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I. Academic Training

- 2001 Ph.D. Materials Engineering, University of Houston, Houston, TX
- 2002 M.E. Electrical Engineering, University of Houston, Houston, TX
- 1993 M.S. Materials Science, Zhejiang University, Hangzhou, China
- 1990 B.S. Materials Science, Zhejiang University, Hangzhou, China

II. Summary of Work Experience

- 09/2018 – present **Professor**
Dept. of Physics, Sam Houston State University, Huntsville, Texas
- 09/2012 – 08/2018 **Associate Professor**
Dept. of Physics, Sam Houston State University, Huntsville, Texas
- 09/2006 – 08/2012 **Assistant Professor**
Dept. of Physics, Sam Houston State University, Huntsville, Texas
- 05/2006 – 08/2006 **Visiting Assistant Professor**
Propulsion Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio
- 05/2004 – 08/2006 **Research Assistant Professor**
Department of Mechanical Engineering and Texas Center for Superconductivity, University of Houston, Houston, Texas
- 05/2005 – 08/2005 **Visiting Assistant Professor**
Propulsion Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio
- 05/2001 – 04/2004 **Post-Doctoral Researcher**
Department of Mechanical Engineering and Texas Center for Superconductivity and Advanced Materials, University of Houston, Houston, Texas
- 09/1996 – 05/2001 **Research Assistant**
Department of Mechanical Engineering, University of Houston, Houston, Texas
- 03/1993 – 08/1996 **Lecture/Research Associate**
Department of Physics, Zhejiang University, Hangzhou, China
- 09/1990 – 03/1993 **Research Assistant**
Department of Materials Science & Engineering, Zhejiang University, Hangzhou, China

III. Scholarly and Creative Contributions

(a). Research Interests

Lithium ion battery, high temperature superconductor, semiconductor, ceramic synthesis

(b). Teaching

- PHYS 1305: Fundamentals of Physics I
- PHYS 1301/1302: General Physics I and II
- PHYS 1403/1404: Introductory Astronomy/Stars and Galaxies
- PHYS 1411/1422W: Introduction to Physics I and II
- PHYS 3360: Statics
- PHYS 3391/3111: Modern Physics
- PHYS 4367: Introduction to Solid State Physics
- PHYS 3395/3115: Electronics and Circuits/Labs
- MECE 3445: Introduction to Materials Science (University of Houston)

(c). Patent

- “Method of manufacturing Fe-sheathed MgB_2 wires and solenoids”, H. Fang and K. Salama, US Patent No. 7,213,325.

(d). Recent Refereed Journal Publications

1. “Anthracite-derived dual-phase carbon-coated $\text{Li}_3\text{V}_2(\text{PO}_4)_3$ as high-performance cathode material for lithium ion batteries”, Xiao-Kai Ding et al., **ACS Applied Materials and Interfaces** 9 (2017) 42788.
2. “Dynamics of a Leidenfrost droplet modulated by electrowetting”, Yi Lu et al., **Journal of Heat Transfer** 139 (2017) 080902.
3. “Investigations on Zr incorporation into $\text{Li}_3\text{V}_3(\text{PO}_4)_3/\text{C}$ cathode materials for lithium ion batteries”, Hua-Bin Sun et al., **Physical Chemistry and Chemical Physics** 19 (2017) 5155.
4. “Interaction of organic cation with water molecule in perovskite MAPbI_3 : from dynamic orientational disorder to hydrogen bonding”, Zhuan Zhu et al., **Chemistry of Materials** 28 (2016) 7385.
5. “Identification of cobalt oxides with Raman scattering and Fourier transform infrared spectroscopy”, Yang Li et al., **Journal of Physics Chemistry C** 120 (2016) 4511.
6. “Efficient solar water-splitting using a nanocrystalline CoO photo catalyst”, L. Liao et al., **Nature Nanotechnology** 9, (2014) 69 – 73.
7. “Electrochemical Studies of Carbon Coated LiFePO_4 Doped with Tungsten”, H. Arava et al., **Proceedings of the 13th IEEE International Conference on Nanotechnology**, (2013) 1050 – 1053.
8. “Evolution of electrochemical performance in $\text{Li}_3\text{V}_2(\text{PO}_4)_3/\text{C}$ composites caused by cation incorporation”, L. Zhang et al., **Electrochimica Acta** 108 (2013) 182 – 190.
9. “Synthesis and characterization of Ti doped lithium iron phosphate”, H. Fang et al., **ECS Transactions** 45 (29) (2013) 11.
10. “Electrochemical properties of cathode material LiFePO_4 with Ti substitution”, H. Fang et al., **Journal of The Electrochemical Society** 160 (2013) A3148.

(e). Recent Conference and Seminar Presentations

1. “Performance enhancement of lithium ion battery with vertically and horizontally aligned graphene anode”, 19th International Meeting on Lithium Batteries, Kyoto, Japan, June 17 – 22, 2018.
2. “Graphene-based anode for Li-ion battery”, 231st The Electrochemical Society Meeting, New Orleans, May 28 – June 1, 2017.
3. “Electrochemical performance of cation doped LiFePO_4 /Graphene composites”, 18th International Meeting on Lithium Batteries, Chicago, Illinois, June 19-24, 2016.

4. "FT-IR and Raman spectroscopic study of cobalt oxides", American Physical Society March Meeting, San Antonio, Texas, March 2 – 6, 2015.
5. "Demonstration of 5% solar to hydrogen conversion efficiency using CoO nanophotocatalyst", 247th American Chemical Society National Meeting, Dallas, Texas, March 16 – 20, 2014.
6. "Electrochemical Studies of Carbon Coated LiFePO₄ Doped with Tungsten", The 13th IEEE International Conference on Nanotechnology, Beijing, China, August 5 – 8, 2013.
7. "Synthesis and characterization of Ti doped lithium iron phosphate", 221st ECS Meeting, Seattle, Washington, May 6 – 10, 2012.
8. "Electrochemical performance of lithium iron phosphate doped with tungsten", American Physical Society March Meeting, Boston, Massachusetts, February 27 – March 2, 2012.
9. "The combined influence of SiC and rare-earth oxide doping on superconducting properties of MgB₂ wires", Materials Science & Technology 2010 Conference, Houston, Texas, October 17 – 21, 2010.
10. "In-field critical current density of MgB₂ wires doped with SiC and rare-earth oxide", Applied Superconductivity Conference, August 1 – 6, 2010, Washington D. C.

IV. Honors, Awards, and Other Special Recognitions

(a). Professional Affiliations

- The Minerals, Metals and Materials Society (TMS)
- Materials Research Society (MRS)
- American Society of Metals, International (ASM International)
- American Physics Society (APS)
- The Electrochemical Society (ECS)

(b). Reviewer

Metallurgical Transactions, Physica C, Superconductor Science and Technology, IEEE Transactions on Applied Superconductivity

(c). Honors and Awards

- Recipient, US Air Force Summer Faculty Fellowship Program Award, 2006.
- Recipient, US Air Force Summer Faculty Fellowship Program Award, 2005.
- Third Prize, 21st TcSUH Student Symposium, May 2001.

V. Significant Professional Service

(a). University and College Services

- Undergraduate Research Committee, College of Sciences, SHSU, 2012 – 2017.
- 2011-2012 Faculty/Staff Annual Fund Campaign Committee
- Curriculum Committee, College of Sciences, SHSU, 2009 – current.
- Faculty Achievement Awards Committee, Sam Houston State University, 2008 – 2010.
- Credit by Examination Committee, Sam Houston State University, 2008 – 2011.

(b). Professional Services

- Session Chair, Materials Science & Technology 2010 Conference, Houston, Texas, October 17 – 21, 2010.
- Session Chair, Session Condense Matter Physics II, The 2009 Fall Meeting of the TSAPS/TSAAPT/SPS, San Marcos, Texas, October 22 - 24, 2009.

- Session Chair, Session M2-M, Cryogenic Engineering Conference and International Cryogenic Materials Conference, June 28-July 2, 2009, Tucson, Arizona.
- Session Chair, Session 2MP, Applied Superconductivity Conference 2008, August 17-22, Chicago, Illinois.
- Judge, Houston Science Fair, April 2008.