

ZIHAO LIANG

Forney Hall of Chemical Engineering, 480 Stadium Mall Drive, West Lafayette, IN, U.S.A.

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EDUCATION

- Purdue University, Davidson School of Chemical Engineering, West Lafayette, IN** 08/2018-
• Ph.D. in Chemical Engineering, advisor: Prof. Bryan Boudouris
- The University of Akron, Department of Polymer Science, Akron, OH** 08/2016-05/2018
• M.S. in Polymer Science, advisor: Prof. Tianbo Liu
- East China University of Science and Technology, Department of Polymer Materials, Shanghai** 09/2013-06/2016
• B.E. in Polymer Materials and Engineering

HONORS AND AWARDS

- Scholarship for Comprehensive Curriculum Behavior, Third Prize 2016
Scholarship for Comprehensive Curriculum Behavior, Second Prize 2014, 2015

PUBLICATIONS

1. Tuning the Inter-Cage Distance in Charge-Regulated Blackberry-Type Assemblies via Host-Guest Chemistry, H. Li, R. Wang, Y. Hong, **Z. Liang**, Y. Shen, T. Miyoshi, T. Liu, *Chem. Eur. J.* **2019**, *25*, 16288–16293
2. Conformational Change Due to Intramolecular Hydrophobic Interaction Leads to Large Blue-Shifted Emission from Single Molecular Cage Solutions, H. Li, T.-Z. Xie, **Z. Liang**, D. Dahal, Y. Shen, X. Sun, Y. Yang, Y. Pang, T. Liu, *Chem. Commun.*, **2019**, *55*, 330-333
3. Adjusting Emission Wavelength by Tuning the Intermolecular Distance in Charge-Regulated Supramolecular Assemblies, H. Li, T.-Z. Xie, **Z. Liang**, Y. Shen, X. Sun, Y. Yang, T. Liu, *J. Phys. Chem. C* **2019**, *123*, 37, 23280-23286

RESEARCH EXPERIENCE

Graduate Research Assistant, 10/2018-06/2020

Purdue University, Davidson School of Chemical Engineering, West Lafayette, IN

Advisor: Prof. Nien-Hwa Linda Wang

Projects: Design of Chromatographic Processes for Recovery and Purification of Rare Earth Elements

Master Student Research Assistant, 10/2016-05/2018

The University of Akron, Department of Polymer Science, Akron, OH

Advisor: Prof. Tianbo Liu

Projects: Investigation on The Solution Behavior of Metal-Organic Nanocages with Aggregation Induced Emission Property; Tuning the Inter-Nanocage Distance in Solution via Host-Guest Chemistry

Undergraduate Research Assistant, 03/2015-06/2016

East China University of Science and Technology, Department of Polymer Materials, Shanghai, China

Project: Foundation and Exploration on Material Gene Bank of Polymer Material's Glass Transition Temperature

Advisor: Prof. Liquan Wang

SKILLS AND ACTIVITIES

- **Computer Skills:** MS Office, MATLAB, Origin, ChemDraw, Hyperchem, Gaussian 09, MestrelNova, Photoshop, Illustrator, VERSE simulator
- **Characterization:** Light scattering, XRD, SEM, TEM, AFM, QCM-D, Zeta-potential analyzer, tensiometer, refractometer, Spectroscopy (UV-vis, IR, FL spectroscopy, AAS), NMR, MS, GPC, HPLC, DSC, ITC, TGA
- **Synthesis and Purification:** Column chromatography, TLC, recrystallization, freeze dryers, and other necessary skills for synthesis of simple organic molecules, polyoxometalates and metal organic frameworks; Gold nanoparticle synthesis, free radical and anionic ring-opening polymerization, ATRP, Suzuki coupling polycondensation; Packing and characterization of ion exchange columns; Semba Octave and ÄKTA chromatography systems
- **Teaching Experience:** Teaching Assistant in CHE306: Staged Separation Process, Purdue University (Fall 2019)
- **Language:** Chinese, English