

# Sharareh Rezaei

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## Education

### M.Sc. in Chemical Engineering

May 2025 (Expected)

Department of Chemical Engineering, Bucknell University

Thesis: Enhancing the Stability and Efficiency of Liposome-based Drug Delivery Systems

GPA: 3.5/4

### B.Sc. in Chemical Engineering

April 2018

Department of Chemical Engineering, Golestan University, Iran

Thesis: Application of Polymeric Nanofibers in Medical Designs

## Research Experiences

### ➤ Undergraduate Research

❖ Department of Chemical Engineering, Golestan University, Iran

- Research Advisor: Dr. Ghasem Bahlakeh
- Topic: Analysis of Biopolymer Blends for Advanced Material Applications
- Date: 20/8 hours/week during Summer 2015

❖ Department of Chemical Engineering, Golestan University, Iran

- Research Advisor: Dr. Hanieh Shaki
- Topic: Development and Characterization of Nanofibrous Hybrid Scaffolds for Enhanced Bone Tissue Regeneration
- Date: 12/20 hours/week during Fall and Spring Semesters 2017-2018

### ➤ R&D Member

❖ Department of Research and Development, Niak Pharmaceutical Company, Iran

- Supervisor: Dr. Fereshteh Safavi
- Topic: Moisture barrier films for herbal medicines fabricated by dry coating
- Date: Full time, November 2022 – June 2023

## ➤ Graduate Research

- ❖ Department of Chemical Engineering, Bucknell University
  - Research Advisor: Dr. Kenny Mineart
  - Topic: Stability and Efficiency of Liposomal Drug Delivery Systems
  - Date: Full time, August 2023 – July 2025
  
- ❖ Department of Chemical Engineering, Bucknell University
  - Research Advisors: Dr. Erin Jablonski, Dr. Brandon Vogel
  - Topic: Influence of Bead Downsizing through Extrusion on the Degradation and Swelling of Injectable ETTMP/PEGDA Hydrogels
  - Date: 12/10 hours/week during Summer 2024

## Industrial Work Experience

- **Position:** R&D and QC Specialist (Full-time)  
**Location:** Niak Pharmaceutical Company, Gorgan, Iran (<http://www.niakpharma.com/index.php/en/>)  
**Supervisors:** Dr. Manouchehr Jnadaghi, Dr. Fereshteh Safavi, Dr. Houman Bayat  
**Date:** August 2019 – June 2023
  
- **Position:** Feasibility Study Specialist (Part-time)  
**Location:** Armin Moshaveran Company, Gorgan, Iran  
**Supervisor:** Dr. Hmaed Akhavan  
**Date:** March 2017 – Sep 2021
  
- **Position:** Quality Assurance Technical Assistant (Full-time)  
**Location:** Paksaz Shimi Hirkan Company, Gorgan, Iran  
**Supervisor:** Mr. Amin Nabavi  
**Date:** June 2017 - August 2019

## Academic Work Experience

- ❖ **Position:** Teaching Assistant/Grader  
**Course:** CHEG 320 Chemical Reaction Engineering  
**Faculty:** Professor Brandon Vogel  
**Location:** Bucknell University  
**Date:** Fall 2023
  
- ❖ **Position:** Lab Assistant  
**Course:** CHEG 200L 60 - Chem Engr Principles  
**Faculty:** Professor Kat Wakabayashi  
**Location:** Bucknell University  
**Date:** Spring 2024

- ❖ **Position:** Lab Assistant  
**Course:** CHEG 330L 61 - Process Control  
**Faculty:** Professor Kenny Mineart  
**Location:** Bucknell University  
**Date:** Spring 2024

## Activities and Volunteer Experience

- **Position:** Lab Tutor, Engineering Camp  
**Location:** Bucknell University  
**Supervisor:** Dr. Kenny Mineart  
**Date:** June 2024, 18/1 hours/week
  - Assisted in facilitating hands-on engineering experiments and activities for high school students.
  - Guided students through real research labs, providing an introduction to drug delivery systems.
  - Mentored students, fostering an interest in engineering and encouraging exploration of different engineering fields.
  
- **Position:** Conference Volunteer  
**Event:** Annual AIChE Conference  
**Location:** Orlando, Florida  
**Date:** November 2023
  - Assisted fellow students in setting up their posters.
  - Supported conference coordinators with logistical tasks.
  - Shared responsibilities with coordinators to ensure smooth operation of the event.

## Related Coursework

- ❖ Genetic Engineering 4/4
- ❖ Biomaterial in Medicine 3/4
- ❖ Particle Technology 4/4

## Publications

S. Rezaei, K. P. Mineart. Evaluation of Chemical and Physical Stability in Liposomes Composed of Mixed Phospholipids. *in preparation*, 2024.

## Presentations

### ➤ **Presentation citation:**

- S. Rezaei, K. P. Mineart. Evaluation of Stability in Liposomes Composed of Mixed Phospholipids, BPS Annual Meeting 2024, Philadelphia (PA), poster.
- S. Rezaei, K. P. Mineart. Evaluation of Stability in Liposomes Composed of Mixed Phospholipids, AIChE Annual Meeting 2024, San Diego (CA).

Session: Poster Session: Interfacial Phenomena (Area 1C)

Date: Monday, October 28, 2024

Session Time: 3:30 PM PT - 5:00 PM PT

## References

❖ **Name:** Professor Kenny Mineart

**Email:** kenny.mineart@bucknell.edu

**Location:** Bucknell University, Chemical Engineering Department

❖ **Name:** Professor Erin Jablonski

**Email:** erin.jablonski@bucknell.edu

**Location:** Bucknell University, Chemical Engineering Department

❖ **Name:** Dr. Elizabeth Kelley

**Email:** elizabeth.kelley@nist.gov

**Location:** National Institute of Standards and Technology