

Jared A. Gohl
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EDUCATION

PURDUE UNIVERSITY <ul style="list-style-type: none">• Doctor of Philosophy in Materials Engineering (In Progress)• GPA 3.92/4.0• Advisor: Chelsea S. Davis	West Lafayette, IN
HILLSDALE COLLEGE <ul style="list-style-type: none">• Bachelor of Science in Chemistry (ACS Certified)• GPA 3.78/4.0	Hillsdale, MI Class of 2019

RESEARCH INTERESTS

Interfacial Adhesion, Surface Science, Surface Functionalization, Pressure Sensitive Adhesives, Molecular Fluorescence, Fluorescence Microscopy, Polymer Mechanics, Polymer Viscoelasticity, Organic Synthesis, Encapsulating Materials, Applied Polymer Science

SKILLS

NMR Spectroscopy, IR Spectroscopy, High Performance Liquid Chromatography, Gas Column-Mass Spectroscopy, Flash-Column Chromatography, UV-Vis Spectroscopy, Fluorescence Spectroscopy, Thin Layer Chromatography, Polymeric Dynamic Mechanical Analysis (Superuser), Mechanical Testing of Soft Materials, Epifluorescence Microscopy, Laser Scanning Confocal Microscopy, Finite Element Analysis

EXPERIENCE

Graduate Assistant Davis Research Group	Purdue Materials Engineering Department, West Lafayette, IN <ul style="list-style-type: none">• Developed a novel Peel Test fixture for testing of pressure sensitive adhesive tapes on roadways for the Indiana Department of Transportation• Studying the interface of polymeric materials with molecular force probes to understand adhesion	2019-Present
Chemistry Researcher Meyet Group	Hillsdale College Chemistry Department, Hillsdale, MI <ul style="list-style-type: none">• Synthesized tricyclic quinoline compounds through A³ methodology• Isolated synthetic products through column chromatography• Successfully developed methodology to synthesize and isolate Di-Imine synthetic intermediate with near quantitative yields• Monitored reaction progress through TLC and GC-MS• Analyzed products via ¹HNMR and ¹³CNMR spectroscopy	Summer 2018
Research and Development Lab Intern Engineering Analysis Group	North American Lighting, Farmington Hills, MI <ul style="list-style-type: none">• Utilized scientific method to problem solve thermal failure of prototype headlamps and conducted extensive testing of proposed solutions• Provided data to improve FEA simulations• Conducted structural testing for prototype headlamps	Summer 2016 and Summer 2017

- Supervised Analytical, Organic, and General Chemistry Students in supplementary lab work
- Performed NMR and IR spectroscopy for students and faculty
- Assisted students when lab experiments fail or produce an unexpected outcome

PUBLICATIONS

1. S. M. El Awad Azrak, **J. A. Gohl**, R. J. Moon, G. T. Schueneman, C. S. Davis, J. P. Youngblood, "Controlling the Dispersion and Setting Behavior of Highly Loaded Pastes of Cellulose Nanofibrils (CNF) with adsorbed Carboxymethyl Cellulose (CMC)." *Cellulose*, (28) **2021**, 9149-9168, DOI: 10.1007/s10570-021-04081-5
2. **J. A. Gohl**, T. C. Thiele-Sardina, M. L. Rencheck, K. A. Erk, C. S. Davis, "A Modular Peel Fixture for Tape Peel Tests on Immovable Substrates." *Experimental Mechanics*, ASAP, 2021, DOI: 10.1007/s11340-021-00738-1
3. M. L. Rencheck, **J. A. Gohl**, H. P. Grennan, K. A. Erk, C. S. Davis, "Assessing the Elastic Moduli of Pavement Marking Tapes using the Tape Drape Test." *Transportation Research Record*, ASAP, 2021, DOI: 10.1177/0361198121999623

ORAL PRESENTATIONS

1. **J. A. Gohl**, T. C. Thiele-Sardina, M. L. Rencheck, H. P. Grennan, K. A. Erk, C. S. Davis, "A Modular 90° Test Configuration for Measuring Tape Adhesion on Immovable Substrates," *American Physical Society March Meeting*, Chicago, IL, March 2022
2. **J. A. Gohl**, M. L. Rencheck, T. B. Wiley, B. T. Mackey, Y. Y. Hu, C. C. Chang, M. D. Sangid, C. S. Davis, "Quantitative Stress Visualization via Mechanophores in Polymer Matrix Composites," *Annual Meeting of the Adhesion Society*, San Diego, CA, February 2022
3. **J. A. Gohl**, T. C. Thiele-Sardina, M. L. Rencheck, H. P. Grennan, K. A. Erk, C. S. Davis, "A Novel Modular Test Configuration for 90° Peel Tests on Immovable Substrates," *Annual Meeting of the Adhesion Society*, Virtual, February 2021
4. **J. A. Gohl**, C. S. Davis, "Development of Testing Methodologies for Temporary Pavement Marking Tapes," *Annual Soft Materials Summer Research Symposium*, School of Materials Engineering, Purdue University, Virtual, July 2020

POSTER PRESENTATIONS

1. **J. A. Gohl**, H. P. Grennan, D. P. Madigan, C. S. Davis, "Evaluating the Mechanical Performance of Pressure Sensitive Adhesive Tapes Using a Tear Resistance Ratio," *Annual Meeting of the Adhesion Society*, San Diego, CA, February 2022

AWARDS AND SCHOLARSHIPS

CRC Press Freshman Achievement Award, Joseph H. Moss Endowed Chemistry Scholarship, Katherine and Alex F. Nason Scholarship, American Institute of Chemists Outstanding Senior Award, ACS Undergraduate Award in Organic Chemistry, ACS Undergraduate Award in Inorganic Chemistry, Trout Memorial Scholarship, Sergio Marchionne Student Achievement Award, Air Force Summer Faculty Fellowship Program 2020, Briney Achievement Award

**PROFESSIONAL
AFFILIATIONS**

American Chemical Society, Member	2015-Present
Adhesion Society, Member	2021-Present
American Physical Society, Member	2021-Present

**EXTRACURRICULAR
ACTIVITIES**

American Chemical Society, Member	2015-Present
Adhesion Society, Member	2021-Present
Materials Engineering Graduate Student Association, Vice President	2021-Present
American Physical Society, Member	2021-Present
Sigma Zeta Math and Science Honorary, Treasurer	2017-2019
Kappa Mu Epsilon Mathematics Honorary, Member	2018-2019
Hillsdale College Football	2015-2017