

## Curriculum Vitae

### Peng Jiang

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#### EDUCATION

- **Ph.D.** in Materials Chemistry, Rice University, May 2001.
- **M.S.** in Physical Chemistry, Chinese Academy of Sciences, August 1996.
- **B.S.** in Chemistry and Chemical Engineering, Ocean University of China, July 1993.

#### PROFESSIONAL EXPERIENCE

- **Assistant Professor**, Department of Chemical Engineering, University of Florida, Gainesville, FL, August 2006-Present.
- **Material Scientist**, GE Global Research Center, General Electric Corp., Niskayuna, NY, 2006.
- **Research Associate**, Department of Chemical Engineering, Princeton University, Princeton, NJ, 2003-2006.
- **Senior Research Scientist**, Corning R&D, Corning Incorporated, Corning, NY, 2001-2003.

#### TEACHING EXPERIENCE

- ECH 6937 – Material Self-Assembly Over All Length Scales, Spring 2008.
- ECH 3023 – Material and Energy Balances, Fall 2007. (Instructor evaluation: 4.61/5.00)
- ECH 6937/4905 – Material Self-Assembly Over All Length Scales, Fall 2006. (Instructor evaluation: 4.80/5.00)

#### AWARDS & HONORS

- NSF CAREER Award, 2008.
- MRS Graduate Student Silver Awards, Materials Research Society, Fall 2000.
- Nettie S. Autrey Fellowship for Outstanding Research in Science, 2000-2001.
- The President Award, Chinese Academy of Sciences, November 1996.
- Distinguished Undergraduate Student Award, Ocean University of China, July 1993.

#### PROFESSIONAL AFFILIATIONS

- AIChE
- American Chemical Society
- Materials Research Society
- American Optical Society

#### SYNERGISTIC ACTIVITIES

- Session Chair of Nanoparticle Synthesis and Stabilization, *American Institute of Chemical Engineering Annual Meeting*, San Francisco, California (2006).
- Session Chair of Ionic Transport for Batteries and Fuel Cells, *Materials Research Society Spring Meeting*, San Francisco, California (2007).

- Session Chair of Particle Synthesis and Stabilization, *American Institute of Chemical Engineering Annual Meeting*, Salt Lake City, Utah (2007).
- Session Co-Chair of Interfacial Phenomena in Environmental and Alternative Energy Systems, *American Institute of Chemical Engineering Annual Meeting*, Salt Lake City, Utah (2007).
- Session Chair of Nanoscale Synthesis 3: Growth Mechanism, 82<sup>nd</sup> *ACS Colloid & Surface Science Symposium*, Raleigh, NC.
- Session Co-Chair of Interfacial Phenomena in Energy Systems, *American Institute of Chemical Engineering Annual Meeting*, Philadelphia, Pennsylvania (2008).
- Session Chair of Nanoparticle Synthesis and Stabilization, *American Institute of Chemical Engineering Annual Meeting*, Philadelphia, Pennsylvania (2008).
- Reviewer: *Nature Photonics*, *Journal of the American Chemical Society*, *Angewandte Chemie International Edition*, *Nano Letters*, *Journal of Physical Chemistry B*, *Langmuir*, *Chemistry of Materials*, *Advanced Materials*, *Advanced Functional Materials*, *Chemical Physical Letters*, *Journal of Materials Chemistry*, *Photonics and Nanostructures*, *Superlattices and Microstructures*, *IEEE Sensors Journal*, *Electrochemistry Communications*, *Crystal Growth & Design*, *Journal of Nanomaterials*, *Journal of Solid State Chemistry*, *Optics and Lasers in Engineering*, and *Environmental Science and Engineerin*.
- Grant Panel Reviewer: NSF (CBET PMP, EFS, and CBS programs) and DOE.

## PUBLICATIONS (Over 2000 citations)

### *Publications at UF:*

40. Lin, T. H.; Linn, N. C.; Tarajano, L.; Jiang, B.; Jiang, P. Electrochemical SERS at Periodic Metallic Nanopyramid Arrays. Submitted.
39. Min, W. L.; Jiang, B.; Jiang, P.\* Large-Scale Assembly of Colloidal Nanoparticles by Spin-Coating. Submitted.
38. Min, W. L.; Jiang, B.; Jiang, P.\* Bioinspired Self-Cleaning Antireflection Coatings. *Advanced Materials*, accepted for publication..
37. Sun, C. H.; Min, W. L.; Jiang, P.\* Templated Fabrication of Sub-100 nm Periodic Nanostructures. *Chemical Communications*, in press.
36. Min, W. L.; Betancourt, A. P.; Jiang, B.; Jiang, P.\* Bio-inspired Broadband Antireflection Coatings on GaSb. *Applied Physics Letters* **2008**, 92, 141109.
35. Sun, C. H.; Min, W. L.; Linn, N. C.; Jiang, B.; Jiang P.\* Effect of Crystalline Structure on the Performance of Self-Assembled Moth-Eye Antireflection Coatings. Submitted.
34. Sun, C. H.; Jiang, B.; Jiang, P.\* Broadband Moth-Eye Antireflection Coatings on Silicon. *Applied Physics Letters* **2008**, 92, 061112.
33. Sun, C. H.; Gonzalez, A.; Linn, N. C.; Jiang, B.; Jiang, P.\* Templated Biomimetic Multifunctional Coatings. *Applied Physics Letters* **2008**, 92, 051107.
32. Sun, C. H.; Jiang, P.\* Photonic Crystals: Acclaimed Defects. *Nature Photonics* **2007**, 2, 9-11.
31. Sun, C. H.; Min, W. L.; Linn, N. C.; Jiang, B.; Jiang, P.\* Templated Fabrication of Large Area Subwavelength Antireflection Gratings on Silicon. *Applied Physics Letters* **2007**, 91, 231105.
30. Jiang, P.\*; Sun, C. H.; Linn, N. C.; Ho, B.; Venkatesh, S. Self-Assembled Photonic Crystals and Templated Nanomaterials. *Current Nanoscience* **2007**, 3, 296-305. (Invited review article)
29. Linn, N. C.; Sun, C. H.; Jiang, B.; Jiang, P.\* Self-Assembled Biomimetic Antireflection Coatings. *Applied Physics Letters* **2007**, 91, 111108. (Featured on *Nature*, *Laser Focus World*, and a dozen of other public media)
28. Sun, C. H.; Linn, N. C.; Jiang, P.\* Templated Fabrication of Periodic Metallic Nanopyramid Arrays. *Chemistry of Materials* **2007**, 19, 4551-4556.
27. Venkatesh, S.; Jiang, B.; Jiang, P.\* Generalized Fabrication of Two-Dimensional Non-Close-Packed Colloidal Crystals. *Langmuir* **2007**, 23, 8231-8235.

### *Early publications:*

26. Jiang, P.\*; Prasad, T.; McFarland, M. J.; Colvin, V. L. Two-Dimensional Nonclose-Packed Colloidal Crystals Formed by Spincoating. *Applied Physics Letters* **2006**, 89, 011908.
25. Jiang, P.\* Large-Scale Fabrication of Periodic Nanostructured Materials by Using Hexagonal Non-Close-Packed Colloidal Crystals as Templates. *Langmuir* **2006**, 22, 3955-3958.
24. Jiang, P.\* Wafer-Scale Fabrication of Periodic Polymer Attolitre Microvial Arrays. *Chemical Communications* **2005**, 1699-1701.
23. Jiang, P.\*; McFarland, M. J. Wafer-Scale Periodic Nanohole Arrays Templated from Two-Dimensional Nonclose-Packed Colloidal Crystals. *Journal of the American Chemical Society* **2005**, 127, 3710-3711.
22. Jiang, P.\*; McFarland, M. J. Large-Scale Fabrication of Wafer-Size Colloidal Crystals, Macroporous Polymers and Nanocomposites by Spin-Coating. *Journal of the American Chemical Society* **2004**, 126, 13778-13786.
21. Jiang, P.\* Surface-Templated Nanostructured Films with Two-Dimensional Ordered Arrays of Voids. *Angewandte Chemie-International Edition* **2004**, 43, 5625-5628.
20. Jiang, P.; Bertone, J. F.; Colvin, V. L.\* A Lost-Wax Approach to Monodisperse Colloids and Their Crystals. *Science* **2001**, 291, 453-457.
19. Rengarajan, R.; Jiang, P.; Larrabee, D. C.; Colvin, V. L.; Mittleman, D. M.\* Colloidal Photonic Superlattices. *Physical Review B* **2001**, 6420.
18. Jiang, P.; Ostojic, G. N.; Narat, R.; Mittleman, D. M.; Colvin, V. L.\* The Fabrication and Bandgap Engineering of Photonic Multilayers. *Advanced Materials* **2001**, 13, 389-393.
17. Rengarajan, R.; Jiang, P.; Colvin, V.; Mittleman, D.\* Optical Properties of a Photonic Crystal of Hollow Spherical Shells. *Applied Physics Letters* **2000**, 77, 3517-3519.
16. Kulinowski, K. M.; Jiang, P.; Vaswani, H.; Colvin, V. L.\* Porous Metals from Colloidal Templates. *Advanced Materials* **2000**, 12, 833-838.
15. Jiang, P.; Hwang, K. S.; Mittleman, D. M.; Bertone, J. F.; Colvin, V. L.\* Template-Directed Preparation of Macroporous Polymers with Oriented and Crystalline Arrays of Voids. *Journal of the American Chemical Society* **1999**, 121, 11630-11637.
14. Jiang, P.; Cizeron, J.; Bertone, J. F.; Colvin, V. L.\* Preparation of Macroporous Metal Films from Colloidal Crystals. *Journal of the American Chemical Society* **1999**, 121, 7957-7958.
13. Jiang, P.; Bertone, J. F.; Hwang, K. S.; Colvin, V. L.\* Single-Crystal Colloidal Multilayers of Controlled Thickness. *Chemistry of Materials* **1999**, 11, 2132-2140.
12. Bertone, J. F.; Jiang, P.; Hwang, K. S.; Mittleman, D. M.; Colvin, V. L.\* Thickness Dependence of the Optical Properties of Ordered Silica-Air and Air-Polymer Photonic Crystals. *Physical Review Letters* **1999**, 83, 300-303.
11. Mittleman, D. M.\*; Bertone, J. F.; Jiang, P.; Hwang, K. S.; Colvin, V. L. Optical Properties of Planar Colloidal Crystals: Dynamical Diffraction and the Scalar Wave Approximation. *Journal of Chemical Physics* **1999**, 111, 345-354.
10. Wang, D. X.\*; Jiang, P.; Qian, X. M.; Hong, G. Y. Response To "Comment on 'a Study of HeI Photoelectron Spectroscopy on the Electronic Structure of the Nitrate Free Radical NO<sub>3</sub>'". *Journal of Chemical Physics* **1998**, 108, 1293-1293.
9. Wang, D. X.\*; Jiang, P.; Qian, X. M.; Hong, G. Y. A Study of HeI Photoelectron Spectroscopy on the Electronic Structure of the Nitrate Free Radical NO<sub>3</sub>. *Journal of Chemical Physics* **1997**, 106, 3003-3006.
8. Jiang, P.; Qian, X. M.; Li, C. H.; Qiao, C. H.; Wang, D. X.\* HeI Photoelectron Spectroscopic Studies on the Electronic Structure of Alkyl Nitrosamines. *Chemical Physics Letters* **1997**, 277, 508-512.
7. Wang, D. X.\*; Jiang, P.; Zhang, Q. Y. HeI Photoelectron Spectrum (PES) of Fluorine Nitrate, FONO<sub>2</sub>. *Chemical Physics Letters* **1996**, 262, 771-775.
6. Wang, D. X.\*; Qian, X. M.; Jiang, P. A Novel Method for the Kinetic Study of a Chemical Reaction: Determination of the Kinetic Parameters of the Isomerisation Reaction of Methyl Isocyanide Using HeI Photoelectron Spectroscopy. *Chemical Physics Letters* **1996**, 258, 149-154.
5. Wang, D. X.\*; Jiang, P. HeI Photoelectron Spectroscopy Study on the Electronic Structure of Bromine Nitrate, BrONO<sub>2</sub>. *Journal of Physical Chemistry* **1996**, 100, 4382-4384.

4. Wang, D. X.\*; Li, Y.; Jiang, P.; Wang, X. H.; Chen, B. M. The Study of HeI Photoelectron Spectroscopy (PES) of the Electronic Structure for ClONO<sub>2</sub>. *Chemical Physics Letters* **1996**, 260, 99-102.
3. Jiang, P.; Wang, D. X.\* HeI Photoelectron Spectroscopy Study of the Reaction between Chlorine Nitrate Molecules with Chlorine Atoms. *Chemistry Bulletin* **1996**, 3, 331-337.
2. Jiang, P.; Wang, D. X.\* HeI Photoelectron Spectroscopy Study of the Photolysis Reaction of Chlorine Nitrate by 253.7 Nm Ultraviolet Light. *Chinese Journal of Chemical Physics* **1996**, 9, 235-241.
1. Chen, G. H.\*; Jiang, P.; Chen, Y.; Ji, H. A Phase Diagram Study of Microemulsions Formed from n-Hexane and Seawater. *Chinese Journal of Oceanology et Limnology* **1995**, 26, 619-626.

## ISSUED/PUBLISHED PATENTS

1. “Optical Article Having a Thermally Responsive Material as an Anti-theft Feature and a System and Method for Inhibiting Theft of Same”, Wisnudel, M; Patel, B.; Peters, A.; Jiang, P., US Patent (20080018886), pending, filed by General Electric.
2. “Wirelessly Powered Flexible Tag”, Wisnudel, M.; Patel, B.; R. Frey, Potyrailo, R.; Litz, K; Jiang, P.; Peters, A., US Patent (20070114621), pending, filed by General Electric.
3. “Large-Scale Colloidal Crystals and Macroporous Polymers and Method for Producing”, P. Jiang, US Patent (20050095417), pending, filed by Corning Inc.
4. “Light Extraction Designs for Organic Light Emitting Diodes”, S. M. Garner, V. A. Bhagavatula, J. S. Sutherland, M. Maxfield, K. Beeson, L. W. Shacklette, P. Jiang, H. Zou, and R. Blomquist, US Patent (20040217702), pending, filed by Corning Inc.
5. “Polymers Having Ordered, Monodisperse Pores and Their Corresponding Ordered, Monodisperse Colloids”, P. Jiang and V. L. Colvin, US Patent, 6,929,764.

## RESEARCH SUPPORT

- National Science Foundation.
- State of Florida Emerging Technology Commission.
- ACS Petroleum Research Fund.
- Rohm and Haas Electronic Materials.
- University of Florida Research Opportunity Seed Fund.
- University of Florida Start-up Funds.

## STUDENTS

- Graduate Students: Nicholas Linn (pre-Ph.D. candidate), Chih-Hung Sun (pre-Ph.D. candidate), Gill Brubaker (Ph.D. candidate), In-Kook Jun (pre-Ph.D. candidate), Tzung-Hua Lin (pre-Ph.D. candidate), Adriel Gonzales (M.S.), Wei-Han Huang (M.S.), Wei-Lun Min (pre-Ph.D. candidate), Gavin Garvey (M.S.).
- Undergraduate Students: Samuel Bahr, Brian Ho, Srinivasan Venkatesh, Amaury Betacourt, Ajay Arya, Lemis Tarajano, Rachel Stewart, Tafadzwa Chigumira (REU).
- High School Student: Fedja Kadribasic.