



Education

- **École Polytechnique of Montréal, Montréal, QC, Canada** (---)
Ph.D. Degree, Department of Chemical Engineering

- **The University of Tehran, Tehran, Iran** (2017)
M.Sc. Degree, Department of Metallurgy & Materials Engineering
Thesis: "Investigation on Increasing Grad of Oolitic Iron Ore by Reduction with Non-Coking Coal to Magnetite"

- **Sharif University of Technology, Tehran, Iran** (2014)
B.Sc. Degree, Department of Material Science & Engineering
Thesis: "The investigation on the effect of solution treatments time and temperature on the Mg-Zn-Si cast alloy formability"
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Research Interests

- High Temperature and Pressure Processing
- Leaching and Titration
- Material Extractive and Purification
- Heat Transfer
- Material Characterization (TEM, FESEM, TGA, DSC)
- Waste Material Recycling
- Chemical Reaction Engineering
- Mineral Processing

Work Experience

- **Mines and Metals Technological Engineering (MMTE),** Process 2016
Tehran, Iran Research Engineer

- **Manufacture of DRI Project for SIRJAN Iranian Steel** Internship 2015
Co. (SISCO),
Kerman, Iran

- **Tabarestan Steel Foundry(T.S.F),** Tehran, Iran Trainee 2013

Research Background

- Investigation on methods for reducing iron oxide with solid coal.
- Cobalt compounds extracted from secondary sources (used Hydro metallurgy methods).
- Recovery and Refining of Aluminum (used Pyro and Hydro metallurgy methods such as High Temperature processes and Titration).

- Waste from Plating and Electroplating industry recovery" made review paper and examine the new methods available.
- Rhodium separation from platinum and palladium by solvent extraction methods.
- Welding semi-solid Al-Mg-Si alloys (product an innovative furnace worked by electricity and used small electric mixer to made homogeneous Semi-Solid region).

Teaching Experience

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| • Pyro-Metallurgy Laboratory , University of Tehran, Tehran, Iran | Research Assistant | 2015-2017 |
| • Thermodynamic , University of Tehran, Tehran, Iran | Teaching Assistant | 2017 |
| • Advanced Kinetic , University of Tehran, Tehran, Iran | Teaching Assistant | 2016 |
| • Physical Chemistry , University of Tehran, Tehran, Iran | Teaching Assistant | 2016 |
| • Kinetic , University of Tehran, Tehran, Iran | Teaching Assistant | 2015 |

Journal Publications

- Monzavi, M.H; Raygan, Sh; "Investigation on Reduction of Oolitic Iron Ore to Magnetite by Non-Coking Coal and Magnetite Separation"; submitted to the International of Mineral Processing

Conference Publications

- Monzavi, M.H; Raygan, SH; "Investigation on effect of temperature and time on process of recycling Iron ore waste by producing magnetite". 1st Iran Congress on Industrial Applications of Advanced Materials and Manufacturing, Tehran, Iran, 2017.
- Monzavi, M.H; Raygan, Sh; "Reduction of Hematite to Magnetite by Solid Coal"; International IMAT Conference, Shiraz, Iran, 2016.
- Monzavi, M.H; Towhidi, N; "The development of steel industry in Iran DR/EAF" in Sustainable Industrial Processing Summit, SIPS Conference, Antalya, Turkey, 2015.
- Monzavi, M.H; Kazemnejad, M; "The effect of cooling rate after ultra-rapid annealing on the microstructure and hardness of low carbon steel", International IMAT Conference, Tehran, Iran, 2015.

- Monzavi, M.H; Karimitaheri, A; "The investigation on the effect of solution treatment time and temperature on the Mg-Zn-Si cast alloy formability", International IMAT Conference, Tehran, Iran, 2015.