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EDUCATION:

- Dec. 2002 Ph.D. in Chemistry, University of California at Berkeley.
Advisor: Prof. Peidong Yang.
- June. 1998 B.S. in chemical physics, University of Science and Technology of China.

EMPLOYMENT:

- 2013-present **Associate Editor**, ACS Applied Materials & Interfaces
- 2011-present **Associate Professor**, Department of Chemistry and Biochemistry, The Ohio State University, Columbus, Ohio
- 2005-2011 **Assistant Professor**, Chemistry Department, The Ohio State University, Columbus, Ohio
- 2003-2005 **Postdoctoral Researcher**, University of California at Santa Barbara, Department of Chemistry and Biochemistry, Advisor: Prof. Galen D. Stucky.

HONORS:

- 2011 6th Top Materials Scientist based on Thompson Reuters' Essential Science Indicators measurement of the impact of each scientist's published works from 2000-2010.
- 2010 NSF-CAREER Award
- 2008 Cottrell Scholar Award, Research Corporation
- 2001 MRS Graduate Student Silver Award, Boston.
- 2001-2002 Cal@Silicon Valley Fellowship, University of California at Berkeley.

PROFESSIONAL MEMBERSHIPS:

- 2001 American Chemical Society
- 2001 Materials Research Society

PUBLICATION LIST (h-index: 37; total citations >21,000 as by February 2014)

64. M. He, Z. Ji, Z. Huang, Y. Wu, "Molecular Orbital Engineering of a Panchromatic Cyclometalated Ru(II) Dye for p-Type Dye-Sensitized Solar Cells", accepted by *J. Phys. Chem. C*. (invited Article in honor of the Michael Graetzel Festschrift)
63. M.R. Laskar, D. N. Nath, L. Ma, E.W. Lee II, C.H. Lee, T. Kent,

- Z. Yang, R. Mishra, M.A. Roldan, J.-C. Idrobo, S.T. Pantelides, S.J. Pennycook, R. Myers, Y. Wu and S. Rajan, “p-type doping in CVD grown MoS₂ using Nb”, accepted by *Appl. Phys. Lett.*
62. M. Yu, T. Draskovic, Y. Wu “Cu(I)-based Delafossite Compounds as Photocathodes in p-type Dye-Sensitized Solar Cells”, accepted by *Physical Chemistry Chemical Physics (Perspective)*.
61. J. Ahmed, C.K. Blakely, J. Prakash, S.R. Bruno, M. Yu, Y. Wu, V.V. Poltavets “Scalable synthesis of delafossite CuAlO₂ nanoparticles for p-type dye-sensitized solar cell applications”, accepted by *Journal of Alloys and Compounds*.
60. Z. Ji, Y. Wu “Photoinduced Electron Transfer Dynamics of Cyclometalated Ruthenium(II)-Naphthalenediimide Dyad at NiO Photocathode”, *J. Phys. Chem. C*, **2013**, *117* (36), pp 18315–18324.
59. Z. Ji, G. Natu, Y. Wu “Cyclometalated ruthenium sensitizers bearing triphenylamino group for p-type NiO dye-sensitized solar cells”, *ACS Appl. Mater. Interfaces*, **2013**, *5* (17), pp 8641–8648.
58. Z. Ji, M. He, Z. Huang, U. Ozkan, Y. Wu “Photostable p-Type Dye-Sensitized Photoelectrochemical Cells for Water Reduction”, *J. Am. Chem. Soc.*, **2013**, *135* (32), pp 11696–11699. (cited 5 times)
57. M. R. Laskar, Lu Ma, etc. “Large area single crystal (0001) oriented MoS₂ thin films”, *APPLIED PHYSICS LETTERS*. **2013**, *102*, pp 252108. (cited 4 times)
56. X. Ren and Y. Wu, “A low overpotential K-O₂ battery based on KO₂”, *J. Am. Chem. Soc.* **2013**, *135* (8), pp 2923–2926. (cited 6 times)
55. Z. Huang, G. Natu, Z. Ji, M. He, M. Yu and Y. Wu, “Probing the Low Fill Factor of NiO p-Type Dye-Sensitized Solar Cells”, *J. Phys. Chem. C*. **2012**, *116*, pp 26239-26246. (cited 7 times)
54. G. Natu, P. Hasin, Z. Huang, Z. Ji, M. He and Y. Wu, “Valence Band-edge engineering of nickel oxide nanoparticles via cobalt doping for application in p-type dye-sensitized solar cells”, *ACS Applied Materials and Interfaces* **2012**, *4* (11), pp 5922–5929. (cited 4 times)
53. Z. Ji, G. Natu, Z. Huang, O. Kokhan, X. Zhang, Y. Wu, “Synthesis, photophysics and photovoltaic studies of ruthenium cyclometalated complexes as sensitizers for p-type NiO dye-sensitized solar cells”, *J. Phys. Chem. C*, **2012** *116* (32), pp 16854–16863. (cited 12 times)
52. M. Yu, G. Natu, Z. Ji, Y. Wu, “p-Type Dye-Sensitized Solar Cells Based on Delafossite CuGaO₂ Nanoplates with Saturation Photovoltages Exceeding 460 mV” *J. Phys. Chem. Lett.*, **2012**, *3*, pp 1074–1078. (cited 28 times)
51. Gayatri Natu, Zhongjie Huang, Zhiqiang Ji, and Yiyong Wu, “The Effect of an Atomically Deposited Layer of Alumina on NiO in P-type Dye-Sensitized Solar Cells” *Langmuir*, **2012**, *28* (1), pp 950–956. (cited 18 times)

50. Panitat Hasin and Yiying Wu, "Sonochemical synthesis of copper hydride (CuH)" *Chem. Commun.*, 2012, **48**, 1302-1304. (cited 5 times)
49. Zhongjie Huang, Gayatri Natu, Zhiqiang Ji, Panitat Hasin, and Yiying Wu, "p-Type Dye-Sensitized NiO Solar Cells: A Study by Electrochemical Impedance Spectroscopy", *J. Phys. Chem. C*, **115** (50), pp 25109–25114 (2011). (cited 21 times)
48. Z. Ji, G. Natu, Z. Huang, Y. Wu, "Linker effect in organic donor-acceptor dyes for p-type NiO dye sensitized solar cells", *Energy & Environmental Science*, 2011, **4**, pp 2818-2821. (cited 32 times)
47. Y. Wu (2011). Nanocrystalline Oxide Semiconductors for Dye-Sensitized Solar Cells. In Peidong Yang (Eds.), *The Chemistry of Nanostructured Materials* (pgs. 127-173). World Scientific Publishing Co.
46. D. Wang, Y. Li, P. Hasin, Y. Wu. "Preparation, Characterization, and electrocatalytical performance of graphene/methylene blue thin films", *Nano Research*, **4**(1), 124-130 (2011). (cited 10 times)
45. P. Hasin, M. A. Alpuche-Aviles, Y. Wu. "Electrocatalytic activity of graphene multilayers towards Γ/I_3^- : effect of preparation conditions and polyelectrolyte modification" *J. Physical Chemistry C* **114**(37), 15857 (2010). (cited 30 times)
44. G. Natu, Y. Wu. "Photoelectrochemical Study of the Ilmenite Polymorph of $CdSnO_3$ and its Photoanodic Application in Dye-Sensitized Solar Cells" *J. Physical Chemistry C*, **114** (14), 6802 (2010). (cited 16 times)
43. Y. Li, P. Hasin, Y. Wu. " $Ni_xCo_{3-x}O_4$ Nanowire Arrays for Electrocatalytic Oxygen Evolution", *Advanced Materials*, **22** (17), 1926 (2010). (cited 79 times)
42. Y. Li, Y. Wu. "Critical Role of Screw Dislocations in the Growth of $Co(OH)_2$ Nanowires as Intermediates for Co_3O_4 Nanowires Growth", *Chemistry of Materials*, **22**(19) 5537-5542 (2010). (cited 23 times)
41. J. Baxter, G. Chen, D. Danielson, M. S. Dresselhaus, A. G. Fedorov, T. S. Fisher, C. W. Jones, E. Maginn, U. Kortshagen, A. Manthiram, A. Nozik, D. Rolison, T. Sands, L. Shi, D. Sholl, Y. Wu. "Nanoscale Design to Enable the Revolution in Renewable Energy", *Energy & Environmental Science*. **2** (6), 559 (2009). (cited 117 times)
40. Y. Li, Y. Wu. "Coassembly of Graphene Oxide and Nanowires for Large-Area Nanowire Alignment", *J. Am. Chem. Soc.* **131**(16) 5851-5857 (2009). (cited 102 times)
39. M. A. Alpuche-Aviles, Y. Wu. "Photoelectrochemical Study of the Band structure of Zn_2SnO_4 Prepared by the Hydrothermal method", *J. Am. Chem. Soc.* **131**(9) 3216-3224 (2009). (cited 65 times)
38. P. Hasin, M. A. Alpuche-Aviles, Y. Li, Y. Wu. "Mesoporous Nb-doped TiO_2 as Pt Support for Counter Electrode in Dye-Sensitized Solar Cells", *J. Phys. Chem. C*. **113**(17) 7456-7460 (2009). (cited 29 times)

37. Y. Li, Y. Wu. "Formation of $\text{Na}_{0.44}\text{MnO}_2$ nanowires via stress-induced splitting of birnessite nanosheets", *Nano Research*, **2**(1): 54-60 (2009). (cited 16 times)
36. Y. Li, B. Tan, Y. Wu. "Mesoporous Co_3O_4 Nanowire Arrays for Lithium Ion Batteries with High Capacity and Rate Capacity", *Nano Letters*, **8**: 265-270 (2008). (cited 527 times)
35. Y. Li, B. Tan, Y. Wu. "Ammonia-Evaporation-Induced Synthetic Method for Metal (Cu, Zn, Cd, Ni) Hydroxide/Oxide Nanostructures", *Chem. Mater.* **20**: 567-576 (2008). (cited 86 times)
34. B. Tan, E. Toman, Y. Li, Y. Wu, "Zinc Stannate (Zn_2SnO_4) Dye-Sensitized Solar Cells", *J. Am. Chem. Soc.* **129**(14), 4162 (2007). (cited 154 times)
33. Y. Li, B. Tan, Y. Wu, "Freestanding mesoporous quasi-single-crystalline Co_3O_4 nanowire arrays", *J. Am. Chem. Soc.* **128**(44), 14258-14259 (2006) (highlighted by *Nature Nanotech.* (Oct. 2006)). (cited 203 times)
32. B. Tan, Y. Wu, "Dye-Sensitized Solar Cells Based on Anatase TiO_2 Nanoparticle/Nanowire Composites", *J. Phys. Chem. B* **110**: 15932-15938 (2006). (cited 346 times)

(Postdoc work)

31. A. Thomas, M. Schierhorn, Y. Wu, G. Stucky, "Assembly of Spherical Micelles in 2D Physical Confinements and Their Replication into Mesoporous Silica Nanorods", *J. Mater. Chem.* **17**: 4558-4562 (2007).
30. M. Moskovits, D.H. Jeong, T. Livneh, Y.Y. Wu, G.D. Stucky, "Engineering nanostructures for single-molecule surface-enhanced Raman spectroscopy", *Israel Journal of Chemistry*, **46**: 283-291 (2006).
29. Y. Zhang, J. Christofferson, A. Shakouri, D. Li, A. Majumdar, Y. Wu, R. Fan, P. Yang, "Characterization of heat transfer along Si Nanowire", *IEEE Transactions on Nanotechnology*, **5**, 67 (2006).
28. J. F. Wang, C.-K. Tsung, R. C. Hayward, Y. Wu, G. D. Stucky. "Single-crystal mesoporous silica ribbons", *Angew. Chem. Int. Ed.* **44**: 332-336 (2005).
27. Y. Wu, G. S. Cheng, K. Katsov, S. W. Sides, J. F. Wang, J. Tang, G. H. Fredrickson, M. Moskovits, G. D. Stucky, "Composite mesostructures by nano-confinement", *Nature Materials* **3**, 816-822 (2004). (Highlighted by *Science* **306**, 943 (2004)).
26. Y. Wu, T. Livneh, Y. X. Zhang, G. S. Cheng, J. F. Wang, J. Tang, M. Moskovits, G. D. Stucky, "Templated synthesis of highly ordered mesostructured nanowires and nanowire array", *Nano Letters* **4**, 2337 (2004) (cover story).
25. J. F. Wang, C.-K. Tsung, W. B. Hong, Y. Wu, J. Tang, G. D. Stucky, "Synthesis of mesoporous silica nanofibers with controlled pore architectures", *Chem. Mater.* **16**, 5169 (2004).

24. J. Tang, Y. Wu, E. W. McFarland, G. D. Stucky, "Synthesis and photocatalytic properties of highly crystalline and ordered mesoporous TiO₂ thin films", *Chem. Comm.* (14), 1670-1671 (2004).

(Graduate work)

23. A. R. Abramson, W. C. Kim, S. T. Huxtable, H. Q. Yan, Y. Wu, A. Majumdar, C.-K. Tien, P. D. Yang, "Fabrication and characterization of a nanowire/polymer-based nanocomposite for a prototype thermoelectric device", *Journal of Microelectromechanical Systems*, **13**(3), 505 (2004).
22. D. Y. Li, Y. Wu, R. Fan, P. D. Yang, A. Majumdar, "Thermal conductivity of Si/SiGe longitudinal heterostructure nanowires" *Appl. Phys. Lett.* **83**(15), 3186 (2003).
21. D. Y. Li, Y. Wu, P. Kim, L. Shi, N. Mingo, Y. Liu, P. D. Yang, A. Majumdar, "Thermal conductivity of individual silicon nanowires" *Appl Phys. Lett.* **83**(14), 2934 (2003).
20. R. Fan, Y. Wu, D. Y. Li, M. Yue, A. Majumdar, P. D. Yang, "Fabrication of Silica Nanotube Arrays from Vertical Silicon Nanowire Templates", *J. Am. Chem. Soc.* **125**(18), 5254-5255 (2003).
19. Y. N. Xia, P. D. Yang, Y. Sun, Y. Wu, B. Mayers, B. Gates, Y. D. Yin, F. Kim, H. Yan, "One-dimensional Nanostructures: Synthesis, Characterization, and Applications", *Adv. Mater.* **15**(5), 353-389 (2003).
18. Y. Wu, R. Fan, P. D. Yang, "Block-by-block growth of single-crystalline Si/SiGe superlattice nanowires", *Nano letters*, **2**, 83 (2002).
17. Y. Wu, H. Yan, M. Huang, B. Messer, J. Song, P. D. Yang, "Inorganic semiconductor nanowires: rational growth, assemblies and novel properties", *Chemistry, Euro. J.*, **8**, 1260 (2002).
16. Y. Wu, H. Yan, P. D. Yang, "Semiconductor nanowire array: potential substrates for photocatalysis and photovoltaics", *Topics in Catalysis*, **19**(2), 197 (2002).
15. B. Gates, B. Mayers, Y. Wu, Y. Sun, B. Cattle, P. D. Yang, Y. N. Xia, "Synthesis and characterization of crystalline Ag₂Se nanowires through a template-engaged reaction at room temperature", *Adv. Func. Mater.* **12**(10), 679-686 (2002).
14. P. D. Yang, Y. Wu, R. Fan, "Inorganic semiconductor nanowires", *International Journal of Nanoscience*, **1**(1), 1-39 (2002).
13. B. Zheng, Y. Wu, P. D. Yang, J. Liu, "Synthesis of ultra-long and highly-oriented silicon oxide nanowires from alloy liquid", *Adv. Mater.* **14**, 122 (2002).
12. Y. Wu, P. D. Yang, "Direct observation of vapor-liquid-solid nanowire growth", *J. Am. Chem. Soc.* **123**, 3165 (2001).
11. Y. Wu, B. Messer, P. D. Yang, "Superconducting MgB₂ nanowires", *Adv. Mater.* **13**, 1487 (2001).

10. Y. Wu, P. D. Yang, "Melting and welding semiconductor nanowires in nanotubes", *Adv. Mater.* **13**, 520 (2001).
9. M. Huang, S. Mao, H. Feick, H. Yan, Y. Wu, H. Kind, E. Weber, R. Russo, P. D. Yang, "Room-temperature ultraviolet nanowire nanolasers", *Science*, **292**, 1897 (2001).
8. M. Huang, Y. Wu, H. Feick, N. Tran, E. Weber, P. D. Yang, "Catalytic growth of zinc oxide nanowires through vapor transport", *Adv. Mater.* **13**(2), 113 (2001).
7. J. Song, Y. Wu, B. Messer, H. Kind, P. D. Yang, "Metal nanowire formation using Mo_3Se_3^- as reducing and sacrificing templates", *J. Am. Chem. Soc.* **123**, 10397 (2001).
6. B. Gates, Y. Wu, Y. Yin, P. D. Yang, Y. D. Xia, "Single-crystalline nanowires of Ag_2Se can be synthesized by templating against nanowires of trigonal Se", *J. Am. Chem. Soc.* **123**, 11500 (2001).
5. J. Song, B. Messer, Y. Wu, H. Kind P. D. Yang, "MMo₃Se₃ (M=Li⁺, Na⁺, Rb⁺, Cs⁺, NMe₄⁺) nanowire formation via cation exchange in organic solution", *J. Am. Chem. Soc.* **123**, 9714 (2001).
4. Y. Li, J. Wang, Z. Deng, Y. Wu, X. Sun, S. Fan, D. Yu, P. D. Yang, "Bismuth nanotubes: a rational low-temperature synthetic route", *J. Am. Chem. Soc.* **123**, 9904 (2001).
3. Y. Wu, P. D. Yang, "Germanium/carbon core-sheath nanostructures", *Appl. Phys. Lett.* **77**, 43 (2000).
2. Y. Wu, P. D. Yang, "Germanium nanowire growth via simple vapor transport", *Chem. Mater.* **12**, 605 (2000).
1. B. Messer, J. H. Song, M. Huang, Y. Wu, F. Kim, P. Yang, "Surfactant induced mesoscopic assemblies of inorganic molecular chains", *Adv. Mater.* **12**, 1526 (2000).

Funding:

Current Grants:

- 10/13-9/14 Honda R&D, "K-O2 battery: optimizing performance through basic research", \$200,000.
- 9/13 – 8/14 OSU Multidisciplinary Team Building Grants, "Next Generation 2D Semiconductor Heterostructures", \$60,000. (Co-PI)
- 9/13 - 8/16 Department of Energy, "Delafossite Semiconductor Nanocrystals for p-type Dye-Sensitized Solar Cells" \$522,000.00 total.
- 2/10 - 2/15 NSF-CAREER, "*Black Cobalt Oxide Nanowire Arrays: Synthesis, Properties, and Energy Applications*"; \$575,000 total

Prior Grants:

- 9/10 - 8/13 Department of Energy, "*Fabricating Highly Efficient Photocathodes for p-type Dye-sensitized Solar Cells*" \$522,000.00 total.
- 9/12-8/13 OSU Materials Seed Grant, "*Rechargeable potassium-air batteries with high energy storage and efficiency*", \$40, 000.

- 9/07-8/10 Department of Energy, "Designing nanoparticle/nanowire composites and "nanotree" arrays as electrodes for efficient dye-sensitized solar cells", \$750,000 total
- 9/06-9/08 Petroleum Research Fund PRF-43833, "Functional nanocrystal-nanowire composite materials: synthesis and electron transport properties", \$35,000 total.
- 7/08-7/11 Research Corporation (Cottrell Scholar Award), "Searching for New Electrode Materials and Nanostructured Architectures for Efficient Dye-Sensitized Solar Cells"; \$100,000 total.
- 9/11-8/12 IMR-OSU, Exploratory Materials Research Grant, "*Sonochemical Synthesis of Metal Hydrides*", \$40,000

INVITED PRESENTATIONS:

Conferences/Workshops/Symposia

27. "Cyclometalated ruthenium sensitizers for p-type dye-sensitized solar cells and solar fuels", 246th ACS meeting, Indianapolis, Sept. 8, 2013.
26. "Delafossite nanocrystals for solar cells and catalysis", 246th ACS meeting, Indianapolis, Sept. 9, 2013.
25. "Understanding nanoporous NiO in p-type dye-sensitized solar cells", 246th ACS meeting, Indianapolis, Sept. 9, 2013.
24. "p-type dye-sensitized solar cells and solar fuels", DOE Physical Behavior of Matter PI's meeting, Bolger Center, MD, April 17, 2013.
23. "Cathodic sensitization for p-type dye-sensitized solar cells", 245th ACS meeting, New Orleans, April 7, 2013.
22. "Cathodic Sensitization for p-type Dye-sensitized Solar Cells", 243rd ACS national meeting, San Diego, March 28, 2012
21. "Towards more efficient photocathode for tandem dye-sensitized solar cells", Materials Science & Technology Conference, Columbus, OH (October 19, 2011)
20. "Towards more efficient dye-sensitized solar cells", International Conference on Clean Energy Science, Dalian, China (April 10-13, 2011)
19. "Photoelectrochemistry of complex oxides for dye-sensitized solar cells." Presented at Materials Research Society (MRS) 2010 Fall Meeting. Boston, MA, USA. (December 2, 2010)
18. Solid State Chemistry Gordon Research Conference, Colby-Sawyer College, August 1-6, 2010.
17. ACS 239th National Meeting, San Francisco, March 22, 2010.
16. FACCs conference, Louisville, KY, October 19, 2009.
15. IMR Materials Week, Ohio State University, August 31 – September 3, 2009.
14. North American Solid State Conference, Ohio State University, June 17-20, 2009.
13. Central Regional Meeting of the American Chemical Society, Cleveland, May 20-23, 2009.

12. Materials Research Society meeting, San Francisco, April 13-17, 2009.
11. Indo-US Workshop on nanoscale materials and interfaces, Purdue University, 10-12 March 2009.
10. Nanoparticles in Energy Applications Workshop, Argonne National Lab, Feb. 23, 2009.
9. ASME Heat transfer, Fluids, Energy Sustainability and Nanotechnology, Jacksonville, FL, Aug. 12, 2008
8. Central Regional Meeting of American Chemical Society, Columbus, OH, June 13, 2008
7. 35th Annual Spring Symposium, Michigan Chapter of the American Vacuum Society, Toledo, Oh, May 28, 2008
6. Wright Center PVIC Semi Annual meeting, Columbus, OH, April 17, 2008
5. 235th ACS National Meeting, New Orleans, LA, April 9, 2008
4. SPIE Optics East, Boston, MA, Sept. 9-12, 2007
3. Advanced Materials Workshop, Dalian, China, June 23-24, 2007
2. 223rd ACS national meeting, Chicago, IL, March 25-28, 2007
1. 41st ACS Midwest Regional Meeting, Quincy, IL, Oct. 25-27, 2006

Universities/Colleges

44. University of Wyoming, Materials science and engineering program, "p-type dye-sensitized solar cells and solar fuels", 10/11/2013.
43. Henan Normal University, China, "Batteries and dye-sensitized solar cells", 6/24/2013
42. University of Florida, Department of Chemistry, "p-type dye-sensitized solar cells and solar fuels", 5/29/2013.
41. University of Akron, College of Polymer Science and Engineering, "p-type dye-sensitized solar cells and solar fuels", 4/26/2013.
40. OSU ENCOMM talk, "A low over-potential K-O₂ battery based on potassium superoxide", 3/27/2013.
39. Michigan State Univ. East Lansing, Dept. of Chemistry. "Cathodic sensitization for p-type dye-sensitized solar cells", 3/19/2012
38. University of Nevada, Reno, Department of Chemistry, "Cathodic sensitization for p-type dye-sensitized solar cells", 2/17/2012.
37. Rutgers University, Department of Chemistry, "Towards more efficient dye-sensitized solar cells", 4/05/2011.
36. Boston College, Department of Chemistry, "Towards more efficient dye-sensitized solar cells", 3/31/2011.
35. University of California, San Diego, Dept. of Chemistry and Biochemistry, 5/21/2010.
34. University of California, Los Angeles, Dept. of Chemistry and Biochemistry, 5/19/2010.
33. University of California, Irvine, Dept. of Chemistry, 5/18/2010.

32. Brown University, Dept. of Chemistry, 5/6/2010.
31. University of California, Berkeley, Dept. of Chemistry, 4/23/2010.
30. University of California, Santa Barbara, Dept. of Chemistry and Biochemistry, 4/21/2010.
29. University of California, Riverside, Dept. of Chemistry, 4/19/2010.
28. University of Wisconsin-Madison, Dept. of Chemistry, 4/15/2010.
27. Wuhan University, Dept. of Physics, 4/9/2010, Wuhan, China.
26. Tsinghua University, Dept. of Chemistry, 4/6/2010, Beijing, China.
25. Peking University, Dept. of Chemistry, 4/5/2010, Beijing, China.
24. Xiamen University, Dept. of Chemistry, 4/2/2010, Xiamen, China.
23. University of Science and Technology of China, Dept. of Chemistry, 3/31/2010, Hefei, China.
22. Nanjing University, Dept. of Chemistry, 3/30/2010, Nanjing, China.
21. Fudan University, Dept. of Chemistry, 3/29/2010, Shanghai, China.
20. Zhejiang University, Dept. of Chemistry, 3/26/2010, Hanzhou, China.
19. Chinese University of Hong Kong, Dept. of Physics, 3/19/2010.
18. University of Utah, Dept of Chemistry, 3/15/2010.
17. Kent State University, Dept of Chemistry, 3/11/2010.
16. Arizona State University, Dept of Chemistry and Biochemistry, 3/5/2010.
15. Washington University at St. Louis, Dept of Chemistry, 2/18/2010.
14. U. of Illinois Urbana Champaign, Dept of Chemistry, 2/16/2010.
13. IUPUI, Department of Mechanical Engineering, February 4, 2010.
12. UC Davis, Department of Chemistry, January 5, 2010.
11. University of Michigan, Department of Chemistry, October 30, 2009.
10. Penn State University, Department of Chemistry &MRSEC, October 5, 2009.
9. Purdue University, Department of Chemistry, September 16, 2009.
8. The Ohio State University, ENCOMM, February 13, 2009
7. The Ohio State University, Department of Chemistry, January 14, 2009 (4th-year review).
6. Indiana University, Department of Chemistry, April 22, 2008.
5. Miami University, Department of Chemistry and Biochemistry, February 7, 2008.
4. Ohio University, Condensed matter and surface science seminar, May 17, 2007.
3. OSU, Department of Materials Science and Engineering, April 6, 2007.
2. OSU, Department of Biomedical Engineering, February 2007.
1. Kent State University, Department of Chemistry, September 22, 2005.

PATENTS:

5. U.S. PCT Patent Application (International Application No. PCT/US14/12730); Entitled: "Potassium-Oxygen Battery Based on Potassium Superoxide" (filed on 1/23/2014).
4. NANOWIRES, NANOSTRUCTURES AND DEVICES FABRICATED THEREFROM, Patent No. 7,834,264 on November 16, 2010.

3. “Fluidic Nanotubes and Devices”, Patent No. US 7,355,216 B2 (April 8, 2008)
2. “Sacrificial Template Method of Fabricating a Nanotube”, Patent No.: US 7,211,143 B2 (May 1, 2007).
1. “Methods of fabricating nanostructures and nanowires and devices fabricated therefrom”, Patent NO.: WO02080280 (2002).

SERVICE/SYNERGISTIC ACTIVITIES

- *Service to the Science Community*: Appointed as associated editor for *ACS Applied Materials and Interfaces* (2013-); Serving on the IMR Seed Board of the Ohio State University (OSU) Materials Research Seed Grant Program (MRS GP). Reviewing proposals and serving in panels for NSF and DOE; Organized the “Advances in Energy Storage” symposium in the IMR Materials Week at the Ohio State University (2009); Organized the “Nanoscale Materials Chemistry” symposium in the Central Regional Meeting of American Chemical Society (2008).
- *Development of Curricular Materials*: Developed and taught a freshman seminar class on alternative energy technologies (2007), *Solid-State Inorganic Chemistry* (2012), and *Coordination Chemistry* (2013).
- *Recent Outreach Activities*: Giving a talk to Solar Education and Outreach, which is a student organization at The Ohio State University (OSU) that seeks to foster knowledge about and use of solar power (2013); Mentoring highschool students from the local Upper Arlington High School for their science project. They have won the Governor's Thomas Edison Award for Advanced or Alternative Energy Scholarship, and the Chemical science Award on the Ohio State Science Day (2012-2013).