



CURRICULUM VITAE

VERONIQUE LE ROUX, Ph.D.

Professor, ENSG & CRPG

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Appointments

Current

- 2023 – Present** **Full Professor**, Centre de Recherches Pétrographiques et Géochimiques (CRPG) / Ecole Nationale Supérieure de Géologie (ENSG), (FR)
- 2023 – Present** **Referent** for Sustainable development and social responsibility (ENSG)
- 2023 – Present** **Adjunct Scientist**, Woods Hole Oceanographic Institution (US)
- 2022 – Present** **Ocean Exploration Advisory Board**, NOAA, US Department of Commerce
<https://oeab.noaa.gov/board-members/>

Past faculty appointments

- 2022 – 2023** **Chair of Joint Committee for Marine Geology and Geophysics** (doctoral program), Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program
- 2021 – 2023** **Associate Scientist with Tenure**, Woods Hole Oceanographic Institution (US)
- 2013 – 2023** **Joint Program Faculty**, Massachusetts Institute of Technology
- 2020 – 2021** **Awarded Visiting Scholar at SCIENCE 2020**, Copenhagen University, Department of Geosciences and Natural Resource Management (DK)
- 2017 – 2021** **Associate Scientist**, Woods Hole Oceanographic Institution (US)
- 2013 – 2017** **Assistant Scientist**, Woods Hole Oceanographic Institution (US)

Postdoctoral appointments

- 2011 – 2013** **Post-doctoral Scholar**, Woods Hole Oceanographic Institution (US).
- 2009 – 2011** **Post-doctoral Fellow**, Rice University (US).

PhD student appointments

- 2005 – 2008** **Teaching Assistant**, University of Montpellier (FR)

Academic Preparation

- 2009** Ph.D. Macquarie University (AU)
- 2008** Ph.D. Montpellier University (FR)
- 2005** Master degree (II) Earth Sciences, Montpellier University (FR)
- 2004** Master degree (I), Earth & Planetary Sciences, University of Nantes (FR)
- 2003** Bachelor degree, Earth & Planetary Sciences, University of Nantes (FR)

Research Interests

Physical and geochemical evolution of the Earth's upper mantle and crust; Volatile budgets in mantle and crustal materials (H₂O, CO₂, halogens); Material transfer in subduction zones; Melt-rock and fluid-rock reactions; Arc and ridge magmatism; Novel developments in Earth Sciences by micro-CT

Peer-reviewed publications

Total citations **3075**

https://scholar.google.com/citations?hl=en&user=QfOO7jcAAAAJ&view_op=list_works&sortby=pubdate

*Equal 1st authorship; \$Undergraduate advisee; #Graduate advisee; ##Postdoctoral advisee

- ##Segee-Wright G., Lassiter J.C., Barnes J.D., **Le Roux V.**, Monteleone B.D., Riley M.C. Controls on halogen abundances in the lithospheric mantle: Part I: Inter-mineral partitioning. *Submitted*.
- Auro M., Nielsen S.G., Heard A. W., Blusztajn J., Burton K.W., **Le Roux V.**, Ostrander C.M., Paquet M., Rheuban J., Tegler L. Development of a Method to Measure Seven Metal Stable Isotope Ratios in Small Carbonaceous Chondrite Samples. *Submitted*
- Hassett B.T., Le Roux V., Rheuban J.E., Edgcomb V. Finding Needles in a Haystack: Micro-CT Scanning of Sediments to Detect Fungal Filaments. *Submitted*.
- #Codillo E., **Le Roux V.**, Van Keken P., Geochemical and geodynamic constraints on the temporal evolution of slab thermal structure and slab-to-mantle transfer processes in global arcs. *Submitted*.
- Shu Y., Nielsen S.G., **Le Roux V.** McKenzie R., , Blusztajn J., Ostrander C., S. Guo, X.-F. Gu, J. Xu, F. Huang, C.-Z. Liu. (2025) Phengite controls on thallium elemental and isotopic systematics in subduction-zone fluids. *Chemical Geology* <https://doi.org/10.1016/j.chemgeo.2025.123110>
- Shu Y., Nielsen S.G., **Le Roux V.**, Horner T., Ostrander C.M., Santiago Ramos D., Blusztajn J., Auro M., Leat P.T. (2025) Mélange dehydration and melting beneath South Sandwich Island arc. *Nature Communications* <https://doi.org/10.1038/s41467-025-56554-x>
- #Anderson O. E., Jackson M. G., ##Pamukçu A., Rose-Koga E. F., **Le Roux V.**, Klein F., Koga K., Gaetani g., Price A. A. (2024) Extensive H₂O degassing in deeply erupted submarine glasses inferred from Samoan melt inclusions: The EM2 mantle source is damp, not dry. *Chemical Geology* <https://doi.org/10.1016/j.chemgeo.2024.121979>
- Bernhard J.M., Fisher L., Murphy Q., \$Sen L., Yeh H., Louyakis A., Goma F., Reilly M., Batta-Lona P., Bucklin A., **Le Roux V.**, Visscher P.T. (2023) Transition from stromatolite to thrombolite fabric: Role for reticulopodial protists in lake microbialites of a Proterozoic ecosystem analog?. *Frontiers in Microbiology* doi: 10.3389/fmicb.2023.1210781
- #Codillo E., **Le Roux V.**, Klein B., Behn M.D., Marschall H., Bebout G. (2023) The ascent of subduction zone mélanges: experimental constraints on mélange rock densities and solidus temperatures. *Earth and Planetary Science Letters* <https://doi.org/10.1016/j.epsl.2023.118398>
- Gruber B., Chin E.J., **Le Roux V.**, (2023) Evolution of microstructural heterogeneity in the deep arc lithosphere during delamination. *Journal of Geophysical Research* e2022JB025661
- Shu Y, Nielsen S.G., **Le Roux V.**, Wörner G., Blusztajn J., Auro M., Sources of dehydration fluids underneath the Kamchatka arc. (2022) *Nature Communications* <https://doi.org/10.1038/s41467-022-32211-5>
- #Urann B.M., **Le Roux V.**, Jagoutz O., Müntener O., Behn M. D., Chin E. J. High water content of arc magmas recorded in cumulates from subduction zone lower crust. (2022) *Nature Geoscience*, <https://doi.org/10.1038/s41561-022-00947-w>.
- Shu Y., Nielsen S.G., **Le Roux V.**, Blustajn J., Guo S., Huang F., Thallium isotope compositions of subduction-zone fluids: Insights from ultra-high pressure eclogites and veins in the Dabie terrane, eastern China. (2022) *Chemical Geology*. <https://doi.org/10.1016/j.chemgeo.2022.120843>
- Le Roux V.**, #Urann B.M, Brunelli D., Bonatti E., Cipriani A., Demouchy S., Monteleone B. (2021) Post-melting hydrogen enrichment in the oceanic lithosphere. *Science Advances*. 7 (24), eabf6071
- Jones M. R., Soule A., Liao Y., Brodsky H., **Le Roux V.**, Klein F. (2020) Quantitative vesicle analyses and total CO₂ reconstruction in mid-ocean ridge basalts. *Journal of Volcanology and Geothermal Research*. doi.org/10.1016/j.jvolgeores.2020.107109.

- *Klein F., ***Le Roux V.** (2020), Quantifying the Volume Increase and Chemical Exchange During Serpentinization. Geology. doi.org/10.1130/G47289.1
- Invited.* #Urann. B.M., **Le Roux V.**, John T., Beaudoin G.M., Barnes J.D. (2020), The distribution and abundance of halogens in eclogites: an in situ SIMS perspective of the Raspas Complex (Ecuador). American Mineralogist 105 (3): 307–318, doi 10.2138/am-2020-6994.
- Shinevar W.J., Mark H.F., Clerc F., Codillo E.A., Gong J., Olive J.-A., Brown S.M., Smalls P.T., Liao Y., **Le Roux V.**, Behn M.D. (2019), Causes of oceanic crustal thickness oscillations along a 74-Myr Mid-Atlantic Ridge flow line. Geochemistry Geophysics Geosystems (G³). doi.org/10.1029/2019GC008711
- Le Roux V.**, Liang Y. (2019), Ophiolitic pyroxenites record boninite percolation in subduction zone mantle. Minerals 9, 565; doi:10.3390/min9090565
- Miller W.G.R., MacLennan J., Shorttle O., Gaetani G.A., **Le Roux V.**, Klein F. (2019), Estimating the carbon content of the deep mantle with Icelandic melt inclusions. Earth and Planetary Science Letters 523, 115699
- Jones M. R., Wanless V. D., Soule S. A., Kurz M. D., Mittelstaedt E., Fornari D. J., Curtice J., Klein F., **Le Roux V.**, Brodsky H., Péron S., Schwartz D.M. (2019), New constraints on mantle carbon from Mid-Atlantic Ridge popping rocks. Earth and Planetary Science Letters 511, 67-75
- *\$Codillo E., ***Le Roux V.**, Marschall H., (2018) Arc-like magmas generated by mélange-peridotite interaction in the mantle wedge. Nature Communications 9, 2864
- Nielsen S. G., Horner T. J., Pryer H. V., Blusztajn J., Shu Y., Kurz M. D. and **Le Roux V.**, (2018) Barium isotope evidence for pervasive sediment recycling in the upper mantle. Science Advances, 4, no. 7, doi: 10.1126/sciadv.aas8675
- Jones M., Soule S.A., Gonnermann H., **Le Roux V.**, Clague D. (2018) Degassing-based constraints on ascent and emplacement dynamics during the 2011 eruption of Axial Seamount. Earth and Planetary Science Letters, doi.org/10.1016/j.epsl.2018.04.044
- ##Cruz-Urbe A., Marschall H., Gaetani G., **Le Roux V.** (2018) Generation of alkaline magmas in subduction zones by melting of mélange diapirs. Geology 46 (4): 343-346
- #Urann B.M., **Le Roux V.**, \$Hammond K., Marschall H., Lee C.-T., Monteleone B. (2017) Fluorine and chlorine in mantle minerals and the halogen budget of the Earth's mantle. Contributions to Mineralogy and Petrology doi 10.1007/s00410-017-1368-7
- Le Roux V.**, Nielsen S.G., ##Sun C., Yao L. (2016) Dating layered websterite formation in the lithospheric mantle. Earth and Planetary Science Letters 454 pp. 103–112
- Miller K.J., Zhu W., Montesi L., Gaetani G., **Le Roux V.**, Xiao X., (2016) Experimental evidence for melt partitioning between olivine and orthopyroxene in partially molten harzburgite. JGR Solid Earth 121 doi:10.1002/2016JB013122
- Le Roux V.**, Dasgupta R., Lee C.-T.A. (2015) Recommended mineral-melt partition coefficients for FRTEs (Cu), Ga and Ge during mantle melting. American Mineralogist 100 pp. 2533–2544
- Le Roux V.**, Dick H., Shimizu N. (2014) Tracking flux melting and melt percolation in supra-subduction peridotites (Josephine Ophiolite, USA). Contributions to Mineralogy and Petrology 168 pp. 1–22
- Lee C.-T. A., Luffi P., Chin E. J., Bouchet R., Dasgupta R., Morton D.M., **Le Roux V.**, Yin Q.-Z., Jin D. (2012) Copper systematics in arc magmas and implications for crust-mantle differentiation Science 336 pp. 64–68
- Le Roux V.**, Dasgupta R., Lee C.-T. A. (2011) Mineralogical heterogeneities in the Earth's mantle: constraints from Mn, Co, Ni and Zn partitioning during partial melting. Earth and Planetary Science Letters 307 pp. 395–408
- Lee, C.-T. A., Luffi, P., **Le Roux, V.**, Dasgupta, R., Albarède F., Leeman W.P. (2010) The redox state of arc mantle using Zn/Fe systematics. Nature 468 pp. 681–685
- Le Roux V.**, Lee C.-T. A., Turner S.J. (2010) Zn/Fe systematics in mafic and ultramafic systems: implications for detecting major element heterogeneities in the Earth's mantle Geochimica et Cosmochimica Acta 74 pp. 2776–2796

- Le Roux V.**, Bodinier J.-L., Alard O., O'Reilly S.Y., Griffin W.L. (2009) Isotopic decoupling during porous melt flow: A case-study in the Lherz peridotite. *Earth and Planetary Science Letters* 279 pp. 76–85
- Le Roux V.**, Tommasi A., Vauchez A. (2008) Feedback between melt percolation and deformation in an exhumed lithosphere-asthenosphere boundary. *Earth and Planetary Science Letters* 274 pp. 401–413
- Le Roux V.**, Bodinier J.-L., Tommasi A., Alard O., Dautria J.-M., Vauchez A., Riches A.J.V. (2007) The Lherz spinel lherzolite: refertilized rather than pristine mantle, *Earth and Planetary Science Letters* 259 pp. 599–612

Research Grants

- 2025-2028** National Science Foundation, Petrology and Geochemistry Program, *Collaborative Research: Constraining volatile storage in the lower crust - a case study of exhumed rocks from the Talkeetna Arc, Alaska* (Hudak, Le Roux, Barry) ~\$700,000
- 2024-2026**: Observatoire Terre Environnement Lorraine (OTELo), Rupture program, *Développement de mesures d'isotopes de l'hydrogène par sonde ionique - Applications au cycle de l'eau dans la Terre profonde et système solaire* (Le Roux & Piani), €9,825
- 2023-2025** NASA *Development of methods allowing measurement of seven metal stable isotope ratios in material returned from primitive asteroids* (Nielsen, Le Roux, Burton) \$516,009
- 2023-2026** National Science Foundation, Marine Geology and Geophysics, *Strength of the Oceanic Lower Crust: New Experimental and Microstructural Constraints* (Goddard, Cross, Le Roux) \$641,214
- 2021-2024** National Science Foundation, Marine Geology and Geophysics (Cruise proposal), *Collaborative Research: Magmatic and Mechanical Extension of the Challenger Deep Forearc Segment: Insights into Subduction Initiation* (Stern, Le Roux, Chin, Dygert) \$119,974
- 2020**: Independent Research And Development Awards, *Effect of alteration on the volatile contents of mantle rocks* (Le Roux) \$82,869
- 2019-2022**: National Science Foundation, Geophysics program/Petrology and Geochemistry program, *Collaborative Research: Voyage to the bottom of Arcs: interplay between water, deformation, and lower crustal stability* (Le Roux, Chin, Behn), \$790,939
- 2019-2022**: National Science Foundation, Geoprisms program, *Collaborative Research: Melange-peridotite Interactions in the Source of Arc Magmas* (Le Roux & Behn), \$546,403
- 2019-2021**: National Science Foundation, Petrology and Geochemistry Program, *Halogen budget of subducted eclogites: the in-situ perspective* (Le Roux), \$363,064
- 2018-2020**: The Andrew W. Mellon Foundation Award for Innovative Research, *Magma Pulses in the Abyss* (Le Roux), \$64,078
- 2017-2019**: National Science Foundation, Antarctic Earth Sciences, *Collaborative Research: Determining Magma Storage Depths and Ascent Rates for the Erebus Volcanic Province, Antarctica Using Diffusive Water Loss from Olivine-hosted Melt Inclusion* (Gaetani, Le Roux, Sims, Wallace), \$499,907
- 2016-2019**: Ocean Exploration Institute, *What is the transport mechanism of sediments in subduction zones?* (Le Roux), \$74,984
- 2016-2019**: National Science Foundation, Petrology and Geochemistry Program, *Quantifying the Volume Changes During Serpentinization of Peridotite using Hydrothermal Laboratory Experiments and X-ray Microtomography* (Klein & Le Roux), \$350,000
- 2016-2018**: National Science Foundation, Marine Geology and Geophysics Program. *Collaborative Research: Does Calcification By Paleoceanographically Relevant Benthic Foraminifera Provide A Record Of Localized Methane Seepage?* (Bernhard, Martin, Le Roux), \$218,355
- 2016-2019**: National Science Foundation, Geobiology and Low-Temperature Geochemistry Program. *Collaborative Research: Alteration of microbially-produced carbonate rock by unicellular predators to better understand early Earth's dominant ecosystem* (Visscher, Bernhard, Le Roux), \$255,000
- 2017**: Independent Research And Development Awards *Developing in-situ trace element analysis capabilities in silicates at WHOI*, \$74,758

2015-2017: National Science Foundation, Petrology and Geochemistry Program, *F and Cl in peridotite minerals: analytical development and applications to fluid cycling in the Earth's mantle* (Le Roux, Monteleone, Shimizu), \$298,072

2015-2017: Ocean Exploration Institute, *A chronometer for magmatic processes at mid-ocean ridges* (Gaetani & Le Roux), \$59,032

2015: Independent Research And Development Awards *Micro-tomography at WHOI: Test Scans and 3-D Data Processing of Geological and Biological Samples* (Le Roux) \$58,297

2014-2016: Andrew W. Mellon Foundation Award for Innovative Research, *Connecting Mineral physics and Geochemistry* (Le Roux), \$59,744

2013-2015: Deep Ocean Exploration Institute, *Innovative tracers of hydrous melting in the Earth's mantle* (Le Roux & Shimizu), \$71,433

2012-2014: National Science Foundation, Petrology and Geochemistry Program, *Widespread pyroxenite layering in the mantle*, (Le Roux & Tivey), \$259,097

2011-2013: Deep Ocean Exploration Institute, *A new experimental approach to constraining H₂O cycling in subduction zones*, (Le Roux & Gaetani), \$67,590

2011-2012: Deep Ocean Exploration Institute Scholarship (Le Roux), WHOI, \$62,000

2007-2009: International Macquarie University Research excellence Scholarship (MQRES), Macquarie University, AUD \$19,231/year

2006-2008: 'Aide à la mobilité internationale' (Research funds for international collaborations), Ministère délégué à l'enseignement supérieur et à la recherche, 5100 €

Formal presentations

108 contributed presentations at conferences and seminars (see bottom of document for details)

Invited/Keynote talks only

2024. French Network on Subduction Zones (FRENSZ; keynote), Barcelonette, FR

2024. Laboratoire Géoressources, FR

2023. University of Texas at Austin, USA

2022. Curtin University, Perth, Australia

2022. ISTO, Orleans, France

2021. Goldschmidt Conference, Lyon, France

2020. Centre de Recherches Péetrographiques et Géochimiques, France

2020. Copenhagen University, Denmark

2019. European Institute for Marine Studies, Geosciences Ocean, Brest, France

2019. Laboratoire Magmas et Volcans, Clermont-Ferrand, France

2019. Geosciences Environnement Toulouse, France

2019. Geosciences Montpellier, France

2019. Water in the mantle workshop, Lamont Doherty Earth Observatory, USA

2018. Boston College, USA

2018. Aarhus University, Denmark

2018. California Institute of Technology, USA

2015. American Geophysical Union, Fall Meeting, San Francisco, USA

2015. Massachusetts Institute of Technology, USA

2015. Goldschmidt Conference, Prague, Czech Republic

2014. Ecole Normale Supérieure de Lyon, France

2013. Bayerisches Geoinstitut, Germany

2012. Unité Mixte de Recherche Domaines Océaniques, Brest, France

2010. University of New Mexico, USA

2010. Wood Hole Oceanographic Institution, USA

2010. Goldschmidt Conference, Knoxville, USA

2010. Geosciences Montpellier, France
2010. Ecole Normale Supérieure de Lyon, France
2009. American Geophysical Union, Fall Meeting, San Francisco, USA

Supervision and mentoring

Postdoctoral collaborators

2024 – present : George Segee-Wright (CNRS postdoc, co-advisor Nielsen)
2023 – present : Molly Anderson (NSF fellowship, main advisor Barry)
2022 : Rellie Goddard (NSF grant, main advisor Cross)
2021 : Benjamin Urann (NSF grant)
2017 – 2019 : Emily Cooperdock (WHOI scholar, co-advisor Klein)
2016 – 2019 : Ayla Pamukcu (NSF grant, main adviser Gaetani)
2015 – 2016 : Chenguang Sun (WHOI scholar)
2015 : Alicia Cruz-Urbe (NSF grant, main advisor Marschall)

PhD student advisees

2024 – present: Matthieu Sanchez (CRPG PhD student)
2023 – present: Namitha Kumar (MIT/WHOI Joint Program PhD student)
2017 – 2022: Emmanuel Codillo (MIT/WHOI Joint Program PhD student)
2015 – 2020: Benjamin Urann (MIT/WHOI Joint Program PhD student)
2013. Ning Zhao (MIT/WHOI Joint Program; main advisor Keigwin) – Geodynamics Class project, Spring

Undergraduate/Master student advisees

2025: Itziar Zabalza – ENSG (FR) — M1 (1 mo)
2025: Galien Duault – ENSG (FR) — M1 (1 mo)
2024: Amélie Bayol – U. of Lorraine (FR) — Undergraduate student (1 mo)
2022: Namitha Kumar – U. of Michigan (US) — Summer Student Fellow Program student (3 mo)
2020: Leena Sen - San Jose State U. (US) — Summer Student Fellow Program student (3 mo; main adviser Bernhard)
2020: Hugo Lestrelin — Ecole Normale Supérieure Paris (France) — Guest Student Fellow (1 mo due to covid-19; planned for 6 months)
2019: Alexandra Nordyke — Bennington College (US) — Summer Student Fellow (3 mo; main advisor Gaetani)
2017 – 2018: Taylor Hough — Brown U. (US) — Summer Student Fellow and Master's thesis
2016: Nadine Doiron — UMass Amherst — NENIMF summer student (3 mo; main advisor Gaetani)
2015 – 2016: Emmanuel Codillo — U. of Philippines — Guest student (9 mo)
2015. Emma Soucy — Northeastern U. (US) — Co-op internship program (6 mo)
2015. Keiji Hammond — Northeastern U. (US) — Co-op internship program (6 mo)
2015. Mariene Basiga — San Jose State U. (US) — Summer Student Fellow Program student (3 mo)
2014. Mariene Basiga — San Jose State U. (US) — Partnership Education Program student (minority program; 3 mo)
2013. Jeremy Slaugenwhite — U. of Houston (US) — Guest student (1 month)

Other Guest or Short-term students/postdocs

2019–2020: Collaboration with PhD student Olivia Anderson (UCSB, USA); **Feb. 2018**: Guest Ph.D. students Stamatis Flemetakis and Dominik Lorocho (U. of Muenster, Germany); **Dec. 2017**: Guest undergraduate student Megan Reilly (Northeastern U.); **May 2017**: Guest Ph.D. student Manon Bickert (IPGP, FR) **2021–2022** George Segee-Wright (UT Austin, USA) **2023 – 2024** : Subhajit Ghosh (main advisor Cross)

Synergistic Activities

Journal Reviewer:

American Mineralogist; American Journal of Science; Chemical Geology; Communications Earth & Environment; Contributions to Mineralogy and Petrology; Earth and Planetary Science Letters; Earth Science Reviews; Elements; Geochimica et Cosmochimica Acta; Geochemical Perspectives Letters; Geochemical Society of America Special Papers; Geochemistry Geophysics Geosystems (G³); Geology; Geophysics Research Letters; Journal of Geophysics Research-Solid Earth; Journal of Petrology; Lithos; Mineralogy and Petrology; Nature Communications; Nature Geoscience; Nature Scientific Reports; Science; Science Advances; Tectonophysics

Panels and committees (International)

- 2022 – Present** Ocean Exploration Advisory Board, National Oceanic and Atmospheric Administration (NOAA), US Department of Commerce
<https://oeab.noaa.gov/board-members/>
- 2023 – Present** Reviewer for Swiss National Science Foundation
- 2021 – Present** Reviewer for National Research and Development Agency (ANID) of the Ministry of Science, Technology, Knowledge and Innovation of Chile (FONDECYT National Projects Competition)
- 2018 – Present** Reviewer for Deutsche Forschungsgemeinschaft, German Research Foundation
- 2010 – Present** Reviewer for National Science Foundation (USA): NSF-EAR Petrology and Geochemistry, Frontier Research in Earth Sciences (FRES), Collaborative studies of the Earth Interior (CSEDI); NSF Tectonics; NSF Polar Programs
- 2023** Goldschmidt session co-convenor
- 2022** AGU session Chair (Research, Exploration, and Challenges in the Hadal Zone and Deep Ocean Trenches)
- 2020** Panel member, National Science Foundation, USA (*Remote*)
- 2018** Goldschmidt session co-convenor (Igneous Processes throughout the Arc Crustal Column and Oceanic Mantle)
- 2015** Goldschmidt session co-convenor (How chalcophile are the chalcophile elements?)
- 2015** AGU session co-convenor (Endogenous mantle melting: petrology and geophysics)
- 2015** AGU session co-convenor (The Ophiolite-Subduction Connection: Using peridotites as analogs for subduction zone mantle)
- 2015** AGU session co-convenor (Melt and Liquids in Earth and Planetary Interiors)
- 2014** Panel member, National Science Foundation
- 2013** Reviewer for ETH Zurich Research Commission
- 2013** Geodynamics program co-organizer (WHOI). Theme: ‘Simulating the Earth in the lab’
<http://www.whoi.edu/main/2013-geodynamics-program>
- 2013** AGU session co-convenor (Deformation Processes: Microstructure, Rheology, and the Effects of Fluids)
- 2009–2011** Reading group organizer: Petrology/Geochemistry (Rice University; 2009–2010); Subduction Zones (WHOI; 2011)
- 2010** Goldschmidt session co-convenor (New and Old Paradigms on the Origin and Evolution of Continental Lithosphere)

Panels and committees (WHOI, MIT, ENSG, CRPG):

- 2024 – present** Member of laboratory council, CRPG
- 2024 – present** Member of leadership committee, ENSG
- 2024 – present** Member of school council, ENSG

2024 – present	Referent for sustainable development and social responsibility, ENSG
2025	Member of promotion committee for PR position; University of Lorraine
2024 – 2025	Chair of work environment committee; CRPG
2024	Chair of promotion committee for PR position; University of Lorraine
2023	Organizer of bi-monthly department gatherings/seminars, WHOI
2023 – 2023	Mentoring committee member for Assistant Scientist Y. Liao, WHOI
2022 – 2023	Chair of MIT-WHOI Joint Committee for Marine Geology & Geophysics (PhD program oversight), Massachusetts Institute of Technology-WHOI
2022	Chair of promotion committee; MC&G Department, WHOI
2020 – 2023	Mentoring committee member for Assistant Scientist A. Cross, WHOI
2016 – 2023	NENIMF ion microprobe steering committee, WHOI
2016 – 2022	Member of MIT-WHOI Joint Committee for Marine Geology & Geophysics (doctoral program), Massachusetts Institute of Technology-WHOI
2021	Salary increase (merit) review committee (G&G department), WHOI
2021	Search committee for Deep Submergence Faculty position, WHOI
2019	Substitute for Education Coordinator of MIT/WHOI PhD program (2 months), WHOI
2018	Inter-disciplinary award proposal review committee, WHOI
2017	Search committee for Vice-President of Academic Program and Dean, WHOI
2017	Search committee for Geochemistry and Petrology Faculty position, WHOI
2016 – 2017	Women's committee, WHOI
2016	Geology and Geophysics Department Chair transition committee, WHOI
2016	Search committee for Geophysics Faculty position, WHOI
2016	WHOI Catalyst program, proposal review panel, WHOI
2016	Visioning committee for Vice-President of academic programs and Dean, WHOI
2015 – 2016	Department representative, Summer Student Fellowship committee, WHOI

Thesis committees (excluding own students):

2025	Thesis examiner, IPGP, Zhengyu Long
2025	Thesis examiner, Géoressources, Baptise Abiven
2022	Chair of General examination committee, MIT/WHOI PhD student Lily Sandborn
2022	Chair of General examination committee, MIT/WHOI PhD student Megan Gillen
2020 – Present	PhD Thesis committee, MIT student Cassandra Seltzer
2020	Thesis proposal committee, MIT student Cassandra Seltzer
2020	General examination committee, MIT student Cassandra Seltzer
2019 – Present	PhD Thesis committee, MIT/WHOI PhD student Fiona Clerc
2019	Thesis proposal committee, MIT/WHOI PhD student Fiona Clerc
2019	Chair of General examination committee, MIT/WHOI PhD student Fiona Clerc
2017 – 2019	PhD Thesis committee, MIT/WHOI PhD student Meghan Jones
2017	Thesis proposal committee, MIT/WHOI PhD student Meghan Jones
2017	General examination committee, MIT/WHOI PhD student Meghan Jones
2017	General examination committee, MIT/WHOI PhD student Gabriela Serrato
2017	General examination committee, MIT/WHOI PhD student William Shinevar
2017	Chair of PhD defense, MIT/WHOI PhD student Emily Sarafian

Analytical and technical skills

EPMA: CAMECA SX 100. CAMECA SX 50, JEOL JXA-733 Superprobe; SIMS: Cameca IMS 1280 and 3f; HIGH P-T EXPERIMENTS: Piston cylinder, 1-atm furnace; ICPMS and LA-ICPMS: VG Plasmaquad II Turbo, Agilent 7500 ICPMS, ThermoFinnigan Element II Sector ICP-MS ; X-RAY

MICROTOMOGRAPHY: Skyscan 1272 micro-CT; Synchrotron; 3D Microtomography modeling: Avizo software; Skyscan reconstruction, analysis and visualization software (CtAn; CtVox; CTVol; NRecon; Dataviewer).

Field experience

Scientific cruises

2024. Collaborative Research: Magmatic and Mechanical Extension of the Challenger Deep Forearc Segment: Insights into Subduction Initiation. *Research Vessel T.G. Thompson* (Guam, US-Guam, US). 1 month.

2017. SCARF Research Cruise AR23-02; Geophysics measurements of seafloor bathymetric, magnetic and gravimetric properties across the Atlantic Ocean. *R/V Neil Armstrong* (Ponta Delgada, PT-Woods Hole, US). 2 weeks.

Fieldwork on land

Introduction to field mapping in sedimentary terrains (France)

Volcanism and Metamorphism (Central Massif, France)

Alpine Ophiolite (Corse, France)

Peridotite Massifs of the Pyrenees (France)

Regular field trips over 3 years; Regular field trips with undergraduate students (5–6 times/year) — Volcanism in South of France

Conference field trip: Volcanism of Mount Shasta and Shear zones in Josephine Peridotite (USA)

Mantle xenoliths in cinder cones (Colorado Plateau, USA)

Volcanism in the Azores (Portugal)

Peridotites and pyroxenites in the Josephine Ophiolite (USA)

Pyroxenites in the Pyrenean Massifs (France)

Teaching and Outreach

2025– present. Natural hydrogen in the deep Earth. Geology of Energy class (3rd year ENSG; Master degree)

2024 – present. Workshop facilitator ; Atelier 2Tonnes (carbon footprint)

2024 – present. Mapping and rock recognition field camps for 1st and 2nd year ENSG students (Southern Alps; Central Massif)

2024 – present. Engineers of Transition

2023. Mariana Trench Studies. A cross-institution, multi-lecturers, 1 semester remote class, that focuses on the petrological, tectonic, geochemical, and hydrothermal processes occurring in the Mariana trench, linked to our 2024 cruise. Open to undergraduates, graduates, and postdocs.

2021–2023. Speaker for the Proposal Club. A course on how to write and design proposals, geared for postdocs

2022. Press releases in collaboration with WHOI and MIT media departments <https://www.whoi.edu/press-room/news-release/arc-volcanoes-are-wetter-than-previously-thought-with-scientific-and-economic-implications/> ; <https://news.mit.edu/2022/magma-tectonic-collision-zones-wetter-0526>

2021. *Remote.* Guest teacher for Geol 311 Igneous Petrology at Western Colorado University (undergraduate)

2018–2019: reading seminar Geochemistry/Petrology

2018. 3-D models hands-on activities for visually impaired-students (7th to 12th grade), WHOI, MA

2018. ‘Inside the Earth’ presentation and hands-on activities — pre-K class, Woods Hole Daycare Co-op, MA

2018: Interview for ‘Who is WHOI’ short documentary about WHOI. <https://vimeo.com/292046329>

2018. ‘Forams’ hands-on activities for visually impaired-students (7th to 12th grade) — “The Very Big and the Very Small” Perkins School for the Blind, MA

2017. Summer Student Fellow Program Lecturer (undergraduate) – *Travel inside the deep Earth*

2016. 12.703 MIT/WHOI Presenting Scientific Research (graduate)

2016. ‘Inside the Earth’ presentation and hands-on activities — pre-K class, VNA child care center, MA

2015–2018: Member of the *Partnership program* between WHOI scientists and Trustees, which encourages dialogue that enhances the understanding of Trustees and Members about WHOI science and culture

2015. 12.703 MIT/WHOI Presenting Scientific Research (graduate)

2015. Summer Student Fellow program Lecturer (undergraduate) – *Geology going 3-D: new prospects for Earth Sciences*

2015. Maria Barrera – Falmouth Academy (USA), volunteer internship (2 months)

2015. Natasha Garland – Falmouth Academy (USA), volunteer internship (2 months)

2014. Chris Connolly – Falmouth High School (USA) — School-to-Careers internship program (3 months)

2014. Summer Student Fellow program Lecturer (undergraduate) – *Travel inside the deep Earth*

2013. 12.753 MIT/WHOI Geodynamics Class (graduate) – *Experiments: simulating the Earth in the Lab*

2009–2010: Lectures at Rice University – geochemistry and thermodynamics (graduate)

2005–2008: Teaching Assistant (‘Monitorat’) at Montpellier University (64 hours of teaching/2 classes/ per year/ 3 years; igneous, metamorphic and sedimentary petrology).

Awards and Recognition

2021 Full Tenure, Woods Hole Oceanographic Institution

2020 Visiting researcher, ‘SCIENCE 2020’ award, Copenhagen University, Department of Geosciences and Natural Resource Management, Section for Geology (Copenhagen, DK)

2020 Professor qualification (France)

2011 Deep Ocean Exploration Institute Scholarship, WHOI

2007 Bourse Lavoisier Cotutelle (Salary funds, European scholarship for international collaborations)

2007 International Macquarie University Research excellence Scholarship (MQRES), Macquarie University

2004 Master degree French scholarship for highly ranked students

Languages

French (Native proficiency); English (Full professional proficiency); Danish (Intermediate working proficiency)

Conferences and seminars – full list

Presenter underlined

Mentored **S**Undergraduate; **#**Graduate; **##**Postdoc

2025

108. Etheridge E., Dygert N., **Le Roux V.**, **##**Segee-Wright G., Exploring chemical variations and thermal history of the lower crust and upper mantle within the Mariana Trench: Signatures of subduction? American Geophysical Union (AGU), Fall Meeting, New Orleans, USA.

107. Stern R.J., Pujana I., **##**Anderson M., Chin E.J., Dygert N.J. Harigane Y., **Le Roux V.**, Leybourne M., Ohara Y., Okumura T., **##**Segee-Wright G. ROVing in the Deep: Jason/Medea investigates the Challenger Deep Forearc Segment, southern Mariana Arc, W. Pacific. American Geophysical Union (AGU), Fall Meeting, New Orleans, USA.

106. [##Anderson M.K.](#), Barry P.H., Li K., Curtice J., Broadley M.W., **Le Roux V.**, Horton F., Kurz M., Sinton J., Fornari D.J. Diverse Volatile Origins Along the East Pacific Rise Determined from Near-EPR Seamount Nitrogen and Noble Gases. Goldschmidt conference, Prague, Czech Republic.

105. [#Sanchez M.](#), **Le Roux V.**, Piani L., Barry P.H., Hudak M.R. Constraining volatile storage in the lower crust of arcs: insights from Talkeetna (Alaska). Gordon Conference, Mount Holyoke, USA

104. [#Kumar N.](#), **Le Roux V.** Hydrogen variability in abyssal peridotites: implications for rehydration processes and rheology of the oceanic lithosphere. Gordon Conference, Mount Holyoke, USA

103. [Okumura T.](#), Miyazaki J., Kawaguchi S., Tasumi E., Takai K., Harigane Y., [##Anderson M.](#), Chin E., Dygert N., **Le Roux V.**, Leybourne M., Ohara Y., Pujana I., Stern R.J., TN438 on board scientist and students. Fluid sampling attempts in the deepest serpentinite-hosted vent site, Shinkai Seep Field, S. Mariana Arc: Revisiting after 8 years. Japan Geological Union annual meeting, Japan

2024

102. [#Kumar N.](#), Cross A. J., **Le Roux V.**, [##Goddard R. M.](#) Determining the Strength of the Oceanic Lower Crust: a Geochemical, Microstructural, and Rheological Investigation of ODP Hole 735B, Southwest Indian Ridge. Gordon Conference, USA

101. [Tian X.](#), Janin A., Fraters M., Behn M.D., Gruber B., Chin E.J., Urann B.M., **Le Roux V.** Numerical simulations of clinopyroxene fabric development under lab and natural conditions. American Geophysical Union (AGU), Fall Meeting, Washington D.C., USA.

100. [Anderson O.E.](#), Jackson M.G., Pamukçu A.S., Rose-Koga E.F., **Le Roux V.**, Klein F., Koga K.T., Gaetani G.A., Price A.A. Enriched mantle sources are not dry: Samoan olivine-hosted melt inclusions have higher H₂O/Ce compared to pillow glasses from the same seamounts. American Geophysical Union (AGU), Fall Meeting, Washington D.C., USA.

99. **Le Roux V.** Fluids in subduction zone and the water content of arc magmas. French Network on Subduction Zones, Barcelonnette, FR. *Keynote*

98. **Le Roux V.** Georessources, Fluids in subduction zone and the water content of arc magmas. Nancy, FR. *Invited*

97. **Le Roux V.** Centre de Recherches Pétrographiques et Géochimiques (CRPG), Fluid circulation, material recycling, and geodynamic processes in subduction zones. Nancy, FR.

96. [##Anderson M.K.](#), Barry P.H., Li K., Curtice J., Sinton J., Horton F., **Le Roux V.**, Kurz M.D. Seamount Nitrogen and Noble Gas Evidence for Subduction-Derived Volatiles in the East Pacific Rise Mantle. Goldschmidt conference, Chicago, USA.

2023

95. [#Codillo E.](#), **Le Roux V.** Testing models of slab-to-mantle transfer in subduction zones. Goldschmidt conference, Lyon, FR.

94. **Le Roux V.** Water in the Earth's mantle, a story from the ocean's abyss. UT Austin, US. *Invited (remote)*

2022

93. **Le Roux V.** Water in the Earth's mantle, a story from the ocean's abyss. Curtin University, AUS. *Invited (remote)*

92. **Le Roux V.** Water in oceanic mantle rocks: a high-temperature and low-temperature perspective ISTO, FR, *Invited*

94. [##Goddard R.](#), Cross A.J., Wallis D., Goldsby D.L., **Le Roux V.**, Kumamoto K.M., Hansen L.N., Hein D. Transient Weakening and Microstructures Associated with the Quartz-Coesite Phase Transition. American Geophysical Union (AGU), Fall Meeting, Chicago, USA.

93. [#Kumar N.](#), Cross A.J., **Le Roux V.**, Goddard R. Determining the Strength of the Oceanic Lower Crust: a Geochemical, Microstructural, and Rheological Investigation of ODP Hole 735B, Southwest Indian Ridge. American Geophysical Union (AGU), Fall Meeting, Chicago, USA.

92. [#Segee-Wright G.](#), Lassiter J.C., Barnes J.D., **Le Roux V.**, Monteleone B.D.. F, Cl, and H₂O contents of nominally anhydrous minerals in variably metasomatized North American sub-continental lithospheric mantle xenoliths. American Geophysical Union (AGU), Fall Meeting, Chicago, USA.

91. Shu Y., Nielsen S., **Le Roux V.**, Worner G., Blusztajn J., Auro M. E.E. Sources of dehydration fluids underneath the Kamchatka arc. American Geophysical Union (AGU), Fall Meeting, Chicago, USA.
90. #Urann B.M., **Le Roux V.**, Jagoutz O., Muntener O., Behn M.D., Chin E. Damp to super-hydrous magmas recorded by arc root cumulates. Goldschmidt conference, Hawaii, US. (*remote*)
89. **V. Le Roux**. Water in oceanic rocks: a low-temperature and high-temperature perspective. ISTO, Orleans, FR. *Invited (remote)*
88. #Goddard R.M., Cross A.J., Kumamoto K.M., Chen H., Goldsby D.L., Hansen L.N., **Le Roux V.**, Thom C., Wallis D. Microstructural signatures of polymorphic phase transformations and their tectonic implications: insights from samples quenched during the quartz-coesite transformation. Gordon Research Conference

2021

- 87. Le Roux V.**, #Codillo E., Behn M.D., Marschall H., Bebout G. Experimental constraints on the physical properties of mélange rocks and their relationship to arc magmas. Goldschmidt, Lyon, FR. *Invited (remote)*
86. #Urann B.M., Le Roux V., Jagoutz O., Chin E.J., Behn M.D., Muntener O. Novel insights into the volatile content of arc magmas recorded in the deep roots of Kohistan arc. Goldschmidt, Lyon, FR. (*remote*)
85. Park E., Cohen A., Mollica N., Barkley H., Fox M., **Le Roux V.**, Rheuban J., Coral recovery from bleaching-induced mortality: mechanisms, rates and implications for coral reef survival. ICRS 2021 - 14th International Coral Reef Symposium.

2020

84. **Le Roux V.** Water in the Earth's mantle - Story from the ocean's abyss. Earth talks series – University of Copenhagen, Denmark. *Invited (remote)*
83. **Le Roux V.**, Water in the Earth's mantle - Story from the ocean's abyss. Centre de Recherches Petrographiques et Geochimiques, FR. *Invited (remote)*
82. #Sen L., Bernhard J.M., **Le Roux V.**, Visscher P.T. Do Freshwater Foraminifera Disturb Stromatolite Layers? SACNAS' National Diversity in STEM Conference. (*remote*)
81. #Sen L., Bernhard J.M., Visscher P.T., **Le Roux V.** Do Freshwater Foraminifera Disrupt Stromatolite Laminations? American Geophysical Union (AGU), Fall Meeting, San Francisco, USA. (*remote*)

2019

80. Gaetani G.A., ##Pamukcu A.S., Wallace P.J., Sims K.W.W., **Le Roux V.**, Klein F., Magma Storage and Ascent Beneath the Erebus Volcanic Province, Antarctica: Insights from Olivine-Hosted Melt Inclusions. ISAES (Republic of Korea).
79. ##Pamukcu A., Gaetani G.A., Del Castillo A., Nordyke A., **Le Roux V.**, Klein F., Sims K.W.W., Wllace P.J., Assessing magma storage and ascent records from volatiles in olivine-hosted melt inclusions. American Geophysical Union (AGU), Fall Meeting, San Francisco (USA)
78. Liang Y., Huang Q.-S., **Le Roux V.**, A Three-Stage Model for Trace Element and Isotope Fractionation During Solidification in Magmatic Veins. American Geophysical Union (AGU), Fall Meeting, San Francisco (USA)
77. Klein F. and **Le Roux V.**, Laboratory Constraints on the Volume Increase of Serpentinization. American Geophysical Union (AGU), Fall Meeting, San Francisco (USA)
- 76. Le Roux V.**, European Institute for Marine Studies, Geosciences Ocean, Brest, FR *Invited*
- 75. Le Roux V.**, Laboratoire Magmas et Volcans, Clermont-Ferrand, FR *Invited*
- 74. Le Roux V.**, Geosciences Environnement Toulouse, FR *Invited*
- 73. Le Roux V.**, Geosciences Montpellier, FR *Invited*
72. Liang Y., Huang Q.S., **Le Roux V.**, A Three-Stage Model for Trace Element and Isotope Fractionation During Solidification in Magmatic Veins. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.
71. #Urann B., **Le Roux V.**, John T., Beaudoin G., Barnes J., The in- situ halogen content of MORB-like eclogites, Raspas Complex, Ecuador. Goldschmidt conference, Barcelona, Spain.
- 70 Klein F., Le Roux V.**, Quantifying the volume increase during incipient serpentinization. Goldschmidt conference, Barcelona, Spain.

69 Le Roux V., Progress on water and halogen measurements at WHOI – Applications to peridotites at VEMA fracture zone. Water in the Mantle workshop. Lamont-Doherty Earth Observatory, USA.

2018

68 Le Roux V., Arc-like magmas generated by mélange-peridotite interaction in the mantle wedge, Boston College, USA. *Invited*

67 Nielsen S.G., Horner, T.J., **Le Roux V.**, Kurz M.D., Blusztajn J.S., Barium isotope evidence for global sediment recycling in the upper mantle. GSA meeting, Indianapolis, USA.

66 Le Roux V., Arc-like magmas generated by mélange-peridotite interaction in the mantle wedge, Aarhus University, Denmark. *Invited*

65 Bernhard J.M., **Le Roux V.**, Martin J.B., Curtis J., Panieri G., Fake news? Benthic foraminifera record gas hydrate methane emissions, FORAMS, Edinburgh, UK.

64 Bernhard J.M., Fisher L., Reilly M., DeHart H.M, Bucklin A., **Le Roux V.**, Visscher P.T., Can freshwater foraminifera impact stromatolite fabric? FORAMS, Edinburgh, UK.

63 #Codillo E.A., **Le Roux V.**, Marschall H.R., Generation of arc-like magmas by mélange-peridotite interaction in the mantle wedge. Goldschmidt, Boston, USA.

62 Nielsen S.G., Horner T., Pryer H., Blusztajn J., Shu Y., Kurz M.D., **Le Roux V.**, Barium isotope evidence for global sediment recycling in the upper mantle. Goldschmidt, Boston, USA.

61 Le Roux V., Arc-like magmas generated by mélange-peridotite interaction in the mantle wedge, California Institute of Technology, USA. *Invited*

2017

60 Jones. M., Soule, S.A., Liao, Y., **Le Roux, V.**, Brodsky, H., Constraining pre-eruptive volatile contents and degassing histories in submarine lavas. American Geophysical Union (AGU), Fall Meeting, New Orleans, USA.

59 \$Hough T.J., **Le Roux V.**, Kurz, M.D., Timing of pyroxenite formation in supra-subduction Josephine Ophiolite, Oregon. American Geophysical Union (AGU), Fall Meeting, New Orleans, USA.

58 Bernhard J. M., Fisher L., Reilly M., Bucklin A., Questel J. M., **Le Roux V.**, Visscher P. T., Can Freshwater foraminifera impact stromatolite fabric? GSA, Washington, USA

57 #Urann B. M., **Le Roux V.**, \$Hammond K., Marschall H. R., Lee C.-T.A., Monteleone B., The fluorine and chlorine budget of the Earth's peridotite mantle. Goldschmidt, Paris, FR.

56 Le Roux V., #Codillo E. A. Marschall H. R. Arc-like magmas and pyroxenites generated by mélange-peridotite interaction in the mantle wedge. Goldschmidt, Paris, FR.

55 Gaetani G.A., **Le Roux V.**, Klein F., Moore L.R., Bodnar R.J., MacLennan J. X-ray microtomography-based reconstruction of total CO₂ in olivine-hosted melt inclusions. Goldschmidt, Paris, FR.

54 Gaetani G.A., Bucholz C.E., Le Roux V., Klein F., Wallace P.J., Sims K.W.W, Ghiorso M.S., Determining magma ascent rates from diffusive D/H fractionation in olivine-hosted melt inclusions. Goldschmidt, Paris, FR.

53 #Codillo E. A., **V. Le Roux**, H. R. Marschall, Experimental hybridization of mantle wedge by mélange rocks, and the generation of arc magmas. Goldschmidt, Paris, FR.

52 Jones M., Soule S., Kurz M., Wanless D., Brodsky H., Schwartz D., **Le Roux V.**, Klein F., Mittelstaedt E., Curtice J., Fornari D., Formation and distribution of popping rocks from the Mid-Atlantic Ridge near 14N. IAVCEI, Portland, USA.

51 Jones M. R., Soule S.A., Gonnermann H., Clague D., **Le Roux V.**, Degassing and Vesiculation during the 2011 eruption of Axial Volcano, Juan de Fuca Ridge. AGU Chapman Conference on Submarine Volcanism: New Approaches and Research Frontiers, Hobart, Tasmania, Australia.

50 \$Rogers L. S., Giuffrida B., **Le Roux V.**, Mensinger A. F., Visualization of the Oyster Toadfish (*Opsanus tau*) Anterior Lateral Line via Micro-CT. SICB conference, New Orleans, USA.

2016

49 Jones M., Soule S.A, Kurz M.D., Wanless V.D., **Le Roux V.**, Klein F., Mittelstaedt E. L., Curtice J., Popping rocks from the Mid-Atlantic Ridge: Insights into mantle volatile concentrations and degassing dynamics. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

48 Gaetani G., Wallace P., Sims K., **Le Roux V.**, Klein F., Bucholz C., Ghiorso M., Determination of magma ascent rates from d/h fractionation in olivine-hosted melt inclusions. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

47 Gaetani G., **\$Doiron N.**, **Le Roux V.**, Klein F., McLennan J., Neave D. Disequilibrium vapor bubble formation in olivine-hosted melt inclusions: how much CO₂ is really in there? American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

46 **##Cruz-Uribe A.**, **Marschall H.**, Gaetani G., **Le Roux V.**, Generation of alkaline magmas in subduction zones by melting of mélange diapirs. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

45 **\$Codillo E.**, Arcilla C., **Le Roux V.**, Did The Palawan Ophiolite And Paly Ultramafic Massif Come From The Same Oceanic Lithosphere? Asia Oceania Geosciences Society, Beijing, (China).

2015

44 Le Roux V., Nielsen S. G., **##Sun C.**, Yao L., Timing of melt migration and pyroxenite formation in the mantle. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA. *Invited*

43 Miller K., Zhu W., Montesi L., Gaetani G., **Le Roux V.**, Xiao X., Lithologic melt partitioning and transport properties of partially molten harzburgite. American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

42 Gaetani G., McLennan J., Klein F., **Le Roux V.**, Reconstructing magma storage depths from olivine-hosted melt inclusions: Do vapor bubbles matter? American Geophysical Union (AGU), Fall Meeting, San Francisco, USA.

41 Le Roux V., Mantle pyroxenites: from Asthenosphere to Lithosphere. Massachusetts Institute of Technology, USA. *Invited*

40 Le Roux V., Mantle pyroxenites: from Asthenosphere to Lithosphere. Wood Hole Oceanographic Institution, USA

39 Le Roux V., Monteleone B., **\$Hammond K.**, Shimizu N., F and Cl in peridotite minerals: analytical development, partitioning, and applications to fluid cycling in the Earth's mantle. Goldschmidt Conference, Prague, Czech Republic. *Invited*

38 Le Roux V., Monteleone B., **\$Hammond K.**, Shimizu N., F and Cl in peridotite minerals: analytical development, partitioning, and applications to fluid cycling in the Earth's mantle. Gordon Conference, Mt Holyoke, USA.

37 Le Roux V., Nielsen S.G., **##Sun C.**, Yao L., Timing of frozen melt fronts preserved in the lithospheric mantle. Gordon Conference, Mt Holyoke, USA.

2014

36 Le Roux V., Fluid cycling in the Earth's mantle: perspectives from field, geochemical and experimental data. Ecole Normale Supérieure de Lyon, FR. *Invited*

35 Le Roux V., Tracking water in a dry mantle. Geochemistry and Geophysics seminar. Woods Hole Oceanographic Institution, USA.

2013

34 Miller K., Zhu W., Montesi L. G., **Le Roux V.**, Gaetani G. A., Evidence for melt partitioning between olivine and orthopyroxene in partially molten harzburgite. American Geophysical Union, Fall Meeting, San Francisco, USA.

33 Le Roux V., Gaetani G. A., **\$Slaugenwhite J.**, Miller K., Fluid escape in subduction zones: new constraints from 3-D microtomography data. American Geophysical Union, Fall Meeting, San Francisco, USA.

32 Tommasi A., Baptiste V., Frets E., Higgie K., Soustelle V., **Le Roux V.**, David M., Vauchez A., Garrido C., Bodinier J-L. Keynote: Heterogeneity and Anisotropy in the Lithospheric Mantle. Goldschmidt Conference, Florence, Italy.

31 Kurz M., **Le Roux V.**, Warren J., Curtice J. M., Nielsen S. G. Helium isotopic and concentration variations in a clinopyroxenite vein, and some implications for mantle evolution. Goldschmidt Conference, Florence, Italy.

30 Le Roux V., Gaetani G., **\$Slaugenwhite J.**, Miller K., 3D fluid distribution in subducted slabs: new constraints on H₂O cycling. Goldschmidt Conference, Florence, Italy.

29 Le Roux V., Melting, erupting, recycling: where and how to probe the Earth's mantle. Bayerisches Geoinstitut, Germany. *Invited*

2012

28 Le Roux V., Dick H., Shimizu N. Scaling and nature of melting processes in the mantle wedge: a record from the Josephine peridotite. Goldschmidt Conference, Montreal, Canada.

27 Lee C.-T.A., Luffi P., **Le Roux V.**, Dasgupta R., Chin E., Erdman M., Bouchet R., Yin Q.Z., Yang W., Ingram L., DePaolo D. Copper, Sulfur and Redox. International Geological Congress, Brisbane, Australia.

26 Le Roux V., **Sulfides in orogenic peridotites, Internal workshop.** Woods Hole Oceanographic Institution, USA.

25 Le Roux V., Processus et traceurs des hétérogénéités du manteau terrestre. Unité Mixte de Recherche Domaines Océaniques, Brest, FR. *Invited*

2011

24 Dasgupta R., Mallik A., **Le Roux V.**, Lee C.-T.A. Constraining pyroxenite component in OIB source through melt-rock reaction experiments in pyroxenite-peridotite system and partitioning of first-row transition elements during mantle melting. Chapman Conference, Galapagos.

23 Le Roux V., Dasgupta R., Lee C.-T.A. Mineralogical Heterogeneities in the Earth's Mantle: Constraints from Mn, Co, Ni and Zn Partitioning during Partial Melting. Goldschmidt, Prague, Czech Republic.

Lee C.-T.A., Chin E., Bouchet R., Luffi P., Dasgupta R., Morton D., **Le Roux V.**, Yin Q.-Z., Albarède F., 22 Blichert-Toft J., Copper systematics in arc magmas and implications for the origin of continents, the Pb-paradox and copper porphyry deposits. Goldschmidt, Prague, Czech Republic.

21 Le Roux V., A broad reminder of what the Earth's mantle (might) be made of. Wood Hole Oceanographic Institution, USA.

2010

20 Lee C.-T. A., Chin, E. J., Dasgupta, R., Luffi, P. I., **Le Roux, V.** Copper systematics during mantle melting and crustal differentiation in arcs: implications for S and Pb budgets of the continental crust American Geophysical Union, Fall Meeting, San Francisco, USA.

19 Lee C.-T.A., Luffi P., **Le Roux V.**, Dasgupta R. Conservative tracers of oxygen fugacity in basalts and their mantle source regions. Goldschmidt Conference, Knoxville, USA.

18 Le Roux V. Major element heterogeneities in the Earth's mantle: perspectives from mantle outcrops and transition metal systematic of basalts. Wood Hole Oceanographic Institution, USA. *Invited*

17 Le Roux V., Dasgupta R., Lee C.-T.A. First series transition metals as tracers of mineralogical heterogeneities in the Earth's mantle. Goldschmidt Conference, Knoxville, USA. *Invited*

16 Le Roux V. Major elements heterogeneities in the Earth's mantle: perspectives from mantle outcrops and transition metal systematic of basalts. University of New Mexico, USA. *Invited*

15 Le Roux V. Péridotites et basaltes, témoins des hétérogénéités en éléments majeurs dans le manteau terrestre. Ecole Normale Supérieure de Lyon, FR. *Invited*

14 Le Roux V. Péridotites et basaltes, témoins des hétérogénéités en éléments majeurs dans le manteau terrestre. Geosciences Montpellier, FR. *Invited*

2009

13 Bodinier J.-L., Tommasi A., Soustelle V., **Le Roux V.**, Vauchez A.R., Garrido C.J. Moving (transient) lithosphere-asthenosphere boundaries: Coupling between partial melting, melt transport, and deformation. American Geophysical Union, Fall Meeting, San Francisco, USA.

12 Le Roux V., Lee C.-T. A. Transitional elements as tracers for mantle heterogeneities; Zn, Fe, and Mn systematics in mafic and ultramafic systems. Goldschmidt Conference, Davos, Switzerland.

11 Le Roux V., Major and trace element heterogeneities in the Earth's mantle, Rice University, USA.

10 Le Roux V., Lee C.-T.A., Bodinier J.-L. Major elements heterogeneities in the Earth's mantle: perspectives from mantle outcrops and transition metal systematic of basalts. American Geophysical Union, Fall Meeting, San Francisco, USA. *Invited*

2008

9 Le Roux V., Bodinier J.-L., Vauchez A., Tommasi A., Alard O., O'Reilly S. Y. Melt-rock interactions in the Lherz peridotite; Implications for structural, chemical and isotopic evolution of the lithospheric mantle. Orogenic Lherzolite Conference, Mount Shasta, USA.

8 Bodinier J.-L., Le Roux V., Soustelle V., Chanefo I., Tommasi A., Garrido C., Alard O. Chemical variations in tectonically-emplaced mantle rocks : superimposed effects of partial melting, melt redistribution and igneous refertilization. Orogenic Lherzolite Conference, Mount Shasta, USA.

7 Tommasi A., Le Roux V., Soustelle V., Bodinier J.-L., Vauchez A., Garrido, C. Lithosphere-asthenosphere interactions: Coupling between partial melting, melt transport, and deformation. International geological congress, Oslo, Norway.

2007

6 Bodinier J.-L., Le Roux V., Soustelle V., Tommasi A. and Garrido C. Chemical variations in tectonically-emplaced mantle rocks: superimposed effects of partial melting, melt redistribution and igneous refertilization. European Mantle Workshop, Ferrara, Italy.

5 Le Roux V., Bodinier J.-L., Alard O., Wieland P. and O'Reilly S.Y. Rejuvenation of the lithospheric mantle (Lherz Massif, FR). European Mantle Workshop, Ferrara, Italy.

4 Le Roux V., Bodinier J.-L., Alard O., Wieland P. and O'Reilly S.Y. Insights into refertilization process in lithospheric mantle from structural and geochemical studies in the Lherz Massif (FR). Goldschmidt Conference, Cologne, Germany.

2006

3 Alard O., Riches A.J.V., Le Roux V. and Bodinier J.-L. How primitive is the "primitive" upper mantle: Revisiting the lherzolite-harzburgite relationships of the Lherz massif. International Conference on Continental Volcanism, Guangzhou, China.

2 Le Roux V., Bodinier J.-L., Alard O., Tommasi A., Dautria J.-M., Vauchez A. and Lorand J.-P. The spinel lherzolite at Lherz: a result of mantle refertilization? EGU Meeting, Wien, Austria.

2005

1 Bodinier J.-L., Le Roux V., Lenoir X., Alard O., Garrido C., Tommasi A., Dautria J.-M., Vauchez A., Lorand J.-P. and Gervilla F. Partial melting in Ronda versus refertilization in Lherz: two contrasting effects of lithospheric thermal erosion documented in orogenic peridotites, Peridotite Workshop, Lanzo, Italy.