

Supporting Information

Nanotubes Connected to a Micro-tank: Hybrid Micro-/Nano-Silica Architectures Transcribed from Living Bacteria as Bioreactors

Fuke Wang and Chuanbin Mao*

Department of Chemistry & Biochemistry, University of Oklahoma, Norman, OK 73019,
USA, e-mail: cbmao@ou.edu

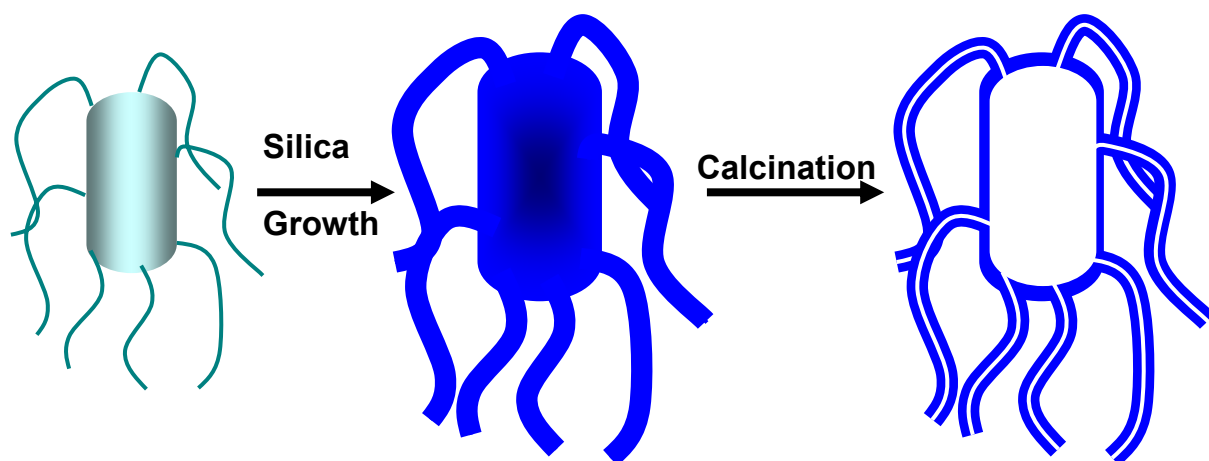


Figure S1. The diagram shows the formation of hybrid micro-tank/nano-tubes silica by using *fimbriated* bacteria *E. Coli* TG1 as templates.

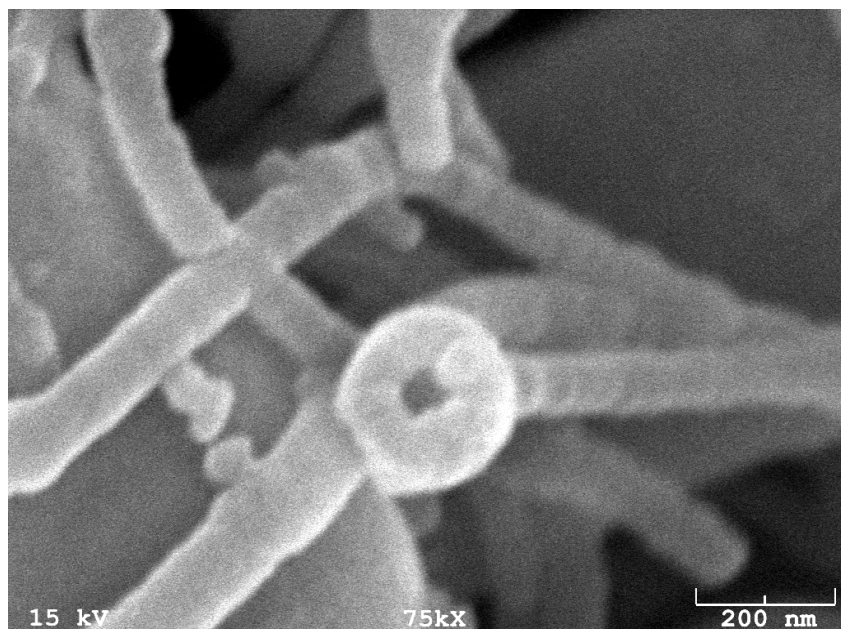


Figure S2. SEM image shows the silica structure at the connection of *fimbriae* and *E. coli* TG1 bacteria.

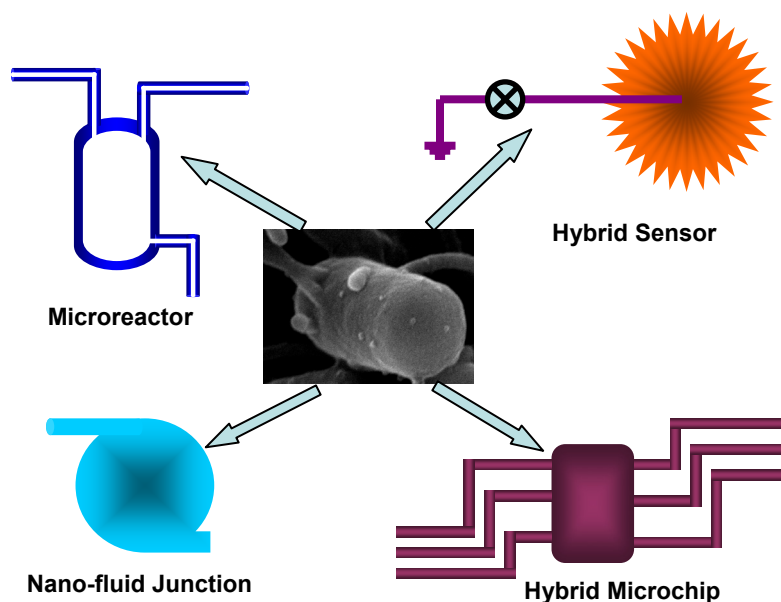


Figure S3. Possible applications of the hybrid micro-/nano-sized silica.¹⁻³

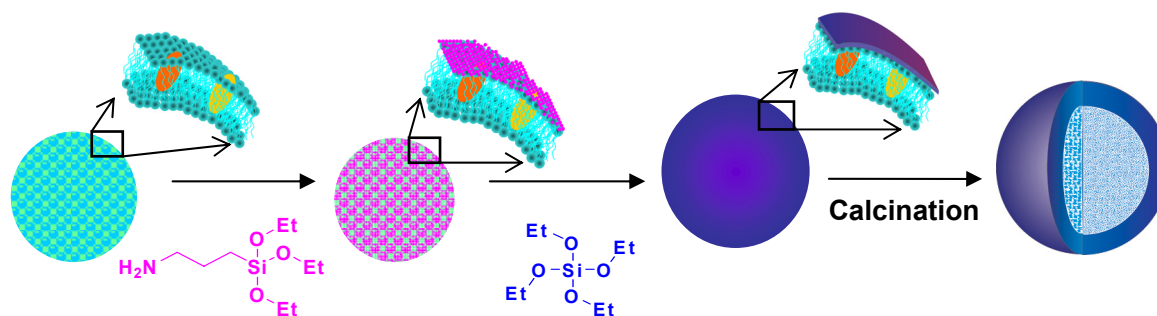


Figure S4. Diagram shows the molecular assembly of APTES on the surface of templates, which then functions as nuclei for the subsequent silica polycondensation.

References:

1. I. R. M. Kottegoda, Y. Kadoma, H. Ikuta, Y. Uchimoto and M. Wakihara, *Journal of the Electrochemical Society*, 2005, **152**, A1595-A1599.
2. J. J. Tulock, M. A. Shannon, P. W. Bohn and J. V. Sweedler, *Analytical Chemistry*, 2004, **76**, 6419-6425.
3. T. C. Kuo, H. K. Kim, D. M. Cannon, M. A. Shannon, J. V. Sweedler and P. W. Bohn, *Angewandte Chemie-International Edition*, 2004, **43**, 1862-1865.