

## F\_Vetere Lista delle pubblicazioni

### PhD thesis

- **Vetere F.** (2006). Viscous flow of magmas from Unzen volcano, Japan – implication for magma mixing and ascent. University of Hanover (Germany)

### Book

- **Dynamic Magma Evolution**  
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### Publicazioni

1. Di Matteo V., Carroll M.R., Behrens H., **Vetere F.**, Brooker R.A. (2004) Water solubility in trachytic melts. *Chemical Geology* 213, 187-196.
2. Holtz F., Lenné S., Ventura G., **Vetere F.**, Wolf P. (2004) Non-linear deformation and break up of enclaves in a rhyolitic magma: A case study from Lipari Island (southern Italy), *Geophys. Res. Lett.*, 31, L24611, doi:10.1029/2004GL021590.
3. **Vetere F.**, Behrens H., Holtz F., Neuville D. R. (2006) Viscosity of andesitic melts – new experimental data and a revised calculation model. *Chemical Geology* 228, 233-245.
4. **Vetere F.**, Behrens H., Misiti V., Ventura G., De Rosa R., Holtz F., Deubener J. (2007) Viscosity of shoshonitic melt (Vulcanello Aeolian Islands, Italy) and inference on the dynamics of magma ascent. *Chemical Geology* 245, 89-102.
5. **Vetere F.**, Behrens H., Schuessler J. A., Holtz F., Misiti V., Borchers L. (2008) Viscosity of andesite melts and its implication for magma mixing prior to Unzen 1991 – 1995 eruption. *Journal of Volcanology and Geothermal Research*, 175, 208-217. doi: 10.1016/j.jvolgeores.2008.03.028
6. Whittington A., Hellwig B., Behrens H., Joachim B., Stechern A., **Vetere F.** (2008) The viscosity of hydrous dacitic liquids: implications for the rheology of evolving silicic magmas. *Bulletin of Volcanology*, 71, 185–199. DOI 10.1007/s00445-008-0217-y
7. Behrens H., Misiti V., Freda C., **Vetere F.**, Botcharnikov R., Scarlato P. (2009) Solubility of H<sub>2</sub>O and CO<sub>2</sub> in ultrapotassic melts at 1200 and 1250 °C and pressure from 50 to 500 MPa. *American Mineralogist*, Volume 94, pages 105–120.

8. Davì M., Behrens H., **Vetere F.**, De Rosa R. (2009) The viscosity of latitic melts from Lipari (Aeolian Islands, Italy): inference on mixing-mingling processes in magmas. *Chemical Geology*, 259, 89-97.
9. Misiti V., **Vetere F.**, Mangiacapra A., Behrens H., Cavallo A., Scarlato P. Dingwell D. (2009) Viscosity of high-K basalt from the 5th April 2003 Stromboli paroxysmal explosion. *Chemical Geology*, 260, 278-285.
10. Davì M., De Rosa R., Donato P., **Vetere F.**, Barca D., Cavallo A. (2009) Magmatic evolution and plumbing system of ring-fault volcanism: the Vulcanello Peninsula (Aeolian Islands, Italy). *European Journal of Mineralogy. Eur. J. Mineral.* 21, 1009-1028
11. **Vetere F.**, Behrens H., Holtz F., Vilardo G., Ventura G. (2010) Viscosity of crystal-bearing hydrous andesites and its implication for magma ascent. *Journal of Mineralogical and Petrological Sciences* vol. 105 no.4, 151-163. doi: 10.2465/jmps.090402
12. Bartels, A., **Vetere, F.**, Holtz, F., Behrens, H., and Linnen, R. (2010) Viscosity of flux-rich pegmatitic melts. *Contributions to Mineralogy and Petrology* 162, 51-60.
13. **Vetere F.**, Botcharnikov R., Behrens H., Holtz F., De Rosa R. (2011) Solubility of H<sub>2</sub>O and CO<sub>2</sub> in shoshonitic melts at 1250 °C and pressure from 50 to 400 MPa. *Journal of Volcanology and Geothermal Research* 202, 251–261.
14. Misiti V., **Vetere F.**, Mangiacapra A., Freda C., Behrens H., Scarlato P. (2011) A general viscosity model of Campi Flegrei (Italy) melts. *Chemical Geology*, 290, 50-59.
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18. **Vetere F.**, Behrens H., Botcharnikov R., Holtz F., Fanara S. (2014) The role of alkalis in the solubility of H<sub>2</sub>O and CO<sub>2</sub> in silicate melts. Implication for phonotephritic magmas. *Contribution to Mineralogy and Petrology* 167, 1-17.
19. Misiti V., **Vetere F.**, Heidelbach F. (2014) Crystallisation from a melt and crystallisation at subsolidus conditions: comparison from crystal size distribution study on Gennargentu Rocks (Sardinia, Italy). *Periodico di Mineralogia*, 83\_ 3
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25. Perugini D., De Campos C.P., Petrelli M., Morgavi D., **Vetere F.**, Dingwell D.B., (2015) Quantifying magma mixing with the Shannon entropy: a comparison between numerical simulations and high-temperature experiments with natural melts. *Lithos* 236–237, 299–310
26. **Vetere F.**, Petrelli M., Morgavi D., Perugini D. (2015) Dynamics and time evolution of a shallow plumbing system: the 1739 and 1888-90 eruptions, Vulcano Island, Italy. *Journal of Volcanology and Geothermal Research* 306, 74-82.
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30. Rossi S., Petrelli M., Morgavi D., Gonzalez D., Fischer L., **Vetere F.**, Perugini D., (2017) Exponential decay of concentration variance during magma mixing: robustness of a volcanic chronometer and implication for the homogeneity in magmatic systems. *Lithos*, 286-287, 396-407, doi:10.1016/j.lithos.2017.06.022.
31. **Vetere F.**, Rossi S., Namur O., Perugini D., Morgavi D., Misiti V., Mancinelli P., Petrelli M., Pauselli C. (2017) Experimental constraints on the rheology, eruption and emplacement dynamics of lavas from Mercury Northern Volcanic Plains" to *Journal of Geophysical Research – Planets*, 122, 1-17, doi:10.1002/2016JE005181.

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35. González-García D., Petrelli M., Behrens H., **Vetere F.**, Fischer L.A., Morgavi D., Perugini D. (2018) Diffusive exchange of trace elements between alkaline melts: implications for element fractionation and timescale estimations during magma mixing. *Geochimica et Cosmochimica Acta* 233 (2018) 95–114.
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37. Rossi S., M Petrelli M., Morgavi D., **Vetere F.**, Almeev R., Astbury R., Perugini D. (2019) The role of magma mixing on pre-eruptive dynamics at the Aeolian Islands (Southern Tyrrhenian Sea, Italy). *Lithos* 324–325 165–179.
38. **Vetere F.**, Murri M., Alvaro M., Domeneghetti M.C., Rossi S., Pisello A., Holtz F., Perugini D. (2019) Viscosity of Pyroxenite Melt and its Evolution during Cooling: an experimental approach. *JGR-Planets* 124. [https://doi.org/ 10.1029/2018JE005851](https://doi.org/10.1029/2018JE005851)
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43. **Vetere F.**, Mazzeo A., Perugini D. and Holtz F. (2020). Viscosity behaviour of silicate melts during cooling under variable shear rates. *Journal of Non-Crystalline Solids*, 533, 119902

44. **Vetere F.** and Holtz F. (2020) Rheological behavior of partly crystallized silicate melts under variable shear rate. Chapter in Dynamic Magma Evolution, Geophysical Monograph Series – WILEY, edited by F. Vetere. <https://doi.org/10.1002/9781119521143.ch7>
45. Giuliani, L., Iezzi, G., **Vetere, F.**, Behrens, H., Mollo, S., Cauti, F., Ventura, G., Scarlato, P. (2020) Evolution of textures, crystal size distributions and growth rates of plagioclase, clinopyroxene and spinel solidified at variable cooling rates from a mid-ocean ridge basaltic liquid. *Earth Science Reviews*, 204, 103165.
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49. Pisello A., De Angelis S., Ferrari M., Porreca M., **Vetere F.**, De Sanctis M. C. and Perugini D. (2022) Visible and Near-InfraRed (VNIR) reflectance of silicate glasses: characterization of a featureless spectrum and its implications for planetary geology. *Icarus*. <https://doi.org/10.1016/j.icarus.2021.114801>
50. Rooyakkers S., Stix J., Berlo K., Morgavi D., Petrelli M., Rusiecka M., Barker S., Charlier B., Neave D., **Vetere F.**, Diego Perugini. Rifting and recharge as triggers of the mixed basalt-rhyolite Halarauður ignimbrite eruption (Krafla, Iceland)" Contribution to Mineralogy and Petrology: CTMP-D-21-00168, accepted.
51. Giuliani L., **Vetere F.**, Iezzi G., Behrens, H., Mollo S., Ventura G., Nazzari M. Chemical variations of phases grown from a MORB melt cooled at variable rates. *Chemical Geology*. doi.org/10.1016/j.chemgeo.2022.120765
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Siena

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1 Marzo, 2022

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