Alessandro Fabbrizio – Publications

International journals with IF

2020

Fabbrizio, A., Špillar, V. (accepted) Methodology to derive well-calibrated thermometers: a new glass-composition geothermometer for olivine-bearing glassy samples at one atmosphere. Annals of Geophysics. IF = 1.531

Bonechi, B., Perinelli, C., Gaeta, M., Tecchiato, V., **Fabbrizio, A.** (in press) Amphibole growth from a primitive alkaline basalt at 0.8 GPa: time-dependent compositional evolution, growth rate and competition with clinopyroxene. Lithos https://doi.org/10.1016/j.lithos.2019.105272. IF = 3.913

2019

Fabbrizio, A. 2019. An investigation on the zoning associated with divalent elements, P, Cr, Al and Ti in olivines from the Kilauea Iki lava lake (Hawaii). Periodico di Mineralogia, 88, 185-201. IF = 1.417

Maimaiti, M., **Fabbrizio, A.,** Carroll, M.R., Ertel-Ingrisch, W., Abudureheman, A., Paris, E., Dingwell, D.B. 2019. Experimental study of monazite solubility in haplogranitc melts: a new model for peraluminous and paralkaline melts. European Journal of Mineralogy, 31, 49-59. IF = 1.663

2018

Fabbrizio, A., Gaeta, M., Carroll, M.R., Petrelli, M. 2018. Sulfur and REE zoning in apatite: the example of the Colli Albani magmatic system. European Journal of Mineralogy, 30, 125-133. IF = 1.663

Arzilli, F., **Fabbrizio, A.,** Schmidt, M.W., Petrelli, M., Maimaiti, M., Dingwell, D.B., Paris, E., Burton, M., Carroll, M.R. 2018. The effect of diffusive re-equilibration time on trace element partitioning between alkali feldspar and trachytic melts. Chemical Geology, 495, 50-66. IF = 3.618

2017

Fabbrizio, A., Bouhifd, M.A., Andrault, D., Bolfan-Casanova N., Manthilake, G., Laporte, D. 2017. Argon behavior in basaltic melts in presence of a mixed H_2O-CO_2 fluid at upper mantle conditions. Chemical Geology, 448, 100-109. IF = 3.618

2016

Clesi, V., Bouhifd, M.A., Bolfan-Casanova, N., Manthilake, G., **Fabbrizio, A.,** Andrault, D. 2016. Effect of H_2O on metal-silicate partitioning of Ni, Co, V, Cr, Mn and Fe: Implications for the oxidation state of the Earth and Mars. Geochimica et Cosmochimica Acta, 192, 97-121. IF = 4.258

2014

Newcombe, M.E., **Fabbrizio, A.,** Zhang, Y., Ma, C., Le Voyer, M., Guan, Y., Eiler, J.M., Saal, A.E., Stolper, E.M. 2014. Chemical zonation in olivine-hosted melt inclusions. Contributions to Mineralogy and Petrology, 168:1030, https://doi.org/10.1007/s00410-014-1030-6. IF = 3.230

2013

Fabbrizio, A., Stalder R., Hametner, K., Günther, D. 2013. Experimental chlorine partitioning between forsterite, enstatite and aqueous fluid at upper mantle conditions. Geochimica et Cosmochimica Acta, 121, 684-700. IF = 4.258

Fabbrizio, A., Stalder R., Hametner, K., Günther, D., Marquardt, K. 2013. Experimental partitioning of halogens and other trace elements between olivine, pyroxenes, amphibole and aqueous fluid at 2 GPa and 900-1300 °C. Contributions to Mineralogy and Petrology, 166, 639-653. IF = 3.230

2011

Lacalamita, M., Schingaro, E., Scordari, F., Ventruti, G., **Fabbrizio, A.,** Pedrazzi, G. 2011. Substitution mechanisms and implications for the estimate of water fugacity for Ti-rich phlogopite from Mt. Vulture, Potenza, Italy. American Mineralogist, 96, 1381-1391. IF = 2.630

2010

Fabbrizio, A., Schmidt, M.W., Günther, D., Eikenberg, J. 2010. Ra-partitioning between phlogopite and silicate melt and ^{226}Ra/Ba-^{230}Th/Ba isochrons. Lithos, 114, 121-131. IF = 3.913

2009

Fabbrizio, A., Scaillet, B., Carroll, M.R. 2009. Estimation of pre-eruptive magmatic water fugacity in the Phlegrean Fields, Naples, Italy, European Journal of Mineralogy, 21, 107-116. IF = 1.663

Fabbrizio, A., Schmidt, M.W., Günther, D., Eikenberg, J. 2009. Experimental determination of Ra mineral/melt partitioning for feldspars and ^{226}Ra-disequilibrium crystallization ages of plagioclase and alkali-feldspar. Earth and Planetary Science Letters, 280, 137-148. IF = 4.637

2008

Fabbrizio, A., Carroll, M.R. 2008. Experimental constraints on the differentiation process and pre-eruptive conditions in the magmatic system of Phlegraean Fields (Naples, Italy). Journal of Volcanology and Geothermal Research, 171, 88-102. IF = 2.617

Fabbrizio, A., Schmidt, M.W., Günther, D., Eikenberg, J. 2008. Experimental determination of radium partition between leucite and phonolite melt and ^{226}Ra-

disequilibrium crystallization ages of leucite. Chemical Geology, 255, 377-387. IF = 3.618

2006

Fabbrizio, A., Rouse, P.J., Carroll, M.R. 2006. New experimental data on biotite + magnetite + sanidine saturated phonolitic melts and application to the estimation of magmatic water fugacity. American Mineralogist, 91, 1863-1870. IF = 2.630

Talks as invited speaker

- **2017** Institute of Petrology and Structural Geology, Charles University, Prague CZ 17 May 2017. Evidences of the geological and geomorphological effects caused by the Central Italy earthquakes in the area of Monti Sibillini.

- **2016** Institute of Petrology and Structural Geology, Charles University, Prague CZ 12 October 2016. Experimental determination of igneous minerlas-silicate liquids Radium distribution coefficients, re-examination of ^{226}Ra-^{230}Th disequilibria and ^{226}Ra/Ba-^{230}Th/Ba isochrones.

- **2016** Department of Geology, Ghent University, Ghent Belgium 10 August 2016. Biomineralogy in Earth's Sciences.

- **2016** Dipartimento di Scienze della Terra, Torino University, Torino Italy 18 May 2016. Chemical zonation in olivine-hosted melt inclusions: A record of syn-eruptive cooling.

- **2015** Institute of Petrology and Structural Geology, Charles University, Prague CZ 27 November 2015. Volatile and major element zonation within melt inclusions: a snapshot of syn-eruptive processes.

- **2015** Departamento de Geociencias, Universidad de los Andes, Bogota Colombia 6 May 2015. Diamonds.

- **2015** Departamento de Geociencias, Universidad de los Andes, Bogota Colombia 5 May 2015. Argon solubility in H_2O-CO_2 bearing melts at upper mantle conditions.

- **2014** Departamento de Geociencias, Universidad de los Andes, Bogota Colombia 17 November 2014. Chemical zonation in olivine-hosted melt inclusions.

- **2014** Dipartimento di Scienze della Terra, Camerino University 7 November 2014, Camerino Italy. Zonation of volatile and major elements in basaltic melt inclusions: a natural diffusion experiment.

- **2013** Laboratoire Magmas et Volcans, Blaise Pascal University, Clermont-Ferrand France 30 October 2013. Experimental partitioning of halogens between olivine, pyroxenes, and aqueous fluid at 2 GPa and 900 to 1300 °C in

model and natural systems.

- **2013** Dipartimento di Scienze della Terra, Camerino Univerisity May 2013, Camerino Italy. Short course – Isotope Geochemistry, 10 hours lecture.

- **2011** Institute of Mineralogy and Petrography, Innsbruck University, Innsbruck Austria 23 March 2011. Phosphorus zoning in olivine: a new window into magmatic processes of Kilauea Iki lava lake, Hawaii.

- **2009** Dipartimento di Scienze della Terra, Camerino University 9 March 2009, Camerino Italy. Experimental determination of Ra-partitioning between igneous minerals (leucite, feldspars, phlogopite) and silicate melt, re-examination of ^{226}Ra-^{230}Th disequilibria and ^{226}Ra/Ba-^{230}Th/Ba isochrons.

- **2009** Liceo Scientifico di Macerata 12 February 2009, Macerata Italy. Usi pratici della Vulcanologia: studi di laboratorio per comprendere le condizioni eruttive e metodi di riduzione del rischio vulcanico.

- **2008** Division of Geological and Planetary Sciences, Caltech 8 December 2008, Pasadena USA. Experimental determination of Ra mineral/melt partitioning for leucite, feldspars, and phlogopite,^{226}Ra-disequilibrium crystallization ages of leucite and feldspars, and the unfeasibility of ^{226}Ra/Ba-^{230}Th/Ba isochrones.

- **2008** Institute of Earth Sciences, Vrije University 10 October 2008, Amsterdam Holland. Experimental determination of Ra mineral/melt partitioning for leucite, feldspars, and phlogopite and ^{226}Ra disequilibrium crystallisation ages of leucite and feldspars.

- **2007** Dipartimento di Scienze della Terra, Camerino University 12 October 2007, Camerino Italy. Use of experimental petrology to manage the volcanic risk: Phase equilibria and geohygrometers.

- **2005** Institute for Mineralogy and Petrology, ETH, Zurich 13 May 2005, Zurich Switzerland. Experimental constraints on pre-eruptive conditions for trachytic magmatism of the Phlegrean Fields (Naples, Italy).

- **2005** Bayerisches GeoInstitute, University of Bayreuth 13 January 2005, Bayreuth Germany. Experimental data on biotite + magnetite + sanidine saturated phonolitic melts and application to the estimation of magmatic water fugacity.

Dissertations

Fabbrizio, A. (2005). Experimental studies of the differentiation process and pre-eruptive conditions in the magmatic system of Phlegraean Fields (Naples, Italy). PhD thesis, 163 pp., Camerino University.

Conference abstracts

7 abstracts, as first author, at international conferences AGU, EGU, EMPG, Goldschmidt. 5 abstracts, as co-author, at international conferences AGU, EMPG, Goldschmidt.

Grants as principal investigator

- 01/2018-12/2020: GACR (Grant Agency Czech Republic) Standard Project number 18-01982S, Experimental determination of the effect of oxygen fugacity on mineral/melt partitioning for the Highly Siderophile Elements at mantle conditions.

- 01/2011-01/2013: FWF (Austrian Science Fund) Lise Meitner Research Fellowship M-1266, Behavior of halogens in the upper mantle.

Service as reviewer

Reviewer for American Mineralogist, Chemical Geology, Contributions to Mineralogy and Petrology, Mineralogy and Petrology, Lithos, US National Science Foundation

Science popularization

- You said ClerVolc? Program 3: Alessandro Fabbrizio https://www.youtube.com/watch?v=rAtpJ3vlJK4

- Interview: Blick in den Erdmantel. *Zukunft forschung* 0211, 48, http://www.uibk.ac.at/forschung/magazin/7/

- Collaboration for the Italian translation of the educational DVD Montserrat's Andesite Volcano. A film by D. Lea and S. Sparks.

14-01-2020 Alessandro Fabbrizio