Al Magnifico Rettore
Area del Personale
Divisione Personale Docente e Ricercatore
Università degli Studi Roma TRE
Via Ostiense 133
00154 Roma

Oggetto: **Elenco delle pubblicazioni** allegate alla domanda presentata dal **Ahmad Rabiee** in riferimento alla procedura pubblica di selezione a n° _1_ posto di ricercatore universitario a tempo determinato, ai sensi dell'Art. 24, c. 3 lettera a) della L. 240/2010, avviso MUR 3277 del 30-12-2021 Progetti per creazione di "Ecosistemi dell'Innovazione" – "Rome Thecnopole" (PNRR) da assumere con contratto di lavoro subordinato, per la durata di tre anni per il settore concorsuale **04/A1** (Geochimica, Mineralogia, Petrologia, Vulcanologia, Georisorse e Applicazioni), S.S.D. **GEO/09** (Georisorse Minerarie e Applicazioni Mineralogico-Petrografiche per l'Ambiente e i beni Culturali) presso il **Dipartimento di Scienze** bandita con decreto rettorale disponibile sul sito pubblico http://www.albopretorionline.it/uniroma/alboente.aspx ed il cui avviso è pubblicato sulla Gazzetta Ufficiale n. 3 del 13/01/2023 (Prot.3137_13.01.2023_Rep.31)

Elenco pubblicazioni

INTERNATIONAL PUBLICATIONS

Della Ventura G., **Rabiee, A.,** Marcelli A., Macis S., D'Arco A., Iezzi G., Radica F, Lucci F., 2023. A new approach to deposit homogeneous samples of asbestos fibres for toxicological tests in vitro. *Frontiers in Chemistry*, in press

Rabiee, A., Rossetti, F., Lucci, Lustrino M., 2022. Cenozoic porphyry and epithermal mineralizations along the south Caucasus-and west Iranian tectono-magmatic belt: a critical reappraisal of the controlling factors. *Lithos,* https://doi.org/10.1016/j.lithos.2022.106874

Curzi M. , Caracausi A., Rossetti F., **Rabiee A**., Billi A., Carminati E., Aldega L., Bernasconi S., Boschi C., Drivenes L. K., Rizzo A. L., Sørensen B. E., 2022. From fossil to active hydrothermal outflow in the back-arc of the central Apennines (Zannone Island, Italy). *Geochemistry, Geophysics, Geosystems*, 23 (10). doi.org/10.3929/ethz-b-000579371

Lucci, F., Saki, A., Miri, M., **Rabiee, A**., & White, J. C. (2021). Genesis of trondhjemite by low-pressure low-melt fraction anatexis of hornblende-gabbro at Alvand Plutonic Complex (Hamedan, NW Iran): insights from geochemical modelling. *Arabian Journal of Geosciences*, 14(17), 1-20. doi.org/10.1007/s12517-021-08104-0

Rabiee, A., Rossetti, F., Asahara, Y., Azizi, H., Lucci, F., Lustrino, M., & Nozaem, R., 2020. Long-lived, Eocene-Miocene stationary magmatism in NW Iran along a transform plate boundary. *Gondwana Research,* 85, 237-262. doi.org/10.1016/j.gr.2020.03.014

Rabiee, A., Rossetti, F., Tecce, F., Asahara, Y., Azizi, H., Glodny, J., Lucci, F., Nozaem, R., Opitz, J. and Selby, D., 2019. Multiphase magma intrusion, ore-enhancement and hydrothermal carbonatisation in the Siah-Kamar porphyry Mo deposit, Urumieh-Dokhtar magmatic zone, NW Iran. *Ore Geology Reviews*, 110 , 102930 doi.org/10.1016/j.oregeorev.2019.05.016

Conference (Abstract)

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., 2022, Towards real-time measurement of airborne asbestos: challenges and solutions, IMA 2022, 23rd International Mineralogical Association General Meeting, Lyon, France

Rabiee, A., Rossetti, F., Lucci, Lustrino M., A petrotectonic model for the Cenozoic porphyry/epithermal mineralizations along the Iranian tectono-magmatic belt, Trieste 2021, 90th Congresso della Società Geologica Italiana

Rabiee, A., Rossetti, F., Asahara, Y., Nozaem, R., Azizi, H., Lucci, F., Tecce, F., Selby, D., November 2018. Multiple ore enrichment and mineralisation in Siah-Kamar porphyry Mo deposit (Urumieh-Dokhtar magmatic zone, NW Iran), Conference: Trans-disciplinary Research on Iranian Geology, Geodynamics, Earthquakes and Resources (TRIGGER)

Mehrabi B., **Rabiee A.,** 2006, Intrusion Related Mineralization at Kuhe-Dome with Special Reference to Gold Mineralization and the Model for Exploration, 12th Quadrennial IAGOD Symposium in Moscow

SUBMITTED MANUSCRIPTS (Under review)

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., Bellagamba, S., 2022, Deep learning for real-time asbestos counting, *Journal of Hazardous Materials*.

Rabiee, A., Rossetti, F., Asahara, Y.,., Lucci, F., Azizi, H., Rajabinasab, B., 2022. Polyphase overprinting mineralisation in Siah-Kamar porphyry Mo deposit, NW Iran, Submitted to *Journal of Geochemical Exploration*.

In Persian (with English Abstract)

Tayebi, F., Behzadi, M., **Rabiee, A.**, Emami, M., 2011, Petrography, alteration and mineralization of porphyry copper of Raziabad, northwest of Jiroft, 2th symposium of Economic Geology of Iran, Lorestan University, (in Persian).

Tayebi, F., Behzadi, M., **Rabiee, A.**, Emami, M., 2010. Geochemistry and elemental variations in Razi Abad porphyry copper mineralization, northwest of Jiroft. Research in Earth Science Journal, Shahid Beheshti University, (in Persian).

Rabiee A., Mehrabi B., 2008, The importance of integrating layers analysis in target selections, Case of Kuh-e Dom area, North of Ardestan, Roshd-e Zamin publication, October issue. (in Persian)

Rabiee A., Kousari S., Hoseini M., 2006, Alteration, mineralization and genesis of Tuzlar gold deposit, 24th symposium on geosciences. (in Persian)

Rabiee A. and Mehrabi B., 2005, Mineralizations Related to the intrusive body of Kuh-e Dom particularly considering gold deposit of Kuh-e Dom and presentation of explorative model (North of Ardestan) 24th symposium on geosciences. (in Persian)

Rabiee A. and Mehrabi B., 2005, Gold, Bismuth and copper mineralization in gold deposit of Kuh-e Dom (North of Ardestan), 13th reunion of Iranian Society of Crystallography & Mineralogy. (in Persian)

23-01--2023

Tesi di dottorato e pubblicazioni presentate:

- **Tesi di dottorato** dal titolo "Pantelleritic magmas: experimental study on the effect of [Na/(Na+K)] ratio and fO_2 on iron redox and viscosity". Supervisors: Prof. G. Giuli, Prof. E. Paris, prof. H. Behrens.
- **Elenco pubblicazioni:**

1. Volpintesta F., Ossoli E., Reggiani A., **Stabile P.***, Santulli C., Paris E. **2023.** Geopolymers-based application for the up-cycling utilization of construction and demolition waste from the 2016 central Italy earthquakes, Materials Letters, Volume 336, 1 April 2023, 133849.
2. Ossoli E., Volpintesta F., Reggiani A., **Stabile P.***, Santulli C., Paris E. **2023.** Upcycling of composite materials waste into geopolymer-based mortars for applications in the building sector, Materials Letters, Volume 333, 2023,15 Feb 2023, 133625.
3. Koeberl, C., Glass B.P., Schulz T., Wegner W., Giuli G., Cicconi M.R., Trapananti A., **Stabile P.,** et al., **2022.** Tektite-like glasses from Belize, Central America: Petrography, geochemistry, and search for a possible meteoritic component, *Geochim. Cosmochim Acta Volume 325, 232-257.*
4. Zucchini A., Gavryushkin P. V., Golovin A. V., Bolotina N.B., **Stabile P**., Carroll M., et al., **2022.** New insights into the nyerereite crystal structure: a link to the stability of alkali carbonates. *American Mineralogist (2022) 107 (11): 2054–2064.* https://doi.org/10.2138/am-2022-8106
5. **Stabile P.,** Radica F., Ranza L., Carroll M.R., Santulli C., and Paris E., **2021**. Dimensional, Mechanical and LCA Characterization of Terrazzo Tiles along with Glass and Construction and Demolition Waste (CDW). *Recent Progress in Materials*, 3(1).
6. **Stabile P.,** Sicola S., Giuli G., Paris E., Carroll M.R., Deubener J., Di Genova D., **2021.** The effect of iron and alkali on the nanocrystal-free viscosity of volcanic melts: A combined Raman spectroscopy and DSC study. *Chemical geology, 559,119991.*
7. **Stabile P**., Arzilli F., Carroll M.R., **2021.** Crystallization of peralkaline rhyolitic magmas: Pre- and syn-eruptive conditions of the Pantelleria system. *Comptes Rendus-Geoscience,* 353(S2).
8. Arzilli F., **Stabile P.**, Fabbrizio A., Landi P., Scaillet B., Paris E. and Carroll M.R., **2020**. Crystallization kinetics of alkali feldspar in peralkaline rhyolitic melts: implications for Pantelleria volcano. *Frontiers in* Earth Sciences 8 (10.3389/feart.2020.00177).
9. **Stabile P.,** Bello M., Petrelli M., Paris E. and and Carroll M., **2019**. Vitrification treatment of Municipal Solid Waste Bottom Ash. Waste Management 95, 250-258 (10.1016/j.wasman.2019.06.021).
10. **Stabile P.** and Carroll M.R., **2019.** Petrologic Experimental Data on Vesuvius and Campi Flegrei Magmatism: A Review. Chapter in Book "Vesuvius, Campi Flegrei, and Campanian Volcanism" (edited by De Vivo B., Belkin H. E. and Rolandi G.), Elsevier (10.1016/B978-0-12-816454-9.00013-4).
11. **Stabile P.,** Giuli G., Cicconi M.R, Paris E., Trapanati A. and Behrens H., **2017**. The effect of oxygen fugacity and Na/(Na+K) ratio on iron speciation in pantelleritic glasses. *Journal of Non-Crystalline Solids 478, 65-74.*
12. **Stabile P.,** Webb S., Knipping J., Behrens H., Paris E., and Giuli G., **2016**. Viscosity of pantelleritic and alkali silicate melts: effect of Fe redox state and Na/(Na+K) ratio. *Chemical Geology 422,73-82.*

FORMATO EUROPEO PER IL CURRICULUM VITAE

NON INSERIRE LA FOTOGRAFIA

INFORMAZIONI PERSONALI

Nome e Cognome	**Ahmad Rabiee**
Sex	
Date of birth and Nationality	
Indirizzo	
Telefono cellulare di servizio	
Indirizzo istituzionale di posta elettronica	
Indirizzo Pec	
Incarico attuale	

ISTRUZIONE E FORMAZIONE

2016-2019	**PhD, Geology, University of Roma Tre** Scuola Dottorale in Geologia dell'Ambiente e delle Risorse – Sezione: Geologia delle Risorse Naturali; Università degli Studi RomaTre
Title of the Thesis	**The characterisation of the Tertiary Mianeh porphyry Mo deposit and associated magmatism, NW Iran**
2002-2006	**M.Sc., Economic Geology, Kharazmi University** Department of Geology
Title of the Thesis	**Geochemical Exploration of the Kuh-eDom Area and Genesis of the Kuh-e Dom Gold Prospect**
Mark	19/20
1998-2002	**B.Sc., Geology, Kharazmi University** Department of Geology

ESPERIENZA LAVORATIVA

Jun. 2022 – Now	**Fellow position (Assegno di ricerca)**, Petrographic-geochemical characterization of geological materials by mass spectrometry technique; Università degli Studi RomaTre, Dipartimento di Scienze
Jan. 2022 – May.2022	**Fellow position (Borsa di Studio post-DOC)** Analisi di immagini ottiche per la caratterizzazione di fibre di amianto nel particolato atmosferico, Università degli Studi RomaTre, Dipartimento di Scienze
Dec. 2020 – Nov.2021	

Nov. 2019 – Nov. 2020	**Fellow position (Assegno di Ricerca)**, Design and construction of a first prototype of a portable compact sampler for monitoring the fibrous fraction contained in the airborne particulate (Project: INAIL-BRIC 2019), Università degli Studi RomaTre, Dipartimento di Scienze
	Fellow position (Borsa di Studio post-DOC), PRIN-2017 project, Università degli Studi RomaTre, Dipartimento di Scienze
2015-2019	**PhD student**, Scienze della Terra; Università degli Studi RomaTre.
2019- present	**Thesis advisor** of M.Sc. student, University of Qazvin, Department of Science Genesis of Chasia magnesite deposit.
2014-2015	**Thesis advisor** of M.Sc. student, University of Birjand, Department of Science Prospecting of magnesite mineralization by remote sensing and integrating layers.
2010-2011	**Thesis advisor** of M.Sc. student, University of Shahid Beheshti, Department of geology, Petrography, alteration and mineralization of porphyry copper of Raziabad, northwest of Jiroft.

RESEARCH PROJECTS

Jun. 2022 – Now

Petrographic-geochemical characterization of geological materials by mass spectrometry technique – Dipartimento di Scienze, Università Roma Tre (Dipartimento di Eccellenza; Prof. G. Giordano, Prof. F. Rossetti)

The main activity concerns the setting up the LA-ICPMS lab, standardization, optimization and maintenance of the corresponding machines in a way to obtain and present acceptable quality data to the scientific community. During this period we optimized the methods for both elemental analysis and zircon geochronology and the obtained data have been processed with different available software, and the advantages and disadvantages of each have been evaluated. Several analysis and data reduction runs showed that the accuracy and the precision of the lab is now in a standard working mode for different analytical purposes.

Dec. 2020 – May 2022

Design and construction of a first prototype of a portable compact sampler for monitoring the fibrous fraction contained in the airborne particulate (INAIL-BRIC 2019) - Dipartimento di Scienze, Università Roma Tre (Prof. G. Della Ventura)

During this project a specific air sampler suitable for real-time imaging was set-up. An optical system was used to solve up to 1 µm asbestos particles. An image processing software was developed in LabView program to count the asbestos particles.

Nov. 2019 – Nov. 2020

Relations between magmatism, mineralization and tectonics in NW Iran

Funded by "PRIN-2017" – Dipartimento di Scienze, Università Roma Tre (Prof. C. Faccenna, F. Rossetti)

The project was aimed at constructing a database for the Cenozoic magmatism and mineralization episodes in Iran from published whole rock, isotopic and geochronological data as well as the geographical coordinates. A georeferenced database was integrated with other strands such as structural patterns, crust and lithosphere thicknesses in ArcGIS software. The results show that major changes in tectonic settings in Iran, in particular during Oligocene-Miocene collision and post collision times, led to production of adakitic fertile magmas, through remelting of the existing enriched lower crust. Moreover, the time-space distribution of the magmatism and mineralization in Iran shows that major clusters of ore deposits are associated with inherited weak zones from the amalgamation of the continental block boundaries, as well as the intersection of

major orogen-parallel and orogen-orthogonal fault systems, which localised long-lived magmatism and triggered production of fertile magmas.

November 2015 – July 2019 **The characterisation of the Tertiary Mianeh porphyry Mo deposit and associated magmatism, NW Iran (PhD Project)**

A research, through a multidisciplinary approach that integrates igneous petrology (whole rock and Nd-Sr isotope systematics), fluid geochemistry and geochronology (zircon U-Pb, molybdenite Re-Os, miultimineral Rb-Sr), structural analysis. It aims to propose a genetic mineralisation model for the Mo ore and to discuss implications for the Mo mineralisation in porphyry systems and the regional ore distribution. The research also emphasize the crucial role of reactivation of inherited structural zones through intracontinental stress distribution, which can localize the major magmatism-related ore deposits such as porphyry-epithermal systems. In particular, they are associated with long-lived stationary magmatism where they interfere with the major orogeny-parallel fault zones.

2002-2006 **Geochemical Exploration of the Kuh-eDom Area and Genesis of the Kuh-e Dom Gold Prospect (M.Sc. Project)**

The project included (i) geochemical exploration via conventional stream sediment method, and (ii) the genesis of Kuhe-Dom gold deposit. During geochemistry study, I targeted the metallic anomalous zones and prioritized them through a synthetic data processing of all available geological information in GIS software. I defined several high ranked targets related to an Eocene granitoid batholith, including Intrusion-related types iron skarn and gold, bismuth, copper lead and zinc bearing veins.

2014- present **Characterization of magnesite deposits in ophiolite zone on E Iran.**

A study on magnesite exploration using remote sensing data analysis and integrating with other information layers in GIS for minerlaization targeting. I am countinuing this project by investigating the genesis of some of selected magnesite deposits in the regoin to define the link between structures, magmatism and subsequent hydrothermal sequences.

2010 - 2011 **Characterization of Razi Abad porphyry copper mineralization, Urumieh-Dokhtar zone, SE Iran.**

A research focused on petrography, alteration, mineralization, geochemistry and elemental variations in Razi Abad porphyry copper mineralization.

WORK EXPERIENCE, NON-ACADEMIC PROJECTS

2011-2015 Employee: Persia Paya Madan Co., Iran.
Title: Member of board and head of mineral exploration.

2005-2011 Employee: Zarnab Exploration Consulting Engineers Co., Iran.
Title: Full time, Project manager of mineral exploration projects.

2005 Employee: Institute of Researches and Application of Mineral Resources, Iran
Title: Part time collaboration in mineral exploration projects.

2004 Employer: Exploration Department of National Iranian Oil Co., Iran
Title: Head of GIS ready and cartography team for Geological map of Iran at 1:1000,000 scale; through a GIS and FreeHand based project.

2004 Employer: Research and Development Department of National Iranian Oil Co., Iran
Title: Full time collaboration in a project entitled “comprehensive investigations of Asmari resource” by a consortium of IFP, BP, Statoil, TOTAL, NIOC (R & D) companies as Software Supporting and assessing of stratigraphical and petrophysical logs.

2003 Employer: Exploration Department of National Iranian Oil Co., Iran

Title: Full time subsurface geologist as an expert in interpretation of geophysical logs and well logging.

2011-2015 **Title:** Research on mineral sorting methods: Optical/Image processing, Electrostatic, Magnetic separation.
Title: Design and construction of beneficiation line for magnesite (mixed with ferromagnesian minerals) based on aforementioned methods.
Location: East Iran, Persia Paya Madan (PPM) Co.

2011 **Title:** Targeting and ranking promising areas for porphyry systems in Bazman area (9500 km2).
Description: Through datasets preparation and data layers integration in GIS software, Fuzzy Logic and Index Overlay methods (as project manager and principle field geologist).
Location: SE Iran, National Iranian Copper Industries Co.

2010 **Title:** Targeting and ranking promising areas for porphyry systems in East of Iran (200.000 km2).
Description: Through datasets preparation and data layers integration in GIS software, Fuzzy Logic and Index Overlay methods.
Location: East Iran, National Iranian Copper Industries Co.

2006-2010 **Title:** Investigations for porphyry systems in Tertiary magmatic zones of Iran, including more than sixty promising areas at 1:25,000, 1: 5,000 and 1:1,000 scales.
Description: Field survey, geological mapping, geochemistry of the magmatism and mineralization.
Location: Iran, National Iranian Copper Industries Co.

2005 **Title:** Detailed explorations in Touzlar epithermal gold deposit
Description: Maping, RC drilling, sampling and rock description, reserve estimation.
Location: NW Iran, Zarnab Exploration Co.

2005 **Title:** Geochemical exploration.
Description: Stream sediment planning and sampling, statistic data processing, interpolation and ploting, anomaly targeting for promissing zones.
Location: Several exploration areas in NW and East Iran, Zarnab Exploration Co.

SKILLS

MOTHER TONGUE: Persian

OTHER LANGUAGE: English (Reading: Advanced; Writing: Advanced; Speaking: Advanced; Listening: Advanced)
Italian (Intermedio)

TECHNICAL SKILLS

- Expertise for in-situ determination of the content of trace elements and lanthanides in mineral and glassy matrices for geochemical and geochronological applications though LA-ICPMS techniques
- Zircon petrochronology (LA-ICP-MS technique; sample preparation, data collection, data reduction and age calculations)
- Characterisation of hydrothermal systems in space and time
- Modelling of mineralisation systems and associated alteration in space and time
- Magma geochemistry based on whole rocks (major and Trace elements) and isotopic systematics
- Skilled in standard analytical techniques for rock sample preparation (two stages decomposition method using HF+HCLO4 at high pressure-

	temperature condition, column chemistry) and inductively coupled plasma mass spectrometry (ICPMS), thermal ionization mass spectrometry (TIMS) and XRF instrumentation; • Fluid inclusion microthermoetry in hydrothermal settings • Mineral separation through hand picking, and techniques such as magnet/heavy media/electrostatic methods. • Computer & Programming: Image processing, data logging and acquisition • Satellite image processing • Geological field survey and geological mapping in different scales; • Microscopy (Stereoscopic, Polarized and Electronic –SEM) • RAMAN Spectroscopy methodologies (acquisition and interpretation); • Mineral prospecting through processing of ASTER and ETM satellites data for discrimination of alteration zones and rock types • Large-scale and small-scale geochemical explorations including litho and stream geochemistry • GIS Ready and integration methods such as Fuzzy Logic, Index Overlay and target ranking • Geostatistical analysis • Structural analysis
COMPUTER SCIENCE	• Data reduction softwares for LA-ICPMS; HDIP, Iolite, CHRUM+UPb11 • Expert in Teledyne Chromium Laser-Ablation software • Expert in Qtegra software for ThermoScientific ICPMS machine • Programming: Python (professional), LabView • Artificial intelligence • Practical use of dedicated software (**SPSS** for statistics, Surface, Geolog, AutoCadMap, GeoISO, DAISY); • Expert in ArcGIS platform and geodatabase management; • Image processing • Excellent knowledge of Windows and Ms-Office suite and EndNote; • Excellent knowledge of graphic software such as Adobe Illustrator, Photoshop; Adobe Acrobat, Freehand and CorelDraw; • Excellent knowledge of ENVI suite for image processing of satellite-acquired images and remote sensing; • Familiar with computer hardware and troubleshooting.
COMMUNICATION AND PRESENTATION	• Ability to work as a part of research group teams; • Management of the activities and interactions while doing multi-approach projects; • Experienced in oral presentation including short presentations, project progress and results in international research meetings and reunions.
ORGANIZATIONAL AND ADMINISTRATIVE	• I am used to working on deadlines and producing periodic progress reports • Detailing the research advancement, up to dating results and planed future works • Experienced in managing project budgets, implementing spending strategies, economizing, keeping records, reporting and justifying annual expenses • I have sound experience in organizing group and independent field trips in remote areas, managing all the associated logistics, creating and maintaining and local relations • I tend to delegate tasks and responsibilities to the team, so that giving confidence to individuals fulfilling their duties • Supervising exploration and drilling programs, and relation with contractors

•

SCIENTIFIC AND EDITORIAL DUTIES

I was reviewer for Arabian Journal of Geoscience" (IF: 1.33); Periodico di Mineralogia (IF: 0.94) and Geochemistry (IF: 4.2), *Gondwana Research (*IF: 6.05)*, G-cubed* (IF: 2.6)*, Geological Magazine* (IF: 2.4)*,*

PUBLICATIONS

INTERNATIONAL PUBLICATIONS

Della Ventura G., **Rabiee, A.,** Marcelli A., Macis S., D'Arco A., Iezzi G., Radica F, Lucci F., 2023. A new approach to deposit homogeneous samples of asbestos fibres for toxicological tests in vitro. *Frontiers in Chemistry*, in press

Rabiee, A., Rossetti, F., Lucci, Lustrino M., 2022, Cenozoic porphyry and epithermal mineralizations along the south Caucasus-and west Iranian tectono-magmatic belt: a critical reappraisal of the controlling factors. *Lithos,* https://doi.org/10.1016/j.lithos.2022.106874

Curzi M. , Caracausi A., Rossetti F., **Rabiee A.**, Billi A., Carminati E., Aldega L., Bernasconi S., Boschi C., Drivenes L. K., Rizzo A. L., Sørensen B. E., 2022. From fossil to active hydrothermal outflow in the back-arc of the central Apennines (Zannone Island, Italy). *Geochemistry, Geophysics, Geosystems*, 23 (10). doi.org/10.1029/2022gc010579371

Lucci, F., Saki, A., Miri, M., **Rabiee, A.,** & White, J. C. (2021). Genesis of trondhjemite by low-pressure low-melt fraction anatexis of hornblende-gabbro at Alvand Plutonic Complex (Hamedan, NW Iran): insights from geochemical modelling. *Arabian Journal of Geosciences*, 14(17), 1-20. doi.org/10.1007/s12517-021-08104-0

Rabiee, A., Rossetti, F., Asahara, Y., Azizi, H., Lucci, F., Lustrino, M., & Nozaem, R., 2020. Long-lived, Eocene-Miocene stationary magmatism in NW Iran along a transform plate boundary. *Gondwana Research,* 85, 237-262. doi.org/10.1016/j.gr.2020.03.014

Rabiee, A., Rossetti, F., Tecce, F., Asahara, Y., Azizi, H., Glodny, J., Lucci, F., Nozaem, R., Opitz, J. and Selby, D., 2019. Multiphase magma intrusion, ore-enhancement and hydrothermal carbonatisation in the Siah-Kamar porphyry Mo deposit, Urumieh-Dokhtar magmatic zone, NW Iran. *Ore Geology Reviews*, doi.org/10.1016/j.oregeorev.2019.05.016.

INTERNATIONAL PRESENTATION

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., 2022, Towards real-time measurement of airborne asbestos: challenges and solutions, IMA 2022, 23rd International Mineralogical Association General Meeting, Lyon, France

Rabiee, A., Rossetti, F., Lucci, Lustrino M., A petrotectonic model for the Cenozoic porphyry/epithermal mineralizations along the Iranian tectono-magmatic belt, Trieste 2021, 90th Congresso della Società Geologica Italiana

Rabiee, A., Rossetti, F., Asahara, Y., Nozaem, R., Azizi, H., Lucci, F., Tecce, F., Selby, D., November 2018. Multiple ore enrichment and mineralisation in Siah-Kamar porphyry Mo deposit (Urumieh-Dokhtar magmatic zone, NW Iran), Trans-disciplinary Research on Iranian Geology, Geodynamics, Earthquakes and Resources (*TRIGGER*)

Mehrabi B., **Rabiee A.,** 2006, Intrusion Related Mineralization at Kuhe-Dome with Special Reference to Gold Mineralization and the Model for Exploration, 12th Quadrennial *IAGOD* Symposium in Moscow

SUBMITTED MANUSCRIPTS (Under review)

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., Bellagamba, S., 2022, Deep learning for real-time asbestos counting, *Journal of Hazardous Materials*

Rabiee, A., Rossetti, F., Asahara, Y.,., Lucci, F., Azizi, H., Rajabinasab, B., 2022. Polyphase overprinting mineralisation in Siah-Kamar porphyry Mo deposit, NW Iran, Submitted to *Journal of Geochemical Exploration*

TO BE SUBMITTED MANUSCRIPTs

Rabiee, A., Rossetti, F., Asahara, Y., Azizi, H., Lucci, F., Characterization and geochronology of the KhatoonAbad porphyry Mo deposit, Mianeh, Iran

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., Bellagamba, S., Artificial intelligence-based model for asbestos counting in phase contrast microscopy. Will be submitted to Journal of Hazardous Materials

Rabiee, A., Della Ventura G., Mirzapour, F., Paglietti, F., Malinconico, S., Bellagamba, S. Introduction to the first hand-hold portable real-time asbestos counter, will be submitted to Sensor

Ballato, P., Balestrieri, M.L., Rabiee, A., Rossetti, F., Apatite fission track and (U-Th)/He thermochronology and structural studies of Mianeh-Hashtroud intrusive rocks, NW of Iran, Mianeh, Iran

Rabiee, A., Rossetti, F., Lustrino M.,Zircon Petrochronology in evolution of a long-liveg magmatism

OTHER PUBLICATIONS

Tayebi, F., Behzadi, M., **Rabiee, A.**, Emami, M., 2011, Petrography, alteration and mineralization of porphyry copper of Raziabad, northwest of Jiroft, 2th symposium of Economic Geology of Iran, Lorestan University, (in Persian).

Tayebi, F., Behzadi, M., **Rabiee, A.**, Emami, M., 2010. Geochemistry and elemental variations in Razi Abad porphyry copper mineralization, northwest of Jiroft. Research in Earth Science Journal, Shahid Beheshti University. (in Persian).

Rabiee A., Mehrabi B., 2007, The importance of integrating layers analysis in target selections, Case of Kuh-e Dom area, North of Ardestan, Roshd-e Zamin publication, October issue. (in Persian)

Rabiee A., Kousari S., Hoseini M., 2006, Alteration, mineralization and genesis of Tuzlar gold deposit, 24th symposium on geosciences. (in Persian)

Rabiee A. and Mehrabi B., 2005, Gold, Bismuth and copper mineralization in gold deposit of Kuh-e Dom (North of Ardestan), Thirteenth reunion of Iranian Society of Crystallography & Mineralogy. (in Persian)

Rabiee A. and Mehrabi B., 2005, Related Mineralizations to the intrusive body of Kuh-e Dom particularly considering gold deposit of Kuh-e Dom and presentation of explorative model (North of Ardestan) 24th symposium on geosciences. (in Persian)

SCIENTIFIC COLLABORATIONS

Prof. **F. Rossetti** (Università degli Studi Roma Tre); Prof. **Y. Asahara** (Nagoya University); Prof. **G. Della Ventura** (Università degli Studi Roma Tre), Prof. **H. Azizi** (Kurdistan University); Prof. **J. Glodny** (GFZ; German Research Centre for Geosciences); Dr. **F. Lucci** (Università degli Studi Roma Tre); Prof. **R. Nozaem** (Theran University); Dr. **F. Tecce** (Istituto di Geologia Ambientale e Geoingegneria, CNR); Prof. **M Lustrino** (Sapienza Università di Roma) Prof. **D. Selby** (Durham University).

PROMINERNT ACHIVEMENTS

I developed **Artificial Inteligence** models (deep learning) for **automatic asbestos counting** of the complicated airborne samples for both on site real-time and lab measurements to address the corresponding environmental issues.

During my carrier as an exploration geologist I have reported several new porphyry mineralization for the first time in Iran including:

- The first porphyry molybdenum deposit (Siah-Kamar, Mianeh) in Iran (NW) for the first time (National Iranian Copper Co., Internal confidential report).
- New porphyry copper mineralization in the center of Jebal-e Barez batholith (SE of Iran) that had been known as a barren body (National Iranian Copper Co., Internal confidential report).
- New porphyry gold mineralization in Kashan area (center of Iran) (National Iranian Copper Co., Internal confidential report).

Luogo e data…Roma, 24/01/2023

PAOLA STABILE

WORK EXPERIENCE

2021-2022

Adjunct Professor

Synthesis and Characterization of Geomaterials (3CFU)

PhD course in "Physics, Earth and Material Sciences" DOCSM017 (XXXVI ciclo)

University of Camerino

10/2020-present

Research Fellow

Cinetica di cristallizzazione e dinamica eruttiva di magmi alcalini evoluti: implicazioni per l'industria del vetro – PRIN 2017 (prof. M.R.Carroll).

Geology Division, University of Camerino

- We focused on two topics: volcano-petrology and design of glass and glass-ceramic materials: the former issue is to discriminate textures and crystal-chemical features of phases solidified during main eruptions of Etna and Stromboli rocks; the second one results to be a green process in order to offer new alternatives for the extraction of strategic elements from natural rocks or from industrial wastes.

2020-2021

Adjunct Professor

Petrography (8 CFU)

Geology Division, University of Camerino

04/2018-04/2020

Research Fellow

Materiali di scarto vetrosi/ceramici e CDW per la produzione di materiali innovative per l'edilizia ecosostenibile - EU-LIFE Project Ecotiles (prof. E.Paris).

Geology Division, University of Camerino

- The project' s aim was to fully characterize ceramics ang glass wastes in order to be reused for the production of new eco-sustainable materials. I was particularly involved in the CDW chemical and petro-mineralogical characterization along with different sets of vitrification experiments, useful to immobilize potentially hazardous components of the waste materials and for further studying their potential to be reused in new recycled building products.

2016-2018

Adjunct Professor

Geochemistry and Petrogenesis (6 CFU)

Geology Division, University of Camerino

10/2015-03/2018

Research Fellow

Studio di geomateriali e materiali da recupero vetrosi e ceramici per la produzione di materiali innovativi per l'edilizia ecosostenibile –EU LIFE Project Ecotiles (prof. E.Paris).

Geology Division, University of Camerino

- The European Life ECOTILES project had the objective of studying and producing high-grade cement-based tiles using glass, ceramics, and construction and demolition waste. At the end of the work, we fully demonstrated its feasibility producing fully recycled (up to 77 %) products with a substantial less (-20%) environmental impact than traditional tiles.

02/2015-09/2015 **Research assistant**

Glass/melt synthesis of different peralkaline composition with varying alkali ratio for various P-T- fO2 conditions.

Geology Division, University of Camerino

10/2013-03/2014 **DAAD award/grant**

Fe redox in pantelleritic melts.

Institute of Mineralogy, University of Hannover (D)

11/2012-03/2013 **Visiting researcher**

High- pressure and high-temperature experiments.

Institute of Mineralogy, University of Hannover (D)

06/2012-09/2012 **Erasmus placement grant**

High-T experiments under controlled redox conditions.

Institute of Mineralogy, University of Hannover (D)

EDUCATION AND TRAINING

2015 PhD in Science and Technology: Earth Sciences XXVII ciclo

University of Camerino

- *Pantelleritic magmas: experimental study on the effect of [Na/(Na+K)] ratio and fO_2 on iron redox and viscosity. Supervisors: Prof. G. Giuli, Prof. E. Paris, prof. H. Behrens.*

2011 MSc (110/110 cum laude) in Geology (Laurea specialistica, 86/s)

University of Calabria

- *Study of melt inclusions in basaltic magma (Mutnovsky volcano)*. Supervisors: Dr. F. Vetere, Prof. R. De Rosa, prof. H. Behrens.

2008

BSc in Geology (Laurea Triennale, L-34)

University of Calabria

- *Distribution coefficients of trace elements in shoshonitic rocks of Vulcanello-Aeolian Islands*. Supervisors: Dr. P. Donato, Prof. R. De Rosa.

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Communication skills

- Good communication skills gained through my research career

Organisational / managerial skills

- Convener 5Conferenza Rittmann, AIV-IAVCEI, 2022, Catania;
- Co-convener -Conferenza della Società Italiana di Mineralogia e Petrologia, Parma.

Students responsibility/supervision:

- 4 PhD students and 7 Master students (2014-present)

Job-related skills

- **Editorial committee member of** International Journal of Science, Technology and Society.
- **Reviewer** for: Lithos, Waste Management, Materials, Sustainability, Comptes Rendus -Geoscience, Frontiers in Earth Sciences.

Computer skills

- Good command of Microsoft Office™ tools for Windows and MacOs, Kaleidagraph, Origin, ECDL certification. IgPet, Melts, VolatileCalc, Corel Draw, Table curve, Graphpad, GraphClick.

Other skills

- Experimental and analytical skills (not exhaustive list): sample and rock preparation, high T-high P experiments (IHPV-CSPV), Optical Microscope (OM), Scanning Electron Microscope (SEM), Electron MicroProbe (EMP), Laser-ablation inductively-coupled-plasma mass- (LA-ICP-MS) spectrometry, Fourier-transform Infrared spectroscopy (FTIR), Raman

spectroscopy (RM), X-ray absorption spectroscopy (XAS)

ADDITIONAL INFORMATION

Publications
total citations Scopus:
126; h-index:8

- Giordano D., La Felice S., **Stabile P.,** Bamber E., Arzilli F., Pre- and syn-eruptive conditions of Monte Amiata volcanism, *in preparation*
- Jablonska D., Stabile P., Zambrano M., Haynes J. T. Mineral characterization of fault cores hosted in heterolytic succession and CO_2 sequestration, *in preparation*
- Stabile P., Abudurehman A., Carroll M.R., Paris E., Vitrification of Construction and Demolition-mixed waste: effect of mineralogical and chemical composition, *in preparation*
- Appiah E, Krasheninnikov SP, Holtz F, **Stabile P**, Arzilli F & Carroll MR. Crystallization Kinetics in Anhydrous and Hydrous Trachytic to Latitic Melts Subjected to Variable Degrees of Undercooling, *in preparation*

- Volpintesta F., Ossoli E., Reggiani A., **Stabile P.***, Santulli C., Paris E. **2023.** Geopolymers-based application for the up-cycling utilization of construction and demolition waste from the 2016 central Italy earthquakes, Materials Letters, Volume 336, 1 April 2023, 133849.
- Ossoli E., Volpintesta F., Reggiani A., **Stabile P.***, Santulli C., Paris E. **2023.** Upcycling of composite materials waste into geopolymer-based mortars for applications in the building sector, Materials Letters, Volume 333, 2023,15 Feb 2023, 133625.
- Koeberl, C., Glass B.P., Schulz T., Wegner W., Giuli G., Cicconi M.R., Trapananti A., **Stabile P.,** et al., **2022.** Tektite-like glasses from Belize, Central America: Petrography, geochemistry, and search for a possible meteoritic component, *Geochim. Cosmochim Acta Volume 325, Pages 232-257.*
- Zucchini A., Gavryushkin P. V., Golovin A. V., Bolotina N.B., **Stabile P**., Carroll M., et al., **2022.** New insights into the nyerereite crystal structure: a link to the stability of alkali carbonates. *American Mineralogist (2022) 107 (11): 2054–2064.*
- **Stabile P.,** Radica F., Ranza L., Carroll M.R., Santulli C., and Paris E., **2021**. Dimensional, Mechanical and LCA Characterization of Terrazzo Tiles along with Glass and Construction and Demolition Waste (CDW). *Recent Progress in Materials*, 3(1).
- Abudurehman A., **Stabile P.*,** Carroll M.R., Santulli C., Paris E., **2021.** Mineralogical and chemical characterization of CDW as function of particle size and thermal treatments for potential recycling. *Detritus J., 15 (40-50).*
- **Stabile P.,** Sicola S., Giuli G., Paris E., Carroll M.R., Deubener J., Di Genova D., **2021.** The effect of iron and alkali on the nanocrystal-free viscosity of volcanic melts: A combined Raman spectroscopy and DSC study. *Chemical geology, 559,119991.*
- **Stabile P**., Arzilli F., Carroll M.R., **2021.** Crystallization of peralkaline rhyolitic magmas: Pre- And syn-eruptive conditions of the Pantelleria

system. *Comptes Rendus-Geoscience,* 353(S2).

- **Stabile P.,** Appiah E., Bello M., Giuli G., Paris E. and Carroll M.R., **2020.** New IR spectroscopic data for determination of water abundances in hydrous pantelleritic glasses. *American Mineralogist 105, 1060-1068* (10.2138/am-2020-7363).
- Arzilli F., **Stabile P.**, Fabbrizio A., Landi P., Scaillet B., Paris E. and Carroll M.R., **2020**. Crystallization kinetics of alkali feldspar in peralkaline rhyolitic melts: implications for Pantelleria volcano. *Frontiers in* Earth Sciences 8 (10.3389/feart.2020.00177).
- **Stabile P.,** Bello M., Petrelli M., Paris E. and and Carroll M., **2019**. Vitrification treatment of Municipal Solid Waste Bottom Ash. Waste Management 95, 250-258 (10.1016/j.wasman.2019.06.021).
- **Stabile P.** and Carroll M.R., **2019.** Petrologic Experimental Data on Vesuvius And Campi Flegrei Magmatism: A Review. Chapter in Book "Vesuvius, Campi Flegrei, and Campanian Volcanism" (edited by De Vivo B., Belkin H. E. and Rolandi G.), Elsevier (10.1016/B978-0-12-816454-9.00013-4).
- Ansaloni F., Radica F., **Stabile P.**, Paris E., **2018**. Ecological tiles from Urban Waste Glass and Construction & Demolition Waste. The 24th International Sustainable development research society conference. *ISDRS conference* (Messina, ISBN 978-88-943228-1-1; edited by the Organizing Committee of the ISDRS 2018).
- **Stabile P.,** Radica F., Bello M., Behrens H., Carroll M.R., Paris E. and Giuli G., **2018**. H_2O solubility in pantelleritic glasses: pressure and alkali effect. *Journal of Mineralogy and Geochemistry 195/1.*
- **Stabile P.,** Giuli G., Cicconi M.R, Paris E., Trapanati A. and Behrens H., **2017**. The effect of oxygen fugacity and Na/(Na+K) ratio on iron speciation in pantelleritic glasses. *Journal of Non-Crystalline Solids 478, 65-74.*
- **Stabile P.,** Webb S., Knipping J., Behrens H., Paris E., and Giuli G., **2016**. Viscosity of pantelleritic and alkali silicate melts: effect of Fe redox state and Na/(Na+K) ratio. *Chemical Geology 422,73-82.*
- **Stabile P., 2016.** Pantelleritic magmas: experimental study on the effect of [Na/(Na+K)] ratio and fO_2 on iron redox and viscosity. *PLINIUS n.42* (10.19276/plinius.2016.01013).
- **Stabile P**., Giuli G., Behrens H., Knipping J., Webb S., Cicconi M.R., and Paris E., **2015**. Experimental study on the effect of alkali ratio and oxygen fugacity on Fe redox and viscosity in pantelleritic glasses. Rendiconti Online della Società Geologica Italiana, Suppl. 2, Vol 35 (https://doi.org/10.3301/ROL.2015.131).
- Knipping J.L., Behrens H., Wilke M., Gottlicher J. and **Stabile P.**, **2015**. Effect of oxygen fugacity on the coordination and oxidation state of iron in alkali bearing silicate melts. *Chemical Geology 411, 143-154.*

Presentations (Invited talks), seminars

- **2022-** 4th Global Webinar on **Applied Science, Engineering and Technology**

"Mineralogical-chemical characterization of Bottom Ash for potential industrial application".

- **2021**- Workshop telematico: **Vetrificazione delle ceneri pesanti da rifiuti solidi urbani**

"*Bottom ashes, da problema a risorsa: analisi, gestione, riciclo".*
2021- Seminario per "**Tecnologie innovative per i beni culturali"_**Ascoli "Il microscoio ottico a luce polarizzata per lo studio delle rocce e dei materiali litoidi applicati ai beni culturali"

- **2020**- **Cities on Volcanoes 11**, Crete (postponed to 2022)
  Crystallization kinetics in peralkaline rhyolitic melts simulating magma ascent toward Earth's surface".

Projects

- **2022**- FAR2022 PNR
  Geological Carbon capture and Green Energies Storage (GeoCaGes) (PI: Miller Zambrano)
- **2019-present-** *POR Marche FESR 2014/20*
  NUOVA VITA project (PI: E. Paris) *Economia circolare post-sisma per costruzioni ed opere.*
- **2017-present**- *PRIN17* project "*Time scales of solidification in magmas: Applications to Volcanic Eruptions, Silicate Melts, Glasses, Glass-Ceramics"* (PI: M.R. Carroll).
- **2015-2018**- *EU-LIFE Project LIFE14 ENV/ IT/000801*
  "*Metodologie ECO-innovative per la valorizzazione di rifiuti edilizi ed urbani in terrazzo-TILES"* (PI: E. Paris).
- **2015**- *FAR* project, University of Camerino
  "REEWARE: Rare Earth Elements: from resource to waste, from waste to resource" (PI: G. Giuli).

Conferences

List of last national and international conferences:

- Appiah E, Krasheninnikov SP, Holtz F, **Stabile P**., Arzilli F & Carroll MR, **2022.** Crystallization Kinetics in Anhydrous and Hydrous Trachytic to Latitic Melts Subjected to Variable Degrees of Undercooling. Goldschmidt Conference 2022.
- **Stabile P.,** Sicola S., Giuli G., Paris E., Carroll M.R., Deubener J., Di Genova D., **2021**. A combined Raman spectroscopy and DSC study on the nanocrystal-free viscosity of volcanic melts. EMPG – XVII -17th International Symposium on Experimental Mineralogy, Petrology and Geochemistry.
- Carroll M.R., Arzilli F., **Stabile P**., Appiah E., **2020**. Alkali Feldspar Crystallization Kinetics in Phonolites and Peralkaline Rhyolites. Goldschmidt Conference 2020.
- **Stabile P.**, Arzilli F., Carroll M.R., **2020**. Crystallization of peralkaline rhyolitic magmas: Rheological implications for the Pantelleria system. Rittmann Giovani Ricercatori 2020.
- **Stabile P.,** Abudureheman A., Bello M., Carroll M.R and Paris E., **2020.** Characteristics of c&d waste prior to and after thermal treatments. SUM2020 / 5th Symposium on Urban Mining and Circular Economy, 18-20/52020, Bologna, Italy.

- **Stabile P.,** Appiah H. and Carroll M., **2020**. The role of syn-eruptive crystallization on pantelleritic eruptive dynamics. EGU2020: Sharing Geoscience Online.
- **Stabile P.**, Appiah E., Behrens H., Giuli G., Paris E., and Carroll M.R. **2019**. Experimental petrology data on pantelleritic melts/glasses. Rittmann Giovani Ricercator 2019.
- **Stabile P.,** Arzilli F., Paris E. and Carroll M.R, **2019**. Role of kinetics of nucleation and crystal growth of alkali feldspar in a peralkaline pantelleritic melt. Congresso SIMP-SGI-SOGEI, Parma.
- **Stabile P.,** Arzilli F., Carroll MR., **2019**. Crystallisation Kinetics of Alkali Feldspar in a Peralkaline Melt of Pantelleritic Composition. Goldschmidt Conference, Barcellona.
- **Stabile P**., Appiah E., Carroll M.R. **2018**. Water solubility in pantelleritic glasses. Goldschmidt Conference, Boston.
- Carroll M.R., **Stabile P.**, Appiah E., Behrens H., Giuli G., Paris E. **2017.** Water solubility in Pantelleritic glasses: New experiments with Karl-Fischer, FTIR and Raman spectroscopic measurements. AGU Fall Meeting 2017.

Memberships

- Società Italiana Mineralogia e Petrografia (2015-present), IAVCEI-AIV (2018-present), European Geosciences Union (2020-present).