

Fangming Xiang

1601 Holleman Dr Apt 1006 ♦ College Station, TX 77840 ♦ (713) 291-3906 ♦ edwardxfm@tamu.edu

OBJECTIVE

Final year PhD student with a strong polymer background hoping to continue research in this area.

HIGHLIGHTS

- Extensive experience in functional polymer composite fabrication
- Layer-by-layer assembly of super gas barrier thin film
- Industrial experience (research project funded by industry)

EDUCATION

PhD, Mechanical Engineering, Texas A&M University, College Station TX expected May 2015

Thesis title: "Layer-by-Layer Assembly of Super Gas Barrier Thin Films"

Advisor: Professor Jaime C. Grunlan

MS, Materials Science and Engineering, Southwest Jiaotong University, 2011

Thesis title: "Modification of Immiscible HDPE/PA6 Blends using Carbon Nanotubes"

Advisor: Professor Yong Wang

BS, Materials Science and Engineering, Southwest Jiaotong University, 2008

Thesis title: "Preparation and Microstructure Characterization of PP/EVA/CNTs Composites"

Advisor: Professor Yong Wang

City University of Hong Kong, Hong Kong, China

August - December 2007

Exchange student in Department of Physics and Materials Science

RESEARCH EXPERIENCE

Department of Mechanical Engineering, Texas A&M University

Graduate Research Assistant (Polymer Focus)

2011 - present

- Developed experiments based on extensive review of literature
- Fabricated polymer multilayer nanocoatings using Layer-by-Layer (LbL) assembly
- Coded for home-built robot using Labview
- Performed surface morphology characterization using SEM and AFM
- Performed mechanical property measurements using AFM
- Conducted thermal property study using DSC and TGA
- Conducted thin film structure and composition testing using ellipsometry and QCM
- Produced thin film with better gas barrier using shorter deposition time (dipping time as short as 5 seconds was proved to be sufficient to make excellent gas barrier)

Department of Materials Science and Engineering, Southwest Jiaotong University

Graduate Research Assistant (Polymer Focus)

2008 - 2011

- Developed experiments based on extensive review of literature
- Fabricated bulk polymer composites using melt mixing
- Conducted mechanical testing using tensile testing machine
- Conducted thermal property study using DSC
- Enhanced mechanical property of polymer blends using modified carbon nanotubes

TECHNICAL SKILLS

Characterization: AFM, SEM, DSC, TGA, QCM, Mechanical Property Testing, Ellipsometry

Computer: Labview, Origin, Photoshop, Microsoft Office

Language: Fluent in Chinese

HONORS

Bachelor's Degree: *Southwest Jiaotong University Undergraduate Scholarship, First Prize* (fall 2006, spring 2007); *Southwest Jiaotong University Undergraduate Scholarship, Second Prize* (spring 2005, fall 2005, spring 2006); *Southwest Jiaotong University Undergraduate Scholarship, Third Prize* (fall 2004), *Southwest Jiaotong University excellent Bachelor's Thesis*

Master's Degree: *Southwest Jiaotong University Graduate Scholarship, First Prize* (2008), *Southwest Jiaotong University Graduate Scholarship, Third Prize* (2009), *Southwest Jiaotong University excellent Master's thesis*

SELECT PUBLICATIONS

1. **F. M. Xiang**, P. Tzeng, J. Sawyer, O. Regev, J. C. Grunlan*, "Improving gas barrier of clay-polymer multilayer thin films using shorter deposition times". *ACS Appl. Mater. Interfaces* 2014, 2014, 6, 6040-6048.
2. **F. M. Xiang**, Y. H. Wang, Y. Y. Shi, T. Huang, C. Chen, Y. Peng, Y. Wang*, "Morphology and mechanical property changes in compatibilized high density polyethylene/polyamide 6 nanocomposites induced by carbon nanotubes" *Polym. Int.* 2012, 61, 1334-1343.
3. **F. M. Xiang**, J. Wu, X. X. Li, T. Huang, Y. Peng, Y. Wang*, "Cocontinuous Morphology of Immiscible High Density Polyethylene/Polyamide 6 Blend Induced by Multiwalled Carbon Nanotubes Network". *Eur. Polym. J.* 2012, 48, 350-361.
4. **F. M. Xiang**, J. Wu, L. Liu, T. Huang, Y. Wang*, C. Chen, Y. Peng, C. X. Jiang, Z. W. Zhou, "Largely Enhanced Ductility of Immiscible High Density Polyethylene/Polyamide 6 Blends via Nano-bridge Effect of Functionalized Multiwalled Carbon Nanotubes". *Polym. Adv. Tech.* 2011, 22, 2533-2542.

PRESENTATIONS

1. **F. M. Xiang**, P. Tzeng, J. S. Sawyer, O. Regev, J. C. Grunlan, "Improving gas barrier of clay-polymer multilayer thin films using shorter deposition times" 248th American Chemical Society National Meeting & Exposition. Volume 111.
2. **F. M. Xiang**, S. M. Ward, J. C. Grunlan, "Super Stretchy Multilayer Thin Film Gas Barrier" 248th American Chemical Society National Meeting & Exposition. Volume 111.