JIANSHAN LIAO

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EDUCATION

Georgia Institute of Technology *Ph.D. in Chemical & Biomolecular Engineering* (Aug. 2016 -) GPA: 3.76/4.00
University of Michigan *B.S.E in Chemical Engineering* (Dec. 2015) GPA: 3.82/4.00
Shanghai Jiao Tong University *B.S.E in Mechanical Engineering* (Aug. 2015) GPA: 3.52/4.00

RESEARCH EXPERIENCE

Breedveld Group – PI: Victor Breedveld
Graduate Research Assistant – *Georgia Tech, Atlanta, GA* Oct. 2016 – Now
- Characterize rheological properties of nanocellulose materials

Larson Group – PI: Ronald Larson
Research Assistant – *University of Michigan, Ann Arbor, MI* Jan. 2016 – Jul. 2016
- Designed and performed experiments to grow layer-by-layer of polyelectrolyte and nanoparticle assemblies
- Synthesized nanoparticles using electric jetting and emulsion method and characterize the particles

Thurber Group - PI: Greg Thurber Jan. 2014 – Jul. 2016
- Built COMSOL model to simulate near-infrared light diffusion in early arthritis hand
- Performed *in vitro* assays for quantitative simulation of drug and imaging agent distribution
- Programed Matlab to develop pharmacokinetic/dynamic models for cancer therapy

INDUSTRY EXPERIENCE

General Electric Global Research Center
Senior Design Project Member – *Shanghai, China* May – Aug 2015
- Designed a Simulink model to compute temperature distribution inside boiler of a thermal power plant
- The difference between calculated and power plant measured temperatures was within 5%

TEACHING EXPEIENCE

Grader, *CHE342 Heat and Mass Transfer* • Grade homework sets and exams Sep. 2015 – Dec.2015
Teaching Assistant, *Thermodynamics* • Led recitation sessions of 60 students May – Jul. 2014

PUBLICATION

Liao, J., S. Bhatnagar, V. Eniola, and G.M. Thurber. *Near-Infrared Fluorescence Imaging Simulations to Design Molecular Imaging Agents for the Early Detection of Rheumatoid Arthritis*. Submitted

Cilliers, C., H. Guo, **J. Liao**, N. Christodolu, and G. M. Thurber. *Multiscale Modeling of Antibody-Drug Conjugates: Connecting Tissue and Cellular Distribution to Whole Animal Pharmacokinetics and Potential Implications for Efficacy*. AAPS Journal, 2016.

Cilliers, C., **J. Liao**, L. Atangcho, and G.M. Thurber. *Residualization rates of near infrared dyes for the rational design of molecular imaging agents*. Molecular Imaging and Biology. 2015; 17(6): 757-62.

Zhang, L., T. Navaratna, **J. Liao**, and G.M. Thurber. *A dual-purpose linker for alpha helix stabilization and imaging agent conjugation to glucagon-like Peptide-1 receptor ligands*. Bioconjugate Chemistry. 2015; 26(2): 329-37.

Bhatnagar, S., E. Deschenes, **J. Liao**, C. Cilliers, and G.M. Thurber. *Multichannel imaging to quantify four classes of pharmacokinetic distribution in tumors.* J Pharm Sci. 2014; 103(10): 3276-86.

ADDITIONAL

- Skills: Rheological characterization, Nanoparticles synthesis, SEM, AFM, Thin Film Fabrication, Spin/Spray-on Coating, Process Simulation & Design, Flow Cytometer, Confocal Microscopy
- Proficient in COMSOL, ASPEN, Matlab, Adobe Premiere
- Academic Awards: Dean's list (2012 - 2015), Lloyd L. and Barbara Kempe Scholarship (April 2015)
- PSE fellowship (December 2016)
- GRE: Verbal 160, Quantitative 170, Writing 3 (September 2015)