

Bardia Irajian

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Education

EPFL Lausanne, Switzerland 2023	Master of Science, Material Science and Engineering Department of Material Science and Engineering
Amirkabir University of Technology Tehran, Iran 2022-2023	Master of Science, Color Engineering and Technology Department of Polymer Engineering and Color Technology Supervisor: Dr. Mohseni GPA: 16.73/20 Studying 2 Semester of MSc, Passing 23 Credits out of 32
University of Tehran Tehran, Iran 2018-2022	Bachelor of Science, Polymer Engineering, Department of Chemical and Polymer Engineering. GPA: 18.10/20 Final Project: "Synthesis of Polyurea Polyaspartic High Abrasion and Chemical Resistance Coatings"
University of Tehran Tehran, Iran 2018-Unfinished	Minor, Chemistry, Department of Science. GPA: 18.59/20
Allame Helli Highschool Tehran, Iran 2014-2018	Diploma in Mathematics and Physics GPA: 19.53/20

Selected Courses

Chemistry and Polymerization Kinetics	18.5/20
Physical Chemistry of Polymers	18.75/20
Physical and Mechanical Properties of Polymers	18/20
Industrial Resins	17.5/20
Economics and Engineering Design	18.8/20
Elastomers Engineering	20/20
Organic Chemistry	20/20
Organic Chemistry 3 (Minor)	20/20
Polymer Chemistry (Minor)	20/20
Plastic Engineering	19.2/20
Polymerization Engineering	17.8/20

Publications

Journal Articles

1. Irajian, B., *A review on starch based nano-composite hydrogels*. MIM Scientific Journal, 2021. **14**: p. 10-21.
2. Irajian, B., *Polyurethane and its components*. MIM Scientific Journal, 2021. **15**.
3. Irajian, B., *Rubber Rheometer*. MIM Scientific Journal, 2021. **16**.
4. Irajian, B. and A.H. Abolhasani, *Calculation of density, solubility parameter and Tg of Polyethylene with molecular dynamics*. MIM Scientific Journal, 2021. **17**: p. 66-73.
5. Mirshahvalad, H., M. Seyfi, and B. Irajian, *Solubility test and color change of rubber compound of fuel hoses in non-polar solvent and its effect on it*. MIM Scientific Journal, 2022. **18**.

Conference papers

1. Irajian, B. and M. Seyfi, *Effect of reactor retention time on the HDPE degree of polymerization in the solution process: a simulation*, in *3rd International Conference on the New Technologies in the Oil, Gas and Petrochemical Industries*. 2022.

- Irajian, B., P. Barari Jirandehi, and M. Miri, *The effect of variation in polyethylene glycol molecular mass in polyurethane coating on polyurethane interaction energy with iron*, in *5th International Conference on Technology Development in Chemical Engineering*. 2022.
- Irajian, B. and A.H. Abolhasani, *Calculation of density and solubility parameter of polyethylene with COMPASS force field*, in *5th National Conference on Chemistry and Chemical Engineering*. 2022.
- Yazdanbakhsh, A., M. Zolfaghari, and B. Irajian, *Mold injection simulation of plastic face shield*, in *HAMPA1400*. 2021. (Oral)
- Irajian, B., *Prediction of TDI-Based Polyaspartic Polyurea's Abrasion Resistance*, in *ISPST 2022*. 2022.
- Irajian, B., *Effect of Castor Oil Content on Viscosity of Castor TDI Prepolymers*, in *ISPST 2022*. 2022.
- Irajian, B., *Synthesis of Waterborne Epoxy Based on E6 and Diethanolamine*, in *ISPST 2022*. 2022.
- Irajian, B. and P. Barari Jirandehi, *Oxygen permeation rate through PBAT: a molecular dynamics simulation*, in *ISPST 2022*. 2022.
- Salehi, M., B. Irajian, and M. Seyfi, *Simulation of Rubber Hose Curing*, in *ISPST 2022*. 2022. (Oral)

Books

Amirhosein Yazdanbakhsh, Bardia Irajian, *Physical Chemistry of Polymers Solution Manual*, Amirkabir University of Technology Publication (Jahad-Daneshgahi), Under Publish

Skills

Language	C++, Qbasic, Familiar with PHP
Software	COMSOL Multiphysics, MATLAB, ABAQUS, Material Studio, Origin, Moldflow, Aspen Plus, ChemDraw, Photoshop, AutoCAD Familiar with Gaussian, ANSYS, Solid Works, 3D Max
Typesetting	Microsoft Office, Endnote, InDesign
Laboratory	Rubber Laboratory: Work with Rubber Rheometer, Durometer, Oven, Rubber Sheet and Tablet Press Molding, Rubber Compounding, Tensile Machine Resin Laboratory: Polyurethane formulation, Epoxy prepolymers, Taber Abrasion Instrument, Ford Cup Viscometer, VICAT, IR, and NMR Spectrum Analysis

Teaching and Work Experiences

- Technical Manager, PadraPat Pars, 2022
- Teacher Assistance, Organic Chemistry ([Dr. Zahedi](#)), University of Tehran, Winter 2022-Spring 2022
- Polymer Technician, APEK Hose, 2021-2022
- Polymer Technician, PadraPat Pars, 2018-2021
- Editor in Chief, MIM Scientific Journal, Scientific Society of Chemical and Polymer Engineering, University of Tehran, 2020-2021
- Chemistry Olympiad Teacher, Alborz Mandegar Highschool, 2019-2021

Projects

- Waterborne Epoxy and Hardener, Padrapatpart, 2022
- Technical and economic justification plan of Diethylenetriamine (DETA), University of Tehran, 2022
- Rubber Hose Curing Simulation, APEK Hose, 2021
- Rubber Hose Mechanical Simulations, APEK Hose 2021
- Polyurethane Sealants, Padrapatpars, 2020
- Polyurethane Foam Formulation, Padrapatpars, 2020
- Epoxy Prepolymer with Lower Heat and Shrinkage, Padrapat Pars, 2018
- Chem-e-car with Zinc-Air Battery and Ammonia Fountain Brake, University of Tehran, 2019

Honor and Awards

- Rank 4 in National Color Technology Entrance Exam, Spring 2022
- Selected as a Talented Student (without Exam) for Color Technology Master of Science, Amirkabir University of Technology, Winter 2022

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- Ranked One Among 26 Students in Polymer Engineering Bachelor of Science Students, University of Tehran, Fall 2021
 - Member, National Elite Foundation. Fall 2017
 - 1st Silver Medal, National Chemistry Olympiad, Young Scholars' Club, Summer 2017

Language

- Persian (Native)
- English (Fluent)
IELTS: Overall: 7 / Speaking: 7 / Listening: 7.5 / Reading: 6.5 / Writing: 6
TRF: 22IR003309IRAB010A
- GRE: Quantitative Reasoning: 167/170 // Appointment# 7381211221692755