

Rebecca Lee

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EDUCATION

The University of Texas at Austin

Ph.D., Chemical Engineering

Austin, TX

August 2022 – Present

University of Connecticut

Bachelor of Science in Engineering, Chemical Engineering

GPA: 3.85/4.00

Storrs, CT

August 2019 – May 2022

RESEARCH EXPERIENCE

Kumar Lab, The University of Texas at Austin

Graduate Research Assistant

Austin, TX

August 2022 – Present

- Making and testing interfacial polymerization membranes for gas and water separation.

McCutcheon Lab, University of Connecticut

Undergraduate Research Assistant

Storrs, CT

February 2020 – July 2022

Development of 3D-printed membranes for low-carbon intensity biofuel production

- Designed and tested electrospray-printed pervaporation membranes for ethanol dewatering.
- Characterized membrane thickness and roughness through surface profiling methods.
- Presented posters at the 2021 AIChE Undergraduate Poster Competition and the 2022 North American Membrane Society conference.

Carbon nanotube membrane separation testing

- Tested the performance of carbon nanotube membranes developed by Prometheus Fuels in rejecting micropollutants and salts in water.

Solar-thermal membrane distillation

- Modeled a demonstration system for a solar-driven membrane distillation system based on a ceramic membrane platform for the U.S. Department of Energy Solar Desalination Prize using Aspen Plus.
- Estimated energy requirements to determine the feasibility, limitations, and ideal operating conditions of the process.

Curran Lab, Trinity College

Research Assistant

Hartford, CT

August 2017 – May 2019

Synthesis of organometallic molecules

- Synthesized and characterized cyclic tungsten bis-alkyne complexes.

WORK EXPERIENCE

Aqualumos

Lab Technician

Storrs, CT

October 2020 – May 2022

- Produced catalyst and tested the photocatalytic degradation of PFAS in a batch reactor prototype.
- Collaborated with team to draft the product overview and market analysis sections of a formal business plan to present to potential investors.

TEACHING EXPERIENCE

The University of Texas at Austin

Teaching Assistant

Measurement, Control, and Data Analysis Laboratory (CHE 253M)

Austin, TX

January 2023 – Present

- Running heat-transfer experiments and grading lab reports.

University of Connecticut

Teaching Assistant

Process Kinetics (CHEG 3151)

Storrs, CT

January 2022 – May 2022

- Graded assignments, held office hours, and developed answer keys and grading rubrics for students.

AWARDS

The University of Texas at Austin Cockrell School of Engineering Fellowship

August 2022 - Present

AIChE Undergraduate Poster Competition – 1st place in Separations II division

November 2021

University of Connecticut Summer Undergraduate Research Fund Awardee

May 2021 – August 2021

University of Connecticut Technology Incubation Program Fellow

May 2021 – July 2021

University of Connecticut STEM Scholarship

August 2019 – May 2022

University of Connecticut Honors Program

August 2019 – May 2022

SKILLS

Software Skills: Microsoft Word, Excel, LaTeX, Aspen Plus, COMSOL Multiphysics, SolidWorks, Matlab

Technical Skills: Interfacial polymerization, electrospray, profilometry

Languages: Korean, French