




## RESEARCH INTERESTS

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Extractive Metallurgy – Hydrometallurgy, Pyrometallurgy, Electrometallurgy, Biometallurgy, Mineral Processing  
Environmental Engineering -- Waste Recycling, CO2 Sequestration, Water Treatment, Soil Decontamination

## EDUCATION

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 Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran  
(2<sup>nd</sup> best university in Iran according to the 2022 QS ranking)

**M.Sc.** in Materials Engineering 2015 – 2018

- Specialization: Extraction of Metals
- Supervisors: Dr. Sadegh Firoozi, Dr. Davoud Haghshenas
- GPA: 3.6 / 4

**B.Sc.** in Materials Engineering 2011 - 2015

- Specialization: Extractive Metallurgy
- Thesis: Solvent extraction of Zn and Cd by D2EHPA at the presence of citrate ion
- Supervisors: Dr. Davoud Haghshenas, Dr. Sadegh Firoozi
- GPA: 3.4 / 4

## AWARDS AND ACHIEVMENT

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3rd National Competitions of Production and Recycling of Metals	Won 2 <sup>nd</sup> Place	2019
1st National Competitions of Production and Recycling of Metals	Won 1 <sup>st</sup> Place	2017
Amirkabir University of Technology (Tehran Polytechnic)	Granted Exam-Free Admission to M.Sc. Program	2015

## RESEARCH EXPERIENCE

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Selective leaching of Ni from iron-rich pyrolusite ore by glycine as an organic solvent 2019  
The 3rd National Competitions of Production and Recycling of Metals

Study of effective parameters on production of SrCO<sub>3</sub> from Celestine ore through the Black-Ash process 2018

### M.Sc. Thesis

- Investigated the pyro-hydrometallurgical Black-Ash process including mineral processing, carbon reduction, neutral leaching and carbonate precipitation in laboratory scale
- Optimized process conditions for a local celestite mine

Recovery of Ni and Co from lithium-ion batteries (LIBs) solid waste by salting-out method including acidic leaching, solvent extraction by 2-propanol, and precipitation 2018  
The 2nd National Competitions of Production and Recycling of Metals

Recovery of Ni from the spent catalysts by acidic leaching followed by oxalate precipitation method 2017  
The 1st National Competitions of Production and Recycling of Metals

Solvent extraction of Zn and Cd by D2EHPA at the presence of citrate ion 2015

### **B.Sc. Thesis**

- Investigated the citrate ion effect on enrichment, separation, and  $\Delta E$  factors of the process
- Recommended an extraction reaction by applying the slope analysis method on provided data

### **RELEVANT PROFESSIONAL EXPERIENCE**

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Founder and Metallurgist Engineer 2016-2021  
Kimiya-Zar company, Tehran, Iran

- Implemented the plan of copper and precious metals recovery from waste PCBs, from feasibility study to pilot plant
- Co-operated in design of acidic leaching, bioleaching, cementation, electrowinning, and electrorefining sectors of the recycling plan
- Achieved the Knowledge-Based award from Vice-Presidency for Science and Technology Affairs of Iran

Intern Summer 2014  
Non-Ferrous Metals Recovery Industries company, Tehran, Iran

- Observed and learnt about pyrometallurgical process of precious metals recycling from secondary resources such as E-waste and spent catalysts
- Presented a report about factory processes to the company and university

### **VOLUNTARY EXPERIENCE**

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Establishing an orthopedic and prosthetic clinic to provide services to people with disabilities Mashhad, Iran- 2021

Participating in 9th National Concrete Competition Tehran, Iran- 2019

- Produced a green self-compacting concrete (SCC) with non-metallic fraction of wPCBs

Visiting from industrial sites:

- Kholes-Sazan Zinc Industries Zanzan, Iran- 2018
- Anguran Lead and Zinc Complex Zanzan, Iran- 2018
- Iran National Lead and Zinc Company Zanzan, Iran- 2018
- Sarcheshmeh Copper Complex Kerman, Iran- 2017

## SKILLS

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Language: Persian (Native)  
English (6.5 IELTS overall band score)

Software : Medusa, HSCChemistry, FactSage (Basic)  
PANalyticalX'Pert  
Minitab, Design-Expert  
EndNote, Mendeley  
Maple, MATLAB, Origin, DataMaster, CLEMEX (Basic)

Analytical : XRD, XRF  
Technique OES, ICP  
AAS, Spectrophotometry  
SEM  
TGA/DTA/DSC (Basic)  
FTIR (Basic)

## SELECTED COURSES

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Chemistry (Overall 25 credits)

General Chemistry - Analytical Chemistry - Physical Chemistry - Crystallography – Thermodynamics - Kinetics

Principles of Metals extraction (Overall 18 credits)

Iron and Steel Making - Non-Ferrous Metals Extraction - Mineral Processing

Corrosion and Oxidation

**●Further information, proofs, and references are available upon request**