Dr. Bin Hu
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Research and Professional Experience

2013 – Present	Professor, Department of Materials Science and Engineering, University of Tennessee, Knoxville, TN 37996
2008 – 2013:	Associate Professor, Department of Materials Science and Engineering, University of Tennessee, Knoxville, TN 37996
2002-2008	Assistant Professor, Department of Materials Science and Engineering, University of Tennessee, Knoxville, Tennessee, USA
1998-2002	*Senior Research Scientist*, R & D Division, SICPA Securink Inc., Springfield, VA
1996-1998	*Research Scientist*, Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA
1992-1995	*Postdoctoral Researcher*, Department of Polymer Science & Engineering, University of Massachusetts, Amherst, MA
1991-1992	*Postdoctoral Researcher*, Institute of Molecular Spectroscopy, Bologna, Italy

Education and Training

Changchun Institute of Physics, Chinese Academy of Sciences	Ph.D. 1991
Changchun Institute of Physics, Chinese Academy of Sciences	M.S. 1987
Northeast University, Changchun, China	B. S. 1984

Selected Publications

1. Surface-Charge Accumulation Effects on Open-Circuit Voltage in Organic Solar Cells Based on Photoinduced Impedance Analysis
   Huidong Zang, Yu-Che Hsiao, and Bin Hu*
   Phys. Chem. Chem. Phys. 16, 4971 – 4976, 2014
2. Magneto-Dielectric Effects Induced by Optically-Generated Intermolecular Charge-Transfer States in Organic Semiconducting Materials
   Huidong Zang, Liang Yan, Mingxing Li, Lei He, Zheng Gai, Ilia Ivanov, Min Wang, Long Chiang, Augustine Urbas, and Bin Hu*,
   Scientific Reports, DOI: 10.1038， 2013
3. Precise Structural Development and Its Correlation to Function in Conjugated Polymer: Fullerene Thin Films by Solvent Annealing
   Huipeng Chen, Shen Hu, Huidong Zang, Bin Hu, and Mark Dadmun
   Advanced Functional Materials, **23**, 1701-1710, 2013

4. Magnetocurrent of Charge-Polarizable C_{60}-Diphenylaminofluorene Monoadduct-Derived Magnetic Nanocomposites"
   Liang Yan, Min Wang, N.P. Raju, Arthur Epstein, Loon-Seng Tan, Long Y. Chiang, Bin Hu*, *J. Am. Chem. Soc*. **134**, 3549-3554, 2012
5. High Seebeck Effects from Hybrid Metal/Polymer/Metal Thin-Film Devices
   Liang Yan, Ming Shao, Hsin Wang, Doug Dudis, and Augustine Urbas, and Bin Hu*
   Adv. Mater. **23**, 4120-4124, 2011
6. Intra-Molecular "Donor-Acceptor" Interaction Effects on Charge Dissociation, Charge Transport, and Charge Collection in Bulk-Heterojunction Organic Solar Cells"
   Huidong Zang, Yongye Liang, Luping Yu,* and Bin Hu*, Adv. Energ. Mater. **1**, 923, 2011
7. Giant Magnetic Field Effects on Electroluminescence in Electrochemical Cells, Ming Shao, Liang Yan, Ilia Ivano, Bin Hu*, Adv. Mater.**23**, 2216-2220, 2011.
8. Magneto-Optical Investigation on formation and dissociation of inter-molecular charge-transfer complexes at donor-acceptor interfaces in organic solar cells
   Huidong Zang, Zhihua Xu, and Bin Hu, *The Journal of Physical Chemistry B.* **114**, 5704-5709. 2010
9. Progress report: Magnetic Field Effects in Organic Semiconductors
   Bin Hu*, Liang Yan, and Ming Shao, Adv. Mater. **21**, 1500, 2009
10. Photovoltaic Processes of Singlet and Triplet Excited States in Organic Solar Cells
    Zhihua Xu and Bin Hu, *Adv. Func. Mater*. **18**, 2611-2617, 2008
11. Review article: Solar Energy-Conversion Processes in Organic Solar Cells
    Zhihua Xu, Huidong Zang, and Bin Hu*, *JOM* (Journal of the Minerals, Metals and Materials Society), **60**, 49 (2008)
12. Tuning Magnetoresistance between Positive and Negative Values in Organic Semiconductors, Bin Hu* and Yue Wu, *Nature Materials*, **6**, 985 (2007).
13. Improvement of Photovoltaic Response Based on Enhancement of Spin-Orbital Coupling and Triplet States in Organic Solar Cells, Zhihua Xu, Bin Hu*, and Jane Howe, *J. Appl. Phys*. **103**, 043909 (2008).
14. Tuning Magnetoresistance and Magnetic Field-Dependent Electroluminescence through Mixing Strong-Spin-Orbital-Coupling Molecule and Weak-Spin-Orbital-Coupling Polymer, Yue Wu, Bin Hu*, and Jane Howe, *Phys. Rev. B*, **75**, 035214 (2007).
15. Spin Injection from Cobalt Nanodot Electrode in conjugated Polymers
    Yue Wu, Anping Li, Jane Howe, Jian Shen, and Bin Hu*, *Phys. Review B*, 75, 075213 (2007)

Synergistic Activities

a. *Professional Membership:*

International Advisory Committee on Spintronics in Organic Semiconductors
Member in American Chemical Society
American Physical Society
Materials Research Society

b. *Invited Academic Activities*:

(1) Multiferroic Effects from Intermolecular Excited States in Organic Semiconductors
Brazil-MRS meeting, Campos do Jordao, September 30 – October 04, 2013

(2) Magneto-Optic, Magneto-Electric, and Magneto-Thermoelectric Effects in Organic Semiconductors
BES Program Review for the CNMS at Oak Ridge National Laboratory, September 24-26, 2013

(3) Organic Thin-Film Thermoelectric Devices
Bin Hu
Flexible Thermoelectric Workshop organized by AFOSR, Arlington, VA, July 09-10, 2013

(4) Effects of Intermolecular and Dielectric-layer Interfaces on Internal Photovoltaic Processes in Organic Solar Cells
Bin Hu
Indo-US Joint Workshop on Organic Solar Cells, National Reviewable Energy Laboratory, Golden, Co, June 24-25, 2013

(5) Magneto-optical Studies on Internal Photovoltaic Processes in Organic Solar Cells
Bin Hu
2013 TechConnect World, National Innovation Summit and National SBIR Conference, Gaylord Hotel, National Harbor, Maryland, May 13-16, 2013

(6) Magneto-Dielectric Functions Developed by Intermolecular Excited States
Bin Hu
MRS Meetings, San Francisco, CA, April 01-05, 2013

(7) Departmental Seminar: Organic Spintronics
Bin Hu
National Taiwan University, Taipei, Taiwan, December 11, 2012

(8) Workshop on Organic Spintronics
Bin Hu
Intermolecular Excited States-Based Organic Spintronics
National Cheng Kung University, Tainan, Taiwan, December 06-07, 2012

(9) Effects of Intermolecular and Dielectric-layer Interfaces on Internal Photovoltaic Processes in Organic Solar Cells
Bin Hu
International Symposium on Organic and Dye-Sensitized Solar Cells 2012 (IS-OPVDSC 2012), Taipei, Taiwan, November 24-29, 2012

(10) Electric-Magnetic Coupling in Organic Sintronics
Bin Hu
9th National Conference on Organic Solids Electronics, Yangzhou, China, November 10-12, 2012

(11) Magneto-optical studies on internal photovoltaic processes in organic solar cells
Bin Hu
Workshop on key scientific and technological issues for development of next-generation organic solar cells
Arlington, VA, September 20 – 21, 2012

(12) Multi-Ferroic Functions Developed by Inter-molecular Excited States
Bin Hu
4th Topical Meeting on Spintronics in Organic Semiconductors, London, UK, September 10 – 14, 2012

(13) Excited States-Based Organic Spintronics
Bin Hu
International Workshop on Novel Nano-Magnetic and Multifunctional Materials 2012
Seoul, Korea, June 11-14, 2012

(14) Magneto-Optical Studies of Internal Photovoltaic Processes in Organic Solar Cells
Bin Hu
Departmental seminar at Department of Materials Science and Engineering, University of Florida, Gainesville, FL, April 04, 2012

(15) Organic Molecular Metamaterials
Bin Hu
Organic Metamaterials Workshop, Army Research Laboratory, March 02, 2012

Awards

1. Research Fellow Award – April 2010 College of engineering, University of Tennessee
2. National Science Foundation Career Award – February 2007
3. Chancellor's Research and Creative Achievement Professional Promise Award–April 2008 University of Tennessee
4. Research Fellow Award – April 2008 College of engineering, University of Tennessee