

Animesh Patel

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EDUCATION

University of California, Berkeley

Doctor of Philosophy (Ph.D) in Chemical Engineering

Berkeley, CA

Expected May 2029

Oregon State University

Bachelor of Science (B.S.) in Chemical Engineering | Minor in Chemistry | GPA: 3.99/4.0

Corvallis, OR

June 2024

WORK EXPERIENCE

U.C. Berkeley | Lawrence Berkeley National Lab

Graduate Research Assistant | Nitash Balsara's Lab

Berkeley, CA

08/2024 to Current

- Investigated ion transport and thermodynamic properties of liquid electrolytes using ac impedance spectroscopy and galvanostatic and potentiostatic techniques.
- Characterized mobilities and conductivities of various lithium polysulfide species for elucidation of transport properties.
- Utilize beamline x-ray absorption spectroscopy to study the kinetics of the lithium-sulfur reaction in a battery during in situ cell polarization. Visualized data using Athena and Origin.

University of California, Berkeley

Graduate Teaching Assistant

Berkeley, CA

08/2024 to Current

- Led lectures in discussion sections on the fundamental principles of chemical engineering.
- Held weekly office hours to assist students with homework and further understanding.
- Created and graded exams and homeworks to test student comprehension of engineering concepts.

Oregon State University

Undergraduate Researcher | Dr. Zhenxing Feng

Corvallis, OR

02/2023 to 06/2024

- Constructed coin battery cells and aqueous batteries for constant current discharge testing.
- Researched methods of active recycling to design more efficient and easily recyclable batteries.
- Created electrolyte solutions for use in stability and capacity testing.

Oregon State University

Undergraduate Teaching Assistant

Corvallis, OR

03/2022 to 06/2024

- Courses assisted: (CBEE 211, PH 21x Series, CH441, CHE 333, CHE 461)
- Led review sessions before exams where students who attended scored 10% higher on average.
- Worked in the physics and chemistry help centers to assist students from all physics and chemistry courses at OSU with conceptual understanding and technical problem solving.
- Collaborated with professors to streamline coursework, aiming to better align with course learning objectives and enhance student comprehension.
- Assisted students in lectures and studios complete daily problems to further their understanding.

Hewlett-Packard

R&D Writing Systems Engineering Intern

Corvallis, OR

06/2022 to 09/2023

- Improved WebWipe cleaning efficiency by 60% through the use of a researched cosolvent mixture.

- Led project for the optimization of start-up calibration alignment sequences, resulting in a 25% increase in efficiency and saving 300 ft² of paper per print run.
- Implemented Python scripts to analyze errors in sequence alignments, enabling data-driven decisions on waste reduction which would save 5500 ft² of paper per run.
- Discovered novel ways of fixing alignment issues without production stoppage.
- Assisted in bringing WebWipe solvent to the product development stage by running cost analysis.

Oregon State University

Corvallis, OR

Undergraduate Researcher | Dr. Liney Arnadottir

01/2023 to 06/2023

- Utilized the fundamentals of Density Functional Theory (DFT) to model reactions of ammonia on doped transition metals using MobaXterm.
- Computed rate-limiting steps of reactions to identify ideal catalysts for different reaction processes.

Oregon State University

Corvallis, OR

Undergraduate Researcher | Dr. Skip Rochefort

02/2021 to 03/2023

- Assisted in the development of an open-source Plastic to Diesel Fuel pyrolysis reactor.
- Led the operation, analysis, and hands-on maintenance of the Plastic to Fuel reactor.
- Operated instruments such as Thermogravimetric Analysis and Differential Scanning Calorimetry Units.
- Prepared samples for use in Gas Chromatography analysis.
- Informed 1st year undergraduate researchers on the fundamentals of pyrolysis and polymer chemistry.
- Led undergraduate students through the operation of the Plastic to Diesel Fuel reactor and taught analytical techniques such as DSC and TGA.
- Presented research data to industry professionals and university associates.

CLUBS

Oregon State University

Corvallis, OR

Chemical, Biological, and Environmental Engineering Club

09/2020 to 06/2024

- Volunteered time to set up the AiChE Regional Conference by assisting with set up, registration, and venue reservations.
- Assisted students during weekly club meetings with professional and academic development through activities such as resume workshops and open office hours.
- Prepared activities for club promotion to teach prospective students about Chemical Engineering professions.
- Facilitated the procurement of industry professionals to conduct workshops on internships and full-time job opportunities for students.

Oregon State University

Corvallis, OR

AiChE Chemical Engineering Car

09/2021 to 05/2022

- Assisted in the development of a chemical-mechanism powered miniature car.
- Worked on the development of a uniquely powered starting mechanism and optimized battery design.
- Facilitated team meetings about possible optimizations of car components.

Presentations

Hewlett-Packard

R&D Intern Poster Fair: “Align Our Future: The Solution to Crossweb Misalignment”

Corvallis, OR

09/2023

Hewlett-Packard

R&D Intern Poster Fair: “Cosolvent Effects on Ink and Sensitive Metal Surfaces”

Corvallis, OR

09/2022

Ocean Plastic Recovery Project Collection Vessel

Seminar on Polymers: “An Introduction to Pyrolysis: Plastic to Fuel Reactors”

Katmai, AK

08/2022

Oregon State University

College of Engineering Expo: “Improved Kiln Reactor Design for Pyrolysis”

Corvallis, OR

06/2022

Oregon State University

College of Engineering Expo: “Powered by Plastic: Plastic to Fuel”

Corvallis, OR

06/2021