

# Arezoo Esrafil, E.I.T

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## INTERESTS AND EXPERTISES

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- ✓ Drug delivery
- ✓ Immunoengineering
- ✓ Process Control & Simulation
- ✓ Bio-nanomaterials
- ✓ Transport Phenomena and Thermodynamics

## EDUCATION

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Jan 2022- Present	Ph.D. student in Chemical Engineering at Arizona State University
Sep. 2021-Dec 2021	Ph.D. student in Chemical Engineering at University of Rhode Island (transferred)
Sep. 2011- Sep. 2014	M.Sc. in Chemical Engineering, Process control modeling, and simulation, Department of Chemical and Petroleum Engineering, Sharif University of Technology, Tehran, Iran* <i>Thesis: "Feedback linearization control of a PEM fuel cell (proton exchange membrane)" GPA: (3.1/4) Supervisor: Prof. Pishavie (1<sup>st</sup> reference)</i>
Sep. 2007- Sep. 2011	B.Sc. in Chemical Engineering, Food Industry, Department of Chemical and Petroleum Engineering, Guilan University, Rasht, Iran <i>Voluntary Undergraduate Thesis: "Carbon nanotubes in gas &amp; oil industry"; GPA (3.6/4) Supervisor: Dr. Ashraf (2<sup>nd</sup> reference)</i>

## HONORS, AWARDS, AND CERTIFICATE

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Apr. 2021	FE in Chemical Engineering
Feb. 2011	Ranked 217th in nationwide M.Sc. entrance exam among more than 7700 participants
Sep. 2011	Rank 1st among 85 Chemical Engineering students, Guilan University, Rasht, Iran (With the Highest GPA)

## COMPUTER SKILLS

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**Chemical and Technical** Proficient in MATLAB-(Simulink), Microsoft Office

## WORKING/TEACHING EXPERIENCE

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- Volunteer Lab Assistant at Arizona State University** Feb 2020 -July (6 months)  
• Laboratory Assistant in Dr. Acharya's Lab; working on the synthesis materials to drug delivery.
- Volunteer Lab Assistant at Temple University** Aug 2018 - Sep 2018 (1 months)  
Laboratory Assistant in Temple University Environmental Laboratory; **Chemical Engineer at Ghiam Nakh Textile Co.** Sep 2014 - Sep 2017 (3 years)  
• Ensure all executed projects meeting regulations and appropriate engineering codes and standards  
• Assist in the installation, check out, and start-up of new or modified processes and equipment  
• management of internal and external outsourced engineering resources, interfacing with permitting authorities,  
• technology evaluation, chemical process engineering design, and technical management
- Teaching Assistant at Guilan University** March 2010 - July 2010 (5 months)  
• Teacher Assistant for "Differential Equations," Mathematical Science Department

## LANGUAGE

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Persian (native language)

English

## SKILLS AND TRAININGS

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Laboratory Equipment H NMR, rotatory evaporator

Certificate Agilent's Chromatography

## PUBLICATION

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- **Esfafili A.**, Wagner A., Inamdar S., Acharya A., "Covalent Organic Frameworks for Biomedical Applications", *Advanced Healthcare Materials* (2021/1/21)
- Mangal, J. L., J. L. Handlos, **A. Esrafili**, S. Inamdar, S. Mcmillian, M. Wankhede, R. Gottardi, and A. P. Acharya. "Engineering Metabolism of Chimeric Antigen Receptor (CAR) Cells for Developing Efficient Immunotherapies. *Cancers* 2021, 13, 1123." (2021).
- Esrafili A., "Feedback linearization control of a PEM fuel cell (proton exchange membrane", *Master of Chemical Engineering Thesis, Sharif University of Technology, 2014*

## REFERENCES

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**1- Prof. Pishvaie** Professor, Chemical Engineering Department, Sharif University of Technology, Tehran, Iran

E-mail: [pishvaie@sharif.edu](mailto:pishvaie@sharif.edu)

Webpage: <http://sharif.edu/~pishvaie/>

**2- Dr. Ashraf** Professor, Chemical Engineering Department, Guilan University, Rasht, Iran

E-mail: [s.ashraf@guilan.ac.ir](mailto:s.ashraf@guilan.ac.ir)

Webpage: <https://guilan.ac.ir/en/~s.ashraf>

**3- Dr. Tehrani** Professor, Chemical Engineering Department, Temple University, Philadelphia, PA

E-mail: [r.tehrani@temple.edu](mailto:r.tehrani@temple.edu)

Webpage: <https://engineering.temple.edu/about/faculty-staff/rouzbeh-afsarmanesh-tehrani-tua75093>