**Zhilin Guo**

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**Education**

**University of California, San Diego** La Jolla, California

*Master of Engineering, Material Science and Engineering* September 2018

*Doctor of Philosophy, Material Science and Engineering*

*Research:* Single cell droplets sequencing

*Advisor:* Professor Yuhwa Lo

**University of Houston** Houston, Texas

*Master of Engineering, Biomedical* January 2016-December 2017

*Thesis title*: Investigation on conducting polymers-doped with laminin

*Advisor*: Professor Mohammad Abidian

**University of Illinois, Urbana-Champaign** Urbana, Illinois

*Bachelor of Science, Chemical Engineering* August 2010-December 2014

*Research:* Investigating the production and purification of single wall carbon nanotubes

*Advisor:* John Rogers

**Research Experience**

**Professor Yu-Hwa Lo’s Lab** Current

PhD students

1. Demonstrated the single cell and nuclei droplets sorting and sequencing.
2. Designed device for DNA molecules pick-up process during liquid enrichment.
3. Built up electronic device and physical model to measure the cell membrane potential.

**Professor Mohammad Abidian’s Lab** August 2016 to May 2018

Research Assistant

1. Demonstrated the production of biomolecules doped conducting polymer nanostructures.
2. Assisted project of highly aligned biodegradable polymer for anti-inflammation drug delivery and anti-tumor drug delivery by liposome carrier.
3. Performed electropolymerization of conducting polymer by hydrogel-mediated direct patterning technology

**Professor John Rogers’ Lab** July 2013 to September 2014

Research Assistant

1. Evaluated the production and purification of single wall carbon nanotubes
2. Analyzed the growth of carbon nanotubes under different conditions.
3. Summarized collected data and published article on Nature Communications

**Teaching Experience**

*Undergrad tutor*, Chinese; Mechanics Physics; Electric and Magnetism Physics; General Chemistry I, II; Fundamental Organic Chemistry I; Analysis of Data, University of Illinois, Urbana-Champaign.

**Publications**

**Journal articles**:

1. X. Xie, S.H. Jin, M.A. Wahab, A.E. Islam, C. Zhang, F. Du, E. Seabron, T. Lu, S.N. Dunham, H.I. Cheong, Y.-C. Tu, **Z. Guo**, H.U. Chung, Y. Li, Y. Liu, J.-H. Lee, J. Song, Y. Huang, M.A. Alam, W.L. Wilson and J.A. Rogers, "Microwave Purification of Large-Area Horizontally Aligned Arrays of Single-Walled Carbon Nanotubes," Nature Communications 5:5332, DOI: 10.1038/ncomms6332 (2014).
2. Investigation on Conducting Polymers-Doped with Laminin for Axonal Regeneration (in preparation)

**Conference Abstract Accepted**

1. **Guo Z**, Khorrami M, Abidian MR. Biofunctionalization of Conducting Polymer Nanotube with Laminin-derived Biomolecules. *Materials Research Society 2018 Spring Meeting*, Phoenix, AR. April 2018 (Abstract accepted)

**Technical and Specialized Skills**

1. Synthesis and development of biomolecules doped conducting polymer nanostructures
2. Processing of biodegradable polymer, micelle and liposome.
3. Synthesis, analysis, and purification of single wall carbon nanotubes (CVD, CEM, RIE, and photolithograph)
4. Characterization of materials, including of FTIR, AFM, UV, 1H NMR, HPLC, and XPS
5. Analytic chemistry (mass spectrometer, GC, HPLC, FTIR, and NMR)
6. Bimolecular Engineer (DNA, RNA, and protein Technology)
7. Software: Microsoft Office, ChemCAD, Cambridge ChemBioDraw Ultra 12.0, Matlab, C language coding, SciFinder and Web of Science.

**Social Services**

**Volunteers for Peace--- Clean Water for La Vallee Project, Haiti** August 2013

Team Member

1. Installed 10 bio-sand water filters
2. Planted 157 trees near the water source
3. Trained 43 new community health promoters.

**Houston Pets Alive---- Cat shelter**  December 2017 to May 2018

Volunteer and Adoption Coordinator

1. Taking care of cats in the shelter for feeding, cleaning and health condition.
2. Help with cat adoptions in shelter and social media.

**Professional Affiliations**

1. Vice president of Women in ECE, UCSD, current
2. Biomedical Engineering Society, 2016-2018
3. Society of Asian Scientist and Engineers, 2016-2018
4. LGBTQ Advocates, 2016-2018
5. Chemical and Biomolecule Engineering Society, 2010-2014
6. Society of Women Engineers, 2010-2014