Ying-Bing Jiang, PhD

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(a) Professional Preparation

- BS, Materials Science, Northeast Institute of Heavy Machinery, China, 1993
- MS, Materials Science, Northeast Institute of Heavy Machinery, China, 1995
- PhD, Chemical Engineering, University of New Mexico, Albuquerque, NM, 2005
- Post-doctoral fellow, Advanced Materials, Sandia National Labs, Albuquerque, NM, 2006 – 2008

(b) Appointments

- Research Associate Professor, Chemical and Biological Engineering, University of New Mexico, 2009-present
- Senior Research Scientist, Manager, TEM & FIB Labs, Univ. of New Mexico, 2008-present
- Post-doctoral employee, Advanced Materials Lab, Sandia National Labs, 2006-2008
- Research Scientist, TEM Lab, University of New Mexico, 2002-2005
- Research Assistant, Chemical Engineering, University of New Mexico, 1999-2002
- Visiting Scientist, Soltan Institute for Physics, Polish Academy of Sciences, 1997

(c) Publications

Ten Recent Publications: (out of 72 Articles)

1. Y.-B. Jiang, G. Xomeritakis, Z. Chen, D. Dunphy, D. J. Kissel, J. L. Cecchi, and C. J. Brinker, “Sub-10 nm thick microporous membranes made by plasma-defined atomic layer deposition of a bridged silsesquioxane precursor,” *J. Am. Chem. Soc.* **129**,15446-15447 (2007).
2. Z. Chen, Y.-B. Jiang, D.R. Dunphy, D. P. Adams, C. Hodges, N. G. Liu, N. Zhang, G. Xomeritakis, X. Z. Jin, N. R. Aluru, S. J. Gaik, H. W. Hillhouse, and C. J. Brinker, “DNA translocation through an array of kinked nanopores,” *Nature Mater.* **9**, 667-675 (2010).
3. Z. Song, T. Xu, M.Gordin, Y.-B.Jiang, I.Bae, Q. Xiao, H. Zhan, J. Liu, and D. Wang. “Polymer-graphene nanocomposites as ultrafast-charge and -discharge cathodes for rechargeable lithium batteries,” *Nano Lett.* **12,** 2205-2211 (2010).
4. S. Moghaddam, E. Pengwang, Y.-B. Jiang, A. R. Garcia, D. J. Burnett, C. J. Brinker, R. I. Masel, and M. A. Shannon, “An inorganic-organic proton exchange membrane for fuel cells with a controlled nanoscale pore structure,” *Nature Nanotech.* **5**, 230-236 (2010).
5. G. Xomeritakis, C. Y. Tsai, Y.-B. Jiang, and C. J. Brinker, “Tubular ceramic-supported sol-gel silica-based membranes for flue gas carbon dioxide capture and sequestration,” *J. Mem. Sci.* **341**, 30-36 (2009).
6. J. X. Song, T. Xu, M. L. Gordin, P. Y. Zhu, D. P. Lv, Y.-B. Jiang, Y. S. Chen, Y. H. Duan, and D. H. Wang, “Nitrogen-doped mesoporous carbon … for lithium-sulfur batteries,” *Adv. Funct. Mater.* **24**, 1243-1250 (2014).
7. Y. J. Tian, B. Xu, D. Yu, Y. M. Ma, Y. B. Wang, Y.-B. Jiang, W. T. Hu, C. C. Tang, Y. F. Gao, K. Luo, Z. S. Zhao, L. M. Wang, B. Wen, J. L. He, and Z. Y. Liu, “Ultrahard nanotwinned cubic boron nitride,” *Nature* **493**, 385-388 (2013).

8. Y.-B. Jiang, N. Liu, H. Gerung, J. L.Cecchi, and C. J.Brinker, “Nanometer-thick conformal pore-sealing of self-assembled mesoporous silica by plasma-assisted atomic layer deposition,” *J. Am. Chem. Soc.* **128** 11018-11019 (2006).
9. J. L. Zhu, Z. W. Quan, Y. S. Lin, Y.-B. Jiang, Z. W. Wang, J. Z. Zhang, C. Q. Jin, Y. S. Zhao, Z. X. Liu, C. J. Brinker, and H. W. Xu, “Porous ice phases with VI and distorted VII structures constrained in nanoporous silica,” *Nano Lett.* **14**, 6554-6558 (2014).
10. Y. Fu, B. S. Li, Y.-B. Jiang, D. R. Dunphy, A. Tsai, S. Y. Tam, H. Y. Fan, H. X. Zhang, D. Rogers, S. Rempe, P. Atanassov, J. L. Cecchi, and C. J. Brinker, “Atomic layer deposition of L-alanine polypeptide,” *J. Am. Chem. Soc.* **136**, 15821-15824 (2014).

(d) Synergistic Activities

- Co-winner of **2011 R&D 100 Award**: “Biomimetic Membranes for Water Purification,” S.B. Rempe, C.J. Brinker, Y.-B. Jiang, K. Leung, D. Rogers, S. Varma, and S. Yang.
- Co-organizer and session chair, MRS Meeting symposium R, Spring 2015 (San Francisco, CA) Nanostructures."
- Organizer & session chair, MRS Meeting symposium NT6, Spring 2016 (Phoenix, AZ)
- Co-organizer & session chair, MRS Meeting symposium ED5, Spring 2017 (to be hold in Phoenix, AZ)
- Co-winner of two (2) **2015 R&D 100 Awards in Mechanical/Materials and Green Technology**: “CO_2 Memzyme,” C.J. Brinker, Y.-B. Jiang, S.B. Rempe, Y. Fu, J. Vanegas, J. Cecchi, and D. Jiao.