

May, 2020

Nima Tabatabaei Rezaei



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EDUCATION

- **Sharif University of Technology (SUT)** Sep 2018 till now
M.Sc. in Material science and engineering
GPA: 18.67/20 , 3.86/4 via 21 credits
- **Iran University of Science and Technology (IUST)** 2014-2018
B.Sc. in Material engineering and metallurgy
GPA: 18.6/20 , 3.96/4 via 142 credits
GPA (last two years): 18.8/20 , 4/4

HONORS AND AWARDDA

- Membership at **Iran's National Elites Foundation** 2019
- **Ranked 3rd** (top 3.5%) of all graduate students in master of materials science and engineering 2019
- **Ranked 1st** among 25 master students in materials selection and characterization subgroup of MSE 2019
- **Ranked 14th** among 50 bachelor students of material engineering in material science and engineering Olympiad exam 2018
- **Ranked 10th** among approximately 4,500 participants in the national universities' entrance exam for M.Sc. degree 2018
- Permitted to study M.Sc. in material science and engineering without entrance exam in Sharif University of Technology, Tehran University, Amirkabir University of Technology and Iran University of Science and Technology (This permission is only awarded to talented students, introduced by the Exceptional Talents Office) 2018
- **Ranked 6th** among approximately 30 participant group in 15th national and 1st international Heat Treatment Competition, Shiraz University 2018
- **Ranked 1st** among 90 undergraduate students in bachelor of material engineering and metallurgy for four consecutive years, IUST 2014-2018
- **Ranked top 0.6%** of approximately 300,000 participants in Iran national universities entrance exam for B.Sc. degree 2014

RESEARCH INTERESTS

- Nano-Bio technology (Cancer therapy, Drug delivery and nano-carriers, Bioimaging, Tissue engineering / Bio-printing, ...)
- Fluorescence materials and their optical applications
- Advanced materials, Nanostructured materials, Porous materials, Nanocomposites

RESEARCH EXPERIENCE

- **Research** on “Application of FAPbI₃ perovskite quantum dots in photodetectors” Dec 2019 till now
Supervisor: [Prof. A. Simchi](#), Dr. M. Mohammadi, [Dr. R. Mohammadpour](#)
Co-worker: [Mahdi Hasanzadeh Azar](#)
- **Research** on “Application of water proofed perovskite quantum dots in drug delivery” Dec 2019 till now
Supervisor: [Prof. A. Simchi](#), Dr. M. Mohammadi, [Dr. N. Zandi](#)
Co-worker: [Mahdi Hasanzadeh Azar](#)
- **Visiting Researcher** at Middle East Technical University, The Center for Solar Energy Research and Applications (GÜNAM) Aug 2019-Sep 2019
Supervisor: [Prof. Selçuk Yerci](#), [Prof. Gökem Günbaş](#)
- **Research** on “Application of nanomaterials in cancer therapy and blood diseases” Jul 2019 till now
Supervisor: [Prof. M.A. Shokrgozar \(Pasteur Institute of Iran\)](#)
Co-workers: [Omid Sedighi](#), [Amirabbas Abedini](#), [Amirhossein Alaghmandfar](#)
- **Research** on “Surface modification of zero-dimensional carbon-based nanoparticles for biological applications” Jun 2019 till now
Supervisor: Dr. AM. Khachatourian, [Prof. Muhammet S. Toprak](#)
Co-workers: [Omid Sedighi](#), [Amirabbas Abedini](#), [Amirhossein Alaghmandfar](#)
- **Research** on “Enhancing perovskite quantum dots by capping them in porous templates such as meso-porous silica spheres and metal organic frameworks (MOFs)” Jan 2019 till now
Supervisor: [Prof. A. Simchi](#), Dr. M. Mohammadi
- **M.Sc. project:** “Perovskite quantum dots and their application in photovoltaic devices” at Prof. Simchi’s lab at SUT Oct 2018 till now
Supervisor: [Prof. A. Simchi](#), Dr. M. Mohammadi
- **B.Sc. project:** Investigation on the effect of rapid heat treatment (Infrared Radiation Furnace) and chemical refinement on microstructure and mechanical properties of A390 aluminum alloy 2016-2018
Supervisor: [Dr. H. Saghafian](#)
Co-worker: [M. Aliabdi](#)

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PUBLICATIONS

- Conference

N. Tabatabaei Rezaei, M. Aliabadi, H. Saghafian, “Investigating the Influence of Rapid Heat Treatment on Microstructure and Mechanical Properties of Aluminium 390 Alloy”, 8th Iran International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat2019), Tehran Iran, 2019. (Accepted)

M.Hasanzadeh Azar, M.Mohammadi, **N.Tabatabaei Rezaei**, S.Ayneband, A.Simchi, “Enhanced Stability of FAPbI₃ Perovskite Quantum Dots by Silica Coating”, 8th International Conference on Nanostructures, Tehran, Iran, 2019. (Submitted)

TEACHING EXPERIENCE

- **Teaching assistant, Iran University of Science and Technology** Fall 2015
 - Vector mechanics for engineers (Statics), [Dr. A. Eivani](#)
Responsibilities included preparing and grading the homework, holding TA sessions for extra work or Q/A and preparing midterm exam questions
- **Teaching assistant, Sharif University of Technology** Winter 2020
 - Material Characterization Techniques I, [Dr. A.Malek Khachatourian](#)
Responsibilities included preparing and grading the homework, holding TA sessions for extra work or Q/A and preparing midterm exam questions

WORK EXPERIENCE

- Executive committee member, 8th Iran International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat2019), Iran, Tehran May 2019 till now
- Internship for 180 hours at Iran-Khodro Company (IKCO) Jul 2018
- Executive committee member, 7th Iran International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat2018), Iran, Tehran Sep 2018-Oct 2018
- Translator and Editorial board committee member of World of Material magazine, seasonally journal of science, IUST Spring 2016

ACADEMIC PROJECTS AND RESEARCHES

- “Hydrogel bioink for 3D bioprinting of cell-laden scaffolds”, spring 2020, project for “Tissue Engineering” course, [Dr. Sh. Mashayekhan](#), co-worker: [Amirabbas Abedini](#)
- “Carbon-based quantum dots nanocomposites for biological applications”, spring 2019, project for “Nanocomposites” course, [Dr. AR. Pircheraghi](#), co-worker: [Amirabbas Abedini](#)
- “Investigation on the effect of welding parameters and flux ingredients on element transfer in Submerged Arc Welding (SAW) of steel”, spring 2018, project for “Welding laboratory”, course, [Dr. M. Goodarzi](#)
- “Introduction to Thick Thermal Barrier Coating (TTBC)”, spring 2017, project for “Surface metallurgy and coatings” course, [Dr. S. Rastegari](#), co-worker: [Amirabbas Abedini](#)

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LABORATORY TOOLS AND SKILLS

- ✓ Tensile and compression test
- ✓ Hardness test
- ✓ Thermal analysis
- ✓ Photoluminescence (PL)
- ✓ Glove box working experience
- ✓ UV-Vis test
- ✓ Photoluminescence Quantum Yield (PLQY)
- ✓ BET
- ✓ Solar simulator
- ✓ Thermal evaporation system

LANGUAGE SKILLS

- English (Fluent) (TOEFL, IBT score:92, R23, L24, S23, W22)
(GRE score: Verbal 142, Quantitative 168, Writing: 3)
- Persian Native
- Azerbaijan Turkish Fluent

COMPUTER SKILLS

- Engineering software: 1) CAD: Solidworks
2) Simulation: Abaqus, AFDEX, ProCast, Deform-3D
3) Image analyzer: ImageJ, MIP-Cloud
4) Data process: OriginLab
- Programming language: C++, MATLAB
- O.S. and tools: Microsoft Windows, Microsoft Office (Word, Excel and PowerPoint)

HOBBIES AND INTERESTS

- Reading books
- Surfing Webpages
- Go out with friends and eat out
- Painting

REFERENCE

- Prof. Saeed Shabestari
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