

Jing Zhou

EDUCATION

2015 - present Georgia Institute of Technology, Atlanta GA
Ph.D. student, Materials Science and Engineering, Advisor Prof. Vladimir V. Tsukruk
2011 - 2013 Texas A&M University, College Station, TX
M. S. Materials Science and Engineering, Advisor Prof. Michael V. Pishko and Prof. Jodie L. Lutkenhaus

- Thesis: Thermoresponsive Layer-by-Layer Assemblies for Nanoparticle-Based Drug Delivery

2007-2011 University of Science and Technology, Beijing, China
B. S. Materials Science and Engineering

RESEARCH EXPERIENCE

August 2015 - present Surface Engineering and Molecular Assemblies Laboratory, Gatech
Graduate Researcher, Department of Materials Science and Engineering, Prof. Vladimir V. Tsukruk

- Investigation of ECP/Metal Interfaces

June 2012 - December 2013 Drug and Vaccine Delivery Laboratory, TAMU
Graduate Researcher, Department of Biomedical Engineering, Prof. Michael V. Pishko and Prof. Jodie L. Lutkenhaus

- First study of the permeability of layer-by-layer (LBL) films to dexamethasone in response to the glass transition while prior work leveraged coil-globule phase transitions to achieve temperature-responsive behavior. LBL films form membranes of tunable permeability, which may possibly realize an “on” or “off” drug release

October 2011 - May 2012 Tissue Engineering Laboratory, TAMU
Graduate Researcher, Department of Chemical Engineering, Prof. Mariah S. Hahn

- Investigation of connection among matrix stiffness and crosslinker density. Mapping these properties can help rational design of scaffolds environment for tissue engineering application.

September 2010 - June 2011 Nanomaterials and Device Laboratory, Beijing

- Synthesized ZnO nanorods using a chemical vapor deposition method and investigated its optical and electrical properties.

WORK EXPERIENCE

June 2014-May 2015
Process Development Intern FUJIFILM Diosynth Biotechnologies Texas, LLC

- Developing microbial fermentation processes for scale-up and technology-transfer to manufacturing sites to produce a protein used in glioblastoma treatment in cGMP environment
- Assisting the optimization of seed influenza virus production in EB66 cell lines
- Assisting downstream protein purification activities

February 2014 - July 2014 National Center for Therapeutics Manufacturing, TAMU
Program Assistant

- Assisted the development of instructional materials for QbD in Bioprocess Development
- Co-authored instruction materials for Pharmaceutical Plant Economics

PUBLICATIONS

- Zhou, J., Lutkenhaus, J. L., and Pishko, M. V., “Thermo-Responsive Layer-by-Layer Assemblies for Nanoparticle-Based Drug Delivery”, *Langmuir*, 2014, 30 (20), 5903–5910.
- Zhao, J., Wang, L., Yan, X., Yang, Y., Lei, Y., Zhou, J., Huang, Y., Gu, Y., Zhang, Y., “Structure and Photocatalytic Activity of Ni-doped ZnO nanorods”, *Materials Research Bulletin*, 2011, 46, 1207-1210.

ORAL AND POSTER PRESENTATIONS

- Zhou, J., Lutkenhaus, J. L., and Pishko, M. V., “Thermo-Responsive Layer-by-Layer Assemblies for Nanoparticle-Based Drug Delivery”, Poster at the International Society for Pharmaceutical Engineering (ISPE) Annual Meeting, Washington, D.C., November 2013.
- Zhou, J., Lutkenhaus, J. L., and Pishko, M. V., “Thermo-Responsive Layer-by-Layer Assemblies for Nanoparticle-Based Drug Delivery”, Texas Soft Matter Meeting, Houston, TX, January 2013 and August 2013.

SELECTED TECHNICAL SKILLS

- Layer-by-layer assembly technique · HPLC · UV-Vis spectrophotometer · Particle size analyzer Zeta potential analyzer · Homogenization · Emulsion · SEM · DSC · XPS · QCM-d
- Shake flask/T-flask cell culture · Fermentation · Aseptic sampling · ELISA · Hemagglutination assay · Histology · Protein purification, Biomaterials mechanical testing, cGMP

PROFESSIONAL AFFILIATIONS

- American Chemical Society
- International Society for Pharmaceutical Engineering
- American Association of Pharmaceutical Scientists

AWARDS AND HONORS

- Top honor at the ISPE, South Central Chapter poster competition (2013)
- Lechner Scholarship, TAMU (2012)
- National Inspirational Scholarship (top 1%), USTB (2008)
- Volunteer at the 29th Olympic Games, Beijing (2008)