

Benjamin Drewry

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Education

Chemical Engineering Graduate Student, University of Texas at Austin *Fall 2019 - present*

- GPA: 3.7

B.S. Chemical Engineering, University of Arkansas: Magna Cum Laude *Fall 2018*

- GPA: 3.84; Mathematics Minor
- Honors Thesis: *Sulfate Removal from Mine Impacted Waters*

Experience

Graduate Research Assistant: Dr. Gary Rochelle, University of Texas *May 2020 - present*

- Developing techno-economic analysis amine-based carbon capture system for Front End Engineering Design (FEED) and further applications
- Investigating systems modelling broadly related to carbon-capture on industrial facilities

Teaching Assistant, University of Texas

- **Chemical Reactor Analysis and Design** *Fall 2020*
 - Assisted with MATLAB and written assignments for 107 person course
 - Proctored quizzes, hosted two office hours weekly, and developed and graded problems
- **Separation Processes and Mass Transfer** *Spring 2021*
 - Will provide assistance for Aspen-related assignments via office and recitation hours

Technical Assistant I: Dr. Jamie Hestekin, University of Arkansas *May 2018 - September 2018*

- Group nanofiltration lead for industry-sponsored membrane research

Team Coordinator: WERC Design Contest: Las Cruces, New Mexico *Spring 2018*

- Awarded first place for Task 2: Sulfate Removal from Mine Impacted Waters
- Built two bench-scale processes on a limited budget with plans for industrial scaleup, accounting for environmental, economic and logistical concerns

Intern III, LyondellBasell, Clinton IA *Fall 2017*

- Worked as process engineering intern in low density polymers unit
- Completed projects for monitoring key heat exchanger performance, improving operator safety and process reliability

NSF REU Program: Dr. Ye Xu, Louisiana State University *Summer 2017*

- Performed computational modeling of doped discharge products in Lithium-Air batteries
- Optimized pristine lithium peroxide structures using USPEX and VASP, in addition to structures with vacancies, and structures doped with sodium, cobalt and magnesium

Organizations

Graduate Chemical Engineering Leadership Committee

- **Corporate Relations Chair** *October 2020 – present*
 - Organize and host corporate recruiting events for Chemical Engineering graduate students
 - Collaborating with staff on alumni mentoring program for interested graduate and undergraduate students
- **Graduate Safety Board** *Fall 2019 – present*
 - Developing annual Safety Fellowship for graduate students that demonstrate commitment to safety

University of Arkansas Toxic Substances Committee, Undergraduate Representative *July 2018 – December 2018*

- Reviewed chemical policies and SOPs for Particularly Hazardous Substances with university-wide board

Publications

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1. Drewry, Benjamin; Morales, Jean; Shock, Tyler; Richard, Derek; Sagarnaga, Luis; and Yeldell, Benjamin, "Sulfate Removal from Mine Impacted Waters" (2018). Chemical Engineering Undergraduate Honors Theses. 132. <https://scholarworks.uark.edu/cheguht/132>

Honors

University of Texas Cockrell School of Engineering Fellow *Fall 2019 – present*

- Fellowship awarded to outstanding incoming doctoral engineering students at the University of Texas at Austin, renewable for four additional years

University of Arkansas Honors College Fellow *Fall 2014-Fall 2018*

- 4-year undergraduate scholarship awarded to 100 high-achieving incoming freshmen to the University of Arkansas