Brunelli Daniele – CURRICULUM VITAE ET STUDIORUM

Present position:
Associate Professor
Department of Chemical and Geological Sciences
University of Modena and Reggio Emilia
Via Campi, 103– 41125 Modena, Italy

adjunct scientist @
WHOI Woods Hole Oceanographic Institution
Clark Lab - Woods Hole, MA 02543-1050
https://www.whoi.edu/
and
CNR - IGAG - Rome https://www.igag.cnr.it/

Office +39 0592058462
cell +39 3201491398
e-mail: daniele.brunelli@unimore.it

Languages:
Italian, English, French
Born July 1st, 1964 in Verona, Italy

Science Pub IDs
orcid.org/0000-0003-4839-1939
ResearcherID: B-7893-2012
Scopus Author ID: 6701771603

Google scholar: https://scholar.google.it/citations?user=F7kpImUAAAAJ&hl=it&oi=ao
Researchgate: https://www.researchgate.net/profile/Daniele_Brunelli/publications

Last update: July 2023

Research interests

- Petrology geochemistry of suboceanic Mantle and MORB: major, trace element and isotopic systematic.
- Cyclicity and nature of partial melting processes along the Mid-Ocean Ridges, source and thermal variability
- Mantle – melt interaction, melt extraction and aggregation.
- Carbon in the suboceanic mantle
- Formation and evolution of the oceanic crust and lithosphere
- Archaeology, archaeometry, Bronze Age manufacture in the Mediterranean basin

Active projects and collaborations

- Source compositional variability from MORBs and alkalines from the Equatorial Atlantic. In collaboration with C. Hemond, M. Maia, UBO, Brest, FR; A. Cipriani, Unimore. PhD thesis of L. Verhoest at Modena University.
- Volatiles in mantle heterogeneities form the equatorial Atlantic. In collaboration with G. Gaetani and B. Monteleone, WHOI, Woods Hole, MA, USA. Phd thesis of M. M. Michailow at Modena University.
- Lithospheric deformation patterns in Equatorial Atlantic shear zones at fracture zones and detachment faults. In collaboration with M. Bickert, postdoc at Modena University, M. Cheadle University of Wyoming, USA; J. Escartin, ENS, Paris, FR; M. Maia, UBO, Brest FR.
- VEMANTLE cruise in Central Atlantic: In collaboration with A. Stracke, PI, WWU Münster (DE), M. Tivey, WHOI, (USA), M. Ligi, ISMAR (ITA), W. Bach, Bremen (GE), C. Beier, Helsinky (FI). RV Meteor, ROV K6000. To be planned for 2022/23.
- Oceanic Megatransforms: a New Class of Plate Boundaries. In the Italian consortium PRIN2017, in collaboration with: M. Ligi, PI, ISMAR, Bologna; A. Sanfilippo, University of Pavia; D. Belmonte, University of Genova, IT and M. Bickert as post-doc researcher at Modena University.
- Re/Os temporal variability in 26 My-long section of mantle exposed at the Vema FZ. In collaboration with Chuan-Zhou Liu, Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijin, China, A. Cipriani, Modena University, IT.
- Nd-Hf temporal variability in 26 My-long section of mantle exposed at the Vema FZ. In collaboration with Andreas Stracke, Westfälische Wilhelms-Universität, Münster, Germany
- Geometry of transpressive positive flower structures from MAR and SWIR. In collaboration with M. Cheadle University of Wyoming, USA; J. Escartin, ENS, Paris, FR; M. Maia, UBO, Brest FR, H. Dick, WHOI and J. Koepke, Leibniz Universität Hannover, DE.
- Compositional variability of mantle and low F processes along the SWIR. In collaboration with M. Cannat, IPGP, Paris, FR; M. Seyler, University of Lille, FR and M. Bickert, postodoc Modena University.

Academic research and teaching positions

2023-	Adjunct Scientist Woods Hole Oceanographic Institution, Woods Hole, MA, USA
2022-	Associate researcher Institute of Environmental Geology and Geoengineering (IGAG) Italian National Research Council (CNR), Italy.
2019-2020	Visiting sabbatical at Woods Hole Oceanographic Institution, MA, USA
2018	Invited Visiting Professor, Université de Bretagne Occidentale, Brest, Institut Universitaire Europeén de la Mer, February 2nd – March 3rd, 2018
2014-10-22	Associate Professor in Petrology and Petrography GEO/07, University of Modena, Italy
2014	Invited Visiting Professor at Université Paris Diderot-Paris 7, February 2014.
2011	Invited Visiting Professor at Institut de Physique du Globe de Paris, IPGP. July-August, 2011.
2010	Invited Visiting Professor at Institut de Physique du Globe de Paris, IPGP. February-March 2010.
2009	Invited Visiting Professor at Institut de Physique du Globe de Paris, IPGP. May - June 2009.
2008-2021	Associate researcher Institute for Marine Sciences (ISMAR) Italian National Research Council (CNR), Italy.
2007-2014	Researcher in Petrology and Petrography at Department of Earth Sciences, University of Modena, Italy.

2006 Post-doc researcher: CNRS-INSU - Institut de Physique du Globe, Paris, Geosciences Marines, FR.

2005-2006 Teaching: Structural geology applied to the metamorphic basement c/o Dip. di Scienze della Terra, Università di Modena e Reggio Emilia, A.A. 2005/2006. Field work: structural analyses of the Balmuccia peridotitic massif (Ivrea-Verbano zone, western Alps).

2003-2006 Post-Doc researcher in the frame of EUROMELT (European Research Training Network) c/o: Laboratoire Pierre Süe, Commissariat à l'Énergie Atomique, Paris – CNRS (March 2003 – December 2005).

2002-2003 Research assistant: Department of Earth Sciences "La Sapienza" University, Roma, Italy. "*Red Sea, Petrological transition from subcontinental to suboceanic mantle*".

2001-2002 Research assistant: "*Assegno di ricerca*" c/o Institute for Marine Geology – CNR, Bologna, Italy (Nov. 2001 – May 2002).

1998-1999 Research assistant: Institute of Marine Geology – CNR, Bologna, Italy "*Petrography and mineral chemistry (major and trace element) of abyssal peridotites from the Equatorial Atlantic*".

1998 Apprenticeship at the Institute of Marine Geology – CNR, Bologna, Italy "*Petrology of the Vema and Romanche FZ residual peridotites*". Tutor: E. Bonatti (CNR-ISMAR; Roma1 University).

1997-1998 Research assistant: University of Pisa, Department of Earth Sciences "*Mineral chemistry and petrography of the Vema FZ peridotites*".

Education & Awards

2017 Abilitazione Nazionale Professore di Prima Fascia (Full professorship habilitation), settore 04/01, Italy

2013 Qualification aux fonctions de Professeur des Universitée: 35 - Structure et évolution de la Terre et des autres planètes n. 13135169697; 36 - Terre solide : géodynamique des enveloppes supérieures, .. n. 1316169697 - France

2012 Abilitazione Nazionale Professore di Seconda Fascia, settore 04/01, Italy

2007 Certificate of Merit of the Modena University, 2008.

2007 "Angelo Bianchi" Award 2007 for research in petrography by SIMP (Italian Society for Mineralogy and Petrology).

2006 Qualification aux fonctions d'enseignant chercheur, 02-02-2006. Qualification number : 06235169697.

2002 PhD at the Bologna University and Institute for Marine Geology – CNR, Italy: "Temporal variations in the lithospheric formation processes along the Mid Ocean Ridges". Tutors: Prof. E. Bonatti (CNR-ISMAR; Roma1 University) and M. Seyler (Lille University, Muséum National d'Histoire Naturelle, Paris). Bologna March 22nd, 2002.

1997 Graduated "*cum laude*" in Geology at Padova University, Italy. "Mantle thermal structure in the Bouvet Triple Junction region (South Atlantic): a study of residual peridotites". Tutors: Prof. P. Tartarotti (Padova University) and Prof. E. Bonatti (CNR-ISMAR; Roma University). Padova, December 9th, 1997.

Seagoing experience and field work

As PI

2019 SMARTIES: Smooth regions at the Mid-Atlantic Ridge Transform-Intersections under extreme thermal gradients: Co-PI with M. Maia, (UBO, Brest), M. Ligi (ISMAR-CNR).

As responsible for rock sampling:

2020 March 7th – April 22nd – Marion Rise II SWIR. R/V Sonne. PI J. Koepke – C. Beyer.

2019 February 18th – March 28th – Marion Rise SWIR. R/V T.G. Thompson. PI H. Dick – H. Zhou – J. Koepke.

2016 November 27th 2016 – January 5th 2017 – ROVSMOOTH. Architecture of the lithosphere in slow-spreading ridges and ocean-continent transition. Smoothseafloor region of the Southwest Indian Ridge. PI: Mathilde Cannat, R/V Pourquois Pas?

2016 May 31st – June 10th APOIEX ECASPSP. Short expedition to St. Peter and Paul Archipelago, Equatorial Atlantic, PROARQUIPELAGO program of Brazilian navy. NPO Araguari.

2013 January 23rd – March 2nd COLMEIA. Geophysical and Petrological survey of the St. Paul fracture Zone, Equatorial Atlantic. R/V Atalante. PI Marcia Maia, Ifremer, Brest.

2010 October 1st – November 5th Smoothseafloor. Defining the smoothseafloor tectonics and sampling along the easternmost SWIR. R/V Marion Dufresne. PI D. Sauter, M. Cannat. IPGP-IPEV.

2006 February 10th – March 10th. AB06 (S23) expedition. Andrew Bain fracture zone – SWIR. R/V A.N. Strakhov. Principal investigators Prof. E. Bonatti, (CNR-ISMAR; Univ. Roma1); Prof. J. Sclater Scripps Institution of Oceanography, UCSD La Jolla CA; Prof. A. Peyve (RAS, Moscow– Russia).

2000 April 18th – June 4th, Vema2000 (S22) expedition to the Vema Fracture Zone. Atlantic Ocean 11°N. R/V A.N. Strakhov. Principal investigators Prof. E. Bonatti, (CNR-ISMAR; Univ. Roma1); Prof. A. Peyve (RAS, Moscow– Russia).

1998 January - March, Vema 1998 (S19) expedition to the Vema Fracture Zone. Atlantic Ocean 11°N. R/V A.N. Strakhov. Principal investigators Prof. E. Bonatti, (CNR-ISMAR; Univ. Roma1); Prof. A. Peyve (RAS, Moscow – Russia).

As invited petrologist:

2009 March 31st – April 12th. Magic project 2009. Mapping the Sicily seaward extension of the Iblean plateau. R/V Urania. P.I. Marco Ligi (ISMAR-CNR).

2009 February 6th – February 23rd Geological survey and sampling of the northern Patagonian massif in the framework of PRIN Mazzucchelli 2007 project.

2007 September 17th – October 9th Geological survey and sampling of the northern Patagonian massif in the framework of PRIN Rivalenti 2005 project.

2005 January 8th – March 3rd. IODP Leg 305 – Oceanic Core Complex Formation, Atlantis Massif. Atlantic Ocean 30 °N. R/V: Joides Resolution. Principal investigators: D.K. Blackman (Scripps, California – USA); B.E. John (Wyoming University - USA); C.J. MacLeod (Cardiff University – UK); Y. Ohara (HOD, Tokyo – JP); D.J. Miller (IODP, Texas University – USA).

1996 October 9th – October 23rd, Tirreno 1996, expedition to Marsili and Vavilov seamounts. Tyrrhenian sea. R/V: Urania. Principal investigator: Dr. Michael Marani, (CNR-ISMAR).

1996 May - July, PRIMAR96 cruise at the Romanche Fracture Zone, Equatorial Atlantic (0-2 °N). R/V Gelendzhik. Principal investigator: Prof. E. Bonatti, (CNR-ISMAR; Univ. Roma1).

1996 March – May, PNRA Bouvet TJ cruise at the Bouvet Triple Junction in the South Atlantic (54 °S). R/V Gelendzhik. Principal investigator: Prof. E. Bonatti, (CNR-ISMAR; Univ. Roma1).

Techniques and analytical skills

- Manned submersible Nautile, reached -6023 m bsl during the SMARTIES cruise 2019
- ROV MARUM QUEST 6000 exploration an sampling
- ROV IFREMER VICTOR 6000 exploration, sampling and microbathymetry
- Seafloor dredging with both dynamic positioning and hip drifting
- Preparation of thin sections for petrography, melt and fluid inclusion studies. Separation and preparation of crystal grains for homogenization o melt inclusions
- Electron microprobe: JEOL JXA 8600, Cameca SX Five, Cameca Camebax SX100, Cameca Camebax SX50
- Mini- probe EDX / CL
- Secondary Emission Ion Microprobe: Cameca IMS 4f, 6f
- Inductively Coupled Plasma Mass Spectrometry: Thermo ICP-MS XSeriesII, Laser ablation: UP 213 - New Wave Research
- Heating stage melt inclusion: Linkam TMS93 and Sobolev (under controlled He-Ar atmosphere).
- Infrared spectroscopy (FTIR)

Publications

1) M. Bickert, M.-A. Kaczmarek, D. Brunelli, M. Maia, T. F. C. Campos, and S. E. Sichel, "Fluid-assisted grain size reduction leads to strain localization in oceanic transform faults," Nat. Commun., vol. 14, no. 1, p. 4087, 2023.
2) Vincent, C., Maia, M., Briais, A., Brunelli, D., Ligi, M. and Sichel, S., 2023. Evolution of a Cold Intra-Transform Ridge Segment Through Oceanic Core Complex Splitting and Mantle Exhumation, St. Paul Transform System, Equatorial Atlantic. Geochemistry, Geophysics, Geosystems, 24(5), p.e2023GC010870.
3) Cipriani, A., Giovanardi, T., Mazzucchelli, M., Lugli, F., Sforna, M.C., Gualtieri, A.F., Di Giuseppe, D., Gaeta, M. and Brunelli, D., 2023. Origin of a carbonate-bearing fluorapatite from Tertiary volcanics of the Veneto Volcanic Province, Italy. Mineralogy and Petrology, pp.1-22.
4) Campos, T.F.C., Sichel, S.E., Maia, M., Brunelli, D., Motoki, K., Magini, C., Barão, L.M., Vargas, T., Szatmari, P., Fonseca, E., 2022. Chapter 4 - The singular St. Peter and St. Paul Archipelago, equatorial Atlantic, Brazil, in: Santos, A.C. dos, Hackspacher, P.C.B.T.-M.-C.B.O.M. (Eds.). Academic Press, pp. 121–165. https://doi.org/https://doi.org/10.1016/B978-0-12-823988-9.00003-4
5) Yu, Z., Singh, S.C., Gregory, E.P.M., Maia, M., Wang, Z., Brunelli, D., 2022. Semibrittle seismic deformation in high-temperature mantle mylonite shear zone along the Romanche transform fault. Sci. Adv. 7, eabf3388. https://doi.org/10.1126/sciadv.abf3388
6) Di Giuseppe, D., Perchiazzi, N., Brunelli, D., Giovanardi, T., Nodari, L., Della Ventura, G., Malferrari, D., Maia, M., Gualtieri, A.F., 2021. Occurrence and characterization of tremolite asbestos from the Mid Atlantic Ridge. Sci. Rep. 11, 6285. https://doi.org/10.1038/s41598-021-85576-w
7) Bertotto, G.W., Mazzucchelli, M., Zanetti, A., Ponce, A.D., Giovanardi, T., Brunelli, D., Bernardi, M.I., Hémond, C., Cipriani, A., 2021. Mantle heterogeneities produced by open-system melting and melt/rock reactions in Patagonian extra-Andean backarc mantle (Paso de Indios, Argentina). J. South Am. Earth Sci. 106, 103002. https://doi.org/https://doi.org/10.1016/j.jsames.2020.103002
8) Le Roux, V., Urann, B. M., Brunelli, D., Bonatti, E., Cipriani, A., Demouchy, S., & Monteleone, B. D. (2021). Postmelting hydrogen enrichment in the oceanic lithosphere. Science Advances, 7(24), eabf6071.
9) Brunelli, D., Sanfilippo, A., Bonatti, E., Skolotnev, S., Escartin, J., Ligi, M., Ballabio, G. & Cipriani, A., 2020. Origin of oceanic ferrodiorites by injection of nelsonitic melts in gabbros at the Vema Lithospheric Section, Mid Atlantic Ridge. Lithos, 105589.
10) Sighinolfi, GP, M Barbieri, D Brunelli, R Serra - Geosciences, 2020. Mineralogical and Chemical Investigations of the Amguid Crater (Algeria): Is there Evidence on an Impact Origin? Geosciences, V. 10, N. 3, P 107.
11) Li, P., Xia, Q.-K., Dallai, L., Bonatti, E., Brunelli, D., Cipriani, A., Ligi, M., 2020. High H2O Content in Pyroxenes of Residual Mantle Peridotites at a Mid Atlantic Ridge Segment. Scientific reports 10, 579. https://doi.org/10.1038/s41598-019-57344-4
12) Rosi, M., Levi, S.T., Pistolesi, M., Bertagnini, A. Brunelli, D., Cannavò, V., Di Renzoni, A., Ferranti, F., Renzulli, A., Yoon, D., 2019. Geoarchaeological evidence of middle-age tsunamis at Stromboli and consequences for the tsunami hazard in the Southern Tyrrhenian Sea. Scientific reports, 9 (1), 677.
13) Brunelli, D., Cipriani, A. & Bonatti, 2018. E. Thermal effects of pyroxenites on mantle melting below mid-ocean ridges. Nature Geoscience (2018). doi:10.1038/s41561-018-0139-z
14) Bénédicte Ménez, Valerio Pasini, Francois Guyot, Karim Benzerara, Sylvain Bernard, Daniele Brunelli, 2018. Mineralizations and transition metal mobility driven by organic carbon during low-temperature serpentinization. Lithos, Online adv pub. 2018
15) MC Sforna, D Brunelli, C Pisapia, V Pasini, D Malferrari, B Ménez, 2019. Abiotic formation of condensed carbonaceous matter in the hydrating oceanic crust. Nature communications 9 (1), 5049
16) Seyler, M. & Brunelli, D. Sodium-chromium covariation in residual clinopyroxenes from abyssal peridotites sampled in the 43°–46°E region of the Southwest Indian Ridge. Lithos 302–303, 142–157 (2018).
17) Paquet, M., Cannat, M., Brunelli, D., Hamelin, C. and Humler, E. (2016), Effect of melt/mantle interactions on MORB chemistry at the easternmost Southwest Indian Ridge (61 to 67°E). Geochemistry, Geophysics, Geosystems, 17(11), 4605-4640. doi:10.1002/2016GC006385
18) Maia, M., Sichel, S., Briais, A., Brunelli, D., Ligi, M., Ferreira, N., Oliveira, P. (2016). Extreme mantle uplift and exhumation along a transpressive transform fault. Nature Geoscience, (July), 1–6. http://doi.org/10.1038/ngeo2759
19) Maia, M., Birot D., Brachet C., Brehme I., Briais A., Brunelli D., Campos T., Colosio A., de Moraes E., Donval J.-P., Fontes F., Gaspar F., Guyader V., Hémond C., Konn C., Marcondes M., Motoki A., Mougel B., Moura D.,

Pessanha I, Scalabrin C., Vale E, Sichel S. and de Souza K., 2015, Preliminary report on the COLMEIA Cruise, Equatorial Atlantic Recife, January 24 - Recife, February 28, 2013. INTERRIDGE NEWS 2013/2014 - VOLUME 22. DOI: 10.13140/RG.2.1.3329.8002

20) Ponce, A.D; Bertotto, G.W; Zanetti, A.; Brunelli, D.; Giovanardi, T.; Aragón, E.; Bernardi, M. I; Hémond, C.; Mazzucchelli, M. 2015. Short-scale variability of the SCLM beneath the extra-Andean back-arc (Paso de Indios, Argentina): Evidence from spinel-facies mantle xenoliths. Open Geosciences, 7, 362-385.

21) Brunelli, D., Paganelli, E., Seyler, M., 2014. Percolation of enriched melts during incremental open-system melting in the spine field: A REE approach to abyssal peridotites from the Southwest Indian Ridge. Geochim. Cosmochim. Act, 127, pp. 190-203. http://dx.doi.org/10.1016/j.gca.2013.11.040

22) Ligi, M., Bonatti, E., Cuffaro, M., Brunelli, D., 2013. Post-Mesozoic rapid increase of seawater Mg/Ca due to enhanced mantle-seawater interaction. Scientific Reports, Nature Pub. Group. Vol. 3, doi:10.1038/srep02752.

23) Pasini, V., D. Brunelli, P. Dumas, C. Sandt, J. Frederick, K. Benzerara, S. Bernard, and B. Ménez. Low temperature hydrothermal oil and associated biological precursors in serpentinites from Mid-Ocean Ridge, Lithos (2013), doi:http://dx.doi.org/10.1016/j.lithos.2013.06.014.

24) Boschi, C., Bonatti, E., Ligi, M., Brunelli, D., Cipriani, A., Dallai, L., D'Orazio, M., Früh-Green, G.L., Tonarini, S., Barnes, J.D., Bedini, R.M., 2013. Serpentinization of Mantle Peridotites along an Uplifted Lithospheric Section, Mid Atlantic Ridge at 11° N. Lithos, v. 178, pp. 3-23. http://dx.doi.org/10.1016/j.lithos.2013.06.003. http://www.sciencedirect.com/science/article/pii/S0024493713001849

25) Sauter, D., Cannat, M., Rouméjon, S., Andreani, M., Birot, D., Bronner, A., Brunelli, D., Carlut, J., Delacour, A., Guyader, V., MacLeod, C.J., Manatschal, G., Mendel, V., Ménez, B., Pasini, V., Ruellan, E., Searle, R., 2013. Continuous exhumation of mantle-derived rocks at the Southwest Indian Ridge for 11 million years. Nature Geoscience 6, 1–7. doi:10.1038/ngeo1771

26) Menez B., Pasini V., and Brunelli, D., 2012. Life in the hydrated suboceanic mantle, Nature Geoscience, *5(2):133-137*. doi:10.1038/ngeo1359

27) Ligi, M., Bonatti, E., Brunelli, D., Cipriani, A., & Ottolini, L. (2011). Water in Mid Ocean Ridge Basalts: Some Like it Hot, Some Like it Cold. In E. D.-C. Brugnoli, G. D.-C. Cavarretta, S. I.-C. Mazzola, F. I.-C. Trincardi, M. I.-C. Ravaioli, & R. C. Santoleri (Eds.), Marine Research at CNR (pp. 671–690). Rome: Consiglio Nazionale delle Ricerche. ISSN 2239-5172 Volume DTA/06-2011

28) Seyler, M., D. Brunelli, M. J. Toplis, and C. Mével (2011), Multiscale chemical heterogeneities beneath the eastern Southwest Indian Ridge (52°E–68°E): Trace element compositions of along-axis dredged peridotites, Geochem. Geophys. Geosyst., 12, Q0AC15, doi:10.1029/2011GC003585.

29) E. Aragon, F. D'Eramo, A. Castro, L. Pinotti, D. Brunelli, O. Rabbia, G. Rivalenti, R. Varela, W. Spakman, M. Demartis, C.E. Cavarozzi, Y.E. Aguilera, M. Mazzucchelli, A. Ribot, 2011. Tectono-magmatic response to major convergence changes in the North Patagonian suprasubduction system; the Paleogene subduction-transcurrent plate margin transition, Tectonophysics, n. 509, pp. 218-237, doi: 10.1016/j.tecto.2011.06.012

30) D.K. Blackman, B. Ildefonse, B.E. John, Y. Ohara, D.J. Miller, and IODP 304-305 Science Party: N. Abe, M. Abratis, E.S. Andal, M. Andreani, S. Awaji, J.S. Beard, D. Brunelli, A.B. Charney, D.M. Christie, J. Collins, A.G. Delacour, H. Delius, M. Drouin, F. Einaudi, J. Escartín, B.R. Frost, G. Früh-Green, P.B. Fryer, J.S. Gee, M. Godard, C.B. Grimes, A. Halfpenny, H-E. Hansen, A.C. Harris, A. Tamura, N.W. Hayman, E. Hellebrand, T. Hirose, J.G. Hirth, S. Ishimaru, K.T.M. Johnson, G.D. Karner, M. Linek, C.J. MacLeod, J. Maeda, O.U. Mason, A.M. McCaig, K. Michibayashi, A. Morris, T. Nakagawa, T. Nozaka, M. Rosner, R.C., Searle, G. Suhr, M. Tominaga, A. von der Handt, T. Yamasaki, X. Zhao, 2011. Drilling Constraints on Lithospheric Accretion and Evolution at Atlantis Massif, Mid-Atlantic Ridge 30°N. Journal of Geophysical Research, 116(B7), B07103, doi: 10.1029/2010jb007931.

31) Brunelli, D. and Seyler, M., Asthenospheric percolation of alkaline melts beneath the St. Paul region (Central Atlantic Ocean), 2010. Earth Planetary Science Letters, 289, pp 393-405. http://dx.doi.org/10.1016/j.epsl.2009.11.028.

32) Belayouni H., Brunelli, D., Clocchiatti, R., Di Staso, A., Hassani, I.E.A., Guerrera, F., Kassaa, S., Laridhi Ouazaa, N., Martín. M.M., Serrano, F., Tramontana, M., 2009. La Galite Archipelago (Tunisia, North Africa): new geological data and insights for geodynamic evolution of the Maghrebian Chain (African-European plate boundary). Journal of African Earth Sciences, 56-1, pp. 15-28. doi:10.1016/j.jafrearsci.2009.05.004.

33) A., Cipriani, E., Bonatti, M., Seyler, H., Brueckner, D., Brunelli, L., Dallai, S., Hemming, M., Ligi, L., Ottolini, B., Turrin, 2009. A 19 to 17 Ma amagmatic extension event at the Mid-Atlantic Ridge: ultramafic mylonites from the Vema Lithospheric Section. Geochemistry Geophysics Geosystem, 10, 2009. doi:10.1029/2009GC002534.

34) A., Cipriani, E., Bonatti, D., Brunelli, M., Ligi, 2009. 26 Million Years of Mantle Upwelling Below a Segment of the Mid Atlantic Ridge: the Vema Lithospheric Section Revisited. Earth Planetary Science Letters, 285, pp 87-95. doi:10.1016/j.epsl.2009.05.046.
35) Godard, M., S. Awaji, H. Hansen, E. Hellebrand, D. Brunelli, K. Johnson, T. Yamasaki, J. Maeda, M. Abratis, D. Christie, Y. Kato, C. Mariet, M. Rosner 2009, Geochemistry of a long in-situ section of intrusive slow-spread oceanic lithosphere: Results from IODP Site U1309 (Atlantis Massif, 30°N Mid-Atlantic-Ridge), Earth Planetary Science Letters, doi:10.1016/j.epsl.2008.12.034
36) Mazzucchelli, M., Rivalenti, G., Brunelli, D., Zanetti, A., & Boari, E., 2009. Formation of highly-refractory dunite by focused percolation of pyroxenite-derived melt in the Balmuccia peridotite massif (Italy). Journal of Petrology, 50, pp 1205-1233, doi:10.1093/petrology/egn053.
37) Suhr, G., E. Hellebrand, K. Johnson, and D. Brunelli 2008, Stacked gabbro units and intervening mantle: A detailed look at a section of IODP Leg 305, Hole U1309D, Geochemistry Geophysics Geosystem, 9, Q10007, doi:10.1029/2008GC002012.
38) A.A. Peyve, S.g. Skolotnev, M. Ligi, N.N. Turko, E. Bonatti, S.Yu. Kolodyazhnyi, N.P. Chamov, N.V. Tsukanov, Yu. E. Baramyokov,, A.E. Eskin, N. Grindlay, J.G. Sclater, D. Brunelly, A.N. Pertsev, A. Cipriani, G. Bortoluzzi, R. Mercuri, E. Paganelli, F. Muccini, Ch. Takeuchi, F. Zaffagnini and K.O. Dobrolyubova., 2007, Investigation of the Andrew Bain transform fault zone (African-Antartctic Region), Doklady Earth Sciences, 2007, vol.416, no. 7, pp. 991-994. DOI:10.1134/S1028334X07070021.
39) Ildefonse, B., Blackman, D., John, B.E., Ohara, Y., Miller, D.J., MacLeod, C.J., and Integrated Ocean Drilling Program Expeditions 304/305 Science Party, 2007. Oceanic core complexes and crustal accretion at slow-spreading ridges. Geology, 35, 623-626. doi: 10.1130/G23531A.
40) Ildefonse, B., Blackman, D., John, B.E. Ohara, Y., Miller, D.J., IODP Expeditions 304 & 305, 2006. Characterize the Lithology, Structure, and Alteration of an Oceanic Core Complex. Scientific Drilling Journal, 3:4–11. doi:10.2204/iodp.sd.3.01.2006
41) D. Blackman, B. I ldefonse, B.E. John, Y. Ohara, D.J. Miller, C. J. MacLeod, N. Abe, M. Abrat is, E.S. Andal, M. Andréani, S. Awaji, J.S. Beard, D. Brunelli, A.B. Charney, D.M. Christie, A.G. Delacour, H. Delius, M. Drouin, F. Einaudi, J. Escartin, B.R. Frost, P.B. Fryer, J.S. Gee, M. Godard, C.B. Grimes, A. Halfpenny, H.-E. Hansen, A.C. Harris, A. Tamura Hasebe, N.W. Hayman, E. Hellebrand, T. Hirose, J.G. Hirth, S. Ishimaru, K.T.M. Johnson, G.D. Karner, M. Linek, J. Maeda, O.U. Mason, A.M. McCaig, K. Michibayashi, A. Morris, T. Nakagawa, T. Nozaka, M. Rosner, R.C. Searle, G. Suhr, M. Tominaga, A. von der Handt, T. Yamasaki, and X. Zhao., 2006. Proc. IODP, 304/305: College Station TX (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.304305.2006
42) Brunelli D., Seyler M., Cipriani A., Bonatti E. and Ottolini L. 2006. Discontinuous melt extraction and weak refertilization of mantle peridotites at the Vema Lithospheric Section (Mid Atlantic Ridge). Journal of Petrology, 47, 745-771. doi:10.1093/petrology/egi092.
43) Expedition Scientific Party, 2005. Oceanic core complex formation, Atlantis Massif—oceanic core complex formation, Atlantis Massif, Mid-Atlantic Ridge: drilling into the footwall and hanging wall of a tectonic exposure of deep, young oceanic lithosphere to study deformation, alteration, and melt generation. IODP Prel. Rept., 305. doi:10.2204/iodp.pr.305.2005
44) IODP Expeditions 304 and 305 Scientists, 2005. IODP Expeditions 304 and 305: oceanic core complex formation, Atlantis Massif. Scientific Drilling Journal, 1:28–31. doi:10.2204/iodp.sd.1.05.2005
45) E. Bonatti, D. Brunelli, W. R. Buck, A. Cipriani, P. Fabretti, V. Ferrante, L. Gasperini and M. Ligi, 2005. Flexural uplift of a lithospheric slab near the Vema Transform (Central Atlantic): timing and mechanisms. Earth and Planetary Science Letters 240, 642-655. doi:10.1016/j.epsl.2005.10.010.
46) Cipriani A., Bruekner H., Bonatti E., Brunelli D., 2004. Oceanic crust generated by elusive parents: Sr/Nd isotopes in basalt-peridotite pairs from the Mid-Atlantic Ridge. Geology, v. 32, pp. 657-660. doi: 10.1130/G20560.1.
47) D'Orazio M., Boschi C., Brunelli D., 2004. Talc-rich hydrothermal rocks from the St. Paul and the Conrad fracture zones in the Atlantic Ocean. European Journal of Mineralogy, v. 16, 73 – 83. DOI: 10.1127/0935-1221/2004/0016-0073.
48) Bonatti E., Ligi M., Brunelli D., Cipriani A., Fabretti P., Ferrante V., Gasperini L., Ottolini L., 2003. Mantle thermal pulses below the Mid-Atlantic Ridge and temporal variations in the formation of oceanic lithosphere. *Nature, v. 423, pp. 499 – 505.* doi:10.1038/nature01594.
49) Brunelli D., Cipriani A., Ottolini L., Peyve A., and Bonatti E., 2003. Mantle peridotites from the Bouvet Triple Junction Region, South Atlantic. Terra Nova, v. 15, no. 3, pp. 194-203. doi: 10.1046/j.1365-3121.2003.00482.x

50) Bonatti E., Brunelli D., Fabretti P., Ligi M., Portaro R.A., Seyler M., 2001. Steady-state creation of crust-free lithosphere at cold spots in mid-ocean ridges. Geology, v. 11, pp. 979-982.
51) Peyve A., Bonatti E., Brunelli D., and scientific party, 2000. New data on some major structures: preliminary results of R/V Akademik Nikolaj Strakhov 22 cruise. InterRidge News, 9 (2).
52) Fabretti P., Bonatti E., Peyve A., Brunelli D., and scientific party, 1998. First results of cruise S19 (Primar Project): petrological and structural investigations of the Vema Transverse Ridge (Equatorial Atlantic). Giornale di Geologia, 60.
53) Carrara G., Bortoluzzi G., Zitellini N., Bonatti E., Brunelli D., and scientific party, 1997. The Bouvet Triple Junction Region (South Atlantic): a report on two geological expeditions. Giornale di Geologia, 59, n 1-2.
54) Gasperini, L., Bonatti, E., Brunelli, D., Carrara, G., Cipriani, A., Fabretti, P., Gilod, D., Ligi, M., Peyve, A., Skolotnev, S., Susini, S., Tartarotti, P. and Turko N. 1997. New data on the geology of the Romanche F.Z., equatorial Atlantic: PRIMAR-96 cruise report. Giornale di Geol., 59/1-2, 3-18.
55) Bortoluzzi G., Bertozzi F., Brunelli D., and scientific party, 1996. Cruise report of the BTJ-96. Bouvet Triple Junction. PNRA – Institute for Marine Geology – CNR, Bologna.

Invited talks, communications and session convener

2019-12-09 Invited talk AGU Fall meeting 2019: T13A-03 The Interplay between Mantle fertility and Low Melting Lithologies Defines Crustal Thickness and Tectonic Style at Slow/Ultraslow Spreading Ridges. Daniele Brunelli, Marcia Maia, Anna Cipriani, Enrico Bonatti, Marco Ligi, and Monique Seyler

2019-04-12 Co-Convener of EGU Session: TS8.1 Media Oceanic and continental transform faults: towards a multi-disciplinary approach – EGU 2019, Vienna, Austria. Conveners: João Duarte; Marcia Maia, Mathieu Rodriguez, Daniele Brunelli, Barry Hanan. https://meetingorganizer.copernicus.org/EGU2019/session/30668

2018-05-22 Convener and organizer of the FIRST WORKSHOP InterRidge Working Group on Oceanic Transform Faults, IUEM, PLOUZANÉ, FRANCE, 22 TO 24 MAY, 2018: http://otf.science/first-workshop/

2017-2020 Co-coordinator InterRidge Working Group on Oceanic Transform Faults: https://www.interridge.org/WG_Transform_Faults

2017-08-14 Co-Convener of Goldschmidt Session: MORB petrogenesis: from partial melting to fractional crystallization. Goldschmidt 2017, Paris.

2015-12-14 Co-Convener of AGU Fall Meeting Session: Generation and Evolution of the Oceanic Lithosphere (V11E-V12A-V14A-V21A). AGU Fall meeting 2015.

2015-03-11 Invited seminar: "The deep melting structure in ultraslow spreading regions: insights from SWIR-Smoothseafloor peridotites". Institute de Physique du Globe de Paris.

2011-02-25 Invited seminar: "Inherited and melting-induced asthenospheric heterogeneities along the slow and ultraslow spreading ridges" in: Ocean Ridges and Mantle Plumes, University of Genova, 25/02/2011.

2010-03-30 Invited seminar at IPGP – Paris: "30 Ma of crustal accretion at the Vema FZ (MAR 11°N); constraints on the scale and nature of the mantle source heterogeneities"

2009-12-14 Invited talk at AGU fall meeting 2009: D. Brunelli; E. Bonatti; A. Cipriani; M. Ligi; M. Seyler; L. Ottolini , 2009. Scale and nature of the mantle heterogeneities at the Vema Lithospheric Section (Mid Atlantic Ridge 11°N) (Invited). Eos Trans. AGU, 90(52), Fall Meet. Suppl., V31F-02.

2009-11-10 Invited lesson: "Constraints on the mantle melting process and source heterogeneities from MORB compositional variability" at the "Corso breve di Petrologia magmatica e Vulcanologia: Dal Mantello alle Camere Magmatiche" FIST, Geoitalia, September 2009.

2008-01-22 Invited seminar at Bologna University: "Transforms, megatransforms and oceanic cold spots"

2007-10-09 Invited talk at Facultad de Ciencias naturals y Museo de la Universidad Nacional de La Plata: Zonas Transformantes, megatransformantes y puntos frios oceanicos", La Plata, Argentina.

2007-10-05 Invited talk at Facultad de Ciencias Exactas y Naturales, Universidad Nacional de La Pampa: "Zonas Transformantes, megatransformantes y puntos frios oceanicos", Santa Rosa, La Pampa, Argentina.

2007-10-04 Invited talk at Facultad de Ciencias Exactas y Naturales, Universidad Nacional de La Pampa: "La corteza oceánica: Formación y variación en el tiempo", Santa Rosa, La Pampa, Argentina.

2005 Teaching at the Master "Environnement Volcaniques et Sédimentaires", 2005. Module "Volcanic Fluids", theory and laboratory practice. Responsible: N. Métrich, P. Allard. Paris XI University – Orsay)

2004 Invited lesson for the senior geology students Cambridge University *"Discontinuous/episodic partial melt extraction from the melting region beneath the Mid Atlantic Ridge".* Cambridge University, November, 2004, Cambridge, UK.

Congress communication

56) L Verhoest, C Hémond, A Cipriani, P Nonnotte, M Maia, D. Brunelli. Small-scale Mantle Heterogeneities revealed by Mid Ocean Ridge cold spots. Goldschmidt Conference, Lyon, 2023
57) Grenet, L., Maia, M., Hamelin, C., Briais, A. and Brunelli, D., 2023. Construction of the neo-volcanic area of a slow-spreading ridge in a cold mantle context: Mid-Atlantic Ridge Eastern Intersection with Romanche Transform Fault (No. EGU23-742). Copernicus Meetings.
58) Bickert, M., Kaczmarek, M.A., Maia, M. and Brunelli, D., 2023. Fluid-assisted deformation processes at the roots of oceanic transform faults (No. EGU23-5111). Copernicus Meetings.
59) Maia, M., Briais, A., Petracchini, L., Cuffaro, M., Ligi, M., Brunelli, D., Grenet, L. and Hamelin, C., 2023. Temporal variation in spreading processes at the Eastern Romanche-Mid-Atlantic Ridge intersection (No. EGU23-5648). Copernicus Meetings.
60) Urann, B., Sun, C. and Brunelli, D., 2022, December. Modulation of Mid-Ocean Ridge Basalt and Abyssal Peridotite H2O Abundances by Melt-Penetration and Diffusive Equilibration. In AGU Fall Meeting Abstracts (Vol. 2022, pp. DI22A-02).
61) Kenji Motoki, Thomas Campos, Susanna E Sichel, Leonardo Barão, Estefan Fonseca, Daniele Brunelli, Marcia Maia, Joaquin Neto, Thais Vargas, Peter Szatmari. The St. Peter and St. Paul Archipelago (Equatorial Atlantic Ocean): Structural evidences for present-day compressive tectonics. AGU Fall Meeting abs. 2021
62) Mathilde Cannat, Souradeep Mahato, Isabelle Martinez, Gretchen Frueh-Green, Stefano Bernasconi, Aurelien Lecoeuvre, Alberto Vitale Brovarone, Daniele Brunelli, Fabrice Fontaine, Mariacristina Prampolini, Pierre Agrinier, Manon Bickert, Cedric Hamelin, Solveig Lie Onstad, Marcia Maia, Stephane Roumejon. Carbonate-Brucite Chimneys At The Southwest Indian Ridge: The Old City Hydrothermal Field. AGU Fall Meeting Abstracts 2021 - V33A-09
63) L Verhoest, C Hemond, P Nonnotte, A Cipriani, F Lugli, D. Brunelli. Cold Spots as a Tool to Reveal Short-Scale Mantle Heterogeneities. - AGU Fall Meeting Abstracts, 2021 . DI24A-08
64) Z Yu, S Singh, M Maia, D Brunelli. Seismic observations in the eastern Romanche ridge-transform intersection (Equatorial Atlantic) from microseismicity data and seismic tomography - AGU Fall Meeting Abstracts, 2021. T55F-09
65) da Costa Campos, T.F., Fonseca, E.M., Araujo, J.H., Pastura, V.F., Sichel, S., Motoki, K.F., Barão, L., Maia, M., Brunelli, D., Neto, J.V. and Vargas, T., 2021. Surface Radioactive Heat Production from in situ Gamma Spectrometry and Chemical Data of Mantle exhumed peridotites from St. Peter and St. Paul Archipelago (Equatorial Atlantic). Goldschmidt2021• Virtual• 4-9 July.
66) M. Maia, D. Brunelli, A. Briais, L. Petracchini, and SMARTIES cruise scientific team. Axial instability and time evolution at an ultra-cold slow-spreading ridge: the Mid-Atlantic Ridge-Romanche transform intersection. First results from the SMARTIES cruise. T026-0001. AGU Fall meeting 2020.
67) M. Maia, D. Brunelli, C. Hamelin, A. Briais, G. Barré, L. Grenet and SMARTIES Cruise scientific team. Interplay Between Volcanic and Tectonic Axial Processes in a Cold Slow-spreading Ridge: the Mid-Atlantic Ridge South of the Romanche Transform Fault. T023-01. AGU Fall meeting 2020.
68) Maia, M. and Brunelli, D. and the SMARTIES Cruise Scientific Party: The Eastern Romanche ridge-transform intersection (Equatorial Atlantic): slow spreading under extreme low mantle temperatures. Preliminary results of the SMARTIES cruise., EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-10314, https://doi.org/10.5194/egusphere-egu2020-10314, 2020
69) Yu, Z., C. Singh, S., Gregory, E., Crawford, W., Maia, M., and Brunelli, D.: Microseismicity constrains on the lithospheric structure at the ridge-transform intersection at the Romanche Transform Fault and Mid-Atlantic Ridge, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-6006, https://doi.org/10.5194/egusphere-egu2020-6006, 2020
70) Henry J Dick, Huaiyang Zhou, Juergen Koepke, Maurice Tivey, Michael J Cheadle, Vincent J M Salters, Gabriella Alodia, Michael Bröcker, Daniele Brunelli, Qiong Chen, Shi Cheng, Fiona Clarke, Christopher James Doorn, John

A. Greene, Fuwu Ji, Pascal Kruttasch, Haizhou Li, Chuan-Zhou Liu, Pingping Liu, Dominik Mock, Sarah Newnes, Qiang Ma, Ellen Roosen, Ben Urann, Theresa Williams, Dominic Woelky and Qikuan Zhu, 2019. T13A-01 Mapping the Mantle on the Marion Rise. AGU FALL meeting, 2019.

71) Verhoest L., Brunelli D., Hemond C., Bonatti E., Ligi M. & Cipriani A. 2019. Mantle source heterogeneity in the Equatorial Mid Atlantic Ridge: a multi-isotopic approach. SIMP-SGI-SOGEI Congress 2019, *Rendiconti online SGI* https://doi.org/10.3301/ABSGI.2019.05

72) Ligi M., Bonatti E., Brunelli D. & Cuffaro M. 2019. Global Seafloor Spreading Variations and the Evolution of Seawater Composition since the Mesozoic. SIMP-SGI-SOGEI Congress 2019, *Rendiconti online SGI* https://doi.org/10.3301/ABSGI.2019.05

73) Brunelli D., Maia M., Ligi M., Bonatti E., Briais A., Campos T., Ceuleneer G., Cipriani A., Cuffaro M., Gregory E., Hamelin C., Jbara R., Kaczmarek M.-A., Lombardi F., Moreira S., Mougel B., Petracchini L., Puzenat V., Revillon S., Seyler M., Soltanmohammadi A., Verhoest L., Trivellato T. & Wang Z. 2019. Cold spots at Mid Ocean Ridges help revealing mantle heterogeneity: a summary of the SMARTIES cruise in the Equatorial Atlantic. SIMP-SGI-SOGEI Congress 2019, *Rendiconti online SGI* https://doi.org/10.3301/ABSGI.2019.05

74) Li P., Xia Q.-K., Dallai L., Bonatti E., Brunelli D., Cipriani A. & Ligi M. 2019. H2O Enrichement in Residual Mantle Peridotites at a Mid-Atlantic Ridge Segment. Abstract book SIMP-SGI-SOGEI Congress 2019 https://doi.org/10.3301/ABSGI.2019.05

75) Mazzucchelli M., Bertotto G.W., Giovanardi T., Zanetti A., Ponce A.D., Brunelli D., Bernardi M.I., Hémond C. & Cipriani A. 2019. Xenoliths's evidence for refertilisation of a strongly depleted mantle column in the Patagonian extra-Andean backarc (Paso de Indios, Argentina). Abstract book SIMP-SGI-SOGEI Congress 2019 https://doi.org/10.3301/ABSGI.2019.05

76) Cannat M, Agrinier P, Martinez I, Vitale Brovarone A, Lecoeuvre A, Corre M, Früh-Green G, Fontaine F, Chavagnac V, Brunelli D, Prampolini M, Bickert M, Hamelin C, Lie Onstad S & Rouméjon S (2019) Goldschmidt Abstracts, 2019 463

77) Alden Adriao, Christophe Hemond, Daniele Brunelli, and Marcia Maia, 2019. Deep shear focusing along transform faults: the ultramafic-ultramylonites of the St. Paul Fracture Zone EGU2019-9492 TS8.1/GD5.12/GMPV3.8/SM1.26

78) Li P, Xia Q-K, Bonatti E & Brunelli D (2018) Goldschmidt Abstracts, 2018

79) Christophe Hemond, Daniele Brunelli, Marcia Maia, Stephen Prigent, and Susanna E Sichel, 2017. St Paul fracture zone intratransform ridge basalts (Equatorial Atlantic): Insight within the mantle source diversity. Abstract T33D-0757 presented at 2017 AGU Fall Meeting, New Orleans, La., 11–15 Dec.

80) Marcia Maia, Anne Briais, Daniele Brunelli, Marco Ligi, Susanna E Sichel, and Thomas Campos, 2017. Transpressive mantle uplift at large offset oceanic transform faults. Abstract T51G-0563 presented at 2017 AGU Fall Meeting, New Orleans, La., 11–15 Dec.

81) Barry B Hanan, David W Graham, Christophe Hemond, Frédéric Dufour, Anne Briais, Georges Ceuleneer, Marcia Maia, Sung-Hyun Park, Sidonie Revillon, Yun-Seok Yang and STORM Cruise Scientific Party: F. Barrere, C. Boulart, A. Briais, D. Brunelli, G. Ceuleneer, N. Ferreira, D. Graham, B. Hanan, C. Hémond, S. Macleod, M. Maia, A. Maillard, S. Merkuryev, S.H. Park, S. Révillon, E. Ruellan, A. Schohn, S. Watson, and Y.S. Ya, 2017. Geochemical and Isotopic Variations Along the Southeast Indian Ridge (126°-140°E) Related to Mantle Flow Originating from Beneath Antarctica. Abstract T33G-08 presented at 2017 AGU Fall Meeting, New Orleans, La., 11–15 Dec.

82) Mathilde Cannat, Pierre Agrinier, Manon Bickert, Daniele Brunelli, Cedric Hamelin, Aurélien Lecoeuvre, Solveig Lie Onstad, Marcia Maia, Mariacristina Prampolini, Stéphane Rouméjon, Alberto Vitale Brovarone, Simon Besançon and El-Madani Assaoui, 2017 Submersible Exploration of Smooth Ultramafic Seafloor at the Southwest Indian Ridge, 64 degree E (Invited) T32C-01: Mid Ocean Ridge Processes at Very Low Melt Supply. AGU Fall Meeting, New Orleans, La., 11–15 Dec.

83) Etienne Ruellan, Anne Briais, Georges Ceuleneer, Marcia Maia and STORM Cruise Scientific Party, : F. Barrere, C. Boulart, A. Briais, D. Brunelli, G. Ceuleneer, N. Ferreira, D. Graham, B. Hanan, C. Hémond, S. Macleod, M. Maia, A. Maillard, S. Merkuryev, S.H. Park, S. Révillon, E. Ruellan, A. Schohn, S. Watson, and Y.S. Ya, 2017. Complex Tectono-Magmatic Interaction along the George V Transform Fault, South-East Indian Ridge, 140°E, and Implications for Mantle Dynamics T33G-06 AGU Fall Meeting, New Orleans, La., 11–15 Dec.

84) Clément Vincent, Marcia Maia, Anne Briais, Daniele Brunelli, Marco Ligi, Álden Adrião and Susanna E Sichel 2017 Particular Oceanic Core Complex evolution in an extremely low melt supply environment, T32C-05 AGU Fall Meeting, New Orleans, La., 11–15 Dec

85) Brunelli D., Cipriani A., 2017. Pyroxenites sow Discord between Parent Mantle and Daughter MORB. Goldschmidt conf. Paris, abs: 05a/15:30/We.
86) Marcia Maia, Susanna Sichel, Anne Briais, Daniele Brunelli, Marco Ligi, Thomas Campos, Bérengère Mougel, Christophe Hémond, 2017. EGU General Assembly Conference Abstracts, Vol. 19, p. 9425
87) Ronchetti, F., Deiana, M., Vezzalini, M. G., Lugli, S., Fioroni, C., & Brunelli, D. (2017, April). Chemical and isotopic analysis to define how many groundwater types could be hosted in a fractured flysch delimited by clayey and evaporites rock masses. In *EGU General Assembly Conference Abstracts* (Vol. 19, p. 6955).
88) Sforna MC, Brunelli D, Pasini V, Pisapia C and Menez B (2016) Multiple carbon reduction pathways within serpentinized peridotites from the SouthWestern Indian Ridge and Northern Appenines ophiolites. Goldschmidt Conference Abstract, 2809.
89) Ménez B, Pasini V, Guyot F, Benzerara K, Bernard S, Brunelli D (2016) Organic carbon drives transition metal distribution and secondary mineralization in the hydrated mantle-derived oceanic crust. 4th Serpentine Days, Sète, France – September 2016.
90) Maia M., Sichel S., Briais A., Brunelli D., Ferreira N., Ligi M., Campos T., Mougel B., Hemond C., 2015. Mantle uplift and exhumation caused by long-lived transpression at a major transform fault. AGU Fall Meeting abs: V14A-04.
91) Brunelli D., Verzani A., Spallanzani R., Seyler M. & Cannat M. Asthenospheric processes beneath the ultraslow Smoothseafloor region in the eastern. SGI-SIMP, 2014 Milan. Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 31 (2014).
92) Mazzucchelli M., Ponce A.D., Bertotto G.W., Zanetti A., Brunelli D., Giovanardi T., Aragón E. & Bernardi M.I. Evidence for strong depletion, followed by multiple refertilisation, in the mantle column of the extra-Andean backarc (Paso de Indios, Argentina). SGI-SIMP, 2014 Milan, Italy. Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 31 (2014).
93) M. Paquet, M. Cannat, C. Hamelin and D. Brunelli, 2014, The Easternmost Southwest Indian Ridge: A Laboratory to Study MORB and Oceanic Gabbro Petrogenesis in a Very Low Melt Supply Context. Eos Trans. AGU, XX 10035.
94) B. Ménez, V. Pasini, D. Brunelli, C. Pisapia, P. Le Campion, C. Laverne, E. Gérard. 2013. The microbial compelling attraction for hydrogarnets in the oceanic crust. Mineralogical Magazine, 77(5) 1739.
95) B. Ménez, V. Pasini, C. Pisapia, F. Guyot, P. Dumas, C. Sandt, D. Brunelli (2013) Cryptoendolithic life in oceanic serpentinites. Deep Carbon Observatory International Science Meeting, Washington, USA, March 2013, invited conference.
96) B. Ménez, V. Pasini, D. Brunelli, M. Andreani, K. Benzerara, S. Bernard, P. Dumas, J. Frederick, C. Sandt, F. Guyot. Serpentinization fuels deep microbial ecosystems in the hydrating mantle, Journées IODP France, Paris, France, April 2012
97) Sauter D., M. Cannat, M. Andreani, D. Birot, A. Bronner, D. Brunelli, J. Carlut, A. Delacour, V. Guyader, V. Mendel, B. Ménez, C. MacLeod, V. Pasini, S. Rouméjon, E. Ruellan and R. Searle, 2011, Mantle exhumation at the Southwest Indian Ridge; preliminary results of the "SMOOTHSEAFLOOR" cruise, Eos Trans. AGU, Fall Meet. Suppl., AGU2011-T15, Abstract, Invited talk
98) D. Brunelli; M. Seyler; C. Mével, 2010. Mantle heterogeneities beneath the eastern SWIR. 89th SIMP, Abstract S1.3-02, Ferrara, Italy.
99) D. Brunelli; E. Bonatti; A. Cipriani; M. Ligi; M. Seyler; L. Ottolini , 2009. Scale and nature of the mantle heterogeneities at the Vema Lithospheric Section (Mid Atlantic Ridge 11°N) (Invited). Eos Trans. AGU, 90(52), Fall Meet. Suppl., V31F-02.
100) M. Ligi; E. Bonatti; D. Brunelli; A. Cipriani, 2009. Present day versus Temporal Heterogeneity of the Subridge Mantle in the Central Atlantic. Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V31D-1987.
101) Ponce, A., Bertotto, G., Mazzucchelli, M., y Brunelli, D., 2009. Basaltos del cerro del Mojón, centro-oeste de la provincia de Río Negro, descripción petrográfica y geoquímica. X Jornadas Pampeanas de Ciencias Naturales -2009-. Jour. Conf. Abst. 54p.
102) Brunelli, D., Seyler, M., 2009. Asthenospheric percolation of alkaline melts beneath the St. Paul Region (Central Atlantic). 10-1474/Epitome.03.0758. Workshop on Alpine Ophiolites and Modern Analogues, Parma October, 2009.
103) Brunelli, D., Seyler, M., 2009. Asthenospheric percolation of alkaline melts beneath the St. Paul Region (Central Atlantic). 10-1474/Epitome.03.0758. GeoItalia.
104) Ligi, M., Bonatti, E., Bortoluzzi, G., Brunelli, D., Caratori Tontini, F., Cipriani, A., Cocchi, L., Cuffaro, M., Ferrante, V., Khalil, S., Mitchell, N C., Rasul, N., Schettino, A., (2008). Sea-floor spreading initiation: constraints from

geophysical data of the Thetis Deep, northern Red Sea. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract T33F-08.

105) Brunelli, D, Bonatti, E, Cipriani, A, Grindlay, N R, Ligi, M, Paganelli, E, Sclater, J, (2007) Crust-Poor Lithosphere at Cold Spots in the Mid Atlantic and SW Indian Ridges, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T52B-06

106) Godard, M, Abratis, M, Awaji, S, Brunelli, D, Christie, D, Hansen, H, Hellebrand, E, Johnson, K, Maeda, J, Yamasaki, T, Kato, Y, (2007), Geochemistry of a long in-situ section of intrusive slow-spread crust: Results from IODP Site U1309 (Atlantis Massif, 30°N Mid-Atlantic-Ridge) Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract T53B-1297

107) Brunelli Daniele, Mével Catherine, Cannat Mathilde, Meyzen Christine, M., Bezos Antoine: THE ROOTS OF THE MAGMA PLUMBING SYSTEM BENEATH A COLD-THICK OCEANIC LITHOSPHERE: MAGMA FRACTIONATION AND MIXING ALONG THE SOUTH WEST INDIAN RIDGE. Abs. 74-6, Fist Geoitalia, Rimini, 12-14 Sept. 2007

108) Rivalenti Giorgio, Mazzucchelli Maurizio, Brunelli Daniele, Zanetti Alberto, Tommasini Simone, Boari Elena: THE DUNITES IN THE BALMUCCIA PERIDOTITE MASSIF. Abs. 22-8, Fist Geoitalia, Rimini, 12-14 Sept. 2007

109) Ligi Marco, Bonatti Enrico, Brunelli Daniele, Cipriani Anna: ACCRETION AT A MID ATLANTIC RIDGE SEGMENT: A 25 MILLION YEARS LONG STORY. Abs. 36-3, Fist Geoitalia, Rimini, 12-14 Sept. 2007

110) Ligi, M., Bonatti, E., Bortoluzzi, G., Brunelli, D., Carminati, E., Cipriani, A., Ferrante, V., Redini, F., Barbino, G., 2006. Initial emplacement of Oceanic Lithosphere in the northern Red Sea. EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract T31D-0487

111) Cipriani, A., Bonatti, E., Brunelli, D., Ligi, M. 2006, 26 Million Years of mantle upwelling below a segment of the Mid Atlantic Ridge: the Vema Lithosperic Section revisited. EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract V23E-0684

112) D. Brunelli, R. Clocchiatti, A. Cipriani, M. Ligi, E. Paganelli, L. Ottolini and E. Bonatti, Snapshots fo the magma plumbing system from melt inclusions and residual peridotites of the Vema Lithospheric Section (MAR 11°N) Polar Ridges Meeting and Workshop 2006 - Sestri Levante, September 19-22

113) A. Cipriani, D. Brunelli, M. Ligi and E. Bonatti, 2006. From magma-engorged to magma starved "constipated" lithosphere: The Mid Atlantic Ridge from 40°N to the Equator. Polar Ridges Meeting and Workshop 2006 - Sestri Levante, September 19-22

114) Brunelli D., *Transform, megatransform and oceanic cold spot.* Invited seminar – Earth Science Department Modena University, April 20th 2006.

115) Brunelli D., Onboard 304-305 scientific parties. 2005. *Cruise report on expeditions 304 and 305: Drilling the oceanic core complex at Atlantis massif, 30°N (Mid Atlantic Ridge).* GEOITALIA 2005, September 21st -23rd. Section T08.

116) Mazzucchelli M., Rivalenti G., Brunelli D., Paglioli S., Zanetti A.M., 2005. Melt percolation and reaction in the Balmuccia peridotite. GEOITALIA 2005, September 21st -23rd. Section T06.

117) Brunelli D., Clocchiatti R., Ottolini L. 2005. *Boundary layers in plagio-hosted melt inclusion: temporal and thermal constraints on MORB genesis.* GEOITALIA 2005, September 21st -23rd. Section T04.

118) Brunelli D., M. Seyler, A. Cipriani, L. Ottolini, E. Bonatti. 2005. *Weak residual mantle refertilization by partial melts beneath the Mid Atlantic Ridge. Implications for discontinuous/episodic melt extraction.* GEOITALIA 2005, September 21st -23rd. Section T06.

119) Sides, R., Holness, M., Brunelli, D., 2005. *Liesegang structures formed during interstitial solidification of crystal mushes: the peridotite plugs of Rum.* VMSG annual meeting, January, 2005 – Milton Keynes - UK

120) Ligi, M., Bonatti, E., Brunelli, D., Buck, R.W., Cipriani A., 2004. *Flexural uplift of a lithospheric slab near the Vema transform (Central Atlantic): timing and mechanism.* EOS Trans. AGU 2004, 85(47), Fall Meet. Suppl., Abstract T44A-06

121) Cipriani, A., Bonatti, E., Brunelli D., Ligi M., Ottolini L., 2004. *Small scale mantle heterogeneities sampled through oceanic basalts from ridge-transform intersections.* EOS Trans. AGU, 85(47), Fall Meet. Suppl., Abstract T44A-07

122) Brunelli, D., M. Seyler, A. Cipriani, L. Ottolini, E. Bonatti. 2004. *Discontinuous/episodic partial melt extraction from the melting region beneath the Mid Atlantic Ridge.* In: "Minéralogie-pétrologie des péridotites du manteau: nouveaux regards" - October 13-14th, 2004, Paris – Bull. de Liaison Soc. Franc. Min. Crist., n. 16,3

123) Brunelli, D., Massare, D., Clocchiatti, R., 2004. *Primary compositional heterogeneities in Pl-hosted melt inclusions.* 3rd EUROMELT meeting, September 12-18th– Pavia, Italy.

124) Brunelli D., 2004. *Partial melt composition and aggregation. Constraints from the Vema FZ residual mantle rocks.* Séminaire des Doctorants et Post-doctorants du laboratoire Pierre Süe (CEA-CNRS). Paris, France.

125) Brunelli D., Clocchiatti R., Massare D., Ottolini L., 2004. *Partial melt composition and aggregation. Constraints from the Vema FZ residual mantle rocks.* 2nd EUROMELT Meeting, February 16-17th, Cambridge, UK.
126) Brunelli D., Clocchiatti R., Massare D., 2003. *Primary melts in MORB's plagioclase-hosted melt inclusions.* 1st EUROMELT Meeting, June 2-3rd, Clermont Ferrand - France
127) Seyler M., Brunelli D., Juteau T. et Hékinian R., 2003. *Géochimie des minéraux de péridotites de la région de Saint-Paul (océan Atlantique équatorial).* "Oceans et Ophiolites", Réunion spécialisée de la Société Géologique de France, Université de Bretagne Occidentale.
128) Brunelli D., Cipriani A., Ottolini L., Vaggelli G., Santo A.P., Bonatti E., 1999. *The Bouvet melt anomaly in the South Atlantic: geochemistry and influence on the Triple Junction Geometry.* FIST GEOITALIA, 1999, 20-23rd September, Bellaria, Italy.
129) Bonatti E., Gasperini L., Ligi M., Brunelli D., Cipriani A., Fabretti P., 1999. *La struttura termica del mantello oceanico e la creazione della litosfera oceanica nell'Atlantico centrale e meridionale.*
FIST GEOITALIA, 1999, 20-23rd September, Bellaria, Italy.
130) Bonatti E., Brunelli D., Cipriani A., Ottolini L. & Seyler M., 1999.*Spatial and temporal heterogeneity of the oceanic mantle in the central Atlantic.*3rd Int. Workshop on Orogenic Lherzolites and Mantle Processes, 12-15th September, 1999, Pavia, Italy.
131) Brunelli D., Cipriani A., Ottolini L., Bonatti E., 1999. *Vema Fracture Zone (Central Atlantic): Temporal variations of mantle composition and of accretion processes at ridge axis,* EUG 10, Strasbourg 28 March-1April 1999, Sec. F02.
132) Gasperini L., Bonatti E., Borsetti AM., Brunelli D., Capotondi L., Carrara G., Cipriani A., Fabretti P., Ligi M., Kastens K., 1999. *Time constraints on the emplacement of an uplifted sliver of oceanic lithosphere at the Vema transverse ridge (Central Atlantic).* EUG 10, Strasbourg 28 March-1 April 1999, Sec. O05.
133) Ligi M., Bonatti E., Brueckner HK., Brunelli D., Cipriani A., Fabretti P., Ottolini L., 1998. *Contrasting Ultra-Slow Ridges near the Bouvet Triple Junction in the South Atlantic.* AGU Fall Meeting, Abstract T31F-08.
134) Bonatti E., Brunelli D., Cipriani A., Fabretti P., Gasperini L., Ligi M., Peyve A., Savelieva G., Skolotnev S., Susini S., 1998. Variations with age of ultramafic composition near the Vema fracture zone, Central Atlantic. AGU Fall Meeting, Abstract T42D-05.

Posters

135) Kenji Freire Motoki Sr., Dr. Thomas Ferreira da Costa Campos V, Susanna Sichel V, Estefan Monteiro Fonseca Sr., Marcia Maia V, Daniele Brunelli V, Leonardo Barão Sr., Joaquim Virgens Neto, Thais Vargas, Peter Szatmari V, Ana M.R. Neiva and Akihisa Motoki. Compressive tectonics recorded in the joint system of the St. Peter and St. Paul Archipelago, Equatorial Atlantic Ocean. Goldschmidt Conference, Hawaii, 2022.
136) Marcia Maia, Anne Briais, Daniele Brunelli, Marco Ligi, Christophe Hemond, Clément Vincent, and Susanna E Sichel, 2019. T13I-0286 Magmatic versus tectonic control on the spreading style of ridge segments inside a slow-slipping multi-transform fault: the St. Paul system, Equatorial Atlantic. AGU FALL meeting 2019.
137) Daniele Brunelli, Marco Ligi, Enrico Bonatti, and Anna Cipriani, 2019. Melting-induced fluctuations on the shallow thermal regime at the Vema transform, Mid Atlantic Ridge. EGU2019-8950 TS8.1/GD5.12/GMPV3.8/SM1.26
138) Marcia Maia, Anne Briais, Daniele Brunelli, Marco Ligi, Clément Vincent, Alysse Bébin, Bernard Le Gall, Christophe Hémond, and Susanna Sichel, 2019. Magmatic versus tectonic control on the evolution of a slow-slipping multi-transform fault: the St. Paul system, Equatorial Atlantic. EGU2019-9958 TS8.1/GD5.12/GMPV3.8/SM1.26
139) Christophe Hemond, Stephen Prigent, Marcia Maia, Daniele Brunelli, Bérengère Mougel, Anne Briais, and Susanna Sichel, 2019. Partial melting versus source composition from basalts dredged inside the cold mantle environment of the St. Paul Fracture Zone (Equatorial Atlantic). EGU2019-9573 TS8.1/GD5.12/GMPV3.8/SM1.26
140) Álden Adrião, Marcia Maia, Christophe Hemond, Mary-Alix Kaczmarek, Anne Briais, Clément Vincent and Daniele Brunelli, 2017. MECHANICAL MIXING AND METAMORPHISM OF MAFIC AND ULTRAMAFIC LITHOLOGIES DURING MYLONISIS AT THE ST. PAUL TRANSFORM SYSTEM, MID-ATLANTIC RIDGE. Abstract T33D-0758 presented at 2017 AGU Fall Meeting, New Orleans, La., 11–15 Dec.

141) Christophe Hemond, Daniele Brunelli, Marcia Maia, Stephen Prigent and Susanna E Sichel, 2017 St Paul fracture zone intratransform ridge basalts (Equatorial Atlantic): Insight within the mantle source diversity T33D-07572017 AGU Fall Meeting, New Orleans, La., 11–15 Dec.
142) Cipriani A., & Brunelli D., 2017. Mantle-Crust Isotopic Relationships along Mid Ocean Ridges: Constraints from the Analysis of Time Series. Goldschmidt conf. Paris, abs: 05a/2153/We.
143) Brunelli D., Cannat M., Paquet M., Sforna M., Seyler M., 2015. Sodium Inverse Relationships During Melting in Ultraslow Spreading Regions: Insights from SWIR-Smoothseafloor Peridotites. AGU Fall Meeting abs: V11B-3063.
144) Brunelli D., Verzani A., Spallanzani R., Seyler M. & Cannat M. Multistage asthenospheric melt/rock reaction in the ultraslow eastern SWIR mantle. SGI-SIMP, 2014 Milan, Italy. Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 31 (2014).
145) Barbieri E., Brunelli D., Cipriani A. & Mazzucchelli M. Barbieri E., Brunelli D., Cipriani A. & Mazzucchelli M. SGI-SIMP, 2014 Milan, Italy. Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 31 (2014).
146) Montanini A. Brunelli D., Paganelli E., 2014 Mantle xenoliths from Sardinia (Italy): evidence for reaction between refractory peridotites and carbonatite melts. 6th Lherzolite Conference, Morocco, in J-L- Bodinier ed. Journal Abstracts.
147) Sauter D., M. Cannat, M. Andreani, D. Birot, A. Bronner, D. Brunelli, J. Carlut, A. Delacour, V. Guyader, V. Mendel, B. Ménez, C. MacLeod, V. Pasini, S. Rouméjon, E. Ruellan and R. Searle, 2011, A 10 Myrs long record of mantle exhumation at the eastern Southwest Indian Ridge, Eos Trans. AGU, Fall Meet. Suppl., AGU2011-T15, Abstract, Poster
148) E. Paganelli, D. Brunelli, M. Seyler, E. Bonatti, A. Cipriani, M. Ligi, 2010. Heterogeneous melting and refertilization of a mantle parcel in a cold spot: Andrew Bain fracure zone (SWIR). 89th SIMP, Abstract S11.3-P6, Ferrara, Italy.
149) Hellebrand, Eric; Suhr, Guenter; Johnson, Kevin; Brunelli, Daniele; von der Handt, Anette, 2010. Pervasive Reactive Melt Migration Before Core Complex Formation: Evidence From IODP Hole U1309D, Atlantis Massif. Chapman Conference: Detachments in Oceanic Lithosphere: Deformation, Magmatism, Fluid Flow and Ecosystems, Agros Cyprus, 2010
150) Maurizio Mazzucchelli, Giorgio Rivalenti, Daniele Brunelli, Alberto Zanetti, Elena Boari, 2009. Formation of Highly-refractory dunite by focused percolation of pyroxenite-derived melt in the Balmuccia spinel peridotite massif (Italy). Workshop on Alpine Ophiolites and Modern Analogues, Parma October, 2009.
151) M. Mazzucchelli, G. Rivalenti, D. Brunelli, A. Zanetti, and E. Boari, 2009. Dunites in the Balmuccia Peridotite Massif (Western Italian Alps): their origin by focused percolation of pyroxenite-derived melt. Geophysical Research Abstracts, Vol. 11, EGU2009-7720, 2009. EGU General Assembly 2009.
152) Paganelli, E., Brunelli, D., Bonatti, E., Cipriani, A., Ligi, M., (2008). Multi-stage impregnation of the lithospheric mantle at the Andrew Bain FZ (SWIR). Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract T43C-2038.
153) Suhr, G., Johnson, K T M., Hellebrand, E., Brunelli, D., (2008). Stacked Gabbro Units Convert Intervening Mantle to Troctolite in Hole U1309D, IODP Expedition 304/305. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract T43B-2020.
154) Cipriani, A., Ligi, M, Bonatti, E, Brunelli, D, (2007) Solid mantle upwelling rate beneath the Mid Atlantic Ridge, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract V21B-0611
155) E. Bonatti, G. Bortoluzzi, D. Brunelli, V. Ferrante, M. Ligi, M. Lopez Correa, F. Redini, A. Cipriani, G. Barbino, E. Carminati, A. Calafato, N.C. Mitchell, B. Sichler, M. Schmidt, N. Rasul, S.N. Al-Nomani, F. Bahreth, R.K. Farawati, S.M. Samir, A. Shawky and Y.M Al-Hazmi – TRANSITION FROM A CONTINENTAL TO AN OCEANIC RIFT IN THE NORTHERN RED SEA. Polar Ridges Meeting and Workshop 2006 - Sestri Levante, September 19-22
156) M. Ligi, E. Bonatti, N.R. Grindlay, J. Sclater, S. Skolotnev, A. Peyve, G. Bortoluzzi, D. Brunelli, A. Cipriani, R. Mercuri, F. Muccini, E. Paganelli, F. Zaffagnini, C. Takeuki, Y. Baramykov, N. Chamov, S. Erofeev, A. Eskin, S. Kolodyazhnyy, A. Pertsev, V. Semenov, V. Rastorgyev, N. Tsukanov, N. Turko, V. Yefimov and L. Zotov – ANDREW BAIN TRANSFORM: MULTIPLE CONTINENTAL-TYPE TRANSFORM BOUNDARIES AT MID-OCEAN RIDGE. Polar Ridges Meeting and Workshop 2006 - Sestri Levante, September 19-22
157) Bonatti E., Ligi M., Brunelli D., Cipriani A., Gasperini L., 2002. *Is the Mid-Atlantic Ridge becoming hotter with time?* Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract T12C-1328.
158) Cipriani A., Brunelli D., Brueckner H.K., Bonatti E., 2001. *Temporal variations in the mantle source of MORB near the Vema fracture zone (Central Atlantic): Nd and Sr isotopes in peridotite and basaltic glasses.* EOS Trans. AGU, 82(47), Fall Meet. Suppl., Abstract V12A-0955

159) Bonatti E., Brunelli D., Fabretti P., Ligi M., Portaro RA., Seyler M., 2000. Crust-Free “Constipated” Lithosphere created at cold spots in Mid Ocean Ridges. EOS Trans. AGU, 81(48), Fall Meet. Suppl., Abstract T51D-22

160) Ligi M., Bonatti E., Gasperini L., Brunelli D., Fabretti P., 2000. Rapid uplift of a lithospheric Sliver Near the Vema FZ (Central Atlantic) due to change in the pole of rotation. EOS Trans. AGU, 81(48), Fall Meet. Suppl., Abstract T52C-12

161) Ligi M., Bonatti E., Bortoluzzi G., Carrara G., Fabretti P., Penitenti D., Terenzoni M., Brunelli D., Cipriani A., Gilod D., Peyve A.A., Skolotnev S., Turko N., 1997. *Death and transfiguration of a triple junction in the south Atlantic.* EGS meeting, Section SE27.

162) Bonatti E., Gasperini L., Ligi M., Carrara G., Chierici F., Fabretti P., Susini S., Tartarotti P., Brunelli D., Cipriani A., Gilod D., Peyve A.A., Skolotnev S., Turko N., 1997.
Morphostructural analysis of the western intersection of the mid Atlantic ridge with the Romanche transform (equatorial Atlantic). EGS meeting, Section SE27.

The Archaeometry corner

163) D Tanasi, D Brunelli, V Cannavò, ST Levi, 2019. Archaeometric characterization of prehistoric pottery from Baħrija, Malta. Journal of Archaeological Science: Reports 27, 101938

164) Levi, S.T., Cannavò, V. and D. Brunelli, 2019. Atlas of Ceramic Fabrics 2. Italy: Southern Tyrrhenian. Neolithic - Bronze Age. Oxford: Archaeopress. ISBN 10: 1789691176 / ISBN 13: 9781789691177

165) Cannavò, V., Photos-Jones, E., Levi, S. T., Brunelli, D., Fragnoli, P., Lomarco, G., ... & Sforna, M. C. (2017). p-XRF analysis of multi-period Impasto and Cooking Pot wares from the excavations at Stromboli-San Vincenzo, Aeolian Islands, Italy. STAR: Science & Technology of Archaeological Research, 1-8.

166) Lugli, F., Brunelli, D., Cipriani, A., Bosi, G., Traversari, M., Gruppioni, G., 2017. C4-plant foraging in Northern Italy: stable isotopes, Sr/Ca and Ba/Ca data of human osteological samples from Roccapelago (16th–18th century AD). Archaeometry.

167) Lugli, F., Cipriani, A., Peretto, C., Mazzucchelli, M., Brunelli, D., 2017. In situ high spatial resolution 87Sr/86Sr ratio determination of two Middle Pleistocene (c.a. 580 ka) Stephanorhinus hundsheimensis teeth by LA–MC–ICP–MS. International Journal of Mass Spectrometry 412 (2017): 38-48.

168) Levi, S.T., Ayala, G., Bettelli, M., Brunelli, D., Cannavò, V., Di Renzoni, A., Ferranti, F., Lugli, S., Martinelli, M.C., Mercuri, A.M., Photos-Jones E., Renzulli, A., Santi, P. and F. Speranza 2014. Archaeological and volcanological investigation at Stromboli, Aeolian Islands, Italy. Antiquity 88, issue 342. ISSN 1745-1744 http://journal.antiquity.ac.uk/projgall/levi342

169) Brunelli, D., S. T. Levi, P. Fragnoli, A. Renzulli, P. Santi, E. Paganelli, and M. C. Martinelli (2013), Bronze Age pottery from the Aeolian Islands: definition of Temper Compositional Reference Units by an integrated mineralogical and microchemical approach, Applied Physics A, 1-9, doi:10.1007/s00339-013-7775-3.

Chapters in books

170) Cannavò, V., Levi, S.T., Brunelli D. and A. Di Renzoni. 2018. 4. Databases, in Cannavo' V., Levi S.T. Atlas of Ceramic Fabrics 1. Italy: North-East, Adriatic, Ionian Bronze Age - Impasto: 58-130. Oxford: Archaeopress: ISBN 9781784918590

171) Jones, R., Brunelli, D. Cannavò, V., Levi, S.T. and M. Vidale 2016. The Riace bronzes: recent work on the clay cores, in E. Photos-Jones (ed) Proceedings of the 6th Symposium of the Hellenic Society for Archaeometry (British Archaeological Reports International Series 2780): 21-28. Oxford: Archaeopress. ISBN 9781407314303

172) Di Renzoni, A., Ayala, G., Brunelli, D., Levi, S.T., Lugli, S., Photos-Jones, E., Renzulli, A. and P. Santi 2016. Aiding and abetting the archaeological enquiry: geochemical work-in-progress at the site of San Vincenzo, Stromboli, Aeolian Islands, Italy, in E. Photos-Jones (ed) Proceedings of the 6th Symposium of the Hellenic Society for Archaeometry (British Archaeological Reports International Series 2780): 167-174. Oxford: Archaeopress. ISBN 9781407314303

173) Ayala, G., Brunelli, D., Levi, S.T., Lugli, S., Photos-Jones, E., Sartor, F. and L. Vigliotti 2012. Site formation processes and human activity patterns: holistic soil analysis at the prehistoric settlement of San Vincenzo, Stromboli, in G. Vezzalini and P. Zannini (eds) Atti del VII congresso AIAR (Modena 2012). Bologna: Patron. ISBN: 9788855531665

174) Fragnoli, P., Brunelli, D., Levi, S.T., Renzulli, A., Santi, P. and J.L. Williams 2012. Scambi ceramici nei Contesti capo Graziano delle isole Eolie: dati petrografici e petrologici a confronto, in G. Vezzalini and P. Zannini (eds) Atti del VII congresso AIAR (Modena 2012). Bologna: Patron. ISBN: 9788855531665

Conference abstracts

175) Levi, S.T., Brunelli, D., Cannavò, V. and A. Di Renzoni 2015. Wikipottery: work in progress (EMAC13, Athens 2015).

176) Levi, S.T., Brunelli, D., Cannavò, V., Corradini, E., Di Renzoni, A. and P. Fragnoli. 2013. Store, classify and share: the Wikipottery project at Modena Univ. (EMAC12, Padova 2013).

177) Renzulli A., Bettelli M., Brunelli D., Cannavò V., Coltelli M., Di Renzoni A., Ferranti F., Levi S.T., Martinelli M.C., Martini M., Maspero F., Rosi M., Santi P. and F. Speranza 2013. Archaeology meets Volcanology: an integrated study to date and enhance understanding of the past human settlements at Stromboli, Geoitalia 2013, IX Forum Italiano di Scienze della Terra, Pisa 16-18, September 2013, Epitome 2013: 49.

Editorial, Membership, Service

2023 Italian delegate to ISA workshop for the Indian Ocean REMP, Chennai May 2023.
2017-2018 Reviewer for the Earth and Environmental Science PhD Program, University of Pavia.
2011-2013 Foreign alternate member of the French Scientific Fleet evaluation panel CNFH (Commission Nationale de la Flotte Hauturière).
Since 2008 Member of the American Geophysical Union, AGU.
Since 2007 Member of the Italian Society for Mineralogy and Petrology, SIMP.
2008-2011 ECORD member of the Science Steering Evaluation Panel (SSEP) of IODP.
Since 2003 Reviewer for Nature Geoscience, Earth Planetary Science Letters, Journal of Petrology, Geology, G-cubed, Lithos, Contribution to Mineralogy and Petrology, International Journal of Earth Sciences, MIUR and NSF scientific proposals.

Regular course teaching

2020- Volcanology and petrology Master in Geology, University of Modena.
2009- Petrography for Natural Science undergraduate, University of Modena.
2008-2019 Petrology, Master in Geology, University of Modena.
2007-2008 Petrography applied to archaeo-materials undergraduate in Geology, University of Modena.
2006-2008 Structure and petrography of the crystalline basement, master in Geology, University of Modena.
2006-2007 Petrology and Petrography of ceramic and artificial materials, undergraduate in Geology University of Modena.

Tutoring

PhD

2022- Mateusz Mieczyslaw Michailov: "Volatile distribution in Earth's mantle heterogeneities: implications for the global mantle convection"
2018-2021 Léna Verhoest: "Alkaline magmatism and source heterogeneities at Mid Ocean Ridge cold spots"
2016-2018 Alden de Brito Adriao: "Rheological behavior of oceanic deep crust at transpressive, strike slip and detachment intra oceanic settings: the case of St. Paul transform system. Cotutelle with UBO, Brst, Christophe Hemond
2012-2015 Emiliano Barbieri: "Melting beneath the AFAR plume".
2010-2013 Valerio Pasini: "Biopetrology of the hydrating mantle in a Mid Ocean Ridge"cotutelle with IPGP Paris, Benedicte Menez
2007-2010 Emanuele Paganelli: "Melt percolation in a cold suboceanic mantle", Modena 2007-2010. Cotutelle with Lille Univ. Monique Seyler.
2009-2011 Co-tutoring PhD thesis of Pamela Fragnoli: "The bronze age pottery network in the Aeolian archipelago.

Graduate master level:

2022 M. M. Michailow: "Volatile distribution in MORBs from the Equatorial Atlantic"
2014 Alessandro Verzani: "Fusione del mantello suboceanico in una regione di smoothseafloor".
2012 Federica Cilona: "Caratterizzazione petrografica e geochimica delle collate laviche di Stromboli e loro evoluzione in relazione all'attività antropica da protostorica a storica"
2010 Emiliano Barbieri: Melt percolation and reaction during gabbro crystallization at the Atlantis core complex.
2009 Tommaso Taticchi Borgia: Petrography and petrology of mantle rocks from the 4-6 °N MAR region.
2009 Domitilla Santi: Oxygen and Hydrogen isotopic distribution in mantle rocks from the 4-6 °N MAR region
2008 Michele Saraceno: "Caratterizzazione petrografica e mineralogica dell'ofiolite di Sasso Tignoso, Apennino Modenese", Rossi, Galli.
Pamela Fragnoli: "La ceramica dell'abitato del Bronzo finale di Morgantina (Enna): tecnologie produttive a confronto mediante indagini archeometriche" Levi, Leighton.

2007 Emanuele Paganelli: “Mantle peridotites from the Andrew Bain FZ, SWIR.
2007 Graduate 1st level Lisa Barbieri: “Caratterizzazione minero-petrografica degli affioramenti ofiolitici di Ca de Giannasi, Apennino Modenese”, Rossi, Galli.
2005 Maîtrise thesis of Musial Michael: “Fluid inclusions in the Galite Island metasediments, constraints for granodiorite emplacement”. Paris XI University – Orsay, 2005.
Master thesis of Bonnefoy Benjamin: “Etude des inclusions vitreuses des trapps de Rajamundry - Inde”. Prof. E. Humler, Paris VI University – IPGP.

Internship tutoring:
2022 Mateusz Mieczyslaw Michailov, @ Woods Hole Oceanographic Institution, April-May 2022.
2022 L. Prandini, Carbonatic veins composition and geochemistry in crustal rocks from Rainbow
Postdocs

2011-2014 Emanuele Paganelli, mantle partial melting
2017-2020 Valentina Cannavò, Bronze Age archaeometry
2017-2019 Marie Sforna, organic matter evolution in serpentinites
2020-2022 Manon Bickert, mantle deformation processes
2022-2023 Lena Verhoest, alkaline basalt Equatorial Atlantic

Project membership – fund raising

PRIN 2017 Oceanic Megatransforms: a New Class of Plate Boundaries, MIUR-PRIN 2017KY5ZX8, Responsible Unit of Modena 144 kEuro
PRIN Melt-rock reaction and melt migration in the MORB mantle through combined natural and experimental studies. MIUR-PRIN 2015. Unit of Parma-Modena. 56 kEuro
2017-2019 PNRA-MIUR ITA. DEEP CARBON II: “Abiotic carbon complexation in the lower oceanic crust. Unity of Modena. 45KEuro
2014-Responsible of Modena Unit of Deep Carbon Observatory Research Project: “Reduced Carbon Associated with Altered Oceanic Crust: from natural sample investigations to experimentations” unit: “Redox Processes and Generation of Abiogenic Hydrocarbon: Experimental reduction of CO2”. Coordination @ IPGP, Paris, partnership with Université de Lyon (FR).
2013-2016 PI of PNRA MIUR ITA. DEEP CARBON: Primary carbon budget and deep biosphere in the circum Antarctic Ridges. PI D. Brunelli Unimore. In cooperation with M. Ligi-ISMAR and M. Cuffaro-CNR-IGAG. 54 kEuro
2014-2017 ANR FRANCE, AAP. deepOASES: The DEEP Oceanic lithosphere As an organic carbon factory: how and to which extent do SErpentiniteS generate, stabilize abiotic organic molecules and sustain deep microbial ecosystems? PI B. Menez, IPGP Paris. Unity of Modena, 42 kEuro
2014-2017 Marie Curie – ITN ABYSS, ESR2- Melt - rock interactions in the oceanic lithosphere : microstructural and petro-geochemical constraints from ophiolites. Supervisor : E. Rampone & L. Crispini (UNIGE) / D. Brunelli (UNIGE); M.Godard & B. Ildefonse (CNRS) ; D. Teagle (USOTON). http://www.gm.univ-montp2.fr/spip.php?article1714&lang=fr
2010-2012 PI of the CARBRIDGE project, Funding of CARIMODENA Foundation for Internationalization of Modena University research. Project in collaboration with IPGP-Geobiosphere Actuelle et Primitive, Lamont-Doherty of Columbia University NY and ISMAR-CNR Marine Geosciences. 120 kEuro
2005-2006 – Programme National Dyeti 2005 *Accrétion et subduction de la croûte océanique. Exemple de l’Atlantique Nord et de la marge active Nord Caraïbes.* Programme Interdisciplinaire CNRS – France. Coordinator: Prof. B. Ildefonse (Univ. Montpellier2); S. Guillot (UCB-ENS Lyon); C. Mevel (IPGP Paris) 6 kEuro
2003-2005 - *Identifying and quantifying the physical and chemical processes accompanying partial melting in the Earth* EUROMELT European Research Training Network. Post-Doc, c/o Laboratoire Pierre Süe – CEA-CNRS. Gif sur Yvette France.Scientific coordinator: Prof. K. Burton (Open University – Milton Keynes – UK); Prof. Pierre Schiano Clermont Ferrand University – France).
2004 –Programme National Dyeti 2004 *Hétérogénéités pétrologiques superposes dans le manteau supérieur convectif: Une approche multi-tecnique integrant peridotites abyssales et lherzolites orogéniques.* Programme

Interdisciplinaire CNRS – France. Scientific coordinator: Prof. Monique Seyler (Lille University, Muséum National d'Histoire Naturelle, Paris).