

## ***PERSONAL INFORMATION***

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MAHYA AZIZI

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## ***EDUCATION***

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### **Sharif University of Technology**

Graduate student (M.Sc.)

Materials science and engineering

(September 2022- September 2024)

### **Amirkabir University of Technology (Tehran Polytechnic)**

Undergraduate student

Materials and metallurgical engineering

GPA:

Last two years: 4/4

Specialized courses: 4/4

(September 2018- September 2022)

Overall: 3.94/4 – 18.44/20

### **Farzanegan High School**

(National Organization for Development of Exceptional Talents)

High school diploma - Mathematics and physics - Overall GPA:4/4

(October 2012- October 2018)

## ***SELECTED COURSES***

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Advanced materials (20/20) – Crystallography (20/20) – Biomaterials (20/20) – Nanomaterials (20/20) – Principles of polymer engineering (19.66/20)

## ***RESEARCH INTERESTS***

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Nanomaterials – biomaterials – composite materials – graphene and CNTs – optoelectronics – advanced ceramics – nanofiber fabrication

## ***PUBLICATIONS***

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Fabrication and characterization of zein-sodium alginate electrospun nanofiber loaded with cinnamaldehyde for wound dressings. (Under Preparation)

## ***AWARDS AND HONORS***

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- Ranked as the second top GPA in the department of materials and metallurgical engineering
- Successfully passed the second stage of the 27<sup>th</sup> National Materials and Metallurgical Engineering Olympiad
- Accepted as a talented student in Amirkabir university of technology's Honors department
- Qualified for direct admission (selected by GPA) to graduate school of Sharif university of technology and Amirkabir university of technology (M.Sc. of Materials Selection and Identification)
- Ranked 14<sup>th</sup> in the final stage of the 26<sup>th</sup> National Materials and Metallurgical Engineering Olympiad
- Member of Iran's National Elites Foundation
- Tuition waiver (fully funded scholarship) at Amirkabir university of technology
- Ranked as the first 1% of the participants in Iran's national university entrance exam
- Successfully passed the first stage of the chemistry Olympiad (Farzanegan high school)

## ***EXPERIENCES***

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### ***Research Experiences***

Research assistant at Amirkabir university of technology (April 2021 (started))

**Thesis title:** Fabrication and characterization of electrospun nanofiber loaded with cinnamon extract

**Projects:** Fabrication of electrospun nanofibers (solutions preparation and optimization/Electrospinning) – Crosslinking of nanofibers (selection of crosslinker, degradation analysis) – Characterization of nanofibers (morphology, mechanical properties, extract release, functional groups, weight loss, and wettability analysis) (Supervisors: Dr.Marashi – Dr.Rahmani)

### ***Teaching Experiences***

1. Teaching assistant at Sharif university of technology (September 2022 (started))  
Crystallography and X-ray diffraction (Supervisor: Dr.Marashi)

2. Teaching assistant at Amirkabir university of technology (February 2021- July 2022)  
Crystallography and X-ray diffraction (Supervisor: Dr.Marashi)

### ***Laboratory Experiences***

1. Laboratory of advanced and nanomaterials (Octobers 2022 (started))
2. Pharmaceutical science and technology laboratory (August 2021- September 2022)
3. Metal extraction and production laboratory (August 2021- August 2022)
4. Materials characterization and analysis techniques laboratory (February 2022 – June 2022)
5. Corrosion and coating laboratory (February 2022 – June 2022)
6. Metallography laboratory (September 2019- January 2020)
7. Mechanical properties of materials laboratory (February 2021- June 2021)
8. General chemistry Laboratory (September 2018- January 2019)

### ***Internship Experiences***

Intern at Payeh Gostar Sahand company (August 2021- October 2021)  
(Materials selection – Quality control)

## ***SKILLS***

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### **Computer skills**

1.C Programming	Intermediate	7.HSC Chemistry	Intermediate
2.Python Programming	Intermediate	8.Origin Pro	Intermediate
3.GROMACS Simulation	Basic	9.Image J	intermediate
4.LAMMPS Simulation	Basic	10.Xpert Highscore	Basic
5.Microsoft Office	Advanced	11.Graphpad Prism	Basic

### **Language skills**

1. Persian	Native	3. English	TOEFL test overall score: 110/120
2. Turkish	Native		Reading: 27/30
			Listening: 29/30
			Writing: 27/30
			Speaking: 27/30

## ***ACADEMIC PROJECTS***

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1. Soft magnetic materials
  2. Quantum tunneling
  3. ImageJ brief tutorial
  4. Innovative coatings ( Kaveh magazine)
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5. Fabrication methods and properties of the polymer and ceramic foam materials	6. Fabrication methods of honeycomb metal foam materials
7. Methods to reduce and control air pollution	8. Electrical applications of perovskite materials
9. Properties, fabrication methods, and applications of graphene	10. Composite materials' application in wearable electronics
11. Introduction of Polymer foams and their application in the automotive industry	12. A green future with solar cells (Kaveh magazine)
13. Fabrication and characterization of electrospun zein-sodium alginate nanofiber loaded by cinnamaldehyde (bachelor's thesis)-(Dr.Marashi-Dr.Rahmani)	

## ***SEMINARS, WORKSHOPS, AND ONLINE COURSES***

### **Seminars and Workshops**

- *Cell culture workshop (Principle and application)*-Tehran university of medical science- May 2022- Tehran- Iran
- *3D cell and organoid culture workshop*- Tehran university of medical science- May 2022- Tehran- Iran
- *Conference on Nanofibers*- Tehran university of medical science- February 2022- Tehran- Iran
- *On the line of Nano*- Nanotechnology training website- December 2020- Tehran- Iran
- *Next-generation optoelectronics with perovskite semiconductors*- Graphene and advanced materials laboratory (GAM Lab)- April 2021- Tehran- Iran
- *Biodegradable micro-/Nano-particles from synthesizing to application*- Amirkabir university of technology- January 2019- Tehran- Iran
- *Introduction to LAMMPS simulation*- Amirkabir university of technology- February 2019- Tehran- Iran

### **Online Courses**

- *Nanotechnology: A Maker's Course*- Duke University/ NC state university/ the university of North Carolina of Chapel Hill- Coursera website- November 2020
- *Introduction to solar cells*- Technical university of Denmark- Coursera website- January 2021
- *Transmission electron microscopy for materials science*- The École polytechnique fédérale de Lausanne- Coursera website- February 2021
- *Materials Science: 10 Things Every Engineer Should Know*- University of California, Davis- Coursera website- August 2021
- *Smart Materials: Microscale and Macroscale Approaches*- Peter the Great St. Petersburg Polytechnic University & Kazan National Research Technological University- Coursera website- January 2022

## ***EXTRACURRICULAR WORK***

1. Writer in Kaveh magazine (Amirkabir university of technology's materials science and engineering magazine) (December 2020-September 2021)
2. Executive member of "International Symposium on additive manufacturing"- Tehran- Iran (January 2020)

## ***HOBBIES***

Reading books – Mountain climbing – Playing piano and keyboard – Painting – Listening to music

## ***REFERENCES***

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1. Dr. Pirooz Marashi  
(Project Supervisor) Associate professor at Amirkabir university of technology Email address: [pmarashi@aut.ac.ir](mailto:pmarashi@aut.ac.ir)
2. Dr. Sadegh Firoozi  
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3. Dr. Amin Jafari Assistant professor at Amirkabir university of technology Email address: [ajafari@aut.ac.ir](mailto:ajafari@aut.ac.ir)