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## YING (JANE) WANG – CURRICULUM VITAE

### EDUCATION BACKGROUND

- **Ph.D.** in Materials Science and Engineering, *University of Washington*, Seattle, WA. June 2006.  
Thesis title: Enhanced Li-Ion Intercalation Properties of Vanadium Oxides.
- **M.A.** in Chemistry, *Harvard University*, Cambridge, MA. November 1999.
- **B.S.** in Chemical Physics, *University of Science and Technology of China (USTC)*, Hefei, Anhui Province, China. June 1997.

### PROFESSIONAL EXPERIENCE

- **Associate Professor**, Department of Mechanical Engineering, *Louisiana State University*, August 2014 – present.
- **Assistant Professor**, Department of Mechanical Engineering, *Louisiana State University*, August 2008 – August 2014.  
Research Interests: Nanomaterials for energy applications, solar cells, lithium-ion rechargeable batteries, photocatalytic materials, superhydrophobic coatings, electrochromic displays, atomic layer deposition (ALD), sol-gel processing, and electrochemical synthesis.
- **Postdoctoral Fellow**, under supervision of Professor Robert P. H. Chang, Materials Research Institute and Department of Materials Science and Engineering, *Northwestern University*, 2006 – 2008.

### RESEARCH EXPERTISE

Photovoltaics, lithium-ion rechargeable batteries, photocatalysis, nanomaterials synthesis, atomic layer deposition, sol-gel processing, electrochemical synthesis.

### TEACHING EXPERIENCE

- Department of Mechanical Engineering, *Louisiana State University*, August 2008 – present.  
ME 2723 Materials of Engineering, Spring 2015. (*Teaching Evaluation: 2.570/4.0*).  
ME 7723, Materials Characterization Using Electron Beam Methods, Spring 2015.  
ME 2723 Materials of Engineering, Fall 2014. (*Teaching Evaluation: 2.012/4.0*)  
ME 2723 Materials of Engineering, Spring 2014. (*Teaching Evaluation: 2.791/4.0*).  
ME 7723, Materials Characterization Using Electron Beam Methods, Spring 2014. (*Teaching Evaluation: 3.000/4.0*).  
ME 4763, Introduction to Corrosion, Fall 2013. (*Teaching Evaluation: 3.353/4.0*).  
ME 4733, Deformation and Fracture of Engineering Materials, Spring 2013 (*Teaching Evaluation: 2.358/4.0*).  
ME 2733, Materials of Engineering, Spring 2013 (*Teaching Evaluation: 2.358/4.0*).  
ME 4723, Advanced Materials Analysis, Fall 2012 (*Teaching Evaluation: 3.692/4.0*).  
ME 7723, Materials Characterization Using Electron Beam Methods, Spring 2012 (*Teaching Evaluation: 3.500/4.0*).  
ME 3701, Materials Science Laboratory (Section 2), Spring 2012. (*Teaching Evaluation: 3.507/4.0*).  
ME 4723, Advanced Materials Analysis, Fall 2011 (*Teaching Evaluation: 3.909/4.0*).

- ME 7723, Materials Characterization Using Electron Beam Methods, Spring 2011 (*Teaching Evaluation: 3.600/4.0*).
- ME 7953, Nanomaterials for Energy, Fall 2010 (*Teaching Evaluation: 3.833/4.0*).
- ME 7723, Materials Characterization Using Electron Beam Methods, Spring 2010 (*Teaching Evaluation: 3.077/4.0*).
- ME 2733, Materials of Engineering, Fall 2009 (*Teaching Evaluation: 3.412/4.0*).
- ME 2733, Materials of Engineering, Spring 2009 (*Teaching Evaluation: 3.346/4.0*).
- ME 3701, Materials Science Laboratory, Fall 2008 (*Teaching Evaluation: 3.778/4.0*).
- Teaching assistant, Department of Materials Science and Engineering, **University of Washington**, January 2004 – June 2004.  
MSE 452, Functional Properties of Materials I and II, Instructor: Professor Guozhong Cao.  
MSE 333, Materials Characterization, Instructor: Professor Mehmet Sarikaya.  
MSE 352, Functional Properties of Materials I, Instructor: Professor Guozhong Cao.
  - Teaching fellow, Department of Chemistry and Chemical Biology, **Harvard University**, September 1997 – January 1999.  
Chem 10, Principles of Chemistry, Instructor: Dr. Gregory Tucci.  
Chem 5, Introduction to Principles of Chemistry, Instructor: Dr. Gregory Tucci.  
Chem 98, Introduction to Research – Junior Year, Instructor: Dr. James Davis.

## HONORS AND AWARDS

- (1) LSU Alumni Association Rising Faculty Research Award, 2014.
- (2) LSU Rainmaker Award in the Emerging Scholar Category, 2012.
- (3) Roy Paul Daniels Distinguished Professorship for career development, College of Engineering, Louisiana State University, 2012 – 2014.
- (4) Dean's Scholarship Award, College of Engineering, Louisiana State University, 2011.
- (5) LSU Environmental, Health and Safety Accreditation Award, 2011.
- (6) Ralph E. Powe Junior Faculty Enhancement Award from Oak Ridge Associated Universities (ORAU), 2010.
- (7) Nanotechnology Graduate Research Award from University of Washington Initiative Fund (UIF), 2005.
- (8) Graduate Fellowship from PNNL-UW Joint Institute for Nanoscience (JIN), 2005.
- (9) Ford Motor Company Fellowship, 2004.
- (10) Best B.S. Thesis Award, University of Science and Technology of China, 1997.
- (11) Procter & Gamble Scholarship, University of Science and Technology of China, 1996.
- (12) Excellent Student Scholarship, University of Science and Technology of China, 1995.

## PUBLICATIONS

- **Refereed Journals**

(*The journal articles received **3138** citations with an h-index of 22 and an i10-index of 35 from Google Scholar, based on a search on January 24, 2016.*)

(57) W. W. Xu, X. D. Cui, Z. Q. Xie, G. Dietrich, **Y. Wang**, “Three-dimensional Coral-like Structure Constructed by Carbon-Coated Interconnected Monocrystalline SnO<sub>2</sub> Nanoparticles with Improved Lithium Storage Properties”, under revision, *ChemElectroChem*, 2016.

(56) Z. Q. Xie, Z. Y. He, X. H. Feng, W. W. Xu, X. D. Cui, J. H. Zhang, C. Yan, M. A. Carreon, X. F. Wang, P. P. Zhou, Z. Liu, **Y. Wang**, “Hierarchical Sandwich-like Structure of Ultrafine N-Rich Porous Carbon Nanospheres Grown on Graphene Sheets as Superior Lithium Ion Battery Anodes”, submitted to *ACS Appl. Mater. & Interfaces*, 2016.

(55) W. W. Xu, Z. Q. Xie, X. D. Cui, K. N. Zhao, L. Zhang, L. Q. Mai, **Y. Wang**, “Direct Growth of Economic Green Energy Storage Material: Monocrystalline Jaro-site-KFe<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>-

- Nanoplates@rGO Hybrid as Superior Lithium-Ion Battery Cathode”, *J. Mater. Chem. A*, *4*, 3735 – 3742 (2016).
- (54) X. D. Cui, W. W. Xu, Z. Q. Xie, **Y. Wang**, “High-Performance Dye-Sensitized Solar Cells based on Ag-doped SnS<sub>2</sub> Counter Electrode”, *J. Mater. Chem. A*, *4*(5), 1908-1914 (2016).
- (53) W. W. Xu, K. N. Zhao, L. Zhang, Z. Q. Xie, Z. Y. Cai, **Y. Wang**, “SnS<sub>2</sub>@Graphene Nanosheet Arrays as Freestanding, Stable, and High-Rate Anodes for Advanced Sodium Batteries”, *J. Alloy. Compd.*, *654*, 357 – 362 (2016).
- (52) X. D. Cui, W. W. Xu, Z. Q. Xie, **Y. Wang**, “Hierarchical SnO<sub>2</sub>@SnS<sub>2</sub> Counter Electrode for Remarkable High-Efficiency Dye-Sensitized Solar Cells”, *Electrochim. Acta*, *186*, 125 – 132 (2015).
- (51) W. W. Xu, Z. Q. Xie, D. Cui, K. N. Zhao, L. Zhang, G. Dietrich, **Y. Wang**, “Hierarchical Graphene-Encapsulated Hollow SnO<sub>2</sub>@SnS<sub>2</sub> Nanostructures with Enhanced Lithium Storage Capability”, *ACS Appl. Mater. & Interfaces*, *7*(40), 22533-22541 (2015).
- (50) Z. Q. Xie, J. Q. Zhao, S. C. Ellis, W. W. Xu, D. Dye, **Y. Wang**, “A Novel Preparation of Core-shell Electrode Materials via Evaporation-Induced Self-Assembly of Nanoparticles for Advanced Li-Ion Batteries”, *Chem. Commun.*, *51*, 15000 – 15003 (2015).
- (49) Z. Q. Xie, J. Q. Zhao, **Y. Wang**, “One-Step Solvothermal Synthesis of Sn Nanoparticles Dispersed in Ternary Manganese-Nickel-Cobalt Carbonate as Superior Anode Materials for Lithium Ion Batteries”, *Electrochim. Acta*, *174*, 1023 – 1029 (2015).
- (48) J. Q. Zhao, S. C. Ellis, Z. Q. Xie, **Y. Wang**, “Synthesis of Integrated Layered-Spinel Composite Cathode Materials for High-Voltage Lithium-Ion Batteries Up to 5.0 V”, *ChemElectroChem*, *2*, 1821-1829 (2015).
- (47) Z. Q. Xie, H. Eikhuemelo, J. Q. Zhao, C. Cain, W. W. Xu, **Y. Wang**, “Ni and Fe Dual-Doped Li<sub>4</sub>Mn<sub>5</sub>O<sub>12</sub> Spinel as Cathode Materials for High-Voltage Li-Ion Batteries”, *J. Electrochem. Soc.*, *162* (8), A1523-A1529 (2015).
- (46) J. Q. Zhao, R. M. Huang, W. P. Gao, J. M. Zuo, X. F. Zhang, S. T. Misture, Y. Chen, J. Lockard, B. L. Zhang, S. M. Guo, M. R. Khoshi, K. Dooley, H. X. He, **Y. Wang**, “An Ion-Exchange Promoted Phase Transition in a Li-Excess Layered Cathode Material for High-Performance Lithium Ion Batteries”, *Adv. Energy Mater.*, 1401937 (2015). (*Reported by Materials Views China in March 2015*).
- (45) X. N. Luan, M. T. Gutierrez Wing, **Y. Wang**, “Enhanced Photocatalytic Activity of Graphene Oxide/Titania Nanosheets Composites for Methylene Blue Degradation”, *Mater. Sci. in Semiconductor Processing*, *30*, 592-598 (2015).
- (44) J. Q. Zhao, **Y. Wang**, “High-Capacity Full Lithium-Ion Cells Based on Nanoarchitected Ternary Manganese-Nickel-Cobalt Carbonate and Its Lithiated Derivative”, *J. Mater. Chem. A*, *2*, 14947-14956 (2014).
- (43) X. N. Luan, **Y. Wang**, “Ultrathin Exfoliated TiO<sub>2</sub> Nanosheets Modified with ZrO<sub>2</sub> for Dye-Sensitized Solar Cells”, *J. Phys. Chem. C*, *118*(33), 18917-18923 (2014).
- (42) X. N. Luan, **Y. Wang**, “Thermal Annealing and Graphene Modification of Exfoliated Hydrogen Titanates for Enhanced Lithium-Ion Intercalation Properties”, *J. Mater. Sci. & Tech.*, *30*(9), 839-846 (2014).
- (41) S. Aziz, J. Q. Zhao, C. Cain, **Y. Wang**, “Nanoarchitected LiMn<sub>2</sub>O<sub>4</sub>/Graphene/ZnO Composites as Electrodes for Lithium Ion Batteries”, *J. Mater. Sci. & Tech.*, *30*(5), 427-433 (2014).
- (40) J. Q. Zhao, S. Aziz, **Y. Wang**, “Hierarchical Functional Layers on High-Capacity Lithium-Excess Cathodes for Superior Lithium Ion Batteries”, *J. Power Sources*, *247*, 95-104 (2014).
- (39) X. N. Luan, **Y. Wang**, “Plasmon-Enhanced Performance of Dye-Sensitized Solar Cells Based on Electrodeposited Ag Nanoparticles”, *J. Mater. Sci. & Tech.*, *30*, 1-7 (2014) (*Top one most downloaded paper in 2014*).
- (38) D. S. Guan, C. J. Zhou, **Y. Wang**, “Engineering Bamboo-Type TiO<sub>2</sub> Nanotube Arrays to Enhance Their Photocatalytic Property”, *J. Nanotech. Nanosci.*, *14*, 4541-4550 (2014).
- (37) X. N. Luan, **Y. Wang**, “Preparation and Photoactivity of Ag/Bamboo-Type TiO<sub>2</sub> Nanotube Composite Electrodes for Methylene Blue Degradation”, *Mater. Sci. in Semiconductor Processing*, *25*, 43-51 (2013).

- (36) J. Q. Zhao, **Y. Wang**, “Atomic Layer Deposition of Epitaxial ZrO<sub>2</sub> Coatings on LiMn<sub>2</sub>O<sub>4</sub> Nanoparticles for High-Rate Lithium Ion Batteries at Elevated Temperature”, *Nano Energy*, 2, 882-889 (2013).
- (35) X. N. Luan, L. Chen, J. D. Zhang, G. Y. Qu, J. C. Flake, **Y. Wang**, “Electrophoretic Deposition of Reduced Graphene Oxide Nanosheets on TiO<sub>2</sub> Nanotube Arrays for Dye-Sensitized Solar Cells”, *Electrochim. Acta*, 111, 216-222 (2013).
- (34) J. Q. Zhao, **Y. Wang**, “Surface Modifications of Li-Ion Battery Electrodes with Various Ultrathin Amphoteric Oxide Coatings for Enhanced Cycleability”, *J. Solid State Electrochem.*, 17, 1049-1058 (2013).
- (33) D. S. Guan, **Y. Wang**, “Ultrathin Surface Coatings to Enhance Cycling Stability of LiMn<sub>2</sub>O<sub>4</sub> in Lithium-Ion Batteries”, *Ionics*, 19, 1-8 (2013).
- (32) D. S. Guan, **Y. Wang**, “Electrodeposition of Ag Nanoparticles onto Bamboo-Type TiO<sub>2</sub> Nanotube Arrays to Improve Their Lithium-Ion Intercalation Properties”, *Ionics*, 19, 879-885 (2013).
- (31) X. N. Luan, D. S. Guan, **Y. Wang**, “Enhancing High-Rate and Elevated-Temperature Performances of Micro-Sized and Nano-Sized LiMn<sub>2</sub>O<sub>4</sub> in Lithium-Ion Batteries with Ultrathin Surface Coatings”, *J. Nanosci. Nanotech.*, 12(9), 7113-7120 (2012).
- (30) D. S. Guan, P. J. Hymel, **Y. Wang**, “Growth Mechanism and Morphology Control of Double-Layer and Bamboo-Type TiO<sub>2</sub> Nanotube Arrays by Anodic Oxidation”, *Electrochim. Acta*, 83, 420-429 (2012).
- (29) X. N. Luan, D. S. Guan, **Y. Wang**, “Facile Synthesis and Morphology Control of Bamboo-Type TiO<sub>2</sub> Nanotube Arrays for High-Efficiency Dye-Sensitized Solar Cells”, *J. Phys. Chem. C*, 116, 14257-14263 (2012).
- (28) J. Q. Zhao, G. Y. Qu, J. C. Flake, **Y. Wang**, “Low Temperature Preparation of Crystalline ZrO<sub>2</sub> Coatings for Improved Elevated-Temperature Performances of Li-Ion Battery Cathodes”, *Chem. Commun.*, 48, 8108-8110 (2012).
- (27) J. Q. Zhao, **Y. Wang**, “Ultrathin Surface Coatings for Improved Electrochemical Performance of Li-Ion Battery Electrodes at Elevated Temperature”, *J. Phys. Chem. C*, 116, 11867-11876 (2012).
- (26) D. S. Guan, **Y. Wang**, “Synthesis and Growth Mechanism of Multilayer TiO<sub>2</sub> Nanotube Arrays”, *Nanoscale*, 4, 2968-2977 (2012).
- (25) D. S. Guan, C. Cai, **Y. Wang**, “Amorphous and Crystalline TiO<sub>2</sub> Nanotube Arrays for Enhanced Li-Ion Intercalation Properties”, *J. Nanosci. Nanotech.*, 11(4), 3641-3650 (2011).
- (24) D. S. Guan, J. A. Jeevarajan, **Y. Wang**, “Enhanced Cycleability of LiMn<sub>2</sub>O<sub>4</sub> Cathodes by Atomic Layer Deposition of Nanosized-Thin Al<sub>2</sub>O<sub>3</sub> Coatings”, *Nanoscale*, 3, 1465-1469 (2011).
- (23) C. Cai, D. S. Guan, **Y. Wang**, “Solution Processing of V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub> Composite Films for Enhanced Li-Ion Intercalation Properties”, *J. Alloy. Compd.*, 509, 909-915 (2011).
- (22) F. Teng, S. Santhanagopalan, **Y. Wang**, D. D. Meng, “In-Situ Hydrothermal Synthesis of Three-Dimensional MnO<sub>2</sub>-CNT Nanocomposites and Their Electrochemical Properties”, *J. Alloy. Compd.*, 499, 259-264 (2010).
- (21) C. Cai, **Y. Wang**, “Novel Nanocomposite Materials for Advanced Li-Ion Rechargeable Batteries”, *Materials*, Special Issue *Composite Materials*, 2(3), 1205-1238 (2009).
- (20) **Y. Wang**, G. Z. Cao, “Developments in Nanostructured Vanadium Oxides for Advanced Li-Ion Rechargeable Batteries”, *invited* contribution by *IEEE Nanotechnology Magazine*, 3(2), 14-20 (2009).
- (19) **Y. Wang**, G. Z. Cao, “Developments of Nanostructured Cathode Materials for High-Performance Lithium-Ion Batteries”, (**Review Article**) *Adv. Mater.*, 9999, 1-19 (2008) (Top 5 most downloaded paper in *Adv. Mater.* in 2008, chosen for the Special Issue “the Best of Advanced Materials” in 2009).
- (18) **Y. Wang**, G. Z. Cao, “Synthesis and Electrochemical Properties of InVO<sub>4</sub> Nanotube Arrays”, *J. Mater. Chem.*, 17, 894-899 (2007).
- (17) **Y. Wang**, G. Z. Cao, “Synthesis and Electrochemical Properties of V<sub>2</sub>O<sub>5</sub> nanostructures”, *invited* contribution by *Key Engineering Materials*, 336-338, 2134-2137 (2007).

- (16) **Y. Wang**, G. Z. Cao, “Nanostructures and Enhanced Intercalation Properties of Vanadium Oxides” (**Review Article**), *Chem. Mater.*, *18*, 2787-2804 (2006) (Top 5 most accessed paper in *Chem. Mater.* in 2006).
- (15) **Y. Wang**, K. Takahashi, K. Lee, G. Z. Cao, “Nanostructured Vanadium Oxide Electrodes for Enhanced Li<sup>+</sup>-Intercalation” (**Feature Article**), *Adv. Funct. Mater.*, *16*, 1133-1144 (2006).
- (14) **Y. Wang**, G. Z. Cao, “Li<sup>+</sup> Intercalation Electrochemical/Electrochromic Properties of Vanadium Pentoxide Porous Films by Sol Electrophoretic Deposition”, *Electrochim. Acta*, *51*, 4865-4872 (2006).
- (13) K. Takahashi, **Y. Wang**, K. Lee, G. Z. Cao, “Fabrication and Li<sup>+</sup>-intercalation Properties of V<sub>2</sub>O<sub>5</sub>-TiO<sub>2</sub> Composite Nanorod Arrays”, *Appl. Phys. A*, *82*, 27-31 (2006).
- (12) **Y. Wang**, H. M. Shang, T. Chou, G. Z. Cao, “Effects of Thermal Annealing on the Li<sup>+</sup>-intercalation Properties of V<sub>2</sub>O<sub>5</sub>·nH<sub>2</sub>O Xerogel Films”, *J. Phys. Chem. B*, *109*, 11361-11366 (2005).
- (11) **Y. Wang**, K. Takahashi, H. M. Shang, G. Z. Cao, “Synthesis and Electrochemical Properties of Vanadium Pentoxide Nanotube Arrays”, *J. Phys. Chem. B*, *109*, 3085-3088 (2005).
- (10) **Y. Wang**, K. Lee, H. M. Shang, B. Wiley, Y. Xia, G. Z. Cao, “Ag-Ag<sub>0.08</sub>V<sub>2</sub>O<sub>5</sub>·nH<sub>2</sub>O Composite Films as Host Materials for Li<sup>+</sup> Intercalation”, *Phys. Stat. Sol.*, (a) *202*, R79-R81 (2005).
- (9) K. Takahashi, **Y. Wang**, G. Z. Cao, “Ni-V<sub>2</sub>O<sub>5</sub>·nH<sub>2</sub>O Core-shell Nanocable Arrays for Enhanced Electrochemical Intercalation”, *J. Phys. Chem. B*, *109*, 48-51 (2005).
- (8) K. Takahashi, **Y. Wang**, G. Z. Cao, “Growth and Electrochromic Properties of Single-Crystal V<sub>2</sub>O<sub>5</sub> Nanorod Arrays”, *Appl. Phys. Lett.*, *86*, 053102 (2005).
- (7) K. Lee, **Y. Wang**, G. Z. Cao, “Dependence of Electrochemical Properties of Vanadium Oxide Films on Their Nano- and Microstructures”, *J. Phys. Chem. B*, *109*, 16700-16704 (2005).
- (6) K. Takahashi, S. J. Limmer, **Y. Wang**, G. Z. Cao, “Growth and Electrochemical Properties of Single Crystalline V<sub>2</sub>O<sub>5</sub> Nanorod Arrays”, *Jpn. J. Appl. Phys.*, *44*, 662-668 (2005).
- (5) H. M. Shang, **Y. Wang**, B. Milbrath, M. Bliss, G. Cao, “Hydrothermal Growth and Photoluminescence Property of Textured CdWO<sub>4</sub> Scintillator Films”, *Appl. Phys. Lett.*, *87*, 051909 (2005).
- (4) H. M. Shang, **Y. Wang**, B. Milbrath, M. Bliss, G. Z. Cao, “Doping Effects in Nanostructured Cadmium Tungstate Scintillation Films”, *J. Luminescence*, *121*, 527-534 (2006).
- (3) H. M. Shang, **Y. Wang**, D. Li, Y. Xia, G. Z. Cao, “Nanostructured Superhydrophobic Surfaces”, *J. Mater. Sci. Lett.*, *44*, 3587-3591 (2005).
- (2) H. M. Shang, **Y. Wang**, S. J. Limmer, T. P. Chou, G. Z. Cao, “Optically Transparent Superhydrophobic Silica-Based Films”, *Thin Solid Films*, *472*, 37-43 (2005).
- (1) K. Takahashi, S. J. Limmer, **Y. Wang**, G. Z. Cao, “Synthesis and Electrochemical Properties of Single Crystal V<sub>2</sub>O<sub>5</sub> Nanorod Arrays by Template-based Electrodeposition”, *J. Phys. Chem. B*, *108*, 9795-9800 (2004).

- **Invited Book**

- (1) G. Z. Cao, **Y. Wang**, “Nanostructures and Nanomaterials: Synthesis, Properties and Applications”, 2<sup>nd</sup> Edition, World Scientific Publishers, 2011.

- **Invited Book Chapters**

- (6) **Y. Wang**, C. Cai, D. S. Guan, “New Developments in Nanostructured Electrode Materials for Advanced Li-Ion Batteries”, in *Nanoelectronics: Nanowires, Molecular Electronics, and Nano-devices*, ed. Kris Iniewski, McGraw-Hill, p. 321-359, 2010.
- (5) D. Liu, G. Z. Cao, **Y. Wang**, “Positive Electrode: Nanostructured Transition Metal Oxides”, in *Encyclopedia of Electrochemical Power Sources*, Vol. 5, eds. J. Garche, C. Dyer, P. Moseley, Z. Ogmi, D. Rand, B. Scrosati, Amsterdam, Elsevier, p. 121-130, 2009.
- (4) **Y. Wang**, G. Z. Cao, “Nanostructured Vanadium Oxide for Enhanced Lithium Ion Intercalation”, in *Handbook of Nanoceramics and Their Based Nanodevices*, ed. T. Y. Tseng, and H. S. Nalwa, The American Scientific Publishers, Stevenson Ranch, CA, p. 97-122, 2009.

- (3) A. Shen, C. J. Lee, M. Vasudevan, R. Sureshkumar, **Y. Wang**, G. Z. Cao, “Hydrodynamics and Rheology Effects in Processing of Micellar Fluids in Nanomaterials Manufacturing” in *Soft Materials*, ed. H. S. Nalwa, The American Scientific Publishers, Chapter 7, p. 234-256, 2009.
- (2) **Y. Wang**, G. Z. Cao, “Nanostructured Cathode Materials for Advanced Lithium-Ion Batteries”, in *Annual Review of Nano Research*, Vol. 2, eds. G. Z. Cao and C. J. Brinker, World Scientific Publishers, p. 545-591, 2008.
- (1) G. Z. Cao, **Y. Wang**, “Chemical Vapor Deposition of Ceramics”, in *Chemical Processing of Ceramics*, eds., B. Lee and S. Komarneni, Marcel Dekker, CRC Press, New York, p.511-542, 2005.

- **Peer-Reviewed Conference Proceedings**

- (16) J. Q. Zhao, R. M. Huang, H. X. He, **Y. Wang**, “Ex-Situ Activation of Li-Excess Layered Cathode Materials for High-Capacity Lithium Ion Batteries”, *Electrochemical Society Transactions*, 64(22), 77-86 (2015).
- (15) J. Q. Zhao, **Y. Wang**, “Versatile Ternary Manganese-Nickel-Cobalt Compounds in Multi-Shell Spherical Structures as Electrode Materials for High-Capacity Lithium-Ion Batteries”, *Electrochemical Society Transactions*, 61, 83-90 (2014).
- (14) J. Q. Zhao, **Y. Wang**, “Hierarchical Functional Layers On High-Capacity Lithium-Excess Cathodes for Superior Lithium-Ion Batteries”, *Electrochemical Society Transactions*, 58, 3-12 (2014).
- (13) **Y. Wang**, J. Q. Zhao, “Ultrathin Surface Coatings for Enhanced Cycleability of Li-Ion Battery Electrodes at Elevated Temperature”, *TMS (The Minerals, Metals & Materials Society) 2013 Spring Conference Proceedings*, p. 789-796, 2013.
- (12) J. Q. Zhao, **Y. Wang**, “Surface Modifications of Li-ion Battery Electrodes with Ultrathin Amphoteric Oxide Coatings for Enhanced Elevated-Temperature Cycleability”, *Mater. Res. Soc. Symp. Proc. Vol. 1496*, 2012. (DOI: 10.1557/opl.2013).
- (11) D. S. Guan, C. Cai, **Y. Wang**, “Enhanced Cycleability of LiMn<sub>2</sub>O<sub>4</sub> Cathodes by Atomic Layer Deposition of Al<sub>2</sub>O<sub>3</sub> Coatings”, *IEEE Green Technologies Conference*, 978-1-61284-713-9, pages 1-6 (2011). (Selected for “Honorable Mention”, interviewed by and aired on the ScienceNews Radio Network).
- (10) D. S. Guan, C. Cai, **Y. Wang**, “Amorphous and Crystalline TiO<sub>2</sub> Nanotube Arrays for Enhanced Li-Ion Intercalation Properties”, *Mater. Res. Soc. Symp. Proc.*, 1266, 1266-CC06-05 (2010).
- (9) C. Cai, D. S. Guan, **Y. Wang**, “Synthesis and Enhanced Li<sup>+</sup>-Intercalation Properties of V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub> Composite Films”, *Proceedings of Energy Materials: Battery Technologies, Materials Science & Technology (MS&T) Conference*, p. 668-679, October 2010.
- (8) **Y. Wang**, G. Z. Cao, “Nanostructured Vanadium Oxide Electrodes for Enhanced Li<sup>+</sup>-Intercalation”, *Proceedings of NSF Design, Service, and Manufacturing Grantees and Research Conference*, St. Louis, MO, DMI-0455994, 1-14 (2006).
- (7) **Y. Wang**, G. Z. Cao, “Synthesis and Electrochemical Properties of InVO<sub>4</sub> Nanotube Arrays”, *Mater. Res. Soc. Symp. Proc.*, 922, 0922-U01-06 (2006).
- (6) H. M. Shang, **Y. Wang**, M. Bliss, G. Z. Cao, “Processing and Optical Properties of Sol-gel Derived Nanostructured CdWO<sub>4</sub> Films”, *Proceedings of SPIE Optics East Meeting*, Boston, 6008, 60081B, (2005).
- (5) **Y. Wang**, K. Takahashi, H. M. Shang, K. Lee, G. Z. Cao, “Growth and Electrochemical Properties of V<sub>2</sub>O<sub>5</sub> Nanotube Arrays”, *Mater. Res. Soc. Symp. Proc.*, 879, Z7.8.1-Z7.8.6 (2005).
- (4) K. Takahashi, **Y. Wang**, K. Lee, G. Z. Cao, “Solution Synthesis and Electrochemical Properties of V<sub>2</sub>O<sub>5</sub> Nanostructures”, *Mater. Res. Soc. Symp. Proc.* 835, K11.7.1-K11.7.6 (2005).
- (3) K. Takahashi, S. J. Limmer, **Y. Wang**, G. Z. Cao, “Synthesis and Electrochromic Property of Single-crystalline V<sub>2</sub>O<sub>5</sub> Nanorod Arrays by Template Based Deposition”, *SPIE Proc.*, 5510, 49-56 (2004)
- (2) H. M. Shang, **Y. Wang**, B. Milbrath, M. Bliss, G. Z. Cao, “Doping Effects on Microstructure and Scintillation Properties of Cadmium Tungstate Films” *SPIE Proc.*, 5510, 88-96 (2004).

(1) H. M. Shang, **Y. Wang**, S. J. Limmer, G. Z. Cao, “Optically Transparent Superhydrophobic Films by Sol-Gel Processing and Self-assembly”, *SPIE Proc.*, 5224, 70-75 (2003).

- **Invited Seminars**

(25) **Y. Wang**, “Novel Nanomaterials for Advanced Energy Conversion and Storage”, *Saturday Science Series*, Louisiana State University, Baton Rouge, LA, March 21, 2015.

(24) **Y. Wang**, “Advanced Photovoltaics and Photocatalysis based on Novel Nanostructured Titania and Titania Nanocomposites”, East China Normal University, Shanghai, China, December 2014.

(23) **Y. Wang**, “Ultrathin ZrO<sub>2</sub> Coating on LiMn<sub>2</sub>O<sub>4</sub> Nanoparticles for Improved High-Rate Performance at Elevated Temperature”, *245<sup>th</sup> American Chemical Society National Meeting*, New Orleans, LA, April 10, 2013.

(22) **Y. Wang**, “Ultrathin Surface Coatings for Enhanced Cycleability of Li-Ion Battery Electrodes at Elevated Temperature”, *2013 Spring TMS (The Minerals, Metals & Materials Society) Meeting*, San Antonio, TX, March 7, 2013.

(21) **Y. Wang**, “Ultrathin Surface Coatings and Novel Titania Nanostructures for High-Performance Li-Ion Batteries and Solar Cells”, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, June 20, 2012.

(20) **Y. Wang**, “Nanostructured Materials for Enhanced Performances of Lithium-Ion Batteries”, Department of Electrical Engineering, Louisiana State University, September 27, 2011.

(19) **Y. Wang**, “Nanostructured Electrodes and Ultra-Thin Surface Coatings for Enhanced Performances of Lithium-Ion Batteries”, Macro Seminar Series, Department of Chemistry, Louisiana State University, September, 2011.

(18) **Y. Wang**, “Nanostructured Materials for High-Performance Lithium-Ion Rechargeable Batteries”, *241<sup>st</sup> American Chemical Society National Meeting*, Anaheim, CA, March 2011.

(17) **Y. Wang**, Invited lecture for graduate level class “Condensed Matter Experimental Techniques”, Department of Physics, Louisiana State University, Baton Rouge, February 2010.

(16) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Chemistry, Louisiana State University, Baton Rouge, October 2010.

(15) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Materials Science and Engineering, University of Washington, February 2009.

(14) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, “Micro and Nano Technology for Energy Applications” Workshop, *4<sup>th</sup> Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems*, Shenzhen, China, January 2009.

(13) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Mechanical Engineering, University of California – Riverside, April 2008.

(12) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Mechanical Engineering, Louisiana State University, April 2008.

(11) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Mechanical Engineering, State University of New York – Buffalo, March 2008.

(10) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Mechanical Engineering, University of Texas – Austin, March 2008.

(9) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Materials Science and Engineering, University of Michigan, March 2008.

(8) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Chemical Engineering, University of Delaware, March 2008.

(7) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Materials Science and Engineering, Michigan Technological University, February 2008.

(6) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Chemistry, Hong Kong University of Science and Technology, February 2008.

(5) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Mechanical Engineering, University of Hong Kong, February 2008.

- (4) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology, February 2008.
- (3) **Y. Wang**, “Nanostructured Materials for Advanced Energy Conversion and Storage Systems”, Materials Research Institute, Northwestern University, March 2006.
- (2) **Y. Wang**, G. Z. Cao, “Enhanced Li Intercalation Properties of V<sub>2</sub>O<sub>5</sub> Nanostructures”, *Materials Science & Technology Meeting*, Cincinnati, Ohio, October 2006.
- (1) **Y. Wang**, G. Z. Cao, “Growth of Oxide Nanorod, Nanotube, and Nanocable Arrays through Template-Based Sol Electrophoretic Deposition”, *Materials Science & Technology Meeting*, Cincinnati, Ohio, October 2006.

- **Conference Presentations**

- (24) P. E. Kolic, N. Siraj, B. P. Regmi, X. N. Luan, **Y. Wang**, I. M. Warner, “Porphyrin-Based GUMBOs and nanoGUMBOs for Use as Sensitizers in Dye-Sensitized Solar Cells”, *DOE Science Graduate Fellowship Meeting*, March 2015 (poster presentation).
- (23) J. Q. Zhao, **Y. Wang**, “Ex-Situ Activation of Li-Excess Layered Cathode Materials for High-Capacity Lithium Ion Batteries”, *226<sup>th</sup> Electrochemical Society Meeting*, Cancun, Mexico, October 2014 (poster presentation).
- (22) P. E. Kolic, N. Siraj, B. P. Regmi, X. N. Luan, **Y. Wang**, I. M. Warner, “Porphyrin-Based GUMBOs and nanoGUMBOs for Use as Sensitizers in Dye-Sensitized Solar Cells”, *DOE Science Graduate Fellowship Meeting*, July 2014 (poster presentation).
- (21) J. Q. Zhao, **Y. Wang**, “Versatile Ternary Manganese-Nickel-Cobalt Compounds in Multi-Shell Spherical Structures As Electrode Materials for High-Capacity Lithium-Ion Batteries”, *225<sup>th</sup> Electrochemical Society Meeting*, Orlando, FL, May 14, 2014 (poster presentation).
- (20) X. N. Luan, **Y. Wang**, “Novel Nanostructured Titania and Titania Nanocomposite for Photovoltaics”, Economic Development Assistantship Symposium, Louisiana State University, Baton Rouge, LA, April 28, 2014 (poster presentation).
- (19) J. Q. Zhao, S. Aziz, **Y. Wang**, “Hierarchical Functional Layers on High-Capacity Lithium-Excess Cathodes for Superior Lithium Ion Batteries”, *224<sup>th</sup> Electrochemical Society Meeting*, San Francisco, CA, October 27, 2013 (oral Presentation).
- (18) J. Q. Zhao, **Y. Wang**, “Ultrathin ZrO<sub>2</sub> Coating on LiMn<sub>2</sub>O<sub>4</sub> Nanoparticles for Improved High-Rate Performance at Elevated Temperature”, *invited by 245<sup>th</sup> American Chemical Society National Meeting*, New Orleans, LA, April 10, 2013 (oral presentation).
- (17) **Y. Wang**, J. Q. Zhao, “Ultrathin Surface Coatings for Enhanced Cycleability of Li-Ion Battery Electrodes at Elevated Temperature”, *invited by 2013 Spring TMS (The Minerals, Metals & Materials Society) Meeting*, San Antonio, TX, March 7, 2013 (oral presentation).
- (16) X. N. Luan, **Y. Wang**, “Novel Bamboo-Type TiO<sub>2</sub> Nanotube Arrays with Enhanced Photocatalytic Effect for Decomposition of Dispersed Oil and Organic Pollutants”, *Gulf of Mexico: Oil Spill & Ecosystem Science Conference*, New Orleans, LA, January 2013 (oral presentation).
- (15) J. Q. Zhao, **Y. Wang**, “Surface Modifications of Li-Ion Battery Electrodes with Ultrathin Amphoteric Oxide Coatings for Enhanced Elevated-Temperature Cycleability”, *Materials Research Society Fall Meeting*, Boston, November 2012 (poster presentation).
- (14) D. S. Guan, **Y. Wang**, “Nanosized Thin and Highly Conformal Oxide Coatings for Enhanced Cycleability of Li-Ion Battery Cathodes”, *Materials Research Society Fall Meeting*, Boston, MA, November 2011 (oral presentation).
- (13) D. S. Guan, C. Cai, **Y. Wang**, “Enhanced Cycleability of LiMn<sub>2</sub>O<sub>4</sub> Cathodes by Atomic Layer Deposition of Al<sub>2</sub>O<sub>3</sub> Coatings”, *IEEE Green Technologies Conference*, Baton Rouge, LA, April 2011 (oral presentation).
- (12) **Y. Wang**, “Nanostructured Materials for High-Performance Lithium-Ion Rechargeable Batteries”, *invited by the 241<sup>st</sup> American Chemical Society National Meeting*, Anaheim, CA, March 2011 (oral presentation).



- (11) **Y. Wang**, C. Cai, D. S. Guan, “Synthesis and Enhanced Li<sup>+</sup>-Intercalation Properties of V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub> Composite Films”, *Materials Science & Technology Meeting*, Houston, TX, October 2010 (oral presentation).
- (10) **Y. Wang**, D. S. Guan, C. Cai, “Amorphous and Crystalline TiO<sub>2</sub> Nanotube Arrays for Enhanced Li-Ion Intercalation Properties”, *Materials Research Society Spring Meeting*, San Francisco, CA, April 2010 (oral presentation).
- (9) **Y. Wang**, C. Cai, D. S. Guan, “Solution Processing of V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub> Composite Films for Enhanced Li-Ion Intercalation Properties”, *Materials Research Society Spring Meeting*, San Francisco, CA, April 2010 (poster presentation).
- (8) **Y. Wang**, “Nanostructured Materials for Advanced Energy and Conversion Systems”, “*Micro and Nano Technology for Energy Applications*” Workshop, *invited* by the 4<sup>th</sup> Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems, Shenzhen, China, January 2009 (oral presentation).
- (7) **Y. Wang**, R. P. H. Chang, “Improving the Performance of Dye-Sensitized ZnO Nanowire Solar Cells”, 13<sup>th</sup> International Conference on Unconventional Photoactive Systems, Evanston, IL, August 2007 (poster presentation).
- (6) **Y. Wang**, G. Z. Cao, “Enhanced Li Intercalation Properties of V<sub>2</sub>O<sub>5</sub> Nanostructures”, *invited* by *Materials Science & Technology Meeting*, Cincinnati, OH, October 2006 (oral presentation).
- (5) **Y. Wang**, G. Z. Cao, “Growth of Oxide Nanorod, Nanotube, and Nanocable Arrays through Template-Based Sol Electrophoretic Deposition”, *invited* by *Materials Science & Technology Meeting*, Cincinnati, OH, October 2006 (oral presentation).
- (4) **Y. Wang**, G. Z. Cao, “Synthesis and Electrochemical Properties of InVO<sub>4</sub> Nanotube Arrays”, *Materials Research Society Spring Meeting*, San Francisco, CA, April 2006 (oral presentation).
- (3) **Y. Wang**, K. Takahashi, G. Z. Cao, “Enhanced Li<sup>+</sup>-Intercalation Performance in Vanadium Pentoxides through Engineering of Nanostructure and Interlayer Structure”, *Materials Research Society Fall Meeting*, Boston, MA, November 2005 (poster presentation).
- (2) **Y. Wang**, K. Takahashi, H. M. Shang, K. Lee, G. Z. Cao, “Growth and Electrochemical Properties of V<sub>2</sub>O<sub>5</sub> Nanotube Arrays”, *Materials Research Society Spring Meeting*, San Francisco, CA, April 2005 (poster presentation).
- (1) **Y. Wang**, S. J. Limmer, E. D. Stenehjem, G. Z. Cao, “Processing and Properties of PZT Sol-Gel Films and Nanorod Arrays”, 56<sup>th</sup> Pacific Coast Regional and Basic Science Division Fall Meeting Hosted by American Ceramic Society, Seattle, WA, September 2004 (oral presentation).

## THESIS ADVISOR

- (1) *Xiaodan Cui*, Ph.D. student, Mechanical Engineering, Louisiana State University.
- (2) *Wangwang Xu*, Ph.D. student, Mechanical Engineering, Louisiana State University.
- (3) *Andrew Xie*, Ph.D. student, Mechanical Engineering, Louisiana State University.
- (4) *Jianqing Zhao*: Ph.D. student, Mechanical Engineering, Louisiana State University (received the *Outstanding Research Assistant Award* from the Department in 2014, an *Enrichment Award* from the College of Engineering in 2014, a *ME Scholarship* in 2013, and an *Electrochemical Society Travel Award and Membership Award* in 2013), graduated in December 2014.  
Ph.D. dissertation: “Novel Syntheses and Surface Modifications of Electrode Materials for Superior Lithium-Ion Batteries”.
- (5) *Hilary Eikhuemelo*, M.E. student, Mechanical Engineering, Louisiana State University, graduated in December 2014.  
M. E. thesis: “Composition Control of Spinel Lithium Manganese Oxide for High Voltage, High Energy Lithium-Ion Batteries”.
- (6) *Xinning Luan*: Ph.D. student, Mechanical Engineering, Louisiana State University (received *LSU Graduate School Enrichment Award*, 2011 – present, *Materials Initiative Assistantship* in 2012-2013, and *Economic Development Assistantship*, 2014), graduated in August 2014.

Ph.D. dissertation: “Novel Nanostructured Titania and Titania Nanocomposites for Photovoltaics and Photocatalysis”.

- (7) *Dongsheng Guan*: Ph.D. student, Mechanical Engineering, Louisiana State University (received *LSU Graduate School Supplementary Award*, 2009 - 2012), graduated in December 2012.

Ph.D. dissertation: “Novel Surface Modifications and New Nanostructured Titania Synthesis for High-Performance Lithium-Ion Batteries and Solar Cells”.

- (8) *Chuan Cai*: M.E. Student, Mechanical Engineering, Louisiana State University, graduated in May 2011.

M.E. thesis: “V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub> Composite Films and Surface-Coated LiCoO<sub>2</sub> for Enhanced Li-Ion Intercalation Properties”.

## UNDERGRADUATE STUDENTS SUPERVISED

- (1) *Dara Dye*, 2015
- (2) *Grant J. Dietrich*, 2015 – 2016
- (3) *Hisham S. Alhasani*, 2015
- (4) *Sarah C. Ellis*, 2014 - 2015
- (5) *Carrington Cain*, 2013 - 2015
- (6) *Hayato deSouza*, 2012
- (7) *Kori Lutenbacher*, 2009 – 2011
- (8) *Jishnu Medhi*, 2011
- (9) *Sasha Bacchus*, 2010

## PROFESSIONAL ACTIVITIES

### • Membership in Professional Organizations

- (1) Material Research Society (MRS) 2005-present.
- (2) Electrochemical Society, 2013.
- (3) Sigma Xi, The Scientific Research Society, 2007-2011.
- (4) The Institute of Electrical and Electronics Engineers (IEEE), 2009-2011.
- (5) American Chemical Society (ACS), 2007-2008, 2010-2011, 2013.
- (6) The Minerals, Metals & Materials Society (TMS), 2007, 2010-2011.
- (7) The American Association for the Advancement of Science (AAAS), 2007-2008.
- (8) American Ceramic Society (ACerS), 2004.

### • Journal Manuscripts Review (Reviewed 86 manuscripts for 36 journals since 2007 and until December 14, 2015)

- (1) ACS Advanced Materials and Interfaces (2012 - 2015) (5 times)
- (2) Advanced Electronic Materials (2015)
- (3) Advanced Energy Materials (2011)
- (4) Advanced Healthcare Materials (2012)
- (5) Advanced Materials (2011, 2014)
- (6) Analyst (2011)
- (7) Beilstein Journal of Nanotechnology (2010)
- (8) ChemElectroChem (2015)
- (9) Chemical Communications (2010, 2013) (2 times)
- (10) Chemistry of Materials (2009, 2015) (2 times)
- (11) Current Applied Physics (2009, 2010) (2 times)
- (12) Dalton Transactions (2010)
- (13) Electrochemistry Communications (2012)
- (14) Electrochimica Acta (2007, 2010 - 2013) (9 times)
- (15) Energy & Environmental Sciences (2009, 2011) (2 times)

- (16) Energy Technology (2013)
- (17) Journal of Alloys and Compounds (2011)
- (18) Journal of Materials Chemistry (2008 - 2014) (12 times)
- (19) Journal of Materials Science (2012, 2014) (2 times)
- (20) Journal of Materials Science and Technology (2014)
- (21) Journal of Physical Chemistry (2013) (2 times)
- (22) Journal of Power Sources (2014)
- (23) Langmuir (2015)
- (24) Materials Letters (2012)
- (25) Materials Science in Semiconductor Processing (2013)
- (26) Microchimica Acta (2015)
- (27) NANO (2010)
- (28) Nano Energy (2014, 2015) (2 times)
- (29) Nano Letters (2011, 2015) (6 times)
- (30) Nanoscale (2010 - 2013) (8 times)
- (31) Nanoscience and Nanotechnology Letters (2010)
- (32) Physical Chemistry Chemical Physics (2009, 2010, 2014) (7 times)
- (33) Science of Advanced Materials (2011, 2013) (2 times)
- (34) Small (2012, 2013) (2 times)
- (35) Solid State Sciences (2008)
- (36) Biochemical and Biophysical Journal of Neutron Therapy & Cancer Treatments (2014)

- **Proposals Review**

- (1) National Science Foundation – Solid State and Materials Chemistry Program (mail in review, April 29, 2009)
- (2) National Science Foundation – MRI (panel meeting, October 19-20, 2009)
- (3) National Science Foundation – Energy for Sustainability Program (panel meeting, January 4-5, 2010)
- (4) National Science Foundation – Solid State and Materials Chemistry Program, (panel meeting, March 29-30, 2012)
- (5) National Science Foundation – Ceramics Program (mail in review, January 2013)
- (6) National Science Foundation – Division of Materials Research (mail in review, February 2013)
- (7) National Science Foundation – Solid State and Materials Chemistry Program (teleconference panel meeting, April 9 – 10, 2014)
- (8) National Science Foundation – Ceramics Program (mail in review, February 2016)

**SYNERGISTIC ACTIVITIES**

- (1) Advising a Capstone Senior Design project “A Roll-To-Roll Imprinting System for Bio-Analytic, Nanofluidic Devices”, (Student members: Xavier Allen, Matthew Cannon, John. W. Grove, Conrad Michael III Kuebel), Department of Mechanical & Industrial Engineering, LSU, Fall 2014 - Spring 2015.
- (2) Giving a talk on “Novel Nanomaterials for Advanced Energy Conversion and Storage” to high school students and the public for the *Saturday Science Series*, LSU, Baton Rouge, LA, March 21, 2015.
- (3) Participating in the CoE female undergrads mentoring, College of Engineering, LSU, spring 2015.
- (4) Serving on the search committee for hiring new faculty in the areas of composite manufacturing and computational mechanics in the MIE department, LSU, spring 2015.
- (5) Handling new equipment selection and purchase for undergraduate materials laboratory, spring 2014.
- (6) Hosting an international visitor and speaker (Prof. Mu Wang) from Nanjing University, China, March 2014.
- (7) Supervising middle school students for the *Science Research Mentorship (SRM) Program* at the Kenilworth Science and Technology Charter (KST) School, Baton Rouge, LA, fall 2013. (The project

“Lithium Ion Battery Revolution” won the second place in the regional science fair and advanced to state level competition.)

- (8) Organizing and chairing the Symposium N – “Nanomaterials in the Subnanometer-Size Range” for *2013 Spring Materials Research Society (MRS) Meeting*, San Francisco, CA, April 2013.
- (9) Advising a Capstone Senior Design Project “Internal Passivation of Aluminum-Based Microchannel Heat Exchanges”, (Student members: Paul J. Hymel, Michael G. Reich, Charles Bourgeois, Kelly Clement), Department of Mechanical & Industrial Engineering, LSU, Fall 2012 – Spring 2013.
- (10) Supervising a middle school student on a lithium-ion battery project for the *Science Research Project Initiative Program (SRPIP)* at the Kenilworth Science and Technology Charter (KST) School, Baton Rouge, LA, November 2012 (The project won the first place in the school system science fair).
- (11) Serving on the ME departmental Graduate Study Committee, LSU, 2012 – present.
- (12) Track Co-Chair of the session - “Energy Generation and Storage Technologies”, the IEEE Green Technologies Conference, Baton Rouge, LA, April 14-15, 2011.
- (13) Chair of the session - “Nanoparticles and Nanostructured Materials for Energy Applications”, *the 241<sup>st</sup> National American Chemical Society Conference*, Anaheim, CA, March 28, 2011.
- (14) Serving as the ME departmental seminar coordinator, LSU, 2009 - 2011.
- (15) *Iberville Science Fair* Judge, Iberville Parish School System, Plaquemine, LA, February 2009.
- (16) Chair of the *Nanomaterials Symposium* on the *4<sup>th</sup> Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems*, Shenzhen, China, January 2009.
- (17) Supervising a high school teacher (from Wells High School, Chicago) in the *Research Experience for Teachers (RET)* program, Northwestern University, Evanston, IL, summer 2006.
- (18) Serving on the *Graduate Student Committee for Faculty Search*, University of Washington, 2005 -2006.
- (19) Serving on the *Graduate Student Committee for Department Seminars*, University of Washington, 2005 - 2006.
- (20) Supervising a team of three undergraduate students in the *UW Subject Area Programs for Groups*, University of Washington, Seattle, WA, summer 2004.

#### **GRADUATE COMMITTEES (CHAIR OR MEMBER)**

- (1) Chuan Cai (M.E. in Department of Mechanical & Industrial Engineering, graduated in May 2011), Chair.
- (2) Dongsheng Guan (Ph.D. in Department of Mechanical & Industrial Engineering, graduated in December 2012), Chair.
- (3) Xinning Luan (Ph.D. in Department of Mechanical & Industrial Engineering, graduated in August 2014), Chair.
- (4) Jianqing Zhao (Ph.D. in Department of Mechanical & Industrial Engineering, graduated in December 2014), Chair.
- (5) Hilary Eikhuemelo (M.E. in Department of Mechanical & Industrial Engineering, graduated in December 2014), Chair.
- (6) Andrew Xie (Ph.D. in Department of Mechanical & Industrial Engineering), Chair.
- (7) Wangwang Xu (Ph.D. in Department of Mechanical & Industrial Engineering), Chair.
- (8) Xiaodan Cui (Ph.D. in Department of Mechanical & Industrial Engineering), Chair.
- (9) Kai Xia (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (10) Jieqiong Lin (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (11) Fareed B Dawan (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (12) Atiya Jordan (Ph.D. in Department of Chemistry), Member.
- (13) Xiaoling Tan (Ph.D. in Department of Civil and Environmental Engineering), Member.
- (14) Bahador Farshchian (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (15) Rohit Pant (Ph.D. in Department of Civil and Environmental Engineering), Member.
- (16) Fenghong Fan (Ph.D. in Department of Civil and Environmental Engineering), Member.
- (17) Junseo Choi (Ph.D. in Department of Mechanical & Industrial Engineering), Member.

- (18) Quentin Yougoubare (M. E. in Department of Mechanical & Industrial Engineering), Member.
- (19) Mandeep Sharma Yougoubare (M. E. in Department of Mechanical & Industrial Engineering), Member.
- (20) Emmanuel Gikunoo (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (21) Khurshida Sharmin (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (22) Folly Teko (Non-thesis M.E. in Department of Mechanical & Industrial Engineering), Member.
- (23) Fariborz Tavangarian (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (24) Qianxi Yang (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (25) Jianren Zhou (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (26) Xinjie Tong (Ph.D. in Department of Mechanical & Industrial Engineering), Member.
- (27) Xiaoman Zhang (Ph.D. in Department of Mechanical & Industrial Engineering), Member.

#### **RESEARCH SPONSORS**

BP, Chevron Corporation, Louisiana Space Consortium (La-SPACE), Louisiana Board of Regents (LABOR), NSF/LABOR, NASA/LABOR, LSU Fund for Innovative Engineering Research (FIER), etc.