



Dr Mohammad Reza GHORBANI

Associate Professor (Petrology and Geochemistry)

Faculty of Basic Sciences, Department of Geology, Petrology Group

I. PERSONAL INFORMATION:

Name: Mohammad Reza GHORBANI

Date of Birth: 1964

Place of Birth: Karaj, Iran

Address: Department of Geology, Tarbiat Modares University (TMU), Tehran 14115-175, Iran

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II. EDUCATIONAL RECORDS:

Degree	Institution	Field	Date	
B.Sc.	Shahid Beheshti University	Geology	1988	(Ex. Iranian National University)
M.Sc.	Shahid Beheshti University	Petrology	1992	(Ex. Iranian National University)
Ph.D.	The University of Sydney	Petrology and Geochemistry	1999	

III. PhD THESIS :

Ghorbani, M.R. 1999. Petrology and geochemistry of volcanic rocks from the Warrumbungle Volcano, New South Wales, Australia. PhD Thesis, University of Sydney, 222 p.

IV. ACADEMIC EXPERIENCES:

Assistant Professor of Igneous Petrology and Geochemistry, Tarbiat Modares University, since Feb. 2001-May 2015

Associate Professor of Igneous Petrology and Geochemistry, Tarbiat Modares University, since May. 2015

V. ADMINISTRATIVE EXPERIENCES:

Head of Petrology Group, Tarbiat Modares University, 2005-2008, 2015-continues

VI. RESEARCH INTERESTS:

Geochemistry of igneous rocks

Neotethyan subduction, mantle processes and geodynamic evolution

Trace element modeling

VII. JOURNAL PAPERS (INTERNATIONAL):

- 1- Ghorbani, M.R. and Middlemost, E. 2000. Geochemistry of pyroxene inclusions from the Warrumbungle Volcano, New South Wales, Australia. *American Mineralogist*, 85, 1349-1367.
- 2- Ghorbani, M.R. 2006. Lead-enrichment in Neotethyan volcanic rocks from Iran; the implications of a descending slab. *Geochemical Journal*, 40 (6), 557-568.
- 3- Ahmadian, J., Haschke, M., McDonald, I., Regelous, M., Ghorbani, M.R., Emami, M.H., Murata, M. 2009. High magmatic flux during Alpine-Himalayan collision: constraints from the Kal-e-Kafi complex, central Iran. *Geological Society of America Bulletin*, 121 (5/6), 857-868.
- 4- Mokhtari, M.A.A., Moin Vaziri, H., Ghorbani, M.R., Mehrparto, M. 2010. Petrology and petrogenesis of Kamtal Intrusion Eastern Azarbaijan, NW Iran. *Central European Geology*, 53, 79-96.
- 5- Ghorbani, M.R. Bezenjani, R. 2011. Slab partial melts; from the metasomatising agent to adakite, Tafresh Eocene. *Island Arc*, 20, 188-202.
- 6- Yeganehfar, H., Ghorbani, M.R., Shinjo, R., Ghaderi, M. 2013. Magmatic and geodynamic evolution of Urumieh–Dokhtar basic volcanism, Central Iran: major, trace element, isotopic, and geochronologic implications. *International Geology Review*, 55, 6,767-786.
- 7- Ghorbani, M.R., Ahmadi, A.R., Tiepolo, M., Langone, A., 2013. Clinopyroxene chemistry in Tertiary alkaline volcanic rocks from Taleghan, central Alborz, Iran: Implications for two parental melts. *Chemie der Erde*, 73, 4, 565-568.
- 8- Ghorbani, M.R., Graham, I.T., Ghaderi, M., 2014. Oligocene-Miocene geodynamic evolution of the central part of Urumieh-Dokhtar Arc of Iran. *International Geology Review*, 56, 8,1039-1050.
- 9- Deevsalar, R., Ghorbani, M.R., Ghaderi, M., Ahmadian, J., Murata, M., Ozawa, H., Shinjo, R. 2015. Geochemistry and petrogenesis of arc-related to intraplate mafic magmatism from the malayer-Boroujerd plutonic complex, northern Sanandaj-Sirjan magmatic zone, Iran. *N. Jb. Geol. Palaont. Abh.*, 274, 1, 81-120.
- 10- Babazadeh, S., Ghorbani, M.R., Bröcker, M., D'Antonio, M., Cottle, J., Gebbing, T., Mazzeo, F.C., Ahmadi, P. 2017. Late Oligocene-Miocene

mantle upwelling and interaction inferred from mantle signatures in gabbroic to granitic rocks from the Urumieh-Dokhtar arc, south Ardestan, Iran. *International Geology Review*, *International Geology Review*, 59, 12,1590-1608.

- 11- Ahmadi, P., Ghorbani, M.R., Coltorti, M., Kuritani, T., Cai, Y., Fioretti, A.M., Braschi, E., Giacomoni, P.P., Aghabazaz, F., Babazadeh, S. and Conticelli, S. 2019. High-Nb hawaiite–mugearite and high-Mg calc-alkaline lavas from northeastern Iran: Oligo-Miocene melts from modified mantle wedge. *International Geology Review*, 61, 2, 150–174.
- 12- Babazadeh, S., Ghorbani, M.R., Cottle, J., Bröcker, M. (In Press) Multistage tectono-magmatic evolution of the central Urumieh–Dokhtar magmatic arc, south Ardestan, Iran: Insights from zircon geochronology and geochemistry. *Geological Journal*. DOI: 10.1002/gj.3306

VIII. PUBLICATIONS IN IRANIAN JOURNALS:

- 1- Ghorbani, M.R. 2005. The role of magmatic differentiation and crustal partial melting in the genesis of acidic volcanic rocks, S Danesfahan. *Geosciences (Quarterly)*, 12 (55), 114-119.
- 2- Ghorbani, M.R. 2005. Geochemistry and petrology of volcanic rocks from south Danesfahan and south Karaj; concurrent island arc and intraplate magmatism. *Journal of Science, University of Tehran*, 31 (1), 21-41.
- 3- Ghorbani, M.R. and Yasaghi, A. 2006. Geochemistry and evolution of the contact zone between “Talun Tunnel” basic intrusive body and surrounding tuff rocks, Central Alborz. *Research Journal of University of Isfahan*, 23 (1), 193-206.
- 4- Ahmadian, J, Emami, M.H., Ghorbani, M.R. and Murata, M. 2007. Mineralogical-geochemical characteristics of potassic granitoides in regard with other granitoids in Kale-Kafi Complex (NE Anarak). *Geosciences (Quarterly)*, 16 (63), 154-163.
- 5- Mokhtari, M.A.A., Moinevaziri, H., Ghorbani, M.R. and Mehrparto, M. 2009 . Petrology, geochemistry and tectonomagmatic environment of Kamtal intrusion (north Kharvana, Eastern Azarbaijan). *Geosciences (Quarterly)*, 18 (71), 123-128.
- 6- Irannezhadi, M.R., Vossoughi Abedini, M., Ghorbani, M.R., Pourmoafi, M. 2009. Geochemistry of Tertiary volcanic rocks in the Tehran region, southern flanks of central Alborz Mountains. *Research Journal of University of Isfahan*, 33 (4), 19-38. In English.
- 7- Ahmadi, A.R., Ghorbani, M.R. 2010. The origin and tectonomagmatic setting of Taleghan Tertiary volcanic rocks. *Quarterly Journal of Iranian*

Geology, 4 (14), 83-99.

- 8- Shahriari, S., Ghorbani, M.R., Nasiri Bezenjani, R. 2011. Geochemistry and petrology of NE Naragh volcanic rocks: island arc or active continental margin magmatism? Journal of the Iranian Society of Mineralogy and Crystallography, 19 (2), 251-262.
- 9- Ahmadi, A.R., Ghorbani, M.R. 2011. Assimilation- fractional crystallization (AFC) impact in the evolution of Taleghan Tertiary alkaline volcanism. Quarterly Journal of Iranian Geology, 4 (16), 75-96.
- 10- Fardfeshani, z., Ghorbani, M.R., Arvin, M. 2014. Origin and evolution of Eocene felsic volcanic rocks and Neogene adakites from Kajan, W Nain. Journal of the Iranian Society of Mineralogy and Crystallography, 22 (1), 115-124.

IX. LIST OF PAPERS PRESENTED IN INTERNATIONAL CONGRESS (since 2007):

- 1- Irannezhadi, MR, Ghorbani, M.R., Vossoughi A., M, Pourmoafi, M. 2006. Tertiary arc-related volcanism in Central Alborz Mountains. European Geosciences Union (EGU), 2007.
- 2- Yeganehfar, H. and Ghorbani, M.R. 2007. Geochemistry and geodynamic setting of Paleogene volcanic rocks from south Ardestan, Iran. American Geophysical Union, Fall Meeting. San Francisco, U.S.A.
- 3- Mahmoudi, H. and Ghorbani, M.R. 2009. Geochemistry of Sarvabad basic igneous rocks from northern Sanandaj-Sirjan Magmatic Arc, Iran. American Geophysical Union, Fall Meeting. San Francisco, U.S.A.
- 4- Irannezhadi, MR, Ghorbani, M.R. M. 2010. Tertiary magmatism in Alborz Mountains and its relationship to the convergence of Eurasia with southern plates. Tectonic Crossroads: Evolving Orogenes of Eurasia-Africa-Arabia. Turkey.
- 5- Ghorbani, M. R., Ahmadi, P., Braschi, E., Conticelli, S., Ghaderi, M. (2015) Sr isotopic ratios of two magmatic series unraveling the role of crustal contamination in NW Firoozeh, NE Iran. Procedia Earth and Planetary Science, 13, 287-290.
- 6- Babazadeh, S., Ghorbani, M.R., Bröcker, M., D'Antonio, M., Cottle, J., Gebbing, T., Mazzeo, F.C., Ahmadi, P. 2017. Petrogenesis of Neogene plutonic rocks from south Ardestan, Iran; mantle-derived arc magmatism. Geophysical Research Abstracts, Vol. 19, EGU, 11523-1.
- 7- Ahmadi, P., Ghorbani, M.R., Coltorti, M., Kuritani, T., Cai, Y., Fioretti, A.M., Braschi, E., Giacomoni, P.P., Babazadeh, S. and Conticelli, S. 2017. Slab-derived melt involvement in petrogenesis of the high-Nb basalts and magnesian andesites-dacites from NE Iran. Geophysical Research Abstracts, Vol. 19, EGU, 11578-1.

X. LIST OF PAPERS PRESENTED IN IRANIAN CONGRESS (since 2007):

- 1- Yeganehfar, H. and Ghorbani, M.R. 2007. Geochemistry and petrogenesis of basic volcanic rocks from south Ardestan. 25th Symposium on Geosciences, 20 Feb. 2007, Geological and Mineral Exploration Survey of Iran, Tehran.
- 2- Irannezhadi, M.R., Vossoughi Abedini, M., Ghorbani, M.R., Pourmoafi, M. 2007. Geochemistry of the subvolcanic igneous rocks from central Alborz, north of Tehran.. 25th Symposium on Geosciences, 20 Feb. 2007, Geological and Mineral Exploration Survey of Iran, Tehran.
- 3- Ahmadian, J., Emami, M.H., Ghorbani, M.R., Lotfi, M. and Murata, M. 2007. Accessory minerals as petrogenetic markers: A case study of the Kalkafi volcano-plutonic complex (NE Anarak). 25th Symposium on Geosciences, 20 Feb. 2007, Geological and Mineral Exploration Survey of Iran, Tehran.
- 4- Abrishami Kaysomi, H.R., Ghorbani, M.R., Mokhtari, M.A.A., Shahriari, S. 2009. Eocene acidic volcanic rocks from SW Nodushan (W Yazd); texture, geochemistry and their setting in the rock sequence. 12th Symposium of the Geological Society of Iran, 18-20 Feb. 2009, National Iranian Oil Company, Ahwaz.
- 5- Mahmoudi, H., Ghorbani, M.R. 2010. Petrogenesis of Sarvabad Igneous rocks, west Sanandaj. 27th Symposium on Geosciences, Feb. 2010, Geological and Mineral Exploration Survey of Iran, Tehran.
- 6- Soltani Dehnavi, A., Ghorbani, M.R. 2010. Nb-enriched basaltic andesites from northwest Neyshabour. 27th Symposium on Geosciences, Feb. 2010, Geological and Mineral Exploration Survey of Iran, Tehran.
- 7- Mokhtari, M.A.A., Moinevaziri, H., Ghorbani, M.R. and Mehrparto 2010. Au-polymetallic mineralization in Anigh-Gharechilar (NE Kharvana, E Azarbaijan). 27th Symposium on Geosciences, Feb. 2010, Geological and Mineral Exploration Survey of Iran, Tehran.
- 8- Amanati, E., Ghorbani, M.R., Abrishami Kaysomi, H.R., Ghaderi, M. 2011. Petrogenesis of Tertiary felsic volcanic rocks from northwest Nodushan. 29th Symposium on Geosciences, Feb. 2011, Geological and Mineral Exploration Survey of Iran, Tehran.
- 9- Fardfeshani, Z., Ghorbani, M.R., Yeganehfar, H., Arvin, M. 2011. The origin and evolution of Tertiary felsic volcanism from west Nainn. 29th

Symposium on Geosciences, Feb. 2011, Geological and Mineral Exploration Survey of Iran, Tehran.

10- Mokhtari, M.A.A., Moinevaziri, H., Ghorbani, M.R. and Mehrparto 2011. Kamtal Skarns (NE Kharvana, E Azarbaijan). 29th Symposium on Geosciences, Feb. 2011, Geological and Mineral Exploration Survey of Iran, Tehran.

XI. RESEARCH PROJECTS:

1- Petrology and geochemistry of the volcanic rocks from Saveh area (SE Eshtehard and SW Danesfahan) (TMU, Approved in 2001, completed in 2003; Directed by Ghorbani, M.R., Advised by Ghaderi, M.)

2- Isotope and trace element geochemistry of tungsten (tin - copper) occurrences from S Shazand, Markazi Province (TMU, Approved in 2001, completed in 2004; Directed by Ghaderi, M., Advised by Ghorbani, M.R. and Rashid Nezhad, N.)

XII.THESES SUPERVISED (M.Sc. and PhD):

1- Geochemistry and petrology of volcanic rocks from Mehre Zamin (NE Tafresh) (Nasiri Bezanjani, R., M.Sc., TMU, completed, July 2006)

2- Geochemistry and petrology of volcanic rocks from northwestern Kashan (Dabiri, R., M.Sc., TMU, completed, Sep. 2006)

3- Geochemistry and petrology of volcanic rocks from south Ardestan (Yeganeh Far, H., M.Sc., TMU, completed, July 2007)

4- Geochemistry and petrology of volcanic rocks from northeastern Naragh (Shahriari, S., M.Sc., TMU, completed, Sep. 2007)

5- Petrology and geochemistry of Tertiary volcanic rocks from northern Koohpayeh, NE Isfahan (Movahedian Attar, F., M.Sc., TMU, completed, Jan. 2008)

6- Petrology and geochemistry of volcanic rocks from southwestern Nadoushan, W Yazd (Abrishami Kaysomi, H.R., M.Sc., TMU, completed, June 2008)

7- Geochemistry and petrology of basic volcanic rocks from southwestern Shahrab (Ahmadvand A., M.Sc., TMU, completed, March 2009)

8- Geochemistry and petrology of intermediate-felsic volcanic rocks from southwestern Shahrab (Amoozad Khalili, D., M.Sc., TMU, completed,

June 2009)

- 9- Geochemistry and petrology of the Tertiary igneous rocks from Sarvabad, W. Sanandaj (Mahmoudi, H., M.Sc., TMU, completed, Jan. 2010)
- 10- Petrology and geochemistry of the Tertiary volcanic rocks from NW Neyshabour (Soltani Dehnavi, A., M.Sc.,TMU, completed, Jan. 2010)
- 11- Geochemistry of felsic volcanic rocks from southwestern Nadoushan (W Yazd) (Amanati, E., M.Sc., TMU, completed, Jan. 2011)
- 12- The origin and evolution of Tertiary felsic volcanism in W Nain (Fardfeshani, Z., M.Sc., TMU, completed, Jan. 2011)
- 13- Petrology and geochemistry of Tertiary volcanic rocks from Taleghan (Ahmadi, A.R., **PhD**, TMU, completed, completed, March 2011)
- 14- Petrogenesis of Tertiary felsic volcanic rocks from NW Kashan (Nasiri Bayekolai, M., M.Sc., TMU, completed, May. 2011)
- 15- Origin of Tertiary alkaline volcanism, N Firoozeh, W Neyshabour (Ahmadi, P., M.Sc., TMU, completed, March 2012)
- 16- Petrogenesis of calc-alkaline and adakitic volcanic rocks, N Firoozeh, W Neyshabour (Aghabazaz, F., M.Sc., TMU, completed, May 2012)
- 17- The origin and evolution of basic volcanism in W Nain (Yeganehfar, H., **PhD**, TMU, completed, Dec. 2012 Jan. 2013)
- 18- Petrogenesis of alkaline and subalkaline magmatic series from S Shahrab, Ardestan (Aghajari, F., M.Sc., TMU, completed, Jan. 2014)
- 19- Post-Oligocene magmatism from Aveh and Parachan (Khoshhal, F., M.Sc., TMU, completed, Jan. 2014)
- 20- Geochemistry and petrology of the Neogene-Quaternary volcanic rocks from Dizaj-e-aland, W Azarbaijan (Sanati, S., M.Sc., TMU, completed, Feb. 2014)
- 21- Geochemistry, petrology and tectonomagmatic evolution of the mafic and intermediate igneous bodies from Malayer-Boroujerd complex

(Deevsalar, R., **PhD**, TMU, completed, Feb. 2015)

22- Petrology and geochemistry of the volcanic rocks from SW Ardestan (Salehitayebloo, M., M.Sc., TMU, completed, April. 2015)

23- Petrogenesis of the volcanic rocks from SW Natanz (Ahmadivartooni, A., M.Sc., TMU, completed, June 2015)

24- Origin and magmatic evolution of the volcanic rocks from W Tafresh (Sasanipour, A., M.Sc., TMU, completed, Nov. 2015)

25- Petrology and geochemistry of the Tertiary volcanic rocks from Miami-Davarzan (Ghorbani, K., M.Sc., TMU, completed, Feb. 2016)

26- Tectonomagmatic environment of the Tertiary volcanic rocks from Miami-Davarzan (Sedighi, N., M.Sc., TMU, completed, Feb. 2016)

27- Petrology and geochemistry of the Tertiary-Quaternary volcanic rocks from Varzaghan, E Azarbaijan (Heydarvandpour, F., M.Sc., TMU, completed, April. 2016)

28- Petrogenesis of Tertiary plutonic rocks from south Ardestan (Babazadeh, S., **PhD**, TMU, completed, May. 2017)

29- Petrology and geochemistry of the Tertiary volcanic succession from south Ghoochan (Ahmadi, p., **PhD**, TMU, completed, Dec. 2017)

30- Origin and magmatic evolution of the volcanic rocks from SW Nadoushan, W Yazd (Jolani Varzaghani, A., M.Sc. TMU, completed, , Dec. 2017)

XIII.THESES ADVISED:

1- Origin and genesis of tungsten and lead from Nezamabad, Revesht, Fizaneh and Bamsar deposits (Fardindoost, Z., M.Sc., TMU, completed, March 2004)

2- Mineralogy, geochemistry and genesis of of Baba Ali Iron ore deposit, NW Hamedan. (Tavakkoli, H., M.Sc., TMU, completed, June 2004)

3- Geochemistry and petrology of the granitoids from NW Ravand and its mineralization (Akbari Moghaddam, M., M.Sc., TMU, completed, Oct.

2006)

4- Microstructural analysis of trusted slices from S Taleghan (Shafaii, A.R., M.Sc., TMU, completed, Fall. 2009)

5- Petrology, geochemistry and petrogenesis of Qaradagh batholith (East of Syahrood, Eastern Azarbaijan) and related skarn (Mokhtari, M.A.A., PhD, TMU, completed, Feb. 2009)

6- Geochemistry, mineral chemistry and petrology of Kale-kafi intrusive bodies, E Anarak (Ahmadian, J., PhD, TMU, completed, Apr. 2012)

XIV. COURSES TAUGHT:

1- Magma and magmatic rocks

2- Geochemistry

3- Experimental petrology