

Hossein Ali Tajeddin



Assistant professor in Economic Geology

Address: Economic Geology Department, Faculty of Basic Science, Tarbiat Modares University, Tehran, Iran.

E-mail: h.tajeddin@modares.ac.ir

Education:

B.Sc. Shahid Beheshti University, Tehran, 1994, Geology.

M.Sc. Tarbiat Modares University, Tehran, 1998, Economic Geology.

Ph.D. Tarbiat Modares University, Tehran, 2011, Economic Geology.

Graduate thesis:

- B.Sc. thesis: Geology of Lar area, NE Tehran, 1994.

- M.Sc. thesis: Geology, mineralogy, geochemistry and genesis of Darestan gold deposit, South of Damghan, 1998.

- Ph.D. thesis: Ore controlling parameters of gold mineralization in the Saqqez-Sardasht metamorphosed area, NW of Sanandaj-Sirjan metamorphic zone, 2011.

Position:

2001-2014 Mineral exploration geologist (Precious and Base metals), Geological Survey and Mineral Exploration of Iran. I especially worked on Sanandaj-Sirjan metamorphic belt for geological studies and exploration of orogenic gold and gold-rich VMS deposits.

2014 until Now Assistant professor in Economic Geology. Tarbiat Modares University.

Field work (in Iran): During the exploration programs in Geological Survey and Mineral Exploration of Iran, I have visited and reported many Iranian deposits, which the most important of them are:

- Sanandaj-Sirjan metamorphic belt (Western Azarbaijan, Kordestan and Kurdistan provinces) for orogenic gold, gold-rich VMS and barite (Kuroko type) deposits.
- Toroud-Chah Shirin magmatic belt (Semnan province) for epithermal gold, intrusion-related gold and base metal deposits.
- Oroumieh Dokhtar magmatic belt (Kerman and Isfahan provinces) for porphyry copper, epithermal gold and intrusion related-gold deposits.
- Alborz magmatic belt (Eastern Azarbaijan and Ardebil provinces) for epithermal gold deposits.
- Central Iran zone (Isfahan, Yazd and Kerman provinces) for magmatic iron and sedimentary-hosted Pb-Zn deposits.

Reports:

- Tajeddin, H.A., 2003. Exploration and introduction of the Barika gold mineralization (East of Sardasht, western Azarbaijan). Geological Survey and Mineral Exploration of Iran.
- Dorri, M., and Niroomand, S., Tajeddin, H.A., 2004. Mineral exploration in geological Salmas sheet (1:100000 scale). Geological Survey and Mineral Exploration of Iran.
- Karimi, A., Tajeddin, H.A., 2004. Gold exploration in Golpayegan-Boroujerd area (Isfahan & Lorestan Provinces). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2004. Investigation of Molybdenum mineralization in Ahmad Abad Pb-Zn deposit (NE Bafgh). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2005. Investigation of Robaii iron deposit (South Damghan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2005. Investigation of Airborn geophysical anomalies in Saqqez-Mahabad area (Kordestan and Western Azarbaijan provinces). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2006. Mineral exploration in geological Alut sheet (1:100000 scale). Geological Survey and Mineral Exploration of Iran.

- Tajeddin, H.A., 2006. Mineral exploration in geological Sardasht sheet (1:100000 scale). Internal report. Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2006. Mineral exploration in geological Baneh sheet (1:100000 scale). Internal report. Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2006. Mineral exploration in geological Bainchob sheet (1:100000 scale). Internal report. Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2008. Mineral exploration in geological Meshkin Shahr sheet (1:100000 scale). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2008. Mineral exploration in geological Esfordi sheet (1:100000 scale). Internal report. Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2009. Exploration and introduction of the gold mineralization at the Southern Ghabaghlojeh area (SW of Saqqez, Kordestan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2009. Exploration and introduction of the gold mineralization at the Kasnazan area (SE of Saqqez, Kordestan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2010. Gold Exploration and geological report (1:1000 scale) on the Barika area (East of Sardasht, western Azarbaijan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2010. Geological map (1:20000 scale) and mineral report on the Barika-Gandoman area (East of Sardasht, western Azarbaijan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2012. Exploration and introduction of the gold mineralization at the Gandoman area (Sardasht, Western Azarbaijan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2013. General exploration at the Southern Ghabaghlojeh gold deposit (SW of Saqqez, Kordestan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2015. Gold exploration in related to intrusion bodies (granitoides) at the South of Saqqez (Kordestan). Geological Survey and Mineral Exploration of Iran.
- Tajeddin, H.A., 2016. Gold exploration in Saqqez-Piranshar area (Kordestan and Western Azarbaijan). Geological Survey and Mineral Exploration of Iran.

-Tajeddin, H.A, 2018. Gold Exploration and geological report (1:5000 scale) on the Kasnazan area (South of Saqqez, Kordistan). Geological Survey and Mineral Exploration of Iran.

Supervision:

- Distribution map of Iranian gold resources. 2011. Geological Survey and Mineral Exploration of Iran.

- Distribution map of Iranian Copper resources. 2011. Geological Survey and Mineral Exploration of Iran.

- Gold exploration in Zaveh Kuh gold area (Western Azarbaijan Province). 2013. Geological Survey and Mineral Exploration of Iran.

- Gold exploration in Mirgenaghshineh gold area (Kordestan Province), 2013. Geological Survey and Mineral Exploration of Iran.

-Conference Secretary (Feb 13, 2012). Types of gold mineralizations in the Sanandaj - Sirjan metamorphic zone, Geological Survey and Mineral Exploration of Iran, Tehran. Scientific Quarterly Journal, GEOSCIENCES, Special Issue on Rare Earth Element & Types of gold mineralizations in the Sanandaj - Sirjan metamorphic zone, Vol. 23, No. 88.3, Summer 2013.

Publications:

- Rastad, E., Tajeddin, H.A., Rashid Nejad Omran, N., Babakhani, A.R., 2000. Genesis and gold (copper) potential in Darestan-Baghu Mining area (South of Damghan). Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran, in Persian with English abstract, v. 9 no. 35-36, p. 60-79..

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., 2010., Formation and evolution stages of gold rich Barika massive sulfide deposit, east of Sardasht, northern Sanandaj-Sirjan zone: Based on structural, textural and fluid inclusion studies., Iranian Journal of Economic Geology, in Persian with English abstract, v. 2(1), p. 107-135.

-Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., 2012., Petrogenesis, geochemistry and role of deformation on ore elements distribution of Barika gold-rich Massive Sulfide deposit, East of Sardasht, Northwest of Sanandaj-Sirjan zone. Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran, in Persian with English abstract, v. 20 no. 83, p. 141-156..

- Tajeddin, H., Rastad, E., Yaghubpur, A., Mohajjel, M., 2013., Metamorphism and deformation effects on the Barika gold-rich Volcanogenic Massive Sulfide deposit, Northern Sanandaj- Sirjan Zone. Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran, in Persian with English abstract, v. 22 no. 87, p. 33-40..
- Makovicky, E., Topa, D., Tajeddin, H.A., Rastad, E., Yaghubpur, A., 2012. The crystal structure of Guettardite, $PbAsSbS_4$, and the Twinnite-Guettardite problem., Canadian Mineralogist, 50:253-265.
- Topa, D., Makovicky, E., Tajeddin, H.A., Putz, H., Zagler, G., 2013. Barikaite, $Pb_{10}Ag_3(Sb_8As_{11})S_{19}S_{40}$, a new member of the sartorite homologous series, Vol. 77(7), pp. 3039–3046
- Topa, D., Makovicky, E., Tajeddin, H.A., Putz, H., Zagler, G., 2013. Ferdowsiite: A new mineral from the Barika ore deposit, Iran. 51.5.727. v. 51 no. 5 p. 727-734.
- Tajeddin, H.A., Rastad, E., Yaghubpur, A., Mohajjel, M., Goldfarb, R. 2013. Geology, mineralization and pattern of gold mineralization in Saqqez-Sardasht area (NW Sanandaj–Sirjan Zone). Scientific Quarterly Journal, GEOSCIENCES, Special Issue on Rare Earth Element & Types of gold mineralizations in the Sanandaj - Sirjan metamorphic zone. Vol. 23, No. 88.3 P. 66-82
- Tajeddin, H.A., Rastad, E., Yaghubpur, A., Mohajjel, M., Goldfarb, R., Thermometry and Origin of the Mineralizing Fluid at Barika Gold Deposit, East of Sardasht, (accepted). In Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran.
- Hamamipour, B., Tajeddin, H.A., Barahmand, L., Geology and mineralization of Sebandoon gold deposit, North of Bardaskan, Razavi Khorasan Province, (accepted). In Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran.
- Tajeddin, H.A., Hassankhanlou, S., Mohajjel, M., Geology, Mineralogy and Fluid Inclusion Studies of the Abdossamadi Barite Deposit, Northeast Marivan, (accepted). In Scientific Quarterly Journal of Geosciences, Geol. Min. Expl. Surv. Iran.

- Niroomand, S., Hassanzadeh, J., Tajeddin, H.A., Asadi, S., 2018. Hydrothermal evolution and isotope studies of the Baghu intrusion-related gold deposit, Semnan province, north central Iran. *Ore Geology Review.*, 95, P. 1028-1048.
- Niroomand, S., Abdollahpour, M., Tajeddin, H.A., 2018. Geology Mineralization and Fluid Inclusion Studies of the Shovey Orogenic Gold Deposit Northwest Baneh). *Journal of Advanced Applied Geology.*, , in Persian with English abstract, 26, P. 75-87.

Symposiums:

- Tajeddin, H.A., Rastad, E., Rashid Nejad Omran, N., 1997. Geology, paragenesis, alteration and gold mineralization in the sulfide-bearing silicic veins of the middle Eocene volcano-pyroclastic rocks (South Damghan). 1st Symposium of Geological Society of Iran, Tehran, Iran, 26-28 Aug. 1997, in Persian.
- Tajeddin, H.A., Rastad, E., Rashid Nejad Omran, N., 1998. Rare Earth Elements (REE) Pattern in relation to Darestan copper-gold bearing silicic vein and associated alterations (South Damghan). 2th symposium of Geological Society of Iran, Mashhad, Iran, 18-20 Aug. 1998, in Persian with English abstract.
- Tajeddin, H.A., Rastad, E., Rashid Nejad Omran, N., 1998. Geochemistry and controlling factors of gold mineralization in Darestan gold occurrence (South Damghan). 2th symposium of Geological Society of Iran, Mashhad, Iran, 18-20 Aug. 1998, in Persian with English abstract.
- Tajeddin, H.A., Rastad, E., Rashid Nejad Omran, N., 1999. Genesis of Darestan gold occurrence with emphasis on field evidence and geochemistry and fluid inclusion microthermometry studies. 17th Symposium on Geosciences, Geological Survey of Iran, Tehran, Iran, 14 Feb. 1999, in Persian with English abstract, 142-146
- Tajeddin, H.A., Dorri, M., and Niroomand, S., 2004. Gold mineralization in Barika shear zone (East of Sardasht, western Azarbaijan). 22th Geoscience Symposium, Geological Survey of Iran, Tehran, Iran, 16-18 Feb. 2004, in Persian with English abstract, 56-58
- Tajeddin, H.A., Niroomand, S. Dorri, M.B., 2004. Gold mineralization in Barika shear zone NW Iran, East of Sardasht (Western Azarbaijan province). 32nd international geological congress, Florence, Italy.
- Tajeddin, H.A., Dorri, M.B., 2004. Investigation of molybdenum mineralization with carbonate host rock in the Abandoned Pb-Zn Ahmadabad mine (NE Bafgh). 8th symposium of Geological Society of Iran, Shahrood Universit of Technology, Iran,

26-28 Aug. 2004, in Persian with English abstract.

- Tajeddin, H.A., Rastad, E., Shamsa, S.M., Dorri, M.B., Ghazanfari, M., Niroumand, S., 2006. Gold mineralization and its types in the Saghez-Piranshahr area (Northwest of metamorphic-magmatic zone of Sanandaj Sirjan). 24th Symposium on Geosciences, Geological Survey of Iran, Tehran, Iran, 27-29 Feb. 2006, in Persian with English abstract.

- Tajeddin, H.A., Shamsa, S.M., Abedian, N., Ghazanfari, M., 2007. Gold mineralization in Metamorphosed Saqqez-Sardasht area: Criteria for gold exploration in metamorphic rocks, Northwest of Sanandaj – Sirjan Zone. 25th Symposium on Geosciences, Geological Survey of Iran, Tehran, Iran, 19-21 Feb. 2007, in Persian with English abstract.

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., Abedian, N., Borna, B., Dorri, M., Roozbeh Kargar, S., 2010., Formation and evolution stages of gold rich Barika massive sulfide deposit, based on structural, textural and fluid inclusion studies, east of Sardasht, northern Sanandaj- Sirjan zone. 27th Symposium on Geosciences and the 13th Symposium of Geological Society of Iran, Geological Survey of Iran, Tehran, Iran, 20-22 Feb. 2010, in Persian with English abstract.

- Khodaparast, M., Tajeddin, H.A., Shahrokhi, S.V., 2010. Nature of fluid inclusion of Gold mineralization at Barika shear zone: Example of Kuroko type Gold mineralization in the west of Iran. 1st Iranian Applied Geological Congress, Islamic Azad University, Mashad Branch, Mashad, Iran, 15-16 May 2010, in Persian with English abstract.

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., Abedian, N., Borna, B., Dorri, M., Roozbeh Kargar, S., 2010., Textural and mineralogical evolution of metamorphosed/sheared the Barika Gold-rich volcanogenic massive sulfide deposit, northern Sanandaj- Sirjan zone, Iran. 14th Symposium of Geological Society of Iran and the 28th Symposium on Geosciences, University of Urmia, Urmia, Iran, 16-18 Sep. 2010, in Persian with English abstract.

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., Goldfarb, R., Orogenic gold deposits in Saqqez-Sardasht area, Specialty seminar "Gold mineral types in the Sanandaj - Sirjan Zone". 13 Feb. 2012, Geological Survey and Mineral Exploration of Iran, Tehran. Scientific Quarterly Journal, GEOSCIENCES, Special Issue on Rare Earth Element & Types of gold mineralizations in the Sanandaj - Sirjan metamorphic zone, Vol. 23, No. 88.3, Summer 2013.

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., 2014. Formation of Ag-rich sulfosalt minerals due to shear zone-related deformation in the Barika gold-rich

massive sulfide deposit, east of Sardasht, north western Sanandaj- Sirjan zone. 32nd national and 1st international Geosciences Congress, Geological Survey and Mineral Exploration of Iran, Tehran. 16-19 Feb. 2014, in Persian with English abstract.

- Tajeddin, H.A., Rastad, E., Yaghubpour, A., Mohajjel, M., 2015. Gold deposits in the Sanandaj-Sirjan metamorphic zone with an emphasis on gold mineralization in the Saqqez-Sardasht area (NW Sanandaj-Sirjan zone). 33rd Symposium on Geosciences. Kurdistan University of Technology, Sanandaj, Iran, 25 Feb. 2015, in Persian with English abstract.

- Hamamipour, B., Tajeddin, H.A., Barahmand, L., 2014, Geology and geochemistry of Sebandoon gold deposit, North of Bardaskan: an example of epithermal gold mineralization in ophiolite rocks. 18th symposium of Geological Society of Iran, Tarbiat Modares University, Tehran, Iran, 24-25 Dec. 2014, in Persian with English abstract.

- Maghsoudi Fallah, L., Tajeddin, H.A., Rastad, E., 2017. Deformation, alteration and gold mineralization in the Hamze-Gharanin deposit, SW Saqqez. 35th Symposium on Geosciences. Geological Survey and Mineral Exploration of Iran, Tehran. 19-21 Feb. 2017, in Persian with English abstract.

- Abdollah Pour, M., Niroumand, S., Tajeddin, H.A., 2017. The role of structural controllers in the Shove gold-bearing polymetallic deposit. 35th Symposium on Geosciences. Geological Survey and Mineral Exploration of Iran, Tehran. 19-21 Feb. 2017, in Persian with English abstract.

- Abdollah Pour, M., Niroumand, S., Tajeddin, H.A., 2017. Geology, mineralogy, and fluid inclusion studies the Shove gold-bearing polymetallic deposit. 35th Symposium on Geosciences. Geological Survey and Mineral Exploration of Iran, Tehran. 19-21 Feb. 2017, in Persian with English abstract.

- Maghsoudi Fallah, L., Tajeddin, H.A., Rastad, E., 2017. Mineralogy and alteration in the Hamze-Gharanin deposit, SW Saqqez. 24th Symposium of Iranian Society of Crystallography and Mineralogy, Shahrood University of Technology, Iran, 25-26 June. 2017, in Persian.

- Tajeddin, H.A., Rastad, E., 2016. Barika gold deposit, east of Sardasht: Origin of rare sulfosalt minerals. 3rd National Symposium of Gemology and Crystallography of Iranian Society of Crystallography and Mineralogy, Shahid Beheshti University. 12-13 Nov. 2016, in Persian.

- Nemati, M., Niroumand, S., Tajeddin, H.A., 2016. The role of deformation and alteration in the gold mineralization of South Ghabaqloujeh deposit, SW Saqqez, Kurdistan province. 3rd National Symposium of Gemology and Crystallography of

Iranian Society of Crystallography and Mineralogy, Shahid Beheshti University. 12-13 Nov. 2016, in Persian.

Nemati, M., Niroumand, S., Tajeddin, H.A., 2016. Investigating the ductile deformation evidences in ore-bearing granitoides in the South Ghabaqloujeh orogenic gold deposit, Kurdistan Province. 20th symposium of Geological Society of Iran, Tehran University, Tehran, Iran, 6-7 Sep. 2016, in Persian with English abstract.

- Shahabinejad, A., Tajeddin, H.A., Meshkani, S.A., 2017. Investigating the Quartz - Tourmaline and sulfide veins and breccia's Chouran gold and Copper deposit in the Granitoid intrusion of the Chahargonbad area, NE sirjan. 9th National Smposium of Iranian Society of Economic Geology. Birjand University. 7-8 Sep. 2017, in Persian.

- Shahabinejad, A., Tajeddin, H.A., Meshkani, S.A., 2017. Geology and lithology of granitoid intrusions in the Chouran gold and copper deposit, (NE Sirjan). Smposium on Cenozoic Magmatism in Iranian Plateau. Geological Survey and Mineral Exploration of Iran, Tehran. 24 Dec. 2017, in Persian.

Workshops (in Iran):

- Geochemistry, Source and Tectonic setting of Igneous Rocks, , 2009-11 (Mark Allen).
- Mineral Resource: Geology and Geochemistry of Ore Deposits, 2010-2-27, 28 (Bernd Lehman).
- Granite – Related Ore Deposits, 2010-3-1 (Bernd Lehman).
- The effect of mineral dusts (toxicity of Asbestos) on human health, 2009-5-4 (Andre Lalonde)
- Training course in hyperspectral data interpretation, 2006-07-24 (two weeks)
- Visiting some key features in metamorphic Core Complex of Muteh-Golpayegan, 2011-12-1 (Jamshid Hassanzadeh).
- Geochronology and Thermochronology with Applications to Intracontinental Extension and Formation of Metamorphic Core Complexes, 2011-11-29, (Jamshid Hassanzadeh).

- Tectonomagmatic controls on Porphyry and Epithermal Mineralization 2015-8-1 (two days) (Jeremy Richards).
- Orogenic gold deposits, 2016-10-1 (Richard Goldfarb)
- The training course on Volcanogenic Massive Sulfide Deposits, 2016-10-4 (David Huston)