

# Danilo Di Genova

National Research Council (CNR), Institute of Science, Technology and Sustainability for Ceramics (ISSMC), Faenza  
Honorary staff member of the Bayerisches Geoinstitut, University of Bayreuth, Germany

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Language skills: Italian (Mother tongue), English (fluent), German (basic)

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## EDUCATION AND PROFESSIONAL APPOINTMENTS

01.01.2022 – ongoing	Senior Researcher. Institute of Science, Technology and Sustainability for Ceramics (ISSMC-CNR), Rome, Italy.
15.12.2021 – 31.09.22	Researcher. National Institute of Geophysics and Volcanology (INGV), Rome, Italy.
01.03.2020 – ongoing	Akademischer Rat (until 14.12.2021). Currently honorary staff member. Bayerisches Geoinstitut, Universität Bayreuth, Germany.
01.07.2018 – 29.02.2020	Research Associate. Institute of Non-Metallic Materials, Clausthal University of Technology, Clausthal-Zellerfeld, Germany.
01.10.2016 – ongoing	Research Associate (until 30.06.2018). Currently honorary staff member. “Quantifying disequilibrium processes in basaltic volcanism (NSFGEO-NERC - DisEqm)”. School of Earth Sciences, University of Bristol, Bristol, UK.
16.12.2013 – 30.09.2016	Postdoctoral position. “Explosive volcanism in the Earth system (ERC Advanced Grant 247076 - EVOKES)”. Department of Earth- and Environmental Sciences, Ludwig-Maximilians-Universität, Munich, Germany.
22.05.2013 – 30.11.2013	Fellowship position at Vulcamed Project. “Monitoring of volcanic risks”. National Institute of Geophysics and Volcanology (INGV – Napoli).
01.11.2011 – 21.05.2013	Postdoctoral position. “The effect of H <sub>2</sub> O and CO <sub>2</sub> on magma rheology”. Department of Science, Università degli studi di Roma Tre, Italy.
01.11.2008 – 31.10.2011	PhD in Environmental and Resource Geology. “Experimental investigation of physical and chemical properties of magmas. Application to magma degassing”. Department of Science, Università degli studi di Roma Tre, Italy. Supervisor: Prof. Claudia Romano.
23.05.2008	MSc with merits (110/110 cum laude) in Geology. “Rheological and electrical proprieties of peralkaline magmas from Pantelleria Island”. Department of Science, Università degli studi di Roma Tre, Italy. Supervisors: Prof. F. Barberi and Prof. Claudia Romano.
18.02.2005	BSc (110/110) in Geology. “Geological survey, Structural Geology and pollution”. Department of Science, Università degli studi di Roma Tre, Italy. Supervisors: Prof. Brent T. Poe, Prof. Annibale Mottana.

## SKILLS

### Analytical Techniques

Electron microprobe (EMP), scanning electron microscope (SEM), Fourier-transform infrared spectroscopy (FTIR), Raman spectroscopy, wet chemistry, rotational viscometer, dilatometer, differential scanning calorimetry (DSC), simultaneous thermal analysis (STA), thermal gravimetric analysis (TGA), synchrotron X-ray tomography and diffraction, small- and wide-angle X-ray scattering (SAXS-WAXS)

### Experimental Techniques

High-temperature synthesis, gas mixing, piston cylinder, multi-anvil, titanium zirconium molybdenum pressure vessel (TZM), cold seal pressure vessel (CSPV)

### Numerical modelling and data analysis

R, MATLAB

## GRANTS AWARDED AND TEACHING QUALIFICATION

2023-ongoing	PRIN 2022 200k€ Ministero dell'università e della ricerca, CNR-IGAG. <b>CRYSTALKIN</b> “Quantifying micro- and nano-CRYSTALLization KINETics of magmas: from laboratory and real-time in situ observations to implications on magma fragmentation” (Head of the research unit 100k€).
2022-ongoing	European Research Council 2M€, Bayerisches Geoinstitut. <b>NANOVOLC</b> “Nanoscale dynamics of volcanic processes: Experimental insights and numerical simulations of explosive eruptions” (Principal investigator).
2022	National Academic Qualification as Full Professor (Italy).
2021-ongoing	German Research Foundation 225k€, Bayerisches Geoinstitut. “ <b>Rheology of nanocrystal-bearing natural silicate melts</b> ” (Principal investigator).
2021-ongoing	German Research Foundation 230k€, Technical University of Clausthal. “ <b>Rheology of nanocrystal-bearing technical silicate melts</b> ” (Co-investigator, Prof. J. Deubener principal investigator).
2019	EPOS Multi-scale laboratories facilities proposal n. EPOS-TNA-MSL 2019-004: “ <b>Viscosity of hydrous melts</b> ” (Principal Investigator).
2018	Diamond Light Source (UK), I22 proposal number SM20447: “ <b>In situ observation of incipient crystallization of volcanic melts</b> ” (Principal Investigator).
2018	European Synchrotron Radiation Facility (France), BM26A proposal number ES-793: “ <b>In situ study of nano- and micro-crystallization in volcanic melt under different <math>f_{O_2}</math></b> ” (Principal Investigator).
2018	EPOS Multi-scale laboratories facilities proposal n. EPOS-TNA-MSL 2018-009: “ <b>Effect of oxygen fugacity on melt properties</b> ” (Principal Investigator).
2017	Diamond Light Source (UK), I15 proposal n. EE17615-1: “ <b>In situ study of crystallization in molten iron silicate</b> ” (Principal Investigator).
2016	Diamond Light Source (UK), I12 proposal n. NE/M018687/1: “ <b>Mobilizing magma in the largest eruptions: In situ observation of microstructural controls on multi-phase fluid rheology</b> ” (Co-Investigator).
2018	National Academic Qualification as Associate Professor (Italy).

2016 Qualification Maître de conférences (Assistant Professor) in “Structure et évolution de la terre et des autres planets (France)”.

#### PROFESSIONAL SERVICES AND AWARDS

2019 “The melt and fluid inclusion message in Earth and Planetary Sciences” Convener: Di Muro, A., co-convener Di Genova, D., Morizet, Y., GMPV 2.2 – Geochemistry, Mineralogy, Petrology & Volcanology, EGU 2019, Vienna.

2016 – 2018 “Storage, activation and transport processes in magmatic system” Conveners: Balcone-Boissard, H., Montagna, C., Di Genova, D., GMPV 5.7 – Geochemistry, Mineralogy, Petrology & Volcanology, EGU 2016-2018, Vienna.

2015 “Structure, dynamics and properties of silicate melts and magmas” Convener: Di Genova, D., Co-Conveners: Henderson, G., Neuvill, D. V33F, AGU 2015, San Francisco, USA.

**Editorial Board Member:** Journal of Volcanology and Geothermal Research; Glass Europe

**Awards:** Alfred Rittmann 2022 medal (Italian Association of Volcanology).

#### JOINED RESEARCH PROJECTS

2016 – 2022 NSFGEO-NERC Grant: “Quantifying disequilibrium processes in basaltic volcanism” (DisEqm). PI Prof. M. Burton (University of Manchester) and Prof. H. Mader (University of Bristol, UK).

2013 – 2016 ERC Advanced Grant: “Explosive volcanism in the earth system: experimental insights (EVOKES)”. PI Prof. D. B. Dingwell (Ludwig-Maximilians-Universität, Munich, Germany).

2012 – 2013 ENI S.P.A.: “Raman spectroscopy analysis of carbonaceous material as a geothermometer in low-high grade metasediments”. PI Prof. S. Corrado (Università degli studi di Roma Tre).

2008 – 2010 COFIN/PRIN 2007: “Proprietà fisico-chimiche dei fusi silicatici in presenza di componenti volatili: sperimentazione, modellizzazione ed applicazioni al degassamento magmatico”. PI Prof. C. Romano (Università degli Studi di Roma Tre).

2007 – 2009 FIRB Air Plane: “Piattaforma di ricerca multidisciplinare su terremoti e vulcani”. PI Prof. F. Barberi (Università degli Studi di Roma Tre).

#### INVITED SEMINARS AND PRESENTATION AT CONFERENCES, UNIVERSITIES, INSTITUTES

20 Crystallization in natural melts: nanoscale approach to volcanic eruptions and unconventional ways to derive melt viscosity. 13th International Symposium on Crystallization in Glasses and Liquids, Orléans, September 2024. Invited.

19 The elephant in the room: nanocrystals formation in laboratory and volcanic conduits. INQUA 2023 (Online), October 2022. Invited.

18 The elephant in the room: nanocrystals formation in laboratory and volcanic conduits. Institut des Sciences de la Terre d'Orléans (ISTO, France), September 2022. Invited.

17 Nanocrystals formation, the elephant in the laboratory. Goldschmidt (Hawaii, USA), July 2022. Invited keynote.

- 16 Volcanic eruptions: the crossroads of earth and material sciences. University of Camerino (Italy), June 2022. Invited.
- 15 Magma transport – moving forward. From nanoscale observations to new infrastructure development. Ludwig Maximilian University (Germany), June 2022. Invited.
- 14 Magma properties – melt structure relationships: 10 years of Known-Knowns and -Unknowns in Volcanology. University of La Sapienza (Italy), April 2022. Invited.
- 13 From macro, to micro, to nano: Known-Knowns and -Unknowns in Volcanology. University of Pavia (Italy), May 2021. Invited.
- 12 The impact of nanocrystal formation on magma viscosity and degassing: implications for the style of volcanic eruptions. University of Bayreuth (Germany), July 2020. Invited.
- 11 Volcanic eruptions: a nanoscale perspective. SIMP-SGI conference, Parma (Italy), September 2019. Invited.
- 10 From macro to micro to nano: relationships between volcanic processes and dynamics of silicate melts. Bavarian Geoinstitute for Experimental Geochemistry and Geophysics (Germany), July 2019. Invited.
- 9 Volcanic eruptions: a nanoscale perspective. Institute fuer Mechanisce Verfahrenstechnik Clausthal University of Technology (Germany), April 2019. Invited.
- 8 Viscosity of fluids and silicate melts carrying nanoparticles. Clausthal University of Technology (Germany), December 2018. Invited.
- 7 A nanoscale look at the physical properties of silicate melts and dynamics of volcanic eruptions. DGG-Fachausschussitzung FA I Physik und Chemie des Glases, Aachen (Germany), October 2018.
- 6 From nano- to macro-scale: structure/properties relationship in natural silicate melts. Institute of Non-Metallic Materials Clausthal University of Technology (Germany), February 2018. Invited.
- 5 Raman spectroscopy applied to volcanology. University of Bristol (UK), July 2017. Invited.
- 4 Raman spectroscopy as a tool to unravel volcanic processes: applications to Earth and Martian volcanism. IPGP (France), March 2016. Invited.
- 3 Structure/property relationships in natural silicate melts. University of Bristol (UK), June 2016. Invited.
- 2 An advanced rotational rheometer system for extremely fluid liquids up to 1273 K and applications to alkali carbonate melts. Fifteenth International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Zurich (Switzerland), 2016.
- 1 Raman spectroscopy as a tool to estimate the chemical composition and iron oxidation state of silicate glasses. 10th Silicate Melt Workshop, La Petite Pierre (France), 2015.

## PUBLICATIONS

- 48 Valdivia, P., Zandonà, Löschmann J., Bondar. D., Genevois, C., Canizarès A., Allix M., Miyajima, N., Kurnosov, A., Boffa-Ballaran, T., Di Fiore, F., Vona, A., Romano, C., Deubener, J., Bamber, E., **Di Genova, D.** Nanoscale chemical heterogeneities control magma viscosity and failure. [Link](#).
- 47 Bondar, D., Canizarès, A., Bilardello, D., Valdivia, P., Zandonà, A., Romano, C., Allix, M., **Di Genova, D.**, 2025. Nanolite crystallization in volcanic glasses: Insights from high-temperature Raman spectroscopy and low-temperature rock-magnetic analysis. *Geochemistry, Geophysics, Geosystems*. [Link](#).
- 46 Giuliani, G., **Di Genova, D.**, Di Fiore, F., Valdivia, P., Mollo, S., Romano, C., Boffa Ballaran, T., Kurnosov, A., Vona, A., 2024. The effect of carbonate assimilation and nanoheterogeneities on the viscosity of phonotephritic melt from Vesuvius. *Chemical Geology*. [Link](#).
- 45 Di Fiore, F., Vona, A., **Di Genova, D.**, Pontesilli, A., Calabrò, L., Mollo, S., Taddeucci, J., Romano, C., Scarlato, P., 2024. Magma titanium and iron contents dictate crystallization timescales and rheological behaviour in basaltic volcanic systems. *Nature Communications Earth & Environment*. [Link](#).
- 44 Mollo, S., Moschini, P., Ubide, T., MacDonald, A., Vetere, F., Nazzari, M., Misiti, V., Miyajima, N., Melai, C., **Di Genova, D.**, Vona, A., Di Fiore, F., Romano, R., 2023. Kinetic partitioning of trace cations between zoned clinopyroxene and a variably cooled-decompressed alkali basalt: Thermodynamic considerations on lattice strain and electrostatic energies of substitution. *Geochimica et Cosmochimica Acta*. [Link](#).
- 43 Zandonà, A., Scarani, A., Löschmann, J., Cicconi, M.R., Di Fiore, de Ligny, D., Deubener, J., Vona, A., Allix, M., **Di Genova, D.**, 2023. Non-stoichiometric crystal nucleation in a spodumene glass containing TiO<sub>2</sub> as seed former: Effects on the viscosity of the residual melt. *Journal of Non-Crystalline Solids*. [Link](#).
- 42 Valdivia, P., Zandona, A., Kurnosov, A., Ballaran, T. B., Deubener, J., **Di Genova, D.**, 2023. Are volcanic melts less viscous than we thought? The case of Stromboli basalt. *Contributions to Mineralogy and Petrology*. [Link](#).
- 41 **Di Genova, D.**, Bondar, B., Zandonà, A., Valdivia, P., Al-Mukadam, R., Fei, H., Withers, A.C., Boffa Ballaran, T., Kurnosov, A., McCammon, C., Deubener, J., Katsura, T., 2023. Viscosity of anhydrous and hydrous peridotite melts. *Chemical Geology*. [Link](#).
- 40 Langhammer, D., **Di Genova, D.**, Steinle-Neumann, G., 2022. Modelling viscosity of volcanic melts with artificial neural networks. *Geochemistry, Geophysics, Geosystems*. [Link](#).
- 39 Scarani, A. Zandonà, A., Di Fiore, F. Valdivia, P., Putra, R., Miyajima, N., Bornhöft, H., Vona, A., Deubener, J., Romano, C., **Di Genova, D.**, 2022. A chemical threshold controls nanocrystallization and degassing behaviour in basalt magmas. *Nature Communications Earth & Environment*. [Link](#).
- 38 Arzilli, F., Polacci, M., La Spina, G., Le Gall, N., Llewellyn, E., Brooker, R.A., Torres-Orozco, R., **Di Genova, D.**, Neave, D., Hartley, M., Mader, H.M., Giordano, D., Atwood, R.C., Lee, P., Heidelberg, F., Burton, M., 2022. Dendritic crystallization in hydrous basaltic magmas controls magma mobility within the Earth's crust. *Nature Communications*. [Link](#).

- 37 Scarani, A., Vona, A., **Di Genova, D.**, Al-Mukadam, R., Romano, C., Deubener, J., 2022. Determination of cooling rates of glasses over four orders of magnitude. *Contributions to Mineralogy and Petrology*. [Link](#).
- 36 Bondar, D., Zandonà, A., Withers, A.C., Fei, H., **Di Genova, D.**, Miyajima, N., Katsura, T., 2022. Rapid-quenching of high-pressure depolymerized hydrous silicate (peridotitic) glasses. *Journal of Non-Crystalline Solids*. [Link](#).
- 35 Dingwell, D.B., Hess, K.-U., Wilding, M.C., Brooker, R.A., **Di Genova, D.**, Drewitt, J.W.E., Wilson, M., Weidendorfer, D., 2022. The glass transition and the non-Arrhenian viscosity of carbonate melts. *American Mineralogist*. [Link](#).
- 34 Langhammer, D., **Di Genova, D.**, Steinle-Neumann, G., 2021. Modeling the viscosity of anhydrous and hydrous volcanic melts. *Geochemistry, Geophysics, Geosystems*. [Link](#).
- 33 Cassetta, M., **Di Genova\***, **D.**, Zanatta, Z., Boffa Ballaran, T., Kurnosov, A., Giarola, M., Mariotto, G., 2021. Estimating the viscosity of volcanic melts from the vibrational properties of their parental glasses. *Scientific Reports*. \*Corresponding author. [Link](#).
- 32 Le Gall, N., Arzilli, F., La Spina, G., Polacci, M., Cai, B., Hartley, M.E., Vo, T.N., Atwood, R.C., **Di Genova, D.**, Nonni, S., E., Llewellyn, E., Burton, M.R., Lee, P. 2021 in Review. In situ quantification of crystallisation kinetics of plagioclase and clinopyroxene in basaltic magma: implications for lava flow. *Earth and Planetary Science Letters*. [Link](#).
- 31 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*. [Link](#).
- 30 La Spina, G., Arzilli, F., Llewellyn, E.W., Burton, M., Clarke, A.B., de' Michieli Vitturi, M., Polacci, M., Hartley, M., **Di Genova, D.**, Mader, H.M., 2021. Explosivity of basaltic lava fountains is controlled by magma rheology, ascent rate and outgassing. *Earth and Planetary Science Letters*. [Link](#).
- 29 **Di Genova, D.**, Brooker, R.A., Mader, H.M., Drewitt, J.W.E., Longo, A., Deubener, J., et al., 2020. In situ observation of nanolite growth in volcanic melt: A driving force for explosive eruptions. *Science Advances*. [Link](#).
- 28 Hughes, E.C., Buse, B., Kearns, S.L., Brooker, R.A., **Di Genova, D.**, Kilgour, G., Mader, H.M., Blundy, J.D., 2020. The microanalysis of iron and sulphur oxidation states in silicate glass - Understanding the effects of beam damage. *IOP Conference Series: Materials Science and Engineering*. [Link](#).
- 27 **Di Genova, D.**, Zandona, A., Deubener, J., 2020. Unravelling the effect of nano-heterogeneity on the viscosity of silicate melts: Implications for glass manufacturing and volcanic eruptions. *Journal of Non-Crystalline Solids*, 545, 120248. [Link](#).
- 26 Dobson, K.J., et al., 2020. Quantifying microstructural evolution in moving magma. *Frontiers in Earth Science*. [Link](#).
- 25 Al-Mukadam, R., **Di Genova, D.\***, Bornhöft, H., Deubener, J., 2020. High rate calorimetry derived viscosity of oxide melts prone to crystallization. *Journal of Non-Crystalline Solids*, 536, 15. \*Corresponding author. [Link](#).

- 24 Bamber, E. C., Arzilli, F., Polacci, M., Hartley, M., Fellowes, J. **Di Genova, D.**, Chavarria, C., Saballos, J.A., Burton, M., **2020**. Pre- and *syn*-eruptive conditions of a basaltic Plinian eruption at Masaya Volcano, Nicaragua: The Masaya Triple Layer (2.1 ka). *Journal of Volcanology and Geothermal Research*. [Link](#).
- 23 Arzilli, F., La Spina, G., Burton, M., Polacci, M., Le Gall, N., Hartley, M., **Di Genova, D.**, Cai, B., Vo, N., Bamber, E., Nonni, S., Atwood, R.C., Llewellyn, E., Brooker, R.A., Mader, H.M., Lee, P. **2019**. Highly explosive basaltic eruptions: magma fragmentation induced by rapid crystallisation. *Nature Geoscience*, 12, 1023–1028. [Link](#).
- 22 Giordano, D., González-García, D., Russel, J.K., Raneri, S., Bersani, D., Fornasini, L., **Di Genova, D.**, Ferrando, S., Kaliwoda, M., Lottici, P.P., Smit, M., Dingwell, D.B., **2019**. A calibrated database of Raman spectra for natural silicate glasses: implications for modelling melt physical properties. *Journal of Raman spectroscopy*. [Link](#).
- 21 Arzilli, F., Morgavi, D., Petrelli, M., Polacci, M., Burton, M., **Di Genova, D.**, Spina, L., La Spina, G., Hartley, M.E., Romero, J.E., Fellowes, J., Diaz-Alvarado, J., Perugini, D., **2019**. The unexpected explosive sub-Plinian eruption of Calbuco Volcano (22-23 April 2015; southern Chile): Triggering mechanism implication. *Journal of Volcanology and Geothermal Research*, 378, 35–50. [Link](#).
- 20 **Di Genova, D.** Caracciolo, A., Kolzenburg, S., **2018**. Measuring the degree of “nanotilization” of volcanic glasses: Understanding syn-eruptive processes recorded in melt inclusions. *Lithos*. 318–319, 209-218, [Link](#).
- 19 Hughes, E., Buse, B., Kearns, S.K., **Di Genova D.**, Blundy, J., **2018**. Analysis of Redox Changes in Silicate Glasses Using EPMA and Raman Spectroscopy. *Microscopy and Microanalysis* 24 (S1), 2022-2023. [Link](#).
- 18 Fuglignati, P. Gioncada, A., Costa, S. **Di Genova D.**, Di Traglia, F., Pistolesi, M., **2018**. Magmatic sulfide immiscibility at an active magmatic-hydrothermal system: the case of La Fossa (Vulcano, Italy). *Journal of Volcanology and Geothermal Research*, 358, 45-57. [Link](#).
- 17 Polacci, M., Arzilli, F., La Spina, G., Le Gall, N., Cai, B., Hartley, M., **Di Genova D.**, Vo, N., Nonni, S., Atwood, R., Llewellyn, E., Lee P., and Burton, M. R., **2018**. Crystallisation in basaltic magmas revealed via in situ 4D synchrotron X-ray microtomography. *Scientific Reports*, 8, 8377. [Link](#).
- 16 Hughes, E., Buse, B., Kearns, S.K., Blundy, J., Kilgour, G., Mader, H., Brooker, R.A., Balzer, R., Botcharnikov, R., **Di Genova, D.**, Almeev, R.R., Riker, J.M., **2018**. High spatial resolution analysis of the Iron oxidation state in silicate glasses using the electron probe. *American Mineralogist*, 103 (9): 1473–1486. [Link](#).
- 15 Kolzenburg, S., **Di Genova, D.**, Giordano, D., Hess, K.U., Dingwell, D.B., **2018**. The effect of oxygen fugacity on the rheologic cut-off of basalts. *Earth and Planetary Science Letters*, 487, 21-32. [Link](#).
- 14 **Di Genova, D.**, Kolzenburg, S., Wiesmaier, S., Dallanave, E., Neuville, D., Hess, K.-U., Dingwell, D. B., **2017**. A subtle chemical tipping point governing mobilization and eruption style of rhyolitic magma. *Nature*, 552, 235-238. [Link](#).

- 13 **Di Genova, D.**, Sicola, S., Romano, C., Vona, A., Fanara, S., 2017. Effect of iron and nanolites on Raman spectra of volcanic glasses: a reassessment of existing strategies to estimate the water content. *Chemical Geology*, 475, 76-86. [Link](#).
- 12 **Di Genova, D.**, Vasseur, J., Hess, K.-U., Neuville, D. R., Dingwell, D. B., 2017. Effect of oxygen fugacity on the glass transition, viscosity and structure of silica- and iron-rich magmatic melts. *Journal of non-crystalline solids*, 470, 78–85. [Link](#).
- 11 **Di Genova, D.**, Hess, K.-U., Chevrel, M. O., Dingwell, D. B., 2016. Models for the estimation of  $Fe^{3+}/Fe_{tot}$  ratio in terrestrial and extra-terrestrial alkali- and iron-rich silicate glasses using Raman spectroscopy. *American Mineralogist*, 101, 943–952. [Link](#).
- 10 Spina, L., Cimarelli C., Scheu, B., **Di Genova, D.**, Dingwell, D. B., 2016. On the decompressive response of volatile- and crystal-bearing magmas: an analogue experimental investigation. *Earth and Planetary Science Letters*, 433, 44–53. [Link](#).
- 9 **Di Genova, D.**, Cimarelli, C., Hess, K.-U., Dingwell, D. B., 2016. An enhanced rotational rheometer system for highly fluid melts at high temperature. *American Mineralogist*, 101, 953–959. [Link](#).
- 8 **Di Genova, D.**, Kolzenburg, S., Vona, A. Hess, K.-U., Chevrel, M. O., Neuville, D. R., Ingrisch, W. E., Romano, C., Dingwell, D. B., 2016. Raman spectra of Martian glass analogues: a tool to approximate their chemical composition. *Journal of Geophysical Research Planets*, 121, 5, 740–752. [Link](#).
- 7 Yilmaz, T., Duschl, F., **Di Genova D.**, 2016. Feathery and network-like filamentous textures as indicators for the crystallization of quartz from a silica gel precursor at the Rusey Fault, Cornwall, UK. *Solid Earth Discussion*, 7, 1509–1519. [Link](#).
- 6 **Di Genova, D.**, Morgavi, D., Hess, K.-U., Neuville, D. N., Borovkov, N., Perugini, D., Dingwell, D. B., 2015. Approximate chemical analysis of volcanic glasses using Raman spectroscopy. *Journal of Raman Spectroscopy*. *Journal of Raman Spectroscopy*, 46, 12, 1235–1244. [Link](#).
- 5 Giordano, D., Nichols, A.R.L., Potuzak, M., **Di Genova, D.**, Romano, C. and Russell, J.K, 2015. Heat capacity of hydrous trachybasalt from Mt Etna: comparison with  $CaAl_2Si_2O_8$  (An) –  $CaMgSi_2O_6$  (Di) as basaltic proxy compositions. *Contribution to Mineralogy and Petrology*, 170:48. [Link](#).
- 4 **Di Genova, D.**, Romano, C., Giordano, D. Alletti, M., 2014. Heat capacity, configurational heat capacity and fragility of hydrous magmas. *Geochimica et Cosmochimica Acta*, 142, 314–333. [Link](#).
- 3 **Di Genova, D.**, Romano, C., Alletti, M., Misiti, V., Scarlato, P., 2014. The effect of  $CO_2$  and  $H_2O$  on Etna and Fondo Riccio (Phlegrean Fields) liquid viscosity, glass transition temperature and heat capacity. *Chemical Geology*, 377, 72–86. [Link](#).
- 2 **Di Genova, D.**, Vona, A., Romano, C., Hess, K.U., Poe, B.T., Giordano, Dingwell, D.B., Behrens, H., 2013. The rheology of peralkaline rhyolites from Pantelleria Island. *Journal of Volcanology and Geothermal Research*, 249, 201–216. [Link](#).
- 1 Poe, B.T., Romano, C., **Di Genova, D.**, Behrens, H., Scarlato, P., 2012. Mixed electrical conduction in a hydrous pantellerite glass. *Chemical Geology*, 6, 320-321. [Link](#).