



Hadi Omrani

Associate Professor

Department of Geology
Golestan University
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Curriculum Vitae

Awards

- 2023 The German Academic Exchange Service (DAAD)
- 2022 University of Potsdam transfer GmbH
- 2021 - 2023 The German Research Foundation (DFG) project support
- 2019 Geo-X fund by University of Potsdam
- 2018 University of Potsdam, funded my visit by Prof. Roland Oberhänsli
- 2018 - 2022 The German Research Foundation (DFG) project support
- 2008 The German Academic Exchange Service (DAAD) Scholarship for participating in a workshop in Germany
- 2005 - 2009 Iran Ministry of Science, Research and Technology (MSRT) Scholarship to pursue a PhD

RESEARCH INTERESTS

- Study of HP-LT Metamorphic Rocks
- Igneous and Metamorphic Ore Deposites
- Study of REE- and PGE-minerals
- Thermodynamic Modeling of Metamorphic Processes
- Mantle Melting and Magma Generation Modeling
- Whole-Rock and Mineral Chemistry
- Paleo-Geodynamics Peculiarities of Suture Zones
- Geology of Iran, Turkey, Afghanistan

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Last update: May, 2024

Positions and National Service

Golestan University:

- 2022 Executive Director of a National Geology Conference, Iran
- 2020-2022 Chair, Department of Geology at Golestan Univeristy
- 2018-Present Associate Professor of Geology at Golestan Univeristy (Tenured)
- 2011 - 2018 Assistant Professor of Geology at Golestan Univeristy

Golestan Province Mining Engineering Organization:

- 2021-2024 Alternate member of the board of directors

Human Faculty of Azadshahr:

- 2013 - 2017 Responsible for setting up

Geological Survey and Mineral Exploration of Iran (GSI):

- 2013 - 2017 Responsible for setting up GSI branch at the Golestan province
- 2011 - 2015 **Serving Military Service at Golestan University**

Visiting Positions

University of Münster, Germany:

- 2019 Period of one month for research by invitation of Prof. Michael Bröcker
- 2017 Visit of institute of mineralogy by invitation of Prof. Michael Bröcker

University of Potsdam, Germany:

- 2022 Period of three months for research by invitation of Dr. Günter
- 2019 Period of one month for research by invitation of Prof. Roland Oberhänsli
- 2018 45 days research period by invitation of Prof. Roland Oberhänsli
- 2017 Period of two months for research with Prof. Uwe Altenberger
- 2017 One month research period, by invitation of Prof. Uwe Altenberger
- 2008-2009 Nine month research period, under the supervision of Prof. Roland Oberhänsli

Argentina:

- 2009 Neotectonics of the southern central Andes, NW Argentina, *2-weeks for research under the supervision of Prof. Manfred Strecker.*

Education

- 2005–2010 **Ph.D. (in Geology-Petrology)**, *University of Tabriz*, Iran.
2003–2005 **M.Sc. (in Geology-Petrology)**, *University of Tabriz*, Iran.
1998–2002 **B.Sc. (in Geology)**, *Islamic Azad University Zahedan Baranch*, Iran.

PhD Thesis

- Title ***Petrological investigation on Shanderman eclogite (Northern Iran)***
Major Prof. Mohsen Moazzen and Dr. Mohsen Moayyed
Advisors
Associate Prof. Roland Oberhänsli and Dr. Tatsuki Tsujimori
Advisors

Masters Thesis

- Title ***South and southwest of Ghorveh metamorphism and deformation study, Kurdistan province (Iran)***
Major Prof. Mohsen Moazzen and Dr. Mohsen Moayyed
Advisors

Present Research

- **REE- and PGE-minerals from A-type granites and chromitites of Iran** in cooperation with Prof. Wilke and Dr. Günter (University of Potsdam, Germany).
- **From mantle wedge to collision zone as recorded in meta-ultramafic rocks from northern Iran** in cooperation with Prof. Oberhänsli (University of Potsdam, Germany), and Prof. Whitney (University of Minnesota, USA).
- **Study of Southern Makran Accretionary Prism Metamorphic and Mafic/Ultramafic Bodies** in cooperation with Dr. Timmerman and Dr. Günter (University of Potsdam, Germany).
- **Formation and exhumation of blueschists from Sistan Suture Zone, E Iran** in cooperation with Prof. Oberhänsli and Dr. Günter (University of Potsdam, Germany), and Prof. Whitney (University of Minnesota, USA).
- **Study of HP-LT metamorphic rocks from NW Iran** in cooperation with Prof. Oberhänsli (University of Potsdam, Germany).

Publications

1. M. Modjarrad, D.L. Whitney, **H. Omrani**, (2024). The P-T-X conditions of staurolite-garnet metabasites, NW Iran: Implications for metamorphism during Arabia-Eurasia collision. *Journal of Asian Earth Sciences: X* 11, 100175. DOI: 10.1016/j.jaesx.2024.100175
2. M. Modjarrad, D.L. Whitney, **H. Omrani**, (2024). Petrologic evolution of the Gysian ophiolitic serpentinites, NW Iran. *Acta Geochimica*, DOI: 10.1007/s11631-024-00682-6.
3. M. Modjarrad, **H. Omrani**, (2023). Mineral chemistry and thermobarometry of Dorbeh diorite metamorphic aureole, South of Urmia, Iran. *Petrological Journal*, 14, 59-88. DOI: 10.22108/ijp.2023.137037.1295
4. **H. Omrani**, C. Günter, G.H. Shamanian, M. Omrani, (2022). Post-collisional alkaline lamprophyre magmatism in Northern Iran: Implications from whole-rock geochemistry and mineral compositions. *Island Arc*, e12469. DOI: 10.1111/iar.12469
5. M. Daghmehi, E., Sauer, J., Nokandeh, **H. Omrani**, H. Omrani-Rekavandi, (2022). Chemical and vibrational spectroscopic analyses of similar types of vessels from forts on the Great Wall of Gorgan and fortifications in its hinterland. Book chapter in: *Ancient Arms Race: Antiquity's Largest Fortresses and Sasanian Military Networks of Northern Iran*. Publisher: Oxbow Books, Series: British Institute of Persian Studies, Archaeological Monograph Series, Volume: VII, 928p.
6. M. Bröcker, **H. Omrani**, J. Berndt, M.E. Moslempour, (2021). Unravelling metamorphic ages of suture zone rocks from the Sabzevar and Makran areas (Iran): robust age constraints for the larger Arabia-Eurasian collision zone. *Journal of Metamorphic Geology* 39, 1099-1129. DOI: 10.1111/jmg.12603.
7. H. Safari, M. Rezaдост, **H. Omrani**, (2020). Mud volcanoes in the west of Golestan province as indicators of hydrocarbon traps. *Scientific Journal of Exploration and Production Oil and Gas* 1399 (183), 1-16.
8. M. Hamzeh, B. Shaffiei Bafti, **H. Omrani**, (2020). Trace elements geochemistry of galena in fluorite deposits from central Alborz, Mazandaran Province. *Journal of Economic Geology* 12, 227-247.
9. M. Dorani, M. Arvin, R. Oberhänsli, **H. Omrani**, S. Dargahi, (2020). The study of mineral chemistry, detection of metamorphic P-T and fluid activity calculation of calcsilicate in the Bajgan complex, Kerman province. *Scientific Quarterly Journal, Geosciences* 29, 39-592.
10. M. Yousefi, **H. Omrani**, G.H. Shamanian, B. Shaffie, (2018). Mineralogical study of the Ghoznavi coal mine, eastern Alborz. *Iranian Journal of Crystallography and Mineralogy* 26, 775-788.

11. **H. Omrani**, M. Raghimi, (2018). Origin of the mud volcanoes in the south east Caspian Basin, Iran. *Marine and Petroleum Geology* 96, 615-626.
12. M. Ghobadi Pour, L.E. Popov, M. Omrani **H. Omrani**, (2018). The latest Devonian (Famennian) phacopid trilobite Omegops from eastern Alborz, Iran. *Estonian Journal of Earth Sciences* 67, 199-204.
13. M. Daghmehchi, C. Rathossi, **H. Omrani**, M. Emami, M. Rahbar, (2018). Mineralogical and thermal analyses of the Hellenistic ceramics from Laodicea Temple, Iran. *Applied Clay Science* 162, 146-154.
14. **H. Omrani**, (2018). Island-arc and Active Continental Margin Adakites from the Sabzevar Zone, Iran, Sabzevar zone, Iran. *Petrology* 26, 96-113.
15. **H. Omrani**, M. Moazzen, R. Oberhänsli, (2018). Geodynamic evolution of the Sabzevar zone, northern central Iranian micro-continent. *Mineralogy and Petrology* 112, 65-83.
16. **H. Omrani**, M. Moazzen, R. Oberhänsli, M. E. Moslempour, (2017). Iran-shahr Blueschists: Subduction of the Inner Makran Oceanic Crust, *Journal of Metamorphic Geology* 35, 373-392.
17. G.H. Shamanian, Z. Monfared, **H. Omrani**, (2016). Stratigraphy, Petrography and Facies Characteristic of Tash and Astaneh Bauxite Deposits in the Eastern Alborz: Understanding of Palaeoenvironments. *Journal of Sedimentary Facies* 8, 71-84.
18. M. Moazzen, M. Ghaderi, W.S. Downey, **H. Omrani**, (2016). Geochemistry of metapelitic rocks from the Garmichay area, East Azerbaijan, NW Iran; protolith nature and whole rock control on metamorphic mineral assemblages. *Geopersia* 6, 1-18.
19. M. Daghmechi, **H. Omrani**, M. Emami, J. Nokandeh, (2016). Mineralogical and thermo-chemical characteristics of the Hellenistic ceramics and raw clay from Qizlar Qal'eh (northeastern Iran). *Materials Characterization* 120, 143-151.
20. M. Moazzen, S. Torabi Asl, **H. Omrani** (2015). Study of pressure and temperature of metamorphism, phase stability and garnet and biotite chemical zoning in the Jandaq metamorphic rocks using pseudosection method. *Iranian Journal of Crystallography and Mineralogy* 23, 651-660.
21. M. Balaghi, M. Sadeghian, H. Ghasemi, M. Mohajjel, **H. Omrani**, (2015). Metapelite petrology, thermobarometry and U-Pb dating of Delbar metamorphic complex. *Iranian Journal of Petrology* 21, 55-82.
22. E. Habibzadeh, G. H. Shamanian, **H. Omrani**, (2014). Textural elements analyses in the Jajarm Karst bauxite: composition and condition of formation. *Iranian Journal of economic geology* 6, 163-176.
23. **H. Omrani**, M. Moazzen, R. Oberhänsli, (2014). Geochemistry of Sabzevar regional metamorphic rocks, northern Central Iranian Microcontinent Blocks (CIM). *Iranian Journal of Crystallography and Mineralogy*, 22, 49-56.

24. **H. Omrani**, M. Moazzen, R. Oberhänsli, T. Tsujimori, R. Bousquet, M. Moayyed (2013). Metamorphic history of glaucophane-paragonite-zoisite eclogites from the Shanderman area, northern Iran. *Journal of Metamorphic Geology* 31, 791–812.
25. **H. Omrani**, M. Moazzen, R. Oberhänsli, U. Altenberger, M. Lange, (2013). Sabzevar blueschists from North Central Iranian micro-continent as remnants of the Neotethys related oceanic crust subduction. *International Journal of Earth Sciences* 102, 1491–1512.
26. **H. Omrani**, R. Michaeli, M. Moazzen, (2013). Geochemistry and petrogenesis of Gasht peraluminous granite, western Alborz, Iran. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 268/2, 175–189.
27. M. Moazzen, G. Pourhatami, R. Hajalioghli, **H. Omrani**, (2012). Magmatic nature and geological setting investigation of SiyahMansour of Miyaneh amphibolite protolith. *Ahwaz University applied geological Journal* 8, 11–20.
28. **H. Omrani**, M. Moazzen, R. Oberhänsli, R. Bosquet, T. Tsujimori, (2010). Geochemistry of Shanderman eclogite, constrains on protolith nature. *Iranian Journal of Crystallography and Mineralogy* 3, 433–446.
29. **H. Omrani**, M. Moazzen, R. Oberhänsli, R. Bosquet, T. Tsujimori, (2010). Amphibole, chlorite and zoisite as retrograde phases in Shanderman. *Iranian Journal of Crystallography and Mineralogy* 18, 485–496.
30. **H. Omrani**, M. Moayyed, A. Jahangiri, M. Moazzen (2010). Introducing the Ghorveh fibrolites and their formation condition. *Iranian Journal of Petrology* 1(1), 1–10.

Conferences (selected ones)

- 2022 *Whole-rock and Mineral-chemistry of the Shanderman Meta-peridotites, Iran* The 2nd National Biennial Conference on Geology of the Alborz Orogen and Caspian Sea, Golestan University, 20–21 May., Iran.
- 2019 *Study of diaspore origin in Alborz bauxites and ultramafic rocks of Kaleybar.* The 1st National Biennial Conference on Geology of the Alborz Orogen and Caspian Sea, Golestan University, 20–21 Nov., Iran.
- 2019 *Introducing fluoride level in the water resources around Paji-Miyana mine, Central Alborz.* The 1st National Biennial Conference on Geology of the Alborz Orogen and Caspian Sea, Golestan University, 20–21 Nov., Iran.
- 2018 *Mineralogy Study of Ghosnavi Coal Mine, South AzadShahr, Golestan Province.* The 36th National and 3rd International Geosciences Congress, Geological Survey of Iran, 25–27 Feb. Tehran, Iran.

- 2017 *Determination of P-T Conditions of the Metamorphic Basement by Pseudo-section Modeling in Schists of Medium Grade from the Cumbres Calchaquies, Sierras Pampeanas, NW Argentina.* XX Congreso Geologico Argentino, 7–11 Aug., Argentina.
- 2016 *Geodynamics of the Iranian Makran Subduction System Based on HP-LT Metamorphic Rocks.* The 34th National and 2nd International Geosciences Congress, Geological Survey of Iran, 22–24 Feb. Tehran, Iran.
- 2015 *Introducing the First Iron Skarn of Golestan Province.,* 7th Symposium of Iranian Society of Economic Geology, 9–10 Sep., Iran.
- 2013 *Geological and Mineralogical Classification of Jozchal Coal Mine ash, Golestan Province.,* The 1st Conference on Iranian Applied Geochemistry, University of Damghan, 15–16 Aug., Damghan, Iran.
- 2012 *Mineral Chemistry and Mineral Forming Study of Sabzevar Blueschists, Northern CIM,* The 16th Geological Society of Iran, Shiraz University, Iran.
- 2010 *Geochemistry of Shanderman eclogites; constrains on nature of Paleotethys oceanic crust.* In: Tectonic Crossroads: Evolving Orogens of Eurasia-Africa-Arabia, 3–8 Oct., Middle East Technical University, Ankara, Turkey.
- 2010 *Shanderman Eclogites From Northern Iran, P-T Path and Paleotethys Geodynamics From Subduction to Exhumation.* In: Tectonic Crossroads: Evolving Orogens of Eurasia-Africa-Arabia, 3–8 Oct., Middle East Technical University, Ankara, Turkey.

Teaching Experience

- 2013– Present **For M.Sc. Students:** Granitoids (Geochemistry, genesis and tectonic setting), Plate Tectonic and Ore Genesis, Analysis of Ore Speciman, Environmental Geochemistry, Principles of Environmental Sampling and Analysis, Environmental Remote Sensing, Industrial Rocks and Minerals
- 2011– Present **For B.Sc. Students:** Igneous Petrology, Optical Crystallography, Geochemistry, Petrology, Field Geology, GIS, Metamorphic rocks, Volcanology

Supervised Master theses (selected ones)

- Title *The study of magmatic alteration processes and Dozein Fe-skarn formation, Golestan Province*
- Student Faezeh Najmabadi
- M. Advisor Dr. Hadi Omrani
- Advisors Dr. Gholam Hossein Shamanian
- Title *Investigation of platinum group elements (PGEs) in the Iranian chromitites: the case study of Fannuj chromitites*
- Student Mansoreh Bostanpour

- M. Advisor Dr. Hadi Omrani
Advisors Dr. Mohamad Elyas Moslempour; Dr. Gholam Hossein Shamanian
- Title *Mineralogy of accessory minerals associated with Paleozoic/Mesozoic igneous Rocks (Farsiyan to Khosh-Yeylagh/Golestan P.): Insight into Opaque Mineralization*
- Student Roghayeh SavarOlia
- M. Advisor Dr. Hadi Omrani
Advisor Dr. Gholam Hossein Shamanian
- Title *Assessment of natural radioactivity and radiation hazard in decorative stones used as building materials in Gorgan city*
- Student Fatemeh Forouzan
- M. Advisor Dr. Hadi Omrani
Advisors Dr. Gholam Hossein Shamanian; Dr. Reza Pour-Imani
- Title *Chemical composition study of the aluminum-controller minerals in the alkaline rocks of the Razghah area, East Azerbaijan province*
- Student Fatemeh Ghiyassi
- M. Advisor Dr. Hadi Omrani
Advisors Dr. Nasser Ashrafi, Prof. Roland Oberhänsli,
- Title *Geochemistry of Rare Earth Elements (REE) in the Ghoznavi coal mine, Eastern Alborz*
- Student Marziyeh Yousefi
- M. Advisor Dr. Hadi Omrani
Advisors Dr. Gholam Hossein Shamanian; Dr. Behnam Shaffie
- Title *Study of magmatism and related mineralization in the east of Haji-Abad village, Golestan province*
- Student Mahsa Mirhasani
- M. Advisor Dr. Hadi Omrani
Advisors Dr. Gholam Hossein Shamanian; Dr. Behnam Shaffie
- Title *Ore body and alteration mineralogy and geochemical changes investigation of Haji-Abad skarn, Golestan province*
- Student Sara Sadeghzadeh
- M. Advisor Dr. Hadi Omrani
Advisors Dr. Gholam Hossein Shamanian
- Title *Economic geology study of Nardin area with insight into Fe-Skarn mineralization, Semnan Province*
- Student Hossein Masoudi

M. Advisors Dr. Hadi Omrani; Dr. Mostafa Raghimi

Advisor Dr. Gholam Hossein Shamanian

Title *Mineralogical and hydrothermal alteration studies in the ChoghondarSar copper mine, Northeast Shahrud*

Student Maryam Sadat Khademi

M. Advisors Dr. Gholam Hossein Shamanian, Dr. Hadi Omrani

Title *Environmental impact study of the central Alborz fluorite mines*

Student Elham Rajaizadeh

M. Advisor Dr. Hadi Omrani

Advisors Dr. Reza Dehbandi

Title *Mineralogical study and environmental assessment of the sand dunes from north of Aq Qala, Golestan province*

Student Fatemeh Mastani

M. Advisor Dr. Hadi Omrani

Advisor Dr. Arash Amini

Title *Geochemistry and mineralogy of the evaporite deposits of Aji-Gol lagoon, north of Aqala, Golestan province*

Student Jalal Bahlake

M. Advisors Dr. Mostafa Roghimi, Dr. Hadi Omrani

Workshops

- 2022 Theriak-Domino program and its application in petrology (National workshop; by Hadi Omrani: **Golestan University, Iran**)
- 2021 XMapTools Special Event; by Prof. Pierre Lanary and the XMapTools team: **University of Bern, Switzerland**
- 2021 The Goldschmidt Virtual Workshop: Advanced Geochemical Modeling; by Prof. Chen Zhu: **Indiana University, USA**
- 2020 Google Earth program and its application in geology (national workshop; by Hadi Omrani: **Golestan University, Iran**)
- 2018 An Introductory Global Mapper Workshop for Beginners (national workshop; by Hadi Omrani: **Golestan University, Iran**)
- 2017 Health, Safety and Environment in the Labs, one weeks; by Prof. Edward Sobel: **University of Potsdam, Germany**
- 2017 A visit to the Museum of Natural History; by invitation of Prof. Lutz Hecht: Museum für Naturkunde, **Berlin, Germany**
- 2016 XRF device performance; **Golestan University, Iran**

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2009 GIS application in geology, fundamentals, 14 weeks; By Dr. Gerold Zeilinger:
University of Potsdam, Germany

2009 Workshop on earth surface forming processes: contribution of lithospheric processes, 20–23 Oct. 2008, **University of Potsdam, Germany**

Journal Reviewer

Row	Journal Name	Number
1	Lithos	2
2	Applied Geochemistry	1
3	Geological Society of America Bulletin	1
4	Earth-Science Reviews	2
5	Arabian Journal of Geosciences	4
6	Island Arc	3
7	Geoscience Frontiers	1
8	Bulletin of the Mineral Research and Exploration	1
9	Iranian Journal of Earth Sciences	2
10	Geographical Planning of Space Quarterly Journal	>10
11	Iranian Journal of Crystallography and Mineralogy	30
12	Other Journals	20

Memberships

Iranian Geological Society

Geo-metamorphism

Iranian Society of Crystallography and Mineralogy

Golestan Province Mining Engineering Organization

Computer and Software skills

GIS, Global Mapper, Theriak-Domino, Adobe Illustrator, L^AT_EX

Languages

Persian Native

English Excellent, Conversational fluent

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Interests

- Iranian traditional music
- Mountain Climbing
- NBA Basketball
- Football
- Running
- Nature Adventure

Google Scholar Link

Web Address: <https://scholar.google.com/citations?user=oejdF-UAAAAJ&hl=en>