

YEN-HAO LIN

EDUCATION

Rice University (Houston, Texas)

Ph.D. in Chemical and Biomolecular Engineering

Anticipated by May 2014

Dissertation topic: All-Conjugated Block Copolymers for Organic Photovoltaics

National Cheng Kung University (Tainan, TAIWAN)

B.S. in Chemical Engineering.

Jun 2008

Thesis: Synthesis of Biodiesel via Immobilized Lipase of Indigenous *Burkholderia sp.* on Celite Carriers

EXPERIENCES

Visiting Researcher in Nanotechnology and Advanced Spectroscopy Team, **Los Alamos National Laboratory**

- Interface engineered conjugated polymers for organic photovoltaics.

Summer Intern in Environmental Stewardship and Sustainability group, **Procter & Gamble** (summer 2013)

- Environmental safety assessment on polymers used in down-the-drain consumer products.

Doctoral Research Assistant in the Department of Chemical & Biomolecular Engineering, **Rice University**

- End-to-end process of organic electronics including polymer synthesis, characterization, process-structure-property analysis and device fabrication.

Teaching Assistant in the Department of Chemical & Biomolecular Engineering, **Rice University**

Second Lieutenant in ROC Military Academy, TAIWAN (2008-09)

Research Assistant in the Department of Chemical Engineering, **National Cheng Kung University** (2006-08)

- Bio-diesel synthesis via immobilized enzyme on surfaced modified carriers.
- Polymer composite for reinforced membranes.

PEER REVIEWED PUBLICATIONS

- “Characterization of *Burkholderia* lipase Immobilized on Celite Carriers,” *Journal of the Taiwan Institute of Chemical Engineers* 2009, **40(4)**: 359-363.
- “Supramolecular Conjugated Block Copolymers,” *Macromolecules*, 2012, **45**, 6571-6579.
- “Synthesis and Crystallinity of All-Conjugated Poly(3-hexylthiophene) Block Copolymers,” *Polymer Chemistry*, 2013, **4(2)**, 229-232 with inside cover feature.
- “Synthesis and Crystallinity of All-Conjugated Block Copolymers Prepared by Click Chemistry,” *Macromolecules*, 2013, **46(7)**, 2636-2645.
- “Conjugated Block Copolymer Photovoltaics with near 3% Efficiency through Microphase Separation,” *Nano Letters*, 2013, **13 (6)**, 2957-2963. (featured in Materials Today, Solar Novus, AIChE’s CEP Magazine, and Futurity.org)
- “Lamellar Structures of Solvent Annealed All-Conjugated Block Copolymers,” *Under revision*.
- “Synthesis and Process-Dependent Film Structure of All-conjugated Copolymers for Organic Photovoltaics,” book chapter for ACS Symposium of Polymer Composites for Energy Harvesting, Conversion and Storage. *Under review*.

HONORS AND ACTIVITIES

- *Recipient of* “Excellence in Graduate Polymer Research Symposium,” ACS National Meeting 2013.
- *Research Award* from *Rice University Shell Center for Sustainability*, “High Performance Polymer Photovoltaics,” shared with Dr. Verduzco R., Dr. Darling S., and Smith K., 2012.
- *President*, Taiwanese Student Association, Rice University, 2011.
- *Outstanding Student Award*, National Cheng Kung University, 2005, 2006, 2007, 2008.
- *Grant Award* for Undergraduate summer research, National Science Council, Taiwan, 2007.

CONFERENCE PRESENTATIONS

- “Synthesis and Crystallinity of All-Conjugated Poly(3-hexylthiophene) Block Copolymers,” Poster presentation given at *The American Chemical Society* National Meeting in New Orleans, LA, April 8, 2013.
- “Synthesis, Crystallinity and Process-dependent Nanostructure of All-Conjugated Poly(3-hexylthiophene) Block Copolymers,” Oral presentation given at *The Materials Research Society* Spring Meeting in San Francisco, CA, April 2, 2013.
- “Process-Dependent Nanostructure and Crystallinity Competition in All-Conjugated Poly(3-hexylthiophene) Block Copolymers,” Oral presentation given at *The American Physical Society* March Meeting in Baltimore, MD, March 21, 2013.
- “Synthesis and Characterization of All-Conjugated Block Copolymers/ Supramolecular Block Copolymers in Thin Films,” Oral presentation given at *The American Institute of Chemical Engineers* Annual Meeting in Pittsburgh, PA, October 30, 2012.
- “All-Conjugated Block Copolymers/SupramolecularBlock Copolymers for Organic Photovoltaics,” Poster presentation given at *The American Chemical Society Summer School*, in Denver, CO, June 30, 2012.
- “Controlled Phase Separation in Conjugated Polymer Blends Using Quadruple Hydrogen Bonding,” Oral presentation given at *The American Physical Society* March Meeting in Boston, MA, February 28, 2012.
- “Biodiesel Production by Immobilized *Burkholderia* Lipase,” Poster presentation at the 13th *Biochemical Engineering Society of Taiwan* Conference in Taiwan, June 27, 2008.
- “Synthesis of Biodiesel with Lipase from Indigenous *Burkholderia* sp,” Oral presentation given at *The Chinese Institute of Environment Engineering - Waste Water Treatment Technology* Conference in Taiwan, November 23, 2007.
- “Producing Biodiesel by Immobilized Lipase from Indigenous *Burkholderia* sp,” Poster presentation at the 12th *Biochemical Engineering Society of Taiwan* Conference in Taiwan, June 29, 2007.