

HUIFENG LI

The University of Texas at Austin
ETC 8.152, 1 University Station C2200, Austin, TX 78712
Tel : (979) 492-9325 Email: huifengli@mail.utexas.edu

RESEARCH INTERESTS

- Carbon based crystal growth
- Novel applications of carbon based materials
- Nano-imprint lithography and its applications in material manipulation and device fabrication.
- Environmentally friendly and high speed process for micro/nano manufacturing

EDUCATION

- **Texas A&M University**, College Station, Texas, USA August 2010
Doctor of Philosophy in Electrical and Computer Engineering GPA: 3.88/4.0
Thesis topic: Development of Advanced Nanomanufacturing: 3D Integration and High Speed Directed Self-assembly
Thesis advisor: Prof. Xing Cheng
- **National University of Singapore, Singapore** July 2004
Master of Engineering in Electrical and Computer Engineering GPA: 4.375/5.0
Thesis topic: UWB Antenna Modeling and Design
Thesis advisor: Prof. Le-Wei Li and Dr. Zhi Ning Chen
- **Shanghai Jiaotong University, Shanghai, China** July 2002
Bachelor of Engineering in Electrical Engineering GPA: 85/100

RESEARCH EXPERIENCE

UNIVERSITY OF TEXAS AT AUSTIN, Austin, Texas, USA August 2010~ present
Postdoctoral Research Fellow
Supervisor: Rodney S. Ruoff

- Carbon based crystal growth
- Novel applications of carbon based materials

TEXAS A&M UNIVERSITY, College Station, Texas, USA September 2004 ~ August 2010
Research Assistant, Electrical and Computer Engineering
Supervisor: Xing Cheng

- Accelerated Directed Self-assembly for Alignment and Placement of Carbon Nanotubes
- Development of Advanced Nano-imprint Lithography for 3D Polymeric Micro-/Nano- Structures
- Patterning of Soft Functional Materials for Organic Thin-film Transistor (OTFT)
- Optical Antenna: Modeling, Design, Fabrication and Characterization
- Tunable Thin Film Optical Interference Filter: Design, Fabrication and Characterization
- Stability of Self-assembled Monolayer for Surfactant Coating in Thermal Nano-imprint
- Numerical Modeling of Interaction Between Optical Wave and Metallic Nanostructures

NATIONAL UNIVERSITY OF SINGAPORE, Singapore July 2002 ~ July 2004
Research Scholar, Electrical and Computer Engineering
Supervisor: Le-Wei Li and Zhining Chen

- Ultra Wide Band (UWB) Antenna Modeling and Design

PUBLICATIONS

Patents

1. **Huifeng Li**, Xing Cheng, Hung-Jue Sue and Chien-Chia Chu, "Highly Efficient Carbon Nanotube Alignment by Guided Electrostatic Self-Assembly," in application (TAMUS-3031), 2009.
2. Hung-Jue Sue, Xing Cheng, **Huifeng Li**, Dazhi Sun, Chien-Chia Chu, "Dispersion, alignment and deposition of nanotubes," in application (USPTO Application #:20090035469), 2008.
3. **Huifeng Li**, "Planar Optics for High Concentration Photovoltaics," to be filed, 2010.

Articles in Refereed and Professionally-Reviewed Journals

4. **Huifeng Li** and X. Cheng, "Optical Antennas: a Boost for Infrared Detection," Journal of Vacuum Science and Technology B, 26 (6): p.2156, 2008.
5. D. Cui, **Huifeng Li**, H. Park and X. Cheng, "Improving organic thin-film transistor performance by nanoimprint-induced chain ordering," Journal of Vacuum Science and Technology B, 26(6): p. 2404, 2008.
6. H. Park, **Huifeng Li** and X. Cheng, "Optimizing Nanoimprint and Transfer-Bonding Techniques for Three Dimensional Polymer Structures," Journal of Vacuum Science and Technology B, 25(6): p. 2325, 2007.
7. **Hui Feng Li**, Z. N. Chen, and Le-Wei Li, "Investigation of Time-domain Characteristics of Thin Wire Antennas," Microwave and Optical Technology Letters, vol. 43, no. 3, pp. 253-258, 2004.
8. **Hui Feng Li**, Z. N. Chen, and Le-Wei Li, "Characterization of Resistive-Loaded Wire Loop in UWB (Impulse) Radio," Microwave and Optical Technology Letters, vol. 43, no. 2, pp. 151-156, 2004.
9. Z. N. Chen, X. H. Wu, **Hui Feng Li**, N. Yang, and M. Y. W. Chia, "Consideration for Source Pulse and Antennas in UWB Radio Systems," IEEE Trans. on Antenna and Propagation, vol. 52, pp. 1739-1748, 2004.

Articles under Preparation for Refereed and Professionally-Reviewed Journals

10. **Huifeng Li**, D. Sun, H.-J. Sue and X. Cheng, "Single-Walled Carbon Nanotube Alignment by Grating-Guided Electrostatic Self-Assembly", submitted to Journal of Vacuum Science and Technology B, 2009.
11. **Huifeng Li** and X. Cheng, "Electric Field Enhanced Directed Self-assembly of SWNTs: Towards High Speed Nanomanufacturing", to be published.
12. D. Cui, **Huifeng Li**, H. Park and X. Cheng, "Increasing Field Effect Mobility of Charge Carriers by stretch-oriented process," in preparation.

Presentations and Abstracts in Conferences

13. **Huifeng Li**, and X. Cheng, "Manipulating Carbon Nanotubes by Electrophoresis Enhanced Directed Self-assembly," 54th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2010 (EIPBN, Anchorage, AK, USA, 2010).
14. **Huifeng Li**, and X. Cheng, "Single-Walled Carbon Nanotube Alignment by Grating-Guided Electrostatic Self-assembly," 53th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2009 (EIPBN, Marco Island, FL, USA, 2009).
15. **Huifeng Li**, H. Park, and X. Cheng, "Microfluidic MDM Structure as Tunable Optical Filter," 52th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2008 (EIPBN, Portland, OR, USA, 2008).
16. **Huifeng Li**, and X. Cheng, "Optical Antennas: a Boost for Infrared Detection," 52th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2008 (EIPBN, Portland, OR, USA, 2008).
17. **Huifeng Li**, and X. Cheng, "Optical Antenna for Mid-infrared Photodetectors," Scientific Conference on Chemical and Biological Defense Research, 2007 (CBDefense, Baltimore, MD, USA, 2007).
18. **Huifeng Li**, H. Park, D. Cui and X. Cheng, "An Approach towards Monolithic Fluorescence Detection in Microfluidic Devices," Scientific Conference on Chemical and Biological Defense Research, 2007 (CBDefense, Baltimore, MD, USA, 2007).
19. H. Park, **Huifeng Li**, and X. Cheng, "Optimizing Nanoimprint and Transfer-bonding Techniques for 3D

- Polymer Structures," 51th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2007 (EIPBN, Denver, CO, USA, 2007).
20. X. Cheng, H. Park, and **Huifeng Li**, "Effect of Nanoimprint on Crystallization in Polymer Thin Film," 51th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2007 (EIPBN, Denver, CO, USA, 2007).
 21. Wen-Hua Tu, **Huifeng Li**, Krzysztof A. Michalski, and Kai Chang, "Microstrip open-loop ring bandpass filter using open stubs for harmonic suppression," 2006 IEEE MTT-S International Microwave Symposium, pp. 357-360.

TEACHING EXPERIENCE

TEXAS A&M UNIVERSITY, College Station, Texas, USA

Fall 2005 and Spring 2007

Teaching Assistant, Electrical and Computer Engineering

In charge of the laboratory teaching and grading for an engineering undergraduate course Electrical Circuit Theory. Assisted the preparation of laboratory teaching materials.

HONORS & AWARDS

- Student Travel Support, International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, 2008 and 2009.
- TEES Research Assistantship, Texas A&M University, 2004-2009.
- National University of Singapore Research Scholar, 2002-2004.
- Ronghong Scholarship (sponsored by United Technologies, USA), 2000.
- The Exceptional Student of Shanghai Jiao Tong University, an honor given to the top 1% students of the whole university, 1999.
- Sanwo Scholarship (sponsored by Sanwo Bank, Japan), 1999.

REFERENCES

Available upon request.