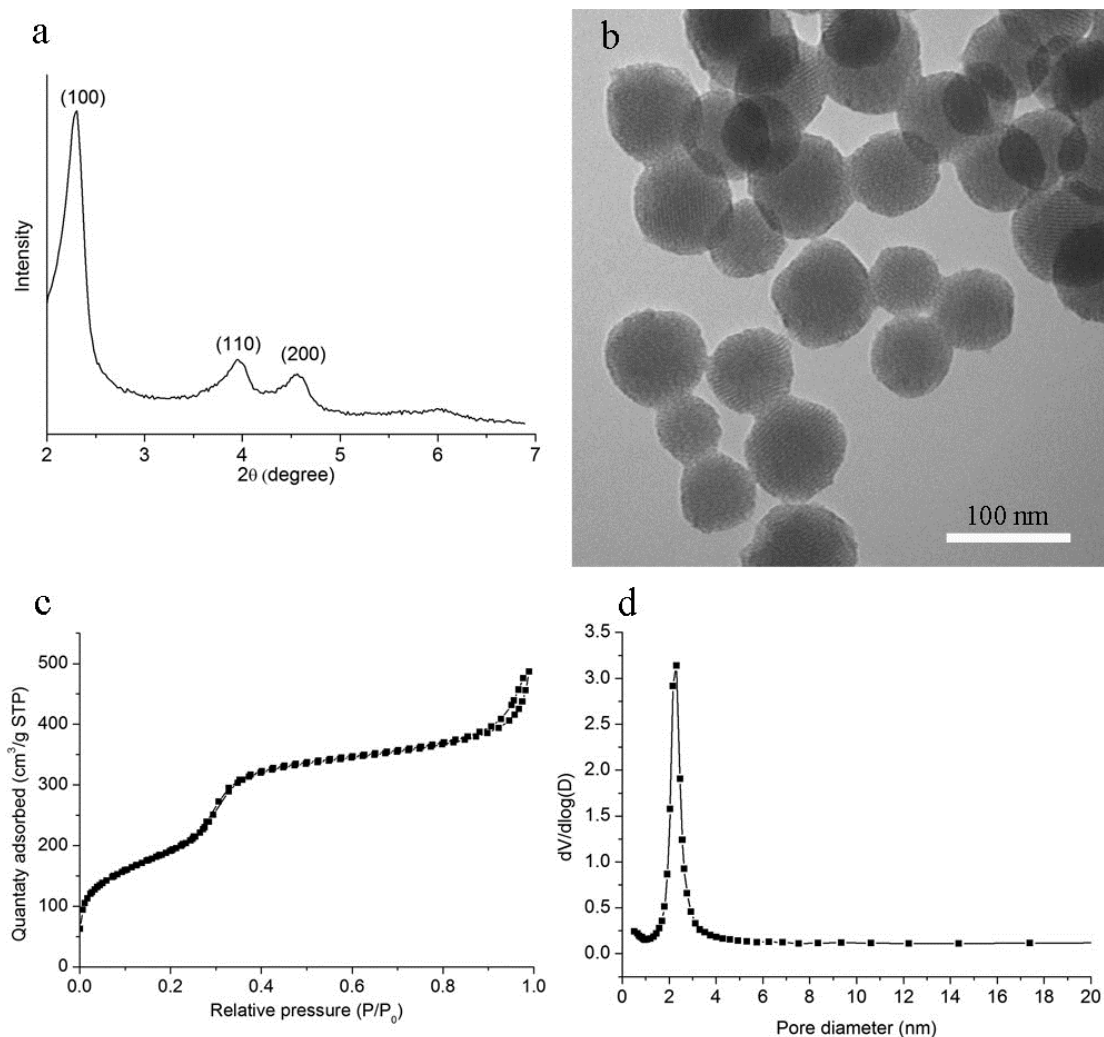


Fig. S2 XRD pattern (a), TEM image (b), nitrogen sorption isotherm (c) and pore size distribution curve (d) of MCM-41.

MCM-41 was synthesized according to our previous report with slight modifications.¹ The XRD pattern (Fig.S2a) of MCM-41 shows three well-resolved diffraction peaks which can be assigned to the 100, 110 and 200 reflections of an ordered two dimensional (2D) hexagonal structure. The TEM image (Fig. S2b) displays that MCM-41 are spherical nanoparticles with particle sizes of 50-100 nm and well-ordered mesopores inside. The nitrogen adsorption-desorption plot of MCM-41 (Fig. S2c) exhibits a typical type IV isotherm and a steep capillary condensation step occurring at a relative pressure (P/P_0) of ~ 0.3 , corresponding to a narrow pore size distribution centred at 2.3 nm (Fig. S2d). The surface area, and pore volume of MCM41 is $766 \text{ m}^2 \text{ g}^{-1}$ and $0.76 \text{ cm}^3 \text{ g}^{-1}$, respectively.

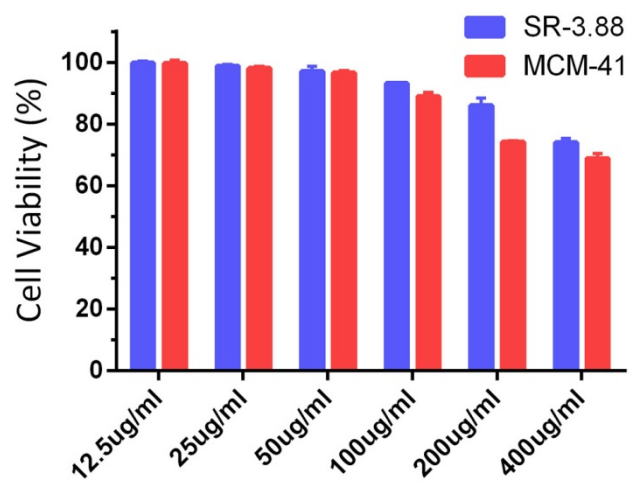


Fig. S3 KHOS cell viability after 24 h incubation with various concentrations of SR-3.88 or MCM-41.

References

1. S. Yang, L. Z. Zhao, C. Z. Yu, X. F. Zhou, J. W. Tang, P. Yuan, D. Y. Chen and D. Y. Zhao, *J. Am. Chem. Soc.*, 2006, 128, 10460-10466.