

# *Curriculum Vitae*

## *Professor Valeh Aghazadeh*

### *Personal Information:*

- Name: Valeh
- Surname: Aghazadeh
- Nationality: Iranian

### *Address:*

- Mining Engineering Faculty, Sahand University of Technology, Tabriz, Iran, P.O Box 51335-1996,
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### *Professional Experience:*

- Professor in Mineral Processing, Mining Engineering Faculty, Sahand University of Technology, Tabriz, Iran, 2011-current.
- Director of Administrative Affairs, Sahand University of Technology, Tabriz, Iran, 2011- 2017
- Design, installation and operation of a Hydrometallurgy laboratory, Sahand University of Technology, Tabriz, Iran, 2011
- Senior Process Engineer, Ase-sanat Consultant Company, Tehran- Iran, 2008-2009
- Deputy of Varzeghan Technical Institute, 2004-2006
- Lecturer at Sahand University of Technology, Tabriz, Iran, 2003-2006

- 1.5 years working at R&D, Sarcheshmeh Copper Complex, 2001- 2002
- 2 months practical workshop, Mineral Processing Plant, Mazraeh Copper Mine, Ahar-Iran, 1998

### **Education:**

- PhD: Tarbiat Modares University, Tehran, Iran, 2006-2011.
- PhD Thesis Title: *“Chalcopyrite Leaching Enhancement in atmospheric and Sulphate Media Condition”*
- Visiting Student: Lulea University of Technology, Lulea, Sweden, 2010.
- MSc: Tehran University, Tehran, Iran, 2000-2002.
- MSc Thesis Title: *“Leaching Of Sungun Copper Oxide r Ore”*
- BSc: Sahand University of Technology, Tabriz, Iran, 1995-1999.

### **Professional Membership:**

- Iranian Society of Mining Engineering (IRSME).
- E-Azerbaijan Mining Engineering Organization.

### **Areas of Interests:**

- Application of hydrometallurgy in mineral industries, recycling and environment
- Kinetic and Thermodynamic of Hydrometallurgical Process
- Electrochemistry of Leaching
- Flowsheet Development of the Hydrometallurgical Process

### **Language:**

- Turkish
- Persian
- English

### **Teaching Experience:**

- General Chemistry (BSc).

- Thermodynamic(BSc)
- Material Kinetic(BSc)
- Principles of Process Engineering (BSc)
- Advanced Hydrometallurgy (MSc).
- Concentration and Purification of Leaching Solution (MSc).
- Solution Chemistry (PhD)
- Electrochemistry in Mineral Processing (PhD)
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#### **Training Courses and Workshops Attended:**

- One day workshop, Copper & Gold extraction by hydrometallurgy method, Boliden, Sweden,2010
- One day workshop, Copper production by Hydrocopper method, Dr Kojo Manger of Outotec R&D Center, Organized by Ministry of Industry, Mine and Trade, Tehran-Iran, 2008
- Two days workshop, Principle of Remote Sensing and GIS, Sahand University of Technology, 2004
- Three days workshop,TQM, Training and development of effective management Center, Tabriz- Iran, 2004
- Two days workshop, Teaching Methods, Sahand University of Technology and Institute of Research and Planning in Higher Education, Tabriz-Iran, 2004

#### **Awards and Distinctions:**

- First rank in MSc and PhD entrance exam
- Top Researcher of Mining Engineering Faculty of Sahand University of Technology, 1397.

#### **References:**

- Dr S.M.J Koleini: Department of Mineral Processing, Faculty of Engineering, Tarbiat Modares University, Tehran, Iran.
- Prof. Ake Sandstrom: Division of Extractive Metallurgy, Department of Chemical Engineering and Geoscience, Lulea University of Technology, Sweden

### Publications:

#### Journal Papers:

- Shima Barakan, **Valeh Aghazadeh**, Ehsan Bidari, Mina Soleymani and Morovvat Faridazad, 2023, Comprehensive Electrochemical-Chemical Study of Copper Reduction from Molybdenum Concentrate Using Mixed HCl, FeCl<sub>3</sub>, CuCl<sub>2</sub> and CaCl<sub>2</sub> Leaching Medium, Mining, Metallurgy & Exploration, 40, 141-159.
- Shima Barakan, **Valeh Aghazadeh**, 2023, Rhenium Extraction from Pressure Oxidative Leaching Solution of Molybdenite Concentrate Using Hydrophobic Deep Eutectic Solvents, Journal of Molecular Liquids, Volume 376, 121481
- Hossein Nourmohamadi, Mehdi D. Esrafil, **Valeh Aghazadeh**, Bahram Rezai, 2022, The influence of Ag<sup>+</sup> cation on elemental sulfur passive layer and adsorption behavior of chalcopyrite toward Fe<sup>3+</sup> and Fe<sup>2+</sup> ions: Insights from DFT calculations and molecular dynamics simulations, Physica B: Condensed Matter, Volume 627, 413611

- Hossein Nourmohamadi, Mehdi D.Esrafil, **Valeh Aghazadeh**, 2022, A DFT investigation into the effects of As-doping on the electronic structure and electrochemical activity of pyrite (FeS<sub>2</sub>), Journal of Molecular Graphics and Modelling, Volume 110, 108040.
- Shima Barakan, Mehdi Noroozi Ayaluey, Somayeh Shayanfar and **Valeh Aghazadeh**, 2021, Production and Characterization of Sodium and Potassium Carbonate Salts from Carbonation Alkaline Aluminate Liquor, Mineral Processing and Extractive Metallurgy, PP.1-9
- Hossein Nourmohamadi, **Valeh Aghazadeh**, 2021, Mehdi D. Esrafil, DFT study and electrochemical investigation of Fe<sup>3+</sup> ion interaction on chalcopyrite (001)-S and M (M=Cu, Fe) surfaces: A thermodynamic insights, Materials Science and Engineering B, 271,
- Mina Hadizadeh, Shima Barakan, **Valeh Aghazadeh**, 2021, Arsenic Removal from Lead Concentrate Containing Mimetite Mineral to Solve the Environmental Problem for Smelting Process, Journal of Sustainable Metallurgy, 7, pp.1004–1012
- Kianmehr Mohammadloo, Shima Barakan, Somayeh Shayanfar and **Valeh Aghazadeh**, 2021, Kinetics Studies of Sintered Nepheline Syenite Alkaline Leaching under Atmospheric Pressure, Transactions of the Indian Institute of Metals, 74(8):2105–2115.
- Shayanfar, **Valeh Aghazadeh**, 2021, DECOMPOSITION OF ALUMINATE SOLUTION FOR ALUMINUM HYDROXIDE PRECIPITATION BY CARBONATION:

A THERMODYNAMIC AND EXPERIMENTAL STUDIES Journal of Chemical Technology and Metallurgy, 56,1, 149-160.

- Shima Barkan, **Valeh Aghazadeh**, 2021, The Advantages of Clay Minerals Modification Methods for Enhancing Adsorption Efficiency in Wastewater Treatment: A Review, Environmental Science and Pollution Research, 28, 2572-2599.
- Hossein Nourmohamadi, Mehdi D. Esrafil, **Valeh Aghazadeh**, 2021, DFT study of ferric ion interaction with passive layer on chalcopyrite surface: Elemental sulfur, defective sulfur and replacement of  $M^{2+}$  (M=Cu and Fe) ions, Computational Condensed Matter, Vol.26, e00536.
- Mohsen Yavari , Sirous Ebrahimi, **Valeh Aghazadeh**, 2020, Mohammad Ghashghaee, Intensified Bioleaching of Copper from Chalcopyrite: Decoupling and Optimization of the Chemical Stage, Iranian Journal of Chemistry and Chemical Engineering (IJCCE), Vol.39, Issue 5, pp. 343-352.
- Ehsan Bidari, Mokhtar Azami, **Valeh Aghazadeh**, 2020, Process Mineralogical Study of the Arsenical Zone from a Carlin-Type Gold Deposit, Submitted to the Mining, Metallurgy & Exploration, 37, 1307-1315.
- H. Nourmohamadi, L. Heidarpour Saremi, **V. Aghazadeh**, 2020(1399), Investigation of Copper Ion Adsorption by Alpha, Beta and Gamma Cyclodextrin by Density Function Method, Journal of Water and Wastewater(Persian) Vol. 31, No.1, pp: 53-60
- Shima Barakan, **Valeh Aghazadeh**, Abdoullah Samiee Beyragh and Sahar Mohammadi, (2020), Thermodynamic, kinetic and equilibrium isotherm studies of As(V) adsorption by Fe(III)-impregnated bentonite, Environment, Development and Sustainability, 22, p.5273–5295

- Shima Barakan , **Valeh Aghazadeh**, Ehsan Bidari,(2020), Determination of surface protonation-deprotonation behaviors, surface charge, and total surface sites concentrations for natural, pillared and porous nano bentonite heterostructure , Journal of Molecular Structure , Vol. 1204.
- Mohsen Yavari, Sirous Ebrahimi, **Valeh Aghazadeh** & Mohammad Ghashghaee, 2019, Kinetics of different bioreactor systems with Acidithiobacillus ferrooxidans for ferrous iron oxidation, ***Reaction Kinetics, Mechanisms and Catalysis***, vol. 128, Issue 2, pages 611–627.
- Hossein Nourmohamadi, **Valeh Aghazadeh**, Mehdi D. Esrafilib, 2020, A comparative DFT study of Fe<sup>3+</sup> and Fe<sup>2+</sup> ions adsorption on (100) and (110) surfaces of pyrite: an electrochemical point of view, Surf Interface Anal. Vol.52, Issue 3, pp.110-118.
- Hossein Nourmohamadi, Mehdi D. Esrafilib, **Valeh Aghazadeh**, 2019, Interaction of ferric ion with (001)-S and (001)-M surfaces of chalcopyrite (M=Fe and Cu): Electrochemical insights from DFT calculations, Applied Surface Science, 495.
- Shima Barakan and **Valeh Aghazadeh**, 2019(1398), The Effect of Ultrasonic Waves, Microwave Irradiation and Calcination Temperature in the Synthesis of Intercalated Nano-Bentonite by Al, Fe Polyoxocations, Journal of Environmental Sciences Studies(Persian), No.1, pp.1188-1199

- Shima Barakan and **Valeh Aghazadeh**, 2019, Structural modification of nano bentonite by aluminum, iron pillarization and 3D growth of silica mesoporous framework for arsenic removal from gold mine wastewater, Journal of Hazardous Materials, 378.
- Shima Barakan and **Valeh Aghazadeh**, 2020, FeAl<sub>12</sub>-polyoxocations intercalated Nano-Bentonite Fabrication in Concentrated Suspension Using One-step Ultrasonic-Microwave Irradiation for Arsenic Removal from Alkaline Wastewater, International Journal of Environmental Science and Technology, 17, 2349–2366.
- Shima Barakan and **Valeh Aghazadeh**, may 2019, Separation and Characterization of Montmorillonite from a Low-grade Natural Bentonite: Using a Non-destructive Methods, Micro and Nano Letters, Volume 14, Issue 6, pp.688-693., DOI: [10.1049/mnl.2018.5364](https://doi.org/10.1049/mnl.2018.5364)
- **Valeh Aghazadeh**, Somayeh Shayanfar and Peyman Hassanpour, 2019, Aluminum hydroxide crystallization from aluminate solution using carbon dioxide gas: effect of pH and seeding, Mineral Processing and Extractive Metallurgy, Vol.128, Issue
- Shima Barakan and **Valeh Aghazadeh**, 2019, Synthesis and characterization of hierarchical porous clay heterostructure from Al, Fe -pillared nano-bentonite sing microwave and ultrasonic techniques, Microporous and Mesoporous Materials, 278, 138-148.



- Shima Barakan and **Valeh Aghazadeh**, 2018(1397), Sulfate Removal under Acid Mine Drainage Condition Using Al, Fe-pillared nano bentonite, Journal of Mineral Resource Engineering (Persian), Vol.3,No.3, pp.57-75.
- Somayeh Shayanfar, **Valeh Aghazadeh**, 2019, Abdoullah Samiee Beyragh, Thermodynamic Modeling and Experimental Studies of Bayerite Precipitation from Aluminate Solution: Temperature and pH Effect, Iranian Journal of Chemistry & Chemical Engineering-International English Edition(IJCCE), Vol.38, Issue 2, pp. 229-238.
- Kianoush Barani, **Valeh Aghazadeh**, 2018, Removal of Impurities from Talk Ore by Leaching Method, Journal of Chemical Technology and Metallurgy, 53(2),pp.296-300.
- Ehsan Bidari, **Valeh Aghazadeh**, 2018, Pyrite from Zarshuran Carlin-Type Gold Deposit: Characterization, Alkaline Oxidation Pretreatment and Cyanidation, Hydrometallurgy, 179, pp.222-231.
- Ehsan Bidari, **Valeh Aghazadeh**, 2018, Pyrite oxidation in the presence of calcite and dolomite: Alkaline Leaching, chemical modeling and surface characterization, Transaction of Nonferrous Metals Society of China, 28, pp.1433-1443.
- Ehsan Bidari, **Valeh Aghazadeh**, 2018, Alkaline leaching pretreatment and cyanidation of arsenical Carlin-type gold deposit of Zarshuran, Canadian Metallurgical Quarterly, pp.283-293.
- Somayeh Shayanfar, **Valeh Aghazadeh**, Amin Saravari, Peyman Hasanpour, 2018, Aluminum Hydroxide Crystallization from Aluminate Solution Using

Carbon Dioxide Gas: Effect of Temperature and Time, Journal of Crystal Growth, Volumes 496-497, pp.1-9.

- Somayeh Shayanfar, **Valeh Aghazadeh**, Peyman Hasanpour, 2018(1397), Thermodynamic Modeling of the Aluminum Hydroxide Production Process from Aluminate Solution with Carbonation Method, Iranian Journal of Mining Engineering (Persian Language), 13(38), pp.77-96
- Mohsen Azmayandeh, **Valeh Aghazadeh**, Hadi Abdollahi, 2017, Investigation of Affecting Parameters on Heap Leaching Performance and Reducing Acid Consumption of Low Grade Oxide-Sulfide Copper Ore, International Journal of Mineral Processing and Extractive Metallurgy, 2(4), 40-45.
- **Valeh Aghazadeh** and Ali Nabizadeh, 2015(1394), Study and Selection of Suitable Method for Copper Leaching from Gharatappeh Copper Oxide Mine, Iranian Journal of Mining Engineering (Persian Language),10(28), pp.35-42.
- Ehsan Bidari, **Valeh Aghazadeh**, 2015, Investigation of Copper Ammonia Leaching from Smelter Slags: Characterization, Leaching and Kinetics, Metallurgical and Materials Transactions B, Volume 46B, pp. 2305-2314.
- Ali Nabizadeh, **Valeh Aghazadeh**, 2015, Dissolution study of chalcopyrite concentrate in oxidative ammonia/ammonium carbonate solutions at moderate temperature and ambient pressure, Hydrometallurgy, 152, pp.61-68.
- **Valeh Aghazadeh**, Abdollah Samiee Beiragh, and Mohammad Hadi Sardari, 2014(1393), Selective leaching of hot filter cake residue produced by zinc

plant with sodium hydroxide, Nashrieh Shimi va Mohandesi Shimi Iran (NSMSI, Persian Language), 33(2), pp. 71-77.

- **Valeh Aghazadeh** and Nabizadeh Ali, 2013(1392), Use a Mixture of Ammonia and Ammonium Carbonate for Sarcheshmeh Copper Complex Concentrate Leaching at Ambient Temperature and Pressure, Iranian Journal of Mining Engineering (Persian Language), Vol.8, N.20, pp.17-24.
- S.M. Javad Koleini, M. Jafarian., M, Abdollahy., S, Javadian., and **V. Aghazadeh.**, 2011(1389), Galvanic Leaching of Chalcopyrite in Sulphate Media with Ferric Ion at the Presence of Pyrite Catalyst, Journal of Separation Science and Engineering(Persian Language), 2(2),pp.111-120.
- S.M .Javad Koleini, **Valeh Aghazadeh**, Ake Sandstrom,2011, Acidic Sulphate Leaching of Chalcopyrite Concentrates in Presence of Pyrite, Minerals Engineering ,381-386,(5)24.
- S.M.J Koleini, M. Jafarian, M. Abdollahy, **V.Aghazadeh**, 2010, Galvanic Leaching of Chalcopyrite in Atmospheric pressure and Sulphate Media, Kinetic Investigation and Surface Studies, Ind. Eng. Chem. Res., 49, 5997-6002.
- M.Oliazadeh, **V.Aghazadeh**, M.Noparast, M.Torabi,2005(1383), Effective Parameters Investigation on Heap Leaching of Sungun Copper Oxide Ore, Journal of Engineering Faculty(Persian Language), Vol.38,No.5,pp.657-665.
- M.Oliazadeh, **V.Aghazadeh**, M.Torabi, R.H.Tabatabaei,2004, Application of LIX984-N for Copper Extraction from Sungun Leaching Solution, International Journal of Engineering Science(IJES), Vol.15,No.4,pp.47-51.

### **Conference Papers:**

- Mina Soleymani, Shima Barakan, **Valeh Aghazadeh**, Investigating the hydrometallurgical processes in reducing the copper content in molybdenite concentrate obtained from porphyry copper deposits. Fourth International Conference on Development of Materials Engineering Technology, Mining and Geology, 2021, Tehran, Iran.
- Ehsan Bidari, Shima Barakan, **Valeh Aghazadeh**, Farhad Azizafshari, Investigating the ability to form acidic mine drainage from sulphide tailings of Sungun copper mine, the 40<sup>nd</sup> national Geosciences Congress, 2022, Tehran, Iran.
- Meysam Naseri, **Valeh Aghazadeh**, Ehsan Bidari, Effect of Acid Concentration and Type on Pyrite Oxidation by Ferric Ion in Atmospheric Condition, the 2<sup>nd</sup> Iranian Conference of Green Mining and Mine Industry, Zanjan University, 1398, Zanjan, Iran.
- Kianmehr Mohammadloo, **Valeh Aghazadeh**, Somayeh Shayanfar, Alkaline Leaching of Sintered Nepheline Syenite by Sodium Hydroxide Solution, 5<sup>th</sup> International Conference on Recent Innovation in Chemistry and Chemical Engineering, 2018, Tehran, Iran.
- Peyman Hassanpour, **Valeh Aghazadeh**, Somayeh Shayanfar, pH and Seed Addition Effect on the Production of Aluminum Hydroxide from Aluminate Solution by Carbonization Method, The 36<sup>th</sup> National and the 3<sup>rd</sup> International Geoscience Congress, 2018, Tehran, Iran.

- Vahid Moazzami, Ehsan Bidari, **Valeh Aghazadeh**, Kinetic Investigation of Alkaline Oxidation of Pyrite in Sodium Hydroxide Solution, The First Annual Congress on Iranian Society of Engineer, 2017, Shiraz, Iran.
- Ali Nabizadeh, **Valeh Aghazadeh**, Effect of Temperature, Oxygen Pressure and Sulphuric Acid generated on Molybdenite Concentrate Pressure Leaching, 4<sup>th</sup> International Conference on Recent Innovation in Chemistry and Chemical Engineering, 2017, Tehran, Iran.
- Somayeh Shayanfar, **Valeh Aghazadeh**, Desilication of Aluminate Solution Obtained from Alkaline Leaching of Nepheline Syenite, 5<sup>th</sup> International Conference on Materials Engineering & Metallurgy, 2016, Shiraz, Iran.
- Gholamhossein Nourmohamadi, **Valeh Aghazadeh**, Study of the Galvanic Effect of Pyrite on the Leaching of Chalcopyrite in Acidic Environment, 4<sup>th</sup> International Mine and Mining Industries Congress & 6<sup>th</sup> Iranian Mining Engineering Conference, 2016, Tehran, Iran.
- Mehdi Noroozi Ayaluey, **Valeh Aghazadeh**, Review on the Alumina and Byproduct Production from Alunite, 2<sup>nd</sup> Iranian Mining Technologies Conference and Exhibition, 2016, Bafgh, Iran.
- Mehdi Noroozi Ayaluey, **Valeh Aghazadeh**, Investigation Dawsonite Bayerite Precipitation in the Carbonization Process of Aluminate Solution and Alkali and Alumina Extraction from Dawsonite Thermal Decomposition Method, International Conferences on Researches of Chemical and Materials Engineering, 2016, Tehran, Iran.
- Mohsen Azmayandeh, **Valeh Aghazadeh**, Reaction Chemical of Investigation Copper of Leaching Bioheap and Heap in, 2<sup>nd</sup> Applied National Conference on Chemical, Biology and Geology Science, 2015, Tehran, Iran.

- Somayeh Shayanfar, **Valeh Aghazadeh**, Thermodynamic Models of Electrolytes and Their Application in Mining Industries, 2<sup>nd</sup> Applied National Conference on Chemical, Biology and Geology Science, 2015, Tehran, Iran.
- Somayeh Shayanfar, Gholamhosein Normohammadi, **Valeh Aghazadeh**, Therapeutic and Medicinal Properties of Clay Minerals, 2<sup>nd</sup> Applied National Conference on Chemical, Biology and Geology Science, 2015, Tehran, Iran.
- Gholamsein Normohammadi, Somayeh Shayanfar, **Valeh Aghazadeh**, Germanium Assessment in Sanghrood and Central Alborz Coal and Feasibility of Germanium Extraction, 2<sup>nd</sup> Applied National Conference on Chemical, Biology and Geology Science, 2015, Tehran, Iran.
- Barakan, Sh., **Aghazadeh, V.**, Improvement of Adsorption Ability in Bentonite with Considering Basal Spacing and Crystallite Size Effect, Secend International Conference on Advances in Engineering and Basic Science, 1393
- Mina Hadizade, **Valeh Aqahzadeh**, Arsenic Removal from Lead Concentrate Produced by ZarrinMadan Asia Company with Sodium Sulphide, 5<sup>th</sup> Iraninian Mining Engineering Conference, Teheran, Iran, 1393.
- Mazaher Jalilzadeh, **Valeh Aqahzadeh**, Parviz Pourghahramani, Ilmenite Concentrate Leaching by Sulphate Media for Titanium Dioxide Pigment Production, 5th Iraninian Mining Engineering Conference, Teheran, Iran, 1393.
- Bidari, E., **Aghazadeh, V.**, Faridazad, M., Investigation of Effective Parameters in Copper Slag Ammonia Leaching, 32<sup>nd</sup> National and the 1<sup>st</sup> International Geoscience Congress, Tehran, 1392

- Aghazadeh, **V., Sardari, M.H.**, Zinc Recovery from Hot Filter Cake Produced by Zinc Plant with Alkaline Reagents, 32<sup>nd</sup> National and the 1<sup>st</sup> International Geoscience Congress, Tehran, 1392
- Nabizadeh, A., **Aghazadeh, V.**, Riahi, A., Danshpajouh, Sh., Investigation of Effective Parameters on Sarcheshmeh Chalcopyrite Concentrate Leaching with Ammonia, ICME, University of Zanjan, Zanjan, Iran, 16-21 Sep. 2013
- Nabizadeh, A., **Aghazadeh, V.**, Johari, F., Selective Leaching of Gharetappeh Copper Oxide Ore with Ammonia Solution, ICME, University of Zanjan, Zanjan, Iran, 16-21 Sep. 2013
- **Aghazadeh, V.**, Sandstrom, A., Koleini, S.M.J. Daneshpajouh, Sh., Chalcopyrite Copper Concentrate Leaching Enhancement in Sulphate Media by Pyrite as a Catalyst, Submitted to 22<sup>nd</sup> World Mining Congress & Expo, 2011, Turkey
- Khoshkhoo Sany, M., **Aghazadeh, V.**, Shchukarev, A., Sandstrom, A., Dopson, M., Investigation of the nature of the passivating layer in galvanically assisted chalcopyrite leaching, Submitted to 19<sup>th</sup> IBS 2011, China.
- S.M.J Koleini, M. Abdollahi, **V.Aghazadeh**, Investigation of Chalcopyrite Galvanic Leaching in the Presence of Pyrite in Atmospheric Pressure and Sulphate Media, 3<sup>rd</sup> Mining Engineering Conference, Yazd University, Yazd, 2010, Iran.
- A., Samiee Beyragh, **V. Aghazadeh**, A. Khodadadi, Investigation of environmental affected of Sungun copper mine, 26<sup>th</sup> Symposium in earth science, 2008, Tehran-Iran

- **V.Aghazadeh,** S.M.J Koleini and H. Zareh Tavakoli, Investigation of temperature effect and size material in expansion of perlite in Shirinbolagh2 mine, , 25th Symposium in earth science,2007, Tehran-Iran.
- Seyyed Kh. Sadrnejad, **V.Aghazadeh,** M.Mozammel, B.Nasrnia, Production of manganese sulfate from manganese concentrate bearing of pyrolusite, 10<sup>th</sup> congress of Iran Metallurgical Engineering, Mashhad University,2006, Mashhad-Iran.
- Oliazadeh,M., **Aghazadeh,V.,** Torabi,M, Application of Solvent Extraction for Copper Recovery of from Sungun Leaching Solution,The 8th International Conference on Environment & Mineral Processing, 2004, Czech Republic.
- **V. Aghazadeh,** M.Oliazadeh & M.Torabi, Metallurgical Test for Recovery of Copper from Sungun Copper Oxide Ore by Heap Leaching Method. 8<sup>th</sup> Congress of Chemical Engineering, Ferdosi University,2003, Mashhad-Iran.

### **Patents:**

Aghazadeh Valeh, Barakan Shima, 2018, Synthesis of Porous Clay Heterostructure from Al, Fe-Pillared Nano-bentonite for Arsenic Removal Used in Mine Wastewater Treatment, (National).

### **Research Projects:**



- حذف مس از کنسانتره مولیبدن مس سونگون با روش هیدرومتالورژیکی در مقیاس آزمایشگاهی و پایلوت کارفرما: شرکت ملی صنایع مس ایران-مجتمع مس سونگون، شروع ۱۳۹۹/۰۷/۰۶
  - بررسی اولیه و امکان سنجی و فنی اقتصادی استحصال مس از زهاب رودخانه پخیر کارفرما: شرکت ملی صنایع مس ایران-مجتمع مس سونگون، شروع ۱۳۹۹/۰۷/۰۶
  - Rare Earth Elements Identification in Andarian Gold Mine Ore from a Point of Processing View, Zarrin Dagh Astarghan Mining Company. Jun. 2019- Current
- (شناسایی عناصر کمیاب و عناصر گروه پلاتین در سنگ معادن طلای شرکت زرین داغ ( سنگ معدن آستارقان ، سنگ معدن اندریان و دپوی سنگ شکن ، خروجی سنگ شکن و دپوی باطله ) از دیدگاه فرآوری ، معرفی و ارائه روش بهینه برای استحصال مناسب آن عناصر)
- Arsenic Removal from Lead Concentrate Produced by Ayerma International Industry and Mining Researches Consulting Engineering Company, 2011-2012.
- (استحصال آرسنیک از کنسانتره سرب تولیدی توسط شرکت بین المللی تحقیقات صنعت و معدن آیرما، مجری طرح، کارفرما: شرکت بین المللی تحقیقات صنعت و معدن آیرما، ۹۱-۹۰)
- Copper Extraction from Oxide Ore, Sane Pajouhan Azar Company, 2011-2012.
- (بررسی نحوه استحصال مس از کانسنگ اکسیدی مس ارسالی از شرکت صانع پژوهان آذر، مجری طرح، شرکت صانع پژوهان آذر، ۹۱-۹۰)
- Investigation of Effective Parameters on Hematite Removal from Hashtrud Abgharm Kaolin, 2005-2006.

(بررسی پارامترهای موثر در حذف هماتیت از کائولن آبگرم هشترود، همکار طرح، طرح پژوهشی

داخلی دانشگاه صنعتی سهند، ۱۳۸۵-۱۳۸۴)

- Feasibility Study of Processing of Existence Minerals in East Azerbaijan, Industry and Mine Organization of East Azerbaijan, Iran, 2004-2005

(مطالعه و بررسی امکان فرآوری مواد معدنی موجود در استان آذربایجان شرقی، همکار طرح، کارفرما:

سازمان صنایع و معادن استان آذربایجان شرقی ۱۳۸۴-۱۳۸۳)

### **MSc Thesis(Supervisor)**

- Investigation of Copper Recovery and Acidity Reduction of Acid Mine Drainage Produced in Sungun Copper Complex, **Seyyed Mehdi Sadeghi, 2022.**
- Leaching of Copper Containing Mineral form Sungun Copper Complex Molybdenum Concentrate, **Mina Soleimani , 2022.**
- Molybdenum Trioxide Production from Molybdenum Concentrate using Hydrometallurgical Method, **Mortaza Lotfi**
- Rhenium and Molybdenum separation from solution using ion exchange method, **Hadi Salimipor,2021.**
- Rhenium and Molybdenum separation from solution using solvent extraction method, **Nayyereh Kiani, 2021.**
- Comparison of Pyrite Oxidation in Acidic and Alkaline Media, **Meysam Naseri, 2020.**

- Optimization of Alkaline Oxidation Pretreatment of Zarshuran Gold Ore to Reduce the Consumption of Chemical Reagent During Cyanidation Process, **Masoud Hamdi, 2019**
- Removal of Chloride Ion from Zinc Sulphate Solution by Electrochemical Method, **Mohammad Reza Zafarani, 2019**
- An Investigation on the Alkaline Dissolution of Orpiment from Zarshuran Gold Deposit and Its Effect on Pyrite Oxidation, **Vahid Moazzami, 2018**
- Sintered Nepheline Syenite Leaching and Desilication of Solution Obtained from Its Leaching, **Kianmehr Mohammadloo, 2018**
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