

## Dr. Corrado Cimarelli - *Curriculum Vitae*

cimarelli@min.uni-muenchen.de - Rumfordstrasse, 46 – 80469 Munich, Germany  
Tel.: +49 176.305.355.87      Fax:+49 (0) 89 2180-4176

### Education and Professional Appointments

- 08.2013 – present **Faculty staff** Department of Earth and Natural Sciences, Ludwig-Maximilians-Universität München, Munich, Germany.
- 11.2011 – 07.2013 **AXA Research Fund Fellow.** “*Risk from Volcanic Ash in the Earth System*”. Department of Earth and Natural Sciences, Ludwig-Maximilians-Universität, Munich, Germany.
12. 2009 - 11. 2011 **Marie Curie Research Fellow.** “*Experimental constrains on magma flow conditions during highly-explosive basaltic eruptions*”. Ludwig-Maximilians-Universität, Munich, Germany. Coordinator: Prof. D. Dingwell.
03. 2009 - 9. 2009 **Royal Society - Accademia dei Lincei Research Fellow.** “*Rheological properties of basaltic magmas modelled as analogue multiphase suspensions: A case study from Etna 2001 explosive eruption*”. Department of Earth Sciences, Bristol University, United Kingdom. Coordinator: Dr. H. Mader.
03. 2006- 03. 2009 **Post-Doctoral Research Associate.** “*Eruptive mechanisms and dynamic of transport and deposition of volcanic products*”. Dipartimento di Scienze Geologiche Università degli Studi Roma Tre, Rome Italy. Coordinator: Prof. D. de Rita.
11. 2002 – 11. 2005 **Ph.D. in Volcanology.** Dipartimento di Scienze Geologiche, Università degli Studi Roma Tre, Italy. Thesis title: “*New geo-volcanological data on the evolution of the Panarea Volcanic Complex (Aeolian Island) and their implication for volcanic hazard*”. Supervisor: Prof. D. de Rita.
02. 2005 – 05. 2005 **Guest Resercher.** Departamento de Geoquímica Petrologia i Prospecció Geològica, Universitat de Barcelona, Spain. Coordinator: Prof. D. Gimeno-Torrente.
04. 2002 **Laurea cum laude (Master degree) in Geological Sciences.** Università degli Studi Roma Tre, Italy. Thesis title: “*Controllo strutturale e modalità di messa in posto dei Domi Cimini*” (*Structural control and style of emplacement of the Cimini Domes: Northern Latium, Italy*).
09. 1999 – 03. 2000 **Socrates/Erasmus Scholar.** Universitat de Barcelona, Spain.

### Projects as PI and Supervisor

- 2020-2025 ERC Consolidator Grant. “VOLTA – The bright side of the plume: volcanic lightning and ash plume electrification” ERC-2019-COG n° 864052 (1,999,861 €). Task: Principal investigator.
- 2018-2021 DFG - Project. Investigating the occurrence of volcanic lightning (246,000 €). Task: Principal investigator and Supervisor of a PhD student.

- 2018-2020 Marie Skłodowskaia Curie Fellowship “INOVA – Geochemical Controls on the Ice Nucleating Efficiency of Volcanic Ash” H2020-MSCA-IF-2018 G.A. No. 746695 to Dr. Elena Maters at University of Leeds. Task: Secondary Supervisor.
- 2017-2018 LMU-Excellence Investment Fund Grant. Ludwig-Maximilians-Universität München (50,000 €). Task: Principal Investigator.
- 2016-2018 Disaster Prevention Research Institute of Kyoto University (4,000,000 ¥) “Geophysical observations of unsteadiness timescales in volcanic explosions: toward an integral dynamic model of mass flow variations in volcanic plumes”. Task: Co-PI with Prof. Matthias Hort (University of Hamburg).
- 2016-2018 National Geographic Exploration Fund (20,000 €). “Multiparametric observation of volcanic lightning” Task: Principal Investigator.
- 2016-2018 Marie Skłodowskaia Curie Fellowship “VOLTAIC - VOLcanic lighTning: a lAb and field approaCh”. H2020-MSCA-IF-2015 G.A. n°.705619 (170,000 €) to Dr. Damien Gaudin. Task: Scientific supervisor and coordinator.
- 2015-2019 EPOS-IP. European Plate Observing System – Implementation Phase. H2020-INFRADEV-1-2015-1 G.A. N° 676564. Task: Coordinator of Working Package (WP16 Multiscale Laboratories and Experimental Facilities) for LMU (40,000 €).
- 2012-2016 AXA Research Fund Grant (570,000 €) “*Risk from Volcanic Ash in the Earth System*”. Tasks: Principal investigator.
- 2009-2011 Marie Curie Fellowship (127,000 €). “BEACON - *Experimental constraints on magma flow conditions during highly-explosive basaltic eruptions*”. FP7-PEOPLE-IEF-2008 G.A. n°235328. Tasks: Principal Investigator.

## Participation to Research Projects

- 2009-2011 “*FIEL-Volcan*” Fondo de Cooperación Internacional en Ciencia y Tecnología Unión Europea-México. Tasks: Definition of the violent Strombolian explosive activity of Xitle scoria cone, Mexico.
- 2008-2009 “*V2 Paroxysm – Stromboli*” INGV-DPC. Tasks: High-speed camera observation of the Strombolian explosive activity and volcanic ash sampling with remote controlled aircrafts.
- 2008-2009 INGV – EDISON S.p.a. “*CO<sub>2</sub> storage in Italian saline aquifers and risk assessment*”. Tasks: Reconstruction of log stratigraphy of deep wells, hazard analysis of EDISON S.p.a. power plants, CO<sub>2</sub> storage site evaluation.
- 2007-2008 Agency of Regional Natural Parks of Lazio. “*Database and cartography of the geodiversity elements in the volcanic areas of Vico and Cimini*”. Tasks: GIS mapping, geotopes evaluation and creation of dedicated database.
- 2005-2007 INGV-DPC “*Monitoring and research activity at Stromboli and Panarea*”. Tasks: Stratigraphy of the recent explosive activity.
- 2003-2005 INGV-DPC “*Volcanic hazard scenarios forecasting at Panarea Island (Aeolian Archipelago) finalized to Civil Protection plans*”. Tasks: Stratigraphy of recent explosive activity, computing of high-resolution Digital Terrain Model of Panarea and the surrounding islets through digital photogrammetry and Differential GPS survey.
- 2002-2003 National Geological Cartography Project (CARG) - Italian Geological Survey. “*Geological mapping of sheet 413 scale 1:50.000*”. Tasks: Geological mapping of the submarine and subaerial volcanic products of the dome complex constituting the islands of Ponza, Palmarola and Zannone (Central Italy) and redaction of the explanatory notes.

## Honours and awards

2017 - LMU-Excellent Fund

2016 - National Geographic Society Exploration Award  
2009 - Marie Curie Fellowship  
2008 - Royal Society – Accademia dei Lincei Fellowship Award  
2005 - Research stage abroad at Universitat de Barcelona  
2000 - Socrates Erasmus Scholarship at Universitat de Barcelona

## Teaching

**Lecturer:** Volcanology (BSc) 2014-present; Petrology (MSc) 2014-present. Geological Mapping (BSc) 2006-2009; Geology of Volcanic Areas (MSc) 2006-2009; Volcanic Hazards and GIS (MSc) 2003-2009.

**Teaching assistant:** Volcanology excursion 2013-present. Geology Field Camp 2002-2009, Geology of Volcanic Areas Field Camp 2002-2009.

## Supervision of Graduate Students and Postdoctoral Researchers

**Supervised MSc students:** L. Teixeira, 2019; S. Stern (1.0), 2018; M. Knüver (1.0), 2018; L. Di Biasi (1.0), 2013; M. Procesi (*cum laude*), 2006; F. Di Traglia (*cum laude*), 2007; E. Del Bello (*cum laude*), 2008; M. Buttinelli (*cum laude*), 2008.

**Supervised BSc students:** V. Becker (1.3), L. Höltgen (1.3), 2015; M. Knüver (2.0), 2014; L. Tornetta (*cum laude*), 2008.

**Supervised PD fellows at LMU:** Dr. D. Gaudin (Marie S. Curie fellow, volcanic lightning); Dr. E. Maters (Marie S. Curie fellow, ash reactivity); Dr. P. Ayris (AXA fellow, gas-rock interaction and volcanic ash reactivity); Dr. V. Witt (AXA fellow, bio-reactivity of volcanic ash); Dr. L. Spina (Marie Curie-ITN NEMOH, foam instability in volcanic conduits); Dr. D. Di Genova (LMU internal funding, melts viscosity and complex rheology)

**Supervised PhD students at LMU:** C. Vossen (DFG, volcanic plume electrification); A. Casas Ramos (DAAD-FONACYT, ash-gas interaction in volcanic plumes).

**Designated Member of Doctoral Committees:** 1) Dep. of Earth Sciences of the Università di Torino. Candidate: Stephan Kolzenburg. Thesis title: “Development and Application of Rheological Laws for the Emplacement of Low Viscosity Lava Flows. An Integration of Experimental, Field and Remote-Sensing Methods”. December 2016. 2) Faculty of Earth Sciences University of Iceland. Candidate W.M. Moreland. Thesis title: “Explosive activity in flood lava eruptions: A case study of the 10<sup>th</sup> century Eldgjá eruption, Iceland”. February 2017. 3) Universitat de Barcelona. Candidate: M. Tarragó Aimerich. Thesis: Modelization of the vitrification of sewage sludge using a basaltic matrix. June 2018.

## Editorial Activity and Review Services

- Editor of “Active Volcanoes of the World”, Springer Verlag Book Series (<http://www.springer.com/series/10081?changeHeader>)
- Associate Editor of Annals of Geophysics
- Review Editor for Frontiers in Earth Sciences
- Expert Reviewer for Nature Geoscience, Geology, Earth and Planetary Science Letters, Journal of Geophysical Research, Geophysical Research Letters, G-cubed, Scientific Report, Bulletin of Volcanology, Frontiers in Earth Science, GSA Today, Geological Magazine, Journal of Volcanology and Geothermal Research, Arabian Journal of Geosciences, Natural Hazards and Earth System Science.
- Expert reviewer for: European Research Agency (ERA); USA National Science Foundation (NSF); UK Natural Environment Research Council (NERC); the Netherlands Organization for Scientific Research (NWO); Czech Science Foundation (GAČR); the Comisión de Grado Académico Universidad Nacional de La Plata, Argentina; University of Durham International Research and Enterprise Fellowships.
- Chairman of Volcanology thematic sessions at scientific congresses (AGU; EGU; IUGG; IAVCEI; FIST) and AGU Outstanding Student Paper Award Judge and Liaison.

## International and Institutional Responsibilities

- Board Member of the *Multi-scale Laboratories Thematic Core Service* within the EPOS (European Plate Observation System) European Research Infrastructure Consortium ([www.epos-ip.org](http://www.epos-ip.org))
- Member of the European Trans National Access Evaluation Committee for the Multi-scale Laboratory Network (European Plate Observation System) European Research Infrastructure Consortium
- Since 2012, Coordinator of the experimental and analytical facilities of the DEES-LMU in the EPOS European Research Infrastructure Consortium.
- Since 2016, Researcher in charge for the Electron Microscopy Analytical Facilities at the DEES-LMU.

## Outreach and Media Coverage

- *Volcanic lightning may be partially fed by Earth's natural radioactivity*, News from Science. <https://www.sciencemag.org/news/2019/03/volcanic-lightning-may-be-partially-fed-earth-s-natural-radioactivity>
- *Volcanoes! Lightning! And radioactive gas too*, The New York Times. <https://www.nytimes.com/2019/03/29/science/volcanoes-lightning-radon-gas.html>
- *Leben mit Vulkane: Liparische Inseln*, Arte TV. <https://www.arte.tv/de/videos/069786-010-A/leben-mit-vulkanen/>
- *Vulkane in Europa – faszinierend und unberechenbar*. Planet Wissen WDR. <https://www.planet-wissen.de/video-vulkane-in-europa--faszinierend-und-unberechenbar-100.html>
- *From ashes to flashes: everything you always wanted to know about volcanic lightning and never dared to ask*. Pint of Science 2017 Munich. <https://pintofsciencede.wixsite.com/pintofsciencede/copy-of-2016m3>
- *Glass spheres forged by volcanic lightning offer clues about eruptions* <http://www.pbs.org/newshour/updates/glass-spheres-forged-volcanic-lightning-offer-clues-eruptions/>
- *Glass formed by volcanic lightning could be used to study eruptions* <http://blogs.agu.org/geospace/2017/04/27/glass-formed-volcanic-lightning-used-study-eruptions/>
- *What Causes Eerie Eolian Lightning?* Scientific American. <https://www.scientificamerican.com/article/what-causes-eerie-volcanic-lightning/>
- *New studies uncover mysterious processes that generate volcanic lightning-* AGU GeoSpace <http://blogs.agu.org/geospace/2016/04/12/new-studies-uncover-mysterious-processes-generate-volcanic-lightning/>
- *Volcanic lightning made in the lab*. Nature - Research Highlights <http://www.nature.com/nature/journal/v504/n7480/full/504335a.html>
- *Volcanoes really CAN create their own lightning: Mystery of violent electrical flashes during eruptions is finally solved*. Daily Mail <http://www.dailymail.co.uk/sciencetech/article-3642674/Volcanoes-really-create-lightning-Mystery-violent-electrical-flashes-ash-clouds-eruptions-solved.html>
- *Scientists think they've solved the mystery of how volcanic lightning forms*. The Washington Post [https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/04/13/scientists-think-theyve-solved-the-mystery-of-how-volcanic-lightning-forms/?utm\\_term=.acdc7bc88de8](https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/04/13/scientists-think-theyve-solved-the-mystery-of-how-volcanic-lightning-forms/?utm_term=.acdc7bc88de8)
- *Lab volcano gives lightning clues*. BBC News. <http://www.bbc.com/news/science-environment-27220909>
- *Scientists storm ahead and create volcanic lightning in lab*. NBC news <http://www.nbcnews.com/science/scientists-storm-ahead-create-volcanic-lightning-lab-2D11775211>
- *First volcanic lightning created in a lab*. National Geographic Daily News. <http://news.nationalgeographic.com/news/2013/12/131213-volcano-lightning-lab-first-video/>
- *Vulkanblitze*. Welt der Physik. Bundesministerium für Bildung und Forschung. <http://www.weltderrphysik.de/mediathek/podcast/>
- *Die große Show der Naturwunder, Volcanic lightning*. ARD-Das Erste, German national public broadcasting. <http://www.swr.de/naturwunder/blitz-vulkan-ascbe-naturwunder-yogeshwar-elstner-technik-bionik-umwelt-natur-tesla-spule-faradayschen-kaefig/-/id=1223312/did=15479292/nid=1223312/rjbx7t/index.html>
- *Wenn der Vulkan Blitze spuckt*. Planet Erde. <http://www.planeterde.de/wissen/wenn-der-vulkan-blitze-spuckt/>
- *Vulkanische Blitze im Labor*. Die Durchblicker. BR, NDR, SWR, WDR, German national public broadcasting. <http://www.swr.de/blog/diedurchblicker/2014/03/10/vulkanische-blitze-im-labor/>

- *How to Stir Up Volcanic Lightning in a Lab.* Popular Mechanics.  
<http://www.popularmechanics.com/science/environment/how-to-stir-up-volcanic-lightning-in-a-lab-16266258>
- *Volcanic lightning generated in a bottle.* Earth Magazine  
<http://www.earthmagazine.org/article/volcanic-lightning-generated-bottle>
- *Volcano lightning strikes – in the lab.* Live Science  
<http://www.livescience.com/42082-volcano-lightning-created-in-lab.html>
- *Volcanic lightning captured in a bottle.* New Scientist  
<http://www.newscientist.com/article/dn24792-volcanic-lightning-captured-in-a-bottle.html#.VTIUAxdrVlw>
- *Tabletop kit makes volcanic lightning bolt.* New Scientist 2014 vol. 221, 2950  
<http://www.sciencedirect.com/science/article/pii/S0262407914600208>
- *Volcanic lightning in the lab and in the “wild”.* American Geophysical Union Blogosphere.  
<http://blogs.agu.org/magmacumlaude/2014/02/20/volcanic-lightning-in-the-lab-and-in-the-wild/>
- *Flash, bang, jet: new observations of volcanic plumes.* European Geoscience Union Newsletter  
<https://www.egu.eu/newsletter/geo/10/articles2.pdf>
- *Lightning could reveal volcano secrets.* Institute of Physics Environmental Research Web  
<http://blog.environmentalresearchweb.org/tag/volcanic-lightning/#container>
- *Volcanic lightning.* CERN Courier. International Journal of High-Energy Physics  
<http://cerncourier.com/cws/article/cern/56215>
- *Super Quark, The 2010 Eyjafjallajökull eruption.* RAI, Italian national public broadcasting  
[http://www.rai.tv/dl/RaiTV/programmi/media/ContentItem-68690f03-4b24-483e-a86d-e1c1421cddb6.html?p=0&refresh\\_ce](http://www.rai.tv/dl/RaiTV/programmi/media/ContentItem-68690f03-4b24-483e-a86d-e1c1421cddb6.html?p=0&refresh_ce)

## Memberships

IAVCEI – International Association of Volcanology and Chemistry of the Earth Interior; EGU – European Geoscience Union; AGU – American Geophysical Union; AIV – Associazione Italiana di Vulcanologia; FIST – Federazione Italiana Scienze della Terra.

## Publications list

### A) Books

1. Managing Editor of the IAVCEI Book Series “*Active Volcanoes of the World*”. Springer Verlag.  
Published books: Teide Volcano (Canary Islands), The Active Volcanoes of Chiapas (Mexico), Copahue Volcano (Argentina), Volcanoes of the Azores (Portugal), Active volcanoes of the South West Indian Ocean, Nisyros Volcano (Greece), Colima Volcano (Mexico). Books in press: Campi Flegrei Caldera (Italy), Poas (Costa Rica).  
<http://www.springer.com/series/10081?detailsPage=titles>

### B) Peer-reviewed papers

#### Submitted/In preparation

1. A.T. Prata, A. Folch, A. J. Prata, R. Biondi, H. Brenot, C. Cimarelli, S. Corradini, J. Lapierre & A. Costa *Fire and Ice: Anak Krakatau triggers volcanic freezer in the upper troposphere.* Resubmittet for publication in Scientific Reports.
2. Méndez Harper J.S., Cimarelli C., Cigala V., Kueppers U., Dufek J., Gaudin D. *Triboelectric or fractoelectric? What lightning tells us about granular mechanics in volcanic jets.* In preparation.

#### Published

1. Stern, S., Cimarelli, C., Gaudin, D., Scheu, B., & Dingwell, D.B. (2019). *Electrification of experimental volcanic jets with varying water content and temperature.* Geophysical Research Letters, 46. <https://doi.org/10.1029/2019GL084678>

2. Colombier, M., Mueller, S. B., Kueppers, U., Scheu, B., Delmelle, P., Cimarelli, C., ... Dingwell, D. B. (2019). *Diversity of soluble salt concentrations on volcanic ash aggregates from a variety of eruption types and deposits*. Bulletin of Volcanology, 81(7), 39. <https://doi.org/10.1007/s00445-019-1302-0>
3. Maters, E. C., Dingwell, D. B., Cimarelli, C., Müller, D., Whale, T. F., & Murray, B. J. (2019). *The importance of crystalline phases in ice nucleation by volcanic ash*. Atmospheric Chemistry and Physics, 19(8), 5451–5465. <https://doi.org/10.5194/acp-19-5451-2019>
4. Casas, A. S., Wadsworth, F. B., Ayris, P. M., Delmelle, P., Vasseur, J., Cimarelli, C., & Dingwell, D. B. (2019). *SO<sub>2</sub> scrubbing during percolation through rhyolitic volcanic domes*. Geochimica et Cosmochimica Acta, 257, 150–162. <https://doi.org/10.1016/j.gca.2019.04.013>
5. Nicol K., Airy M., Cimarelli C., Bennett A., Harrison G., Gaudin D., Aplin K., Koh KL. & Knüver M. (2019) *First in-situ observations of gaseous volcanic plume electrification*. Geophysical Research Letters. <https://doi.org/10.1029/2019GL082211>
6. Gaudin D. and Cimarelli C. (2019) *The electrification of volcanic jets and controlling parameters: a laboratory study*. Earth and Planetary Science Letters. Earth and Planetary Science Letters. 513. <https://doi.org/10.1016/j.epsl.2019.02.024>
7. A. J. Hornby, Y. Lavallée, J. E. Kendrick, G. Rollinson, A. Butcher, S. Clesham, U. Kueppers, C. Cimarelli, G. Chigna (2019) *Phase partitioning during fragmentation revealed by QEMSCAN Particle Mineralogical Analysis of volcanic ash*. Scientific Report 9:126, DOI:10.1038/s41598-018-36857-4.
8. Méndez Harper J.S., Cimarelli C., Dufek J., Thomas R., Gaudin D. 2018 *Inferring compressible fluid dynamics from vent discharges during volcanic eruptions*. Geophysical Research Letters. 45. <https://doi.org/10.1029/2018GL078286>
9. Colombier M., Scheu B., Wadsworth F., Cronin S., Vasseur J., Dobson K., Hess KU., Tost M., Yilmaz T., Cimarelli C., Brenna M., Ruthensteiner B., Dingwell D. *Vesiculation and quenching during Surtseyan eruptions at Hunga Tonga-Hunga Ha'apai volcano, Tonga*. Journal of Geophysical Research: Solid Earth, 123.<https://doi.org/10.1029/2017JB015357>.
10. S. A. Behnke, H. E. Edens, R. J. Thomas, C. M. Smith, S. R. McNutt, A. R. Van Eaton, C. Cimarelli, V. Cigala. *Investigating the Origin of Continual RF Impulses during Explosive Volcanic Eruptions*. Journal of Geophysical Research - Atmosphere. doi: 10.1002/2017JD027990.
11. M. Polacci, M. de' Michieli Vitturi, F. Arzilli, M. R. Burton, L. Caricchi, B. Carr, M. Cerminara, C. Cimarelli, A.B. Clarke, S. Colucci, A. Costa, W. Degruyter, T. Druitt, S. Engwell, T. Esposti Ongaro, D. Giordano, L. Gurioli, B. Haddadi, J. Kendrick, U. Kueppers, A. Lamur, Y. Lavallée, E. Llewellyn, H.M. Mader, N. Metrich, C. Montagna, A. Neri, E. Rivalta, G. Saccorotti, F. Sigmundsson, L. Spina, J. Taddeucci. (2017). *From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments, numerical modeling, and observations*: Annals of Geophysics. 60, 6 DOI: 10.4401/ag-7449.
12. Mueller SB., Kueppers U., Ametsbichler J., Cimarelli C., Merrison JP., Poret M., Wadsworth FB., Dingwell DB. (2017). Stability controls of volcanic ash aggregates against break-up processes. Scientific Reports. 7: 7440. DOI:10.1038/s41598-017-07927-w
13. Wadsworth F., Vasseur J., Llewellyn E., Genareau K., Cimarelli C., Dingwell D. (2017) *Size limits for rounding of volcanic ash particles heated by lightning*. Journal of Geophysical Research - Solid Earth, 122, doi:10.1002/
14. Witt V., Ayris P., Damby D., Cimarelli C., Kueppers U., Wörheide G., Dingwell D.B. (2017) *Volcanic ash supports large variability in pioneer bacterial community structure in a marine mesocosm*. Geobiology. 1-11. DOI: 10.1111/gbi.12231
15. Laeger K., Petrelli M., Andronico A., Misiti M., Scarlato P., Cimarelli C., Taddeucci J., del Bello E., Perugini D. (2017) *High-resolution geochemistry of volcanic ash highlights complex magma dynamics during the Eyjafjallajökull 2010 eruption*. American Mineralogist. 10.2138/am-2017-5860
16. Kolzenburg S., Giordano D., Cimarelli C., Dingwell D. (2016) *In Situ thermal characterization of cooling/crystallizing lavas during rheology measurements and implications for lava flow emplacement*. Geochimica et Cosmochimica Acta. <http://dx.doi.org/10.1016/j.gca.2016.09.022>

17. Spina L., Scheu B., Cimarelli C., Arciniega-Ceballos A., Dingwell DB. (2016) *Cyclic degassing at basaltic volcanoes: an experimental investigation*. *Geochem. Geophys. Geosyst* 17, doi:10.1002/2016GC006455.
18. Cimarelli C., Alatorre Ibargüengoitia MA., Aizawa K., Yokoo A., Dingwell DB. (2016) *Multiparametric observation of volcanic lightning: Sakurajima volcano, Japan*. *Geophysical Research Letters*. doi: 10.1002/2015GL067445.
19. Aizawa K., Cimarelli C., Alatorre Ibargüengoitia MA., Yokoo A., Dingwell DB., Iguchi M. (2016) *Physical properties of volcanic lightning at Sakurajima volcano, Japan: constraints from magnetotelluric and video observations*. *Earth and Planetary Science Letters* 444, 45-55.
20. Song W., Lavallée Y., Hess K-U., Kueppers U., Cimarelli C., Dingwell DB. (2016). *Volcanic ash melting under conditions relevant to ash turbine interactions*. *Nature Communications*. doi: 10.1038/ncomms10795.
21. Ayris PM., Cimarelli C., Delmelle P., Wadsworth FB., Vasseur J., Suzuki Y., Dingwell DB (2016). *A novel apparatus for the simulation of eruptive gas-rock interactions*. *Bulletin of Volcanology*. 77 (12), 1-5.
22. Di Genova D., Cimarelli C., Hess K., Dingwell DB. (2016) *An enhanced rotational rheometer system for highly fluid melts at high temperature*. *American Mineralogist*. 101, 953-959.
23. Spina L., Cimarelli C., Scheu B., Di Genova D., Dingwell D.B. (2016). On the slow decompressive response of volatile- and crystal-bearing magmas: an analogue experimental investigation. *Earth and Planetary Science Letters* 433, 44–53.
24. Lavallée Y., Dingwell DB., Johnson JB., Cimarelli C., et al. (2015) Thermal foaming during volcanic eruptions. *Nature*. 528 (7583), 544-547
25. Chevrel MO., Cimarelli C., deBiasi L., Hanson J., Lavallée Y., Arzilli F., Dingwell D.B. (2015). *Viscosity measurements of crystallizing andesite from Tungurahua volcano (Ecuador)*. *Geophysics, Geochemistry, Geosystems*. doi:10.1002/2014GC005661
26. Ayris PM., Delmelle P., Cimarelli C., Maters EC., Suzuki YJ., Dingwell DB (2014). *HCl uptake by volcanic ash in the high temperature eruption plume: mechanistic insights*. *Geochimica and Cosmochimica Acta* 144, 188-201. DOI:<http://dx.doi.org/10.1016/j.gca.2014.08.028>
27. Song W., Hess K., Damby DE., Wadsworth FB., Lavallée Y., Cimarelli C., Dingwell DB. (2014). *Fusion characteristics of volcanic ash relevant to aviation hazards*. *Geophysical Research Letters*. 41 (7), 2326-2333.
28. Kueppers U., Cimarelli C., Hess K., Taddeucci J., Wadsworth FB., Dingwell DB. (2014) *The thermal stability of Eyjafjallajökull ash versus turbine ingestion test sands*. *Journal of Applied Volcanology*. 3:4 doi:10.1186/2191-5040-3-4
29. Cimarelli C., Alatorre-Ibargüengoitia MA., Kueppers U., Scheu B., Dingwell DB. (2014) *Experimental generation of volcanic lightning*. *Geology*. 42 (1), 79-82. doi: 10.1130/G34802.1
30. Cimarelli C., Di Traglia D., De Rita D., Gimeno-Torrente D., Fernandez-Turiel JL. (2013). *Space-time evolution of monogenetic basaltic volcanism in the Garrotxa Volcanic Field, NE Iberian Peninsula*. *Bulletin of Volcanology*, Volume 75, Issue 11, pp.1-18. DOI 10.1007/s00445-013-0758-6
31. Van Eaton A.R., Muirhead J.D., Wilson C.J.N., Cimarelli C. (2012). *On the growth of volcanic ash-hydrometeor aggregates: an experimental approach*. *Bulletin of Volcanology*, 74 (9), 1963-1984 doi: 10.1007/s00445-012-0634-9
32. Taddeucci J., P. Scarlato A. Capponi, E. Del Bello, C. Cimarelli, DM. Palladino, and U. Kueppers (2012) *High-speed imaging of Strombolian explosions: the ejection velocity of pyroclasts*. *Geophysical Research Letters*, Vol. 39, L02301, doi:10.1029/2011GL050404.
33. Cimarelli C., Costa A., Mueller S., Mader HM. (2011): *Rheology of magmas with bimodal crystal size and shape distributions: Insights from analogue experiments*. *Geophysics, Geochemistry, Geosystems*, 12, 7, Q07024 doi:10.1029/2011GC003606
34. Taddeucci J., Scarlato P., Montanaro C., Cimarelli C., Del Bello E., Freda C., Andronico D., Gudmundsson MT., Dingwell DB. (2011): *Aggregation-dominated ash settling from the Eyjafjallajökull volcanic cloud illuminated by field and laboratory high-speed imaging*. *Geology*, 39; no. 9; p. 891–894; doi:10.1130/G32016.1

35. Buttinelli, M., De Rita, D., Cremonini, C., Cimarelli, C. (2011): *Deep explosive focal depths during maar-forming magmatic-hydrothermal eruption: Baccano crater, Central Italy.* Bulletin of Volcanology. 73 (7), 899-915 doi: 10.1007/s00445-011-0466-z
36. Aulinas, M., Gasperini, D., Gimeno, D., Macera, P., Fernandez-Turiel, J.L., Cimarelli, C. (2011): *Coexistence of Calc-alkaline and Ultrapotassic Alkaline magmas at Mounts Cimini: evidence for transition from the Tuscan to the Roman Magmatic Provinces (central Italy).* Geologica Acta, vol. 9, 1, 1-23.
37. Cimarelli, C., Di Traglia, F., Taddeucci, J. (2010): *Basaltic scoria textures from a zoned conduit as precursors to violent Strombolian activity.* Geology. 38; no. 5; p. 439–442; doi: 10.1130/G30720.1
38. Cimarelli, C., De Rita, D. (2010): *Deep-seated gravitational slope deformations in volcanic settings: examples from Italian volcanoes.* Geografia Fisica e Dinamica Quaternaria, 33, 2, 155-164.
39. Di Traglia, F., Cimarelli, C., De Rita, D., Gimeno, D. (2009): *Changing eruptive styles in basaltic explosive volcanism: examples from Croscat complex scoria cone, Garrotxa Volcanic Field (NE Iberian Peninsula).* Journal of Volcanology and Geothermal Research, 180, 89-109. doi:10.1016/j.jvolgeores.2008.10.020.
40. Cimarelli, C., De Rita, D., Dolfi, D., Procesi, M. (2008): *Coeval strombolian and vulcanian type explosive eruptions at Panarea (Aeolian Islands, Southern Italy).* Journal of Volcanology and Geothermal Research. 177, 797-811. doi: 10.1016/j.jvolgeores.2008.01.051.
41. De Rita, D., Dolfi, D., Cimarelli, C. (2008): *Occurrence of the Somma-Vesuvio fine ashes in the tephrostratigraphic record of Panarea, Aeolian Islands.* Journal of Volcanology and Geothermal Research. 177, 197-207. doi:10.1016/j.jvolgeores.2007.11.007.
42. Cimarelli, C. (2007): *New geo-volcanological data on the evolution of Panarea Volcanic Complex (Aeolian Islands) and their implication on volcanic hazard.* Plinius, 31, 83-90.
43. Dolfi, D., De Rita, D., Cimarelli, C., Mollo, S., Soligo, M., Fabbri, M. (2007): *Dome growth rates, eruption frequency and assessment of volcanic hazard: Insights from new U/Th dating of the Panarea and Basiluzzo dome lavas and pyroclastics, Aeolian Islands, Italy.* Quaternary International. 162-163, 182-194. doi:10.1016/j.quaint.2006.05.035.
44. Cimarelli, C. and De Rita, D. (2006): *Relatively rapid emplacement of dome-forming magma inferred from strain analyses: the case of the acid Latian dome complexes (Central Italy).* Journal of Volcanology and Geothermal Research. 158, 106-116. doi: 10.1016/j.jvolgeores.2006.04.015.
45. Cimarelli, C. and De Rita, D. (2006): *Structural evolution of the Pleistocene Cimini trachytic volcanic complex (Central Italy).* Bulletin of Volcanology. 68, 538-548. doi: 10.1007/s00445-005-0028-3
46. De Rita, D., Fabbri, M., Cimarelli, C. (2004): *Evoluzione pleistocenica del margine tirrenico dell'Italia centrale tra eustatismo, vulcanismo e tettonica.* Il Quaternario - Italian Journal of Quaternary Sciences. 17 (2/1), 523-536.
47. Aulinas, M., Gimeno, D., Cimarelli, C., De Rita, D., Giampaolo, C., Giordano, G., Lo Mastro S. (2004): *Estudio petrológico del volcanismo cuaternario de los Monti Cimini y el volcán de Vico, Lazio, Italia.* Geotemas 6 (1), 147-150.

## C) Geological and thematic maps

1. Cimarelli, C., De Rita, D. (2009): The Geodiversity Map of Vico and Cimino Volcanic Districts, Central Italy. Scale 1:75.000 Agency of Regional Natural Parks. Lazio Region, Italy. [http://www.parchilazio.it/pubblicazioni-53-carta\\_delle\\_geodiversita\\_dei\\_distretti\\_vulcanici\\_cimino\\_e\\_vicano](http://www.parchilazio.it/pubblicazioni-53-carta_delle_geodiversita_dei_distretti_vulcanici_cimino_e_vicano)
2. De Rita, D., Cimarelli, C., Fabbri, M., Dolfi, D., Conte, A., Lombardi, L. (2006): Geological map of Italy scale 1:50.000. Sheet 413 "Borgo Grappa". Italian Geological Survey. [http://www.isprambiente.gov.it/Media/carg/413\\_BORGO\\_GRAPPA/Foglio.html](http://www.isprambiente.gov.it/Media/carg/413_BORGO_GRAPPA/Foglio.html)

## D) Educational multimedia contributions

1. Cimarelli C., Bonadonna C., Behnke B., Fabbrizio A., Rivalta E., Todesco M. (2009). Montserrat's Andesite Volcano (Italian Version DVD). An educational film with Prof. Steve Sparks. Living Letters Productions.
2. Cimarelli C. (2005). *Il Museo e le Scienze della Terra*. Treccani Scuola-Area Scienze Sperimental. April 2005. [http://www.treccani.it/site/Scuola/nellascuola/nellascuola\\_archivio.htm](http://www.treccani.it/site/Scuola/nellascuola/nellascuola_archivio.htm)
3. Cimarelli C. (2005). *Luis Agassiz e la paleoclimatologia: Ovvero come passammo dall'Era Glaciale al Global Warming*. Treccani Scuola-Area Scienze Sperimental. October 2005. [http://www.treccani.it/site/Scuola/nellascuola/area\\_scienze\\_sperimental/index.htm](http://www.treccani.it/site/Scuola/nellascuola/area_scienze_sperimental/index.htm)

**E) Published contributions to scientific conferences (full list available on request)**

1. Cimarelli C. (2019) Electrical activity of volcanic plumes: recent advances and perspectives. (*Invited*) EGU General Assembly. Vienna, Austria.
2. Cimarelli C. (2018) The bright side of the plume - Volcanic plume electrification: observations and experiments. CTR Wilson Meeting on Atmospheric Electricity. 15<sup>th</sup> November 2018. Bath, UK.
3. Cimarelli C., Gaudin D., Nicoll K., Airey M., Knuever M., Koh K., Bennett A. (2018) Constraining the electrification properties of weak volcanic plumes. EGU General Assembly. Vienna, Austria.
4. Nicoll K., Airey M., Koh K., Cimarelli C., Gaudin D., Knuever M., Bennett A., Harrison R.G., Marlton G., Williams P., Fullekrug M. (2018) Volcanic plume charging at Stromboli volcano. EGU General Assembly. Vienna, Austria.
5. C. Cimarelli, D. Gaudin, J. Méndez-Harper (2017). From ashes to flashes: experimentally mapping the conditions for electrification and lightning in volcanic plumes. IAVCEI General Assembly. Portland OR, USA.
6. D. Gaudin, C. Cimarelli, S.A. Behnke, V. Cigala, H. Edens, S.R. McNutt, C.M. Smith, R. Thomas (2017). Volcanic lightning vs. plume dynamics: Integration of multi-parametric observations from the explosive activity of Sakurajima Volcano (Japan). IAVCEI General Assembly. Portland OR, USA.
7. J. Mendez Harper, J. Dufek, C. Cimarelli (2017). What volcanic lightning tells us about the near-vent dynamics. IAVCEI General Assembly. Portland OR, USA.
8. S. Behnke, R. Thomas, H. Edens, A. Van Eaton, S. McNutt, C. Smith, C. Cimarelli (2017). Volcanic Lightning Observations and Applications: Recent Progress and Future Directions. IAVCEI General Assembly. Portland OR, USA.
9. A. Casas, F. Wadsworth, J. Vasseur, P. Ayris, C. Cimarelli, D.B. Dingwell (2017). In-plume gas scavenging: An insight into gas adsorption, ash-surface chemistry and the role of water. IAVCEI General Assembly. Portland OR, USA.
10. Cimarelli C., Yilmaz T., Colombier M., Villanova J., Höfer L., Hess KU., Ruthensteiner B., Dingwell D. (2017). Micro- and nano-CT textural analysis of an experimental volcanic fulgurite.
11. Cimarelli C. (2015). Volcanic Lightning: in nature and in the lab (*Invited*). AGU Fall Meeting. San Francisco CA, USA.
12. Cimarelli C., Alatorre-Ibargüengoitia MA., Aizawa K., Díaz Marina Al., Yokoo A., Kueppers U., Mueller S., Scheu B., Dingwell DB. (2015). Volcanic Lightning: in nature and in the lab (*Invited*). EGU General Assembly. Vienna, Austria.
13. Lavallée Y., Cimarelli C., Hornby A., Johnson J., Kendrick J., von Aulock F., Wadsworth F., Rhodes E., Kennedy B., Andrews B., Chigna G., Dingwell DB. (2015). Sacrificial fragmentation and superheated foaming trigger of explosive volcanism. EGU General Assembly. Vienna, Austria.
14. Hornby A., Kendrick J., Lavallée Y., Cimarelli C., von Aulock F., Rhodes E., Kennedy B., Wadsworth F. (2015) Volcanic ash at Santiaguito dome complex, Guatemala. EGU General Assembly. Vienna, Austria.
15. Witt V., Cimarelli C., Ayris P., Kueppers U., Erpenbeck D., Dingwell DB., Woerheide G. (2015) Marine mesocosm bacterial colonisation of volcanic ash. EGU General Assembly. Vienna, Austria.
16. Borovkov N., Hess KH., Fehr KT., Cimarelli C., Dingwell DB (2014). Fe behavior in iron-bearing phonolitic and pantelleritic melts and its significance for magma dynamics in the volcanic conduits.

- AGU Fall Meeting. San Francisco CA, USA.
- 17. DB Dingwell, D Di Genova, KU Hess, C Cimarelli (2014) Viscosities of Highly Fluid Melts: Carbonatites and Analogues AGU Fall Meeting. San Francisco CA, USA.
  - 18. Corrado Cimarelli, Miguel Alatorre-Ibargüengoitia, Koki Aizawa, Bettina Scheu, Akihiko Yokoo, Sebastian Mueller, Donald B Dingwell (2014). Multi-parametric observation of volcanic lightning produced by ash-rich plumes at Sakurajima volcano, Japan. EGU General Assembly. Vienna, Austria.
  - 19. Paul M Ayris, Corrado Cimarelli, Pierre Delmelle, Donald B Dingwell (2014) A novel reactor for the simulation of gas and ash interactions in volcanic eruption plumes. EGU General Assembly. Vienna, Austria.
  - 20. Cimarelli C., Scheu B., Spina L., Wadsworth FB., (2013). From permeable network to cracks: mapping fragmentation mechanism transition with multiphase magma analogues (*Invited*). AGU Fall Meeting. San Francisco CA, USA.
  - 21. Song W., Hess K., Lavallee Y., Cimarelli C., Dingwell DB. (2013) Melting Behavior of Volcanic Ash relevant to Aviation Ash Hazard. AGU Fall Meeting. San Francisco CA, USA.
  - 22. Spina L., Cimarelli C., Scheu B., Wadsworth FB., Dingwell DB. (2013) Eruptive dynamics during magma decompression: a laboratory approach. AGU Fall Meeting. San Francisco CA, USA.
  - 23. Cimarelli, C., Alatorre-Ibargüengoitia, MA., Kueppers, U., Scheu, B., Dingwell, DB. (2013) Experimental generation of volcanic lightning. IAVCEI General Assembly. Kagoshima, Japan
  - 24. Cimarelli C., Di Traglia F., Pinto GG., Aulinas Juncá M., De Rita D., Gimeno Torrente D. (2013) Space–time evolution of monogenetic basaltic volcanism in the Garrotxa Volcanic Field, NE Iberian Peninsula. IAVCEI General Assembly. Kagoshima, Japan
  - 25. Chevrel, MO., de Biasi, LJ., Hanson, JB., Cimarelli, C., Lavallée, Y., Dingwell DB. (2012). Transient rheology of crystallizing magmas. Goldschmidt Conference Abstracts 2012.
  - 26. L.J. de Biasi, M.O. Chevrel, J.B. Hanson, C. Cimarelli, Y. Lavallée, and D.B. Dingwell (2012). Transient rheology of crystallizing andesitic magmas. EGU Geophysical Research Abstracts. Vienna, Austria, 22-27 April 2012.
  - 27. Cimarelli C., Scheu B., Dingwell DB. (2011). Fragmentation mechanism transition of multiphase magma analogues. Fall Meeting, AGU, San Francisco, Calif., 5-9 December.
  - 28. Cimarelli, C., Alatorre-Ibargüengoitia, M., Taddeucci, J., Gibault, MN. (2011): A reappraisal of the explosive activity of Xitle Volcano, Mexico City. Fragile Earth International Conference, Munich, Germany, 4-7 September 2011.
  - 29. Kueppers, U., Cimarelli, C., Delmelle, P., Lavallée, Y., Taddeucci, J., Dingwell DB. (2011): Volcanic ash: an agent in Earth systems. Fragile Earth International Conference Abstracts, Munich, Germany, 4-7 September 2011.
  - 30. Costa, A., Cimarelli, C., Mueller, S., Mader, HM. (2011): Effects of crystal size and shape distribution on the rheology of magmas: insights from analogue experiments. IUGG Conference Proceedings, Melbourne, Australia 28 June-7July 2011.
  - 31. Taddeucci, J., Scarlato, P., Montanaro, C., Cimarelli, C., Del Bello, E., Freda, C., Andronico, D., Gudmundsson, MT., Dingwell, DB. (2011): Aggregation impacts on the Eyjafjallajökull ash fallout illuminated by field and laboratory high-speed imaging. IUGG Conference Proceedings, Melbourne, Australia 28 June-7July 2011.
  - 32. Cimarelli, C., Costa, A., Mueller, S., Mader, HM. (2011): Rheology of magmas with bimodal crystal size and shape distributions: insights from analogue experiments. EGU Geophysical Research Abstracts. Vienna, Austria, 3-8 April 2011.
  - 33. Taddeucci, J., Scarlato, P., Montanaro, C., Cimarelli, C., Del Bello, E., Freda, C., Andronico, D., Gudmundsson, MT., Dingwell, DB. (2011): Aggregation control on ash sedimentation from the Eyjafjallajökull volcanic cloud: insights from field and laboratory high-speed imaging. EGU Geophysical Research Abstracts. Vienna, Austria, 3-8 April 2011.
  - 34. Hess, KU., Kueppers, U., Cimarelli, C., Dingwell, DB., Rickerby, D., Madden, P. (2011): Volcanic Ash versus Turbine Ingestion Test Sands: Thermal Stability Experiments. EGU Geophysical Research Abstracts. Vienna, Austria, 3-8 April 2011.
  - 35. Del Bello, E., Taddeucci, J., Scarlato, P., Andronico, D., Cimarelli, C., Freda, C. (2011): High speed imaging of geysers as an analogue to Strombolian eruptions. EGU Geophysical Research Abstracts.

Vienna, Austria, 3-8 April 2011.

36. Andronico, D., Scarlato, P., Cimarelli, C., Del Bello, E., Freda, C., Misiti, V., Taddeucci, J. (2011): Textural and compositional features of ash erupted between 18 and 22 May 2010 from Eyjafjallajökull. EGU Geophysical Research Abstracts. Vienna, Austria, 3-8 April 2011.
37. Kueppers U., Auer B., Cimarelli C., Scolamacchia T., Dingwell DB. (2011): Experimentally constraining the boundary conditions for volcanic ash aggregation. EGU Geophysical Research Abstracts. Vienna, Austria, 3-8 April 2011.
38. Cimarelli C., Kueppers U., Hess KU., Dingwell DB., Rickerby D., Madden P. (2010): Thermal Stability of Volcanic Ash versus Turbine Ingestion Test Sands: an Experimental Investigation. Fall Meeting, AGU, San Francisco, Calif., 13-17 December.
39. Scarlato, P., Taddeucci, J., Montanaro, C., Del Bello, E., Cimarelli, C., Freda, C., Andronico, D. (2010): Settling dynamics of ash aggregates from the Eyjafjallajökull (Iceland) eruption plume illuminated by high-speed video analysis. Fall Meeting, AGU, San Francisco, Calif., 13-17 December.
40. Scolamacchia T., Alatorre Ibarguengoitia M., Scheu B., Dingwell DB., Cimarelli C. (2010): Experimental particle acceleration by water evaporation induced by shock waves. Fall Meeting, AGU, San Francisco, Calif., 13-17 December.
41. Andronico, D., Scarlato, P., Cimarelli, C., Del Bello, E., Freda, C., Taddeucci, J. (2010): The Last Days of the 2010 Eruption at Eyjafjallajökull Volcano. Fall Meeting, AGU, San Francisco, Calif., 13-17 December.
42. Cimarelli, C., Mueller, S., Costa, A., Mader, H.M. (2010): The rheology of bimodal crystal size distribution magmas - analogue experiments. EGU Geophysical Research Abstracts. Vienna, Austria, 19-24 April 2010.
43. Cimarelli, C., De Rita, D., Mancinella, D., Fattori, C. (2010): The Geodiversity Map of Vico and Cimino Volcanic Districts, Central Italy. Abstracts Volume, Cities on Volcanoes 6<sup>th</sup>. Puerto de La Cruz, Tenerife May 31-June 4, 2010, p.194.
44. Gasperini, D., Aulinas, M., Gimeno, D., Macera, P., Fernandez-Turiel, J.L., Cimarelli, C. (2009): Evidence for transition from the Roman to the Tuscan Magmatic Provinces in Mts. Cimini olivinlatites. Goldschmidt Conference Abstracts 2009, A417.
45. Taddeucci, J., Scarlato, P., Freda, C., Acerra, C., Cimarelli, C., Di Traglia, F.\*, Montanaro, C., Palladino, D.M., Russo, P. (2009): High-speed imaging of explosive activity at Stromboli Volcano, Italy. EGU Geophysical Reserch Abstracts. Vienna, Austria, 19-24 April 2009.
46. Di Traglia, F.\*, Cimarelli, C., Taddeucci, J. (2009): Basaltic scoria textures from a zoned conduit as precursors to violent Strombolian activity. Geoitalia 2009, Rimini, Italy, 9-11 September 2009.
47. Taddeucci, J., Scarlato, P., Acerra, C., Cannata, C., Cimarelli, C., Di Traglia, F.\*., Freda, C. (2009): A bird's-eye view into basaltic explosive activity at Stromboli Volcano,Italy. EGU Geophysical Research Abstracts. Vienna, Austria, 19-24 April 2009.
48. Cimarelli, C., Di Traglia, F.\*., Taddeucci, J. (2008): In-conduit mingling of basaltic magmas with different groundmass crystallinity at Croscat Volcano, Garrotxa Volcanic Field, Spain. IAVCEI General Assembly. Reykjavík, Iceland 17-22 August 2008.
49. Cimarelli, C., Di Traglia, F.\*., De Rita D., Fernandez Turiel, J.L., Gimeno, D. (2008): The Garrotxa Volcanic Field: a case study of the interplay between regional tectonics, volcanoes distribution and eruptive styles. IAVCEI General Assembly. Reykjavík, Iceland 17-22 August 2008.
50. Del Bello, E.\*., Cimarelli, C., De Rita, D. (2008): Evolution and structural control on phreatomagmatic activity of Martignano multiple maar, Sabatini Volcanic District Rome (Central Italy). IAVCEI General Assembly. Reykjavík, Iceland 17-22 August 2008.
51. Del Bello, E.\*., Cimarelli, C., De Rita, D. (2008): Phreatomagmatic eruptive and depositional processes from Martignano multiple maar, Sabatini Volcanic District Rome (Central Italy). IAVCEI General Assembly. Reykjavík, Iceland 17-22 August 2008.
52. Cimarelli, C., De Rita, D. (2007): Deep-seated Gravitational Slope Deformations in volcanic settings: examples from Italian volcanoes. FIST Geoitalia 2007. Sesto Forum Italiano di Scienze della Terra. Rimini, 12-14 Settembre.
53. Di Traglia, F.\*., Cimarelli, C., Gimeno, D., De Rita, D. (2007): *Phreatomagmatism in the Garrotxa Volcanic District: spatial distribution of the vents, volcanoes architectures and characterization of*

- the deposits.* IUGG XXIV General Assembly, 7-13 July, Perugia – Italy.
54. Di Traglia, F.\*, Cimarelli, C., De Rita, D., Gimeno, D. (2007): Evolució vulcanològica de l'àrea central del districte de la Garrotxa. Jornades de Recerca i Gestió del Patrimoni Natural. La Vulcanologia al Parc Natural de la Zona Vulcànica de la Garrotxa. Olot, 28-30 Juni.
55. Di Traglia, F.\*, Cimarelli, C., De Rita, D., Gimeno, D. (2007): *Changing in eruptive styles in basaltic explosive volcanism: examples from Croscat Volcano, Garrotxa Volcanic District (NE Catalunya).* IUGG XXIV General Assembly, 7-13 July, Perugia – Italy.
56. Cimarelli, C., De Rita, D., Dolfi, D., Procesi, M.\* (2006): *The fine ash exotic layers in the explosive succession of Panarea (Aeolian Archipelago, Southern Italy).* Tefrostratigrafia del Quaternario recente italiano – AIQUA. Roma, 21-23 June 2006.
57. Dolfi D., Mollo S., De Rita D., Cimarelli C. (2006): *New U/Th dating of the Panarea and Basiluzzo dome lavas and pyroclastics, Aeolian Islands, Italy: Implications for dome growth rates, eruption frequency and assessment of volcanic hazards.* Cities on Volcanoes 4. January 2006. Quito, Ecuador.
58. De Rita, D., Dolfi D., Cimarelli, C. (2005): A new model for the evolution of the Panarea Volcanic Complex (Aeolian Islands, Southern Italy). Quinto Forum Italiano di Scienze della Terra. Spoleto, 21-23 September.
59. De Rita, D., Dolfi, D., Gimeno, D., Soligo, M., Mollo, S., Cimarelli, C. (2005): Geochronological ages and field evidences: a conflictual symbiosis. Examples from Panarea (Eolian Islands) and acidic volcanics from Latium. Geoitalia 2005. Quinto Forum Italiano di Scienze della Terra. Spoleto, 21-23 September.
60. De Rita, D., Barberi, F., Cimarelli, C., Dolfi, D., Fabbri, M., Mollo, S., Soligo, M., Taddeucci, A. (2004): Nuovi dati sull'evoluzione geo-vulcanologica del complesso di Panarea e implicazioni sulla pericolosità vulcanica. Assemblea Conclusiva del Programma Quadro GNV INGV-Protezione Civile 2000-2004. Napoli, 20-22 December.
61. La Berge, R.D., Cimarelli, C., Cas, R.A.F., Giordano, G. (2004): *The significance of breccias in the Monte Cimino volcanic system, central Italy: the evolution of a silicic lava dome complex from a series of cryptodomes to a pyroclastic flow generating volcano.* IAVCEI General Assembly. Pucon, Chile 13 – 19 November 2004.
62. Cimarelli, C. De Rita, D., Dolfi, D., Fabbri, M., Soligo, M. (2004): *New stratigraphical and geochronological data for the definition of the eruptive scenario at Panarea and Basiluzzo Island in the Aeolian Archipelago (Southern Italy).* 32<sup>nd</sup> International Geological Congress, Florence, 20-28 August 2004.
63. Cimarelli, C., De Rita, D. (2004): *The influence of the structural setting of the basement in the emplacement of submarine and subaerial dome complexes: the case of the Latian dome complexes (Central Italy).* 32<sup>nd</sup> International Geological Congress, Florence, 20-28 August 2004.
64. De Rita, D., Sposato, A., Cimarelli C. (2004): *The interaction between volcanoes and their basement: twenty years of research.* 32<sup>nd</sup> International Geological Congress, Florence, 20-28 August 2004.
65. De Rita, D., Fabbri, M., Cimarelli, C. (2004): *Evoluzione pleistocenica del margine tirrenico dell'Italia centrale tra eustatismo, vulcanismo e tettonica.* AIQUA-CNR Convegno sul tema “La geologia del Quaternario in Italia: temi emergenti e zone d’ombra”. 16-18 Febbraio 2004. Roma.
66. Aulinas, M., Gimeno, D., Cimarelli, C., De Rita, D., Giampaolo, C., Giordano, G., Lo Mastro, S. (2004): *Estudio petrológico del volcanismo cuaternario de los Monti Cimini y el volcán de Vico, Lazio, Italia.* VI Congreso Geológico de España Zaragoza, 12-15, July 2004.
67. De Rita, D., Dolfi, D., Cimarelli, C., Fabbri, M., Soligo, M., Barberi, F. (2004): *Structural control on the development of the Panarea volcanic complex (Eolian Islands, Southern Italy).* IAVCEI General Assembly. 13 – 19 November 2004.
68. La Berge, R.D., Cas, R.A.F., Giordano, G., Cimarelli, C., Phillips, D. (2004): *Explosive emergence of a rhyodacite lava dome and the complex facies architecture of the resultant dense-clast and pumiceous pyroclastic flow deposits: the Pleistocene Cimino ignimbrite in northern Lazio, Italia.* IAVCEI General Assembly. 13 – 19 November 2004.
69. De Rita, D., Fabbri, M., Cimarelli, C. (2004): *Stratigraphy in volcanic areas: the case of the Northern Pontine Archipelago.* 32<sup>nd</sup> International Geological Congress, Florence, 20-28 August 2004.

70. De Rita, D., Fabbri, M., Cimarelli, C., Lombardi, L. (2004): *The Ponza, Palmarola and Zannone Islands (Pontine Archipelago, Central Italy): A natural laboratory illustrating the relationship between geology and human activities.* 32<sup>nd</sup> International Geological Congress, Florence, 20-28 August 2004.
71. Cecili, A., Cinnirella, A., Cimarelli, C., Giordano, G., Pignotti, S. (2004): *Automated DEM Extraction and Orthoimage Generation from EROS-A1 satellite images of Mt. Etna. Italy.* IAVCEI General Assembly. 13 – 19 November 2004.
72. Fabbri, M., De Rita, D., Lombardi, L., Cimarelli, C. (2004): *Le isole di Ponza, Palmarola e Zannone: un laboratorio naturale per le relazioni tra la geologia e l'opera dell'uomo.* Geologia e Turismo “Opportunità nell'economia del paesaggio”. Bologna, 3-4 Novembre 2004.
73. Cimarelli, C., De Rita, D., Fabbri, M. (2003): *Associazioni di facies nei complessi di domi sottomarini: l'esempio delle Isole Pontine Occidentali.* FIST Geoitalia 2003. 4° Forum Italiano di Scienze della Terra. Bellaria 16-18 Settembre 2003.
74. Cinnirella, A., Cimarelli, C., De Rita, D. (2003): *Emergenza a lungo termine: rischio di inquinamento da fluoro della falda acquifera in aree vulcaniche.* FIST Geoitalia 2003. 4° Forum Italiano di Scienze della Terra. Bellaria 16-18 Settembre 2003.
75. Cimarelli, C., De Rita, D., Fabbri, M. (2003): *Facies association of submarine dome complexes: examples from Italy.* IUGG 2003 – State of the Planet. 30 June – 11 July, 2003. Sapporo, Japan.
76. Cinnirella, A., Cimarelli, C., De Rita, D. (2003): *Long term emergency: groundwater-dissolved fluoride intoxication hazard in volcanic areas, the case of the urbanistic-expansion areas of Rome.* Cities on Volcanoes 3. 14-18 July, 2003. Hilo, Hawaii.
77. Cimarelli, C., De Rita, D., Cinnirella, A., Giordano, G., Cecili, A. (2002): *Structural evolution of the Pleistocene Cimini trachydacitic dome complex (Central Italy).* Montagne Pelee IAVCEI Meeting “Explosive Volcanism in Subduction Zones”. 12-16 May 2002. Saint Pierre, Martinique.