

Narjess Hajilou

Ph.D. Student in Biomedical Engineering

University of Illinois Chicago

Address: 900 s Halsted St., Chicago, Illinois, SEL NW 2014

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Appointments

- **PhD student, Graduate Research Assistant**, University of Illinois at Chicago, Chicago IL, USA, May 2024-Present
- **Lab Manager**, In-Situ Nanomedicine Laboratory at the University of Illinois at Chicago, Chicago IL, USA, Aug. 2024-Present
- Member of The Nonwoven Institute (NWI), the North Carolina State University, Raleigh, NC, USA, May 2024-Present

RESEARCH INTERESTS

- Sustainable materials
- High Entropy Alloys
- Nano/micro materials
- Biopolymers
- Biocomposites
- Nonwoven materials

EDUCATION

- *University of Illinois Chicago, Chicago-Illinois* ([homepage](#))

Ph.D., Biomedical Engineering (May 2024–Present)

Dep. of Biomedical Engineering ([homepage](#))

- *Materials and Energy Research Center, Tehran-Iran* ([homepage](#))

M.Sc., Materials Engineering-Ceramics (Sep. 2019–Sep. 2022)

Dep. of Ceramics ([homepage](#))

- *Amirkabir University of Technology (Polytechnic of Tehran) , Tehran –Iran* ([homepage](#))

B.Sc., Materials Engineering-Extractive metallurgy (Sep. 2013 – Oct. 2017)

Dep. of Metallurgy and Mining Engineering([homepage](#))

Bachelor's thesis: Recycling of lead from the printed circuit board wastes by electrolysis method

Supervisor: Dr. Eskandar Keshavarz Alamdari

- Molood-kabeh Talented High School, Tehran-Iran

Physics Mathematics Discipline (Sep. 2009-Jun 2013)

RELEVANT WORK EXPERIENCE

- **Part Time Materials Inspection Expert** / (Nov. 2021)-(Nov. 2022)

Roshak Paya Control Inspection Company / Materials Inspection for imports and exports

(under supervision of Institute of Standards and Industrial Research of Iran (ISIRI)) ([homepage](#))

- **Full Time Materials Expert** / (Dec. 2017) – (Oct. 2021)

Razi Applied Science Foundation / laboratory services / Materials Science and Engineering (the most professional Materials and Metallurgy laboratory in Iran and working under the requirements of ISO IEC 17025) ([homepage](#))

- Determination of the chemical composition of various types of materials
- Identification of materials grades using “key to steel” or applicable standards.
- Conducting interrelated projects by team working with the other labs

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PROJECTS AND PUBLICATIONS

1. Multiscale Analytical and Modelling for NW Soil Biodegradation

Supervisors: Prof. Alexander L. Yarin & Prof. Tolou Shokuhfar

Funded by the Nonwoven Institute (NWI) (Project No. 23-273SB)

Publication: N. Hajilou, S. Mostafayi, A. Yarin, T. shokuhfar, "A Comparative Review on Biodegradation of Poly(lactic acid) in Soil, Compost, Water, and Wastewater Environments: Incorporating Mathematical Modeling Perspectives " Submitted in AppliedChem Journal.

2. Master's thesis: Investigation of electrochemical behaviour of AlCoCrFeNi and its composites

Supervisors: Dr. Mohammad Farvizi & Dr. Masoumeh Javaheri

Funded by Materials and Energy Research Center (MERC) (Grant No. 321392012)

Publication: N. Hajilou, M. Javaheri, T. Ebadzadeh M. Farvizi, "Investigation of the electrochemical Behavior of AlCoCrFeNi-ZrO₂ high entropy alloy composites prepared with mechanical alloying and spark plasma sintering" published in the Journal of Applied Electrochemistry

HONOURS & AWARDS

- **Nationwide Entrance Exam** for Undergraduate Program Jul. 2013
Ranked in the Top 0.5% among 250,000 participants, Physics Mathematics Discipline
- **Awarded Full Scholarship** for Bachelor of Science Aug. 2013
Extractive Metallurgy, Department of Material and Metallurgy, Polytechnic of Tehran
- **Awarded for being one of the executive personals** Sep. 2015
The "13th international congress of Materials Science and Engineering", Polytechnic of Tehran
- **Awarded Full Scholarship** for Master of Science Aug. 2019
- A member of the Nonwoven Institute in the North Carolina State University. May 2024
- **Awarded for academic engagement in the Nonwoven Institute.** May 2024
- **Promoted to the lab manager role in the In-Situ Nanomedicine Laboratory at the University of Illinois at Chicago** Aug. 2024

SKILLS

Computer Skills

- Microsoft office
- FORTRAN
- HSC Chemistry
- Zview
- Origin

Experimental Skills

- Transmission Electron Microscopy (TEM)
 - Scanning Transmission Electron Microscopy (STEM)
 - Scanning Electron Microscopy (SEM)
 - Differential Scanning Calorimetry (DSC)
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- Optical Emission Spectroscopy (OES)
 - Metallography
 - Mechanical Tests of Materials
 - XRD and XRF Analysis
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References

- **Tolou Shokuhfar** / Associate Professor of University of Illinois at Chicago
Email: tolou@uic.edu
- **Alexander Yarin** / Professor of University of Illinois at Chicago
Email: ayarin@uic.edu
- **Mohammad Farvizi** / Associate Professor of Materials and Energy Research Center
Email: mmfarvizi@merc.ac.ir
- **Masoumeh Javaheri** / Assistant Professor of Materials and Energy Research Center
Email: m.javaheri@merc.ac.ir
- **Eskandar Keshavarz Alamdari** / Associate Professor of AmirKabir university of technology
Email: alamdari@aut.ac.ir
- **Parviz Davami** / Professor of materials science and engineering at Sharif University of Technology, and head of Razi Applied Science Foundation
Email: davami@sharif.edu