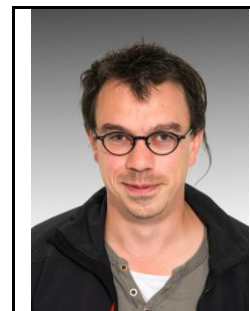


# CURRICULUM VITAE

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***Lydéric FRANCE***

**16/06/83**

*Igneous Petrologist*  
*Study of magma chamber processes*

## **Current position:**

**Maître de Conférences (associate professor) at the Centre de Recherches Pétrographiques et Géochimiques (CRPG, CNRS-UMR 7358), University of Lorraine, Nancy, France (since 2010)**

## **Formation:**

- 2009-2010 **Assistant professor at University of Cergy Pontoise, France (Geosciences Laboratory)**
- 2006-2009 **PhD at “Geosciences Montpellier Laboratory” in co-tutelle with the Institut für Mineralogy from Hannover, Germany**  
*Grade: Excellent*  
**Magmatic / hydrothermal interactions at fast spreading mid-ocean ridges: Implications on the dynamics of the axial melt lens.**  
Directors: \*Benoît ILDEFONSE (Montpellier, France)  
\*Juergen KOEPKE (Hannover, Germany)  
University of Montpellier II

This work has been rewarded by the attribution of two awards:

**\*best thesis award 2010 of the Comité National Français de Géologie (CNFG)**

**\*best thesis award "Haüy-Lacroix 2010" of the Société Française de Minéralogie et Cristallographie (SFMC)**

- 2004-2006 **Master Research ‘Volcanism, magmatism and metamorphism’ (Grade B)**  
**“Petrological and geochemical study of garnet pyroxenites (French Massif-Central, Jordan, Morocco, Cameroon). Origins and geodynamical implications.” (directors Gilles CHAZOT & Jacques KORNPORBST) (French reports available).**  
University Blaise Pascal ; Clermont-Ferrand, France

- 2003-2004 **Licence « Geology » option Volcanology (Grade AB)**  
University Blaise Pascal ; Clermont-Ferrand, France
- 2001-2003 **DEUG « Geology » (Grade AB)**  
University Jean Monnet ; Saint-Etienne, France
- 2001 **Bac « Sciences » (Maths speciality)**  
**Climbing Sport-study**  
Lycée Saint-Louis ; Saint-Etienne, France
- 1998-1999 **Seconde Climbing Sport-study**  
Lycée du Mont-Blanc ; Saint-Gervais Le Fayet, France

**Publications (peer reviewed publications, Journals surveyed in "ISI Web of knowledge"):**

**489 citations in Google Scholar the 01/01/2018**

Submitted:

- [31] R. Pik, M. Stab, M.A. Ancellin, S. Medynski, C. Cloquet, D. Ayalew, G. Yirgu, G. Chazot, C. Vye-Brown, **L. France**, N. Bellahsen, S. Leroy (*in correction after a review requesting some revisions; Nature Geosciences*) The role of the Afar mantle plume in breaking-up East Africa.
- [30] **L. France**, E. Deloule, R. Botcharnikov, R. Bonnet, G. Mollex (*submitted to EPSL*) Comment and volatile content reassessment on “Megacrystals track magma convection between reservoir and surface” by Moussallam et al. (2015)
- [29] **L. France**, M. Boulanger, G. Mollex, J.L. Devidal (*under consideration at Geochemical Perspective Letters*) Oldoinyo Lengai natrocarbonatite derives from classical calciocarbonatite
- [28] G. Mollex, **L. France**, R. Bonnet, R. Botcharnikov, S. Wilke, E. Deloule (*submitted to EPSL*) Magma composition and architecture of the active deep plumbing system at Oldoinyo Lengai carbonatite volcano, Tanzania

Published or accepted (students are underlined):

- [27] X. Gu, J. Ingrin, E. Deloule, **L. France**, Q. Xia (2018, *in press*) Mantle metasomatism in the sub-continental lithospheric mantle beneath the South French Massif Central: Constraints from trace elements, Li and H in peridotite minerals. *Chemical Geology*
- [26] G. Mollex, E. Füre, P. Burnard, L. Zimmermann, G. Chazot, E.O. Kazimoto, B. Marty, **L. France** (2018, *in press*) Helium isotope composition from mantle source to fumaroles at the Oldoinyo Lengai volcano, Tanzania. *Chemical Geology*
- [25] C. Zhang, J. Koepke, **L. France**, M. Godard (2017) Felsic Plutonics from IODP Hole 1256D, Eastern Pacific: Implications for the Nature of Axial Melt Lens at Fast-Spreading Ocean Ridges. *Journal of Petrology*, 58-1: 1535-1565.  
doi:[10.1093/petrology/egx064](https://doi.org/10.1093/petrology/egx064)
- [24] C. Zhang, L.X. Wang, M.A.W. Marks, **L. France**, J. Koepke (2017) Volatiles (CO<sub>2</sub>, S, F, Cl, Br) in the dike-gabbro transition zone at IODP Hole 1256D: Magmatic imprint versus hydrothermal influence at fast-spreading mid-ocean ridge. *Chemical Geology*, 459: 43-60. doi:[10.1016/j.chemgeo.2017.04.002](https://doi.org/10.1016/j.chemgeo.2017.04.002)
- [23] M. Erdmann, **L. France**, L. Fischer, E. Deloule, J. Koepke (2017) Trace elements in anatectic products at the roof of mid-ocean ridge magma chambers: an experimental study. *Chemical Geology*, 456: 43-57. doi:[10.1016/j.chemgeo.2017.03.004](https://doi.org/10.1016/j.chemgeo.2017.03.004)
- [22] X. Gu, E. Deloule, **L. France**, J. Ingrin (2016) Multi-stage metasomatism revealed by trace element and Li isotope distributions in minerals of peridotite xenoliths from

- Allègre volcano (French Massif Central). *Lithos*, 264: 158-174  
doi:[10.1016/j.lithos.2016.07.019](https://doi.org/10.1016/j.lithos.2016.07.019)
- [21] S. Medynski, R. Pik, P. Burnard, S. Dumont, R. Grandin, A. Williams, P.H. Blard, I. Schimmelpfennig, C. Vye-Brown, **L. France**, D. Ayelew, L. Benedetti, G. Yirgu, ASTER Team (2016) Magmatic cycles pace tectonic and morphological expression of rifting (Afar depression, Ethiopia). *EPSL*, 446: 77-88. doi:[10.1016/j.epsl.2016.04.014](https://doi.org/10.1016/j.epsl.2016.04.014)
- [20] **L. France**, M. Demacon, A.A. Gurenko, D. Briot (2016) Oxygen isotopes reveal crustal contamination and a large, still partially molten magma chamber in Chaîne des Puys (French Massif Central). *Lithos*, 260: 328-338. doi:[10.1016/j.lithos.2016.05.013](https://doi.org/10.1016/j.lithos.2016.05.013)
- [19] L.A. Fischer, M. Erdmann, **L. France**, P. Wolff, E. Deloule, C. Zhang, M. Godard, J. Koepke (2016) Trace element evidence for anatexis at oceanic magma chamber roofs and the role of partial melts for contamination of fresh MORB. *Lithos*, 260: 1-8. doi:[10.1016/j.lithos.2016.05.001](https://doi.org/10.1016/j.lithos.2016.05.001)
- [18] C. Scheffer, O. Vanderhaeghe, P. Lanari, A. Tarantola, L. Ponthus, A. Photiades, **L. France** (2016) Syn- to post-orogenic exhumation of metamorphic nappes: structure and thermobarometry of the western Attic-Cycladic metamorphic complex (Lavrion, Greece). *Journal of Geodynamics*, 96: 174-193. doi:[10.1016/j.jod.2015.08.005](https://doi.org/10.1016/j.jod.2015.08.005)
- [17] **L. France**, G. Chazot, J. Kornprobst, L. Dallai, R. Vannucci, M. Grégoire, H. Bertrand, P. Boivin, (2015) Mantle refertilization and magmatism in old orogenic regions: The role of late-orogenic pyroxenites. *Lithos*, 232: 49-75. doi:[10.1016/j.lithos.2015.05.017](https://doi.org/10.1016/j.lithos.2015.05.017)
- [16] M. Erdmann, L. Fischer, **L. France**, C. Zhang, M. Godard, J. Koepke (2015) Anatexis at the roof of an oceanic magma chamber at IODP Site 1256 (equatorial Pacific): an experimental study. *Contributions to Mineralogy and Petrology*, 169: 39. doi:[10.1007/s00410-015-1136-5](https://doi.org/10.1007/s00410-015-1136-5)
- [15] I. Pezzali, **L. France**, G. Chazot, R. Vannucci (2015) Analogues of exhumed pyroxenite layers in the Alboran domain sampled as xenoliths by Middle Atlas Cenozoic volcanism. *Lithos*, 230: 184-188. doi:[10.1016/j.lithos.2015.02.024](https://doi.org/10.1016/j.lithos.2015.02.024)
- [14] S. Medynski, R. Pik, P. Burnard, C. Vye-Brown, **L. France**, I. Schimmelpfennig, K. Whaler, N. Johnson, L. Benedetti, D. Ayelew, G. Yirgu (2015) Stability of rift axis magma reservoirs: spatial and temporal evolution of magma supply in the Dabbahu rift segment (Afar, Ethiopia) over the past 30 kyr. *EPSL*, 409: 278-289. doi:[10.1016/j.epsl.2014.11.002](https://doi.org/10.1016/j.epsl.2014.11.002)
- [13] **L. France**, J. Koepke, C.J. MacLeod, B. Ildefonse, M. Godard, E. Deloule (2014) Contamination of MORB by anatexis of magma chamber roof rocks: constraints from a geochemical study of experimental melts and associated residues. *Lithos*, 202-203: 120-137. doi:[10.1016/j.lithos.2014.05.018](https://doi.org/10.1016/j.lithos.2014.05.018)
- [12] **L. France**, B. Ildefonse, J. Koepke (2013) Hydrous magmatism triggered by assimilation of hydrothermally altered rocks in fossil oceanic crust (Northern Oman ophiolite). *Geochem. Geophys. Geosyst.*, 14, doi: [10.1002/ggge.20137](https://doi.org/10.1002/ggge.20137)
- [11] S. Medynski, R. Pik, P. Burnard, A. Williams, C. Vye-Brown, D. Ferguson, P.H. Blard, **L. France**, G. Yirgu, J.I. Seid, D. Ayalew, A. Calvert (2013) Controls on magmatic cycles and development of rift topography of the Manda Hararo segment (Afar, Ethiopia): Insights from cosmogenic <sup>3</sup>He investigation of landscape evolution. *Earth Planet. Sci. Lett.*, 367: 133-145. doi: [10.1016/j.epsl.2013.02.006](https://doi.org/10.1016/j.epsl.2013.02.006)
- [10] N. Bolfan-Casanova, M. Muñoz, C. McCammon, E. Deloule, A. Ferot, S. Demouchy, **L. France**, D. Andrault, S. Pascarelli (2012) Ferric iron and water incorporation in wadsleyite under hydrous and oxidizing conditions: a XANES, Mössbauer, and SIMS study. *American Mineralogist*, 97: 1483-1493. doi: [10.2138/am.2012.3869](https://doi.org/10.2138/am.2012.3869)
- [9] F. Deschamps, M. Godard, S. Guillot, C. Chauvel, M. Andreani, K. Hattori, B. Wunder, **L. France**; (2012) Behaviour of fluid-mobile elements in serpentines from abyssal to subduction environments: Examples from Cuba and Dominican Republic. *Chemical Geology*, 312-313: 93-117. doi: [10.1016/j.chemgeo.2012.04.009](https://doi.org/10.1016/j.chemgeo.2012.04.009)

- [8] J. Koepke, **L. France**, T. Müller, F. Faure, N. Goetze, W. Dziony, B. Ildefonse (2011) Gabbros from IODP Site 1256, equatorial Pacific: Insight into axial magma chamber processes at fast-spreading ocean ridges. *Geochem. Geophys. Geosyst.* Q09014, doi: [10.1029/2011GC003655](https://doi.org/10.1029/2011GC003655)
- [7] **L. France**, C. Nicollet (2010) MetaRep, an extended CMAS 3D program to visualize mafic (CMAS, ACF-S, ACF-N) and pelitic (AFM-K, AFM-S, AKF-S) projections. *Computers and Geosciences*, 36: 786-791. doi: [10.1016/j.cageo.2010.01.001](https://doi.org/10.1016/j.cageo.2010.01.001)
- [6] **L. France**, J. Koepke, B. Ildefonse, S. Cichy, F. Deschamps (2010) Hydrous partial melting in the sheeted dike complex at fast spreading ridges: Experimental and natural observations. *Contrib. Mineral. Petrol.*, 160:683-704. doi:[10.1007/s00410-010-0502-6](https://doi.org/10.1007/s00410-010-0502-6)
- [5] **L. France**, B. Ildefonse, J. Koepke, F. Bech (2010) A New Method to Estimate the Oxidation State of Basaltic series from microprobe analysis. *Journal of Volcanology and Geothermal Research*, **189**: 340-346, doi: [10.1016/j.jvolgeores.2009.11.023](https://doi.org/10.1016/j.jvolgeores.2009.11.023)
- [4] A. Nicolas, F. Boudier, **L. France** (2009) Subsidence in magma chamber and development of magmatic foliation in Oman ophiolite gabbros. *Earth Planet. Sci. Lett.*, 284:76-87. doi: [10.1016/j.epsl.2009.04.012](https://doi.org/10.1016/j.epsl.2009.04.012)
- [3] **L. France**, N. Ouillon, G. Chazot, J. Kornprobst, P. Boivin (2009) CMAS 3D a new program to visualize and project major elements compositions in the CMAS system. *Computers and Geosciences*, 35, 1304-1310, doi: [10.1016/j.cageo.2008.07.002](https://doi.org/10.1016/j.cageo.2008.07.002)
- [2] **L. France**, B. Ildefonse, J. Koepke (2009) Interactions between magma and hydrothermal system in Oman ophiolite and in IODP Hole 1256D: Fossilisation of a dynamic melt lens at fast spreading ridges. *Geochem. Geophys. Geosyst.*, 10-10, Q10O19, doi: [10.1029/2009GC002652](https://doi.org/10.1029/2009GC002652)
- [1] A. Nicolas, F. Boudier, J. Koepke, **L. France**, B. Ildefonse, C Mevel (2008) The Root Zone of the Sheeted Dike Complex in the Oman Ophiolite. *Geochem. Geophys. Geosyst.*, 9, Q05001, doi: [10.1029/2007GC001918](https://doi.org/10.1029/2007GC001918)

### **Other publications:**

- [7] MacLeod, C.J., Dick, H.J.B., Blum, P., Abe N., Blackman D.K., Bowles J.A., Cheadle M.J., Cho K., Ciazela J., Deans J.R., Edgcomb V.P., Ferrando C., **France L.**, Ghosh B., Ildefonse B.M., Kendrick M.A., Koepke J.H., Leong J.A.M., Liu C., Ma Q., Morishita T., Morris A., Natland J.H., Nozaka T., Pluemper O., Sanfilippo A., Sylvan J.B., Tivey M.A., Tribuzio R., Viegas L.G.F. (2017) Southwest Indian Ridge Lower Crust and Moho. Proceedings of the International Ocean Discovery Program, 360: College Station, TX (International Ocean Discovery Program). doi:[10.14379/iodp.360.2017](https://doi.org/10.14379/iodp.360.2017)
- [6] Dick H.J.B., MacLeod C.J., Blum P., Abe N., Blackman D.K., Bowles J.A., Cheadle M.J., Cho K., Ciazela J., Deans J.R., Edgcomb V.P., Ferrando C., **France L.**, Ghosh B., Ildefonse B.M., Kendrick M.A., Koepke J.H., Leong J.A.M., Liu C., Ma Q., Morishita T., Morris A., Natland J.H., Nozaka T., Pluemper O., Sanfilippo A., Sylvan J.B., Tivey M.A., Tribuzio R., Viegas L.G.F. (2016) Expedition 360 Preliminary Report: Southwest Indian Ridge lower crust and Moho. *International Ocean Discovery Program*. doi:[10.14379/iodp.pr.360.2016](https://doi.org/10.14379/iodp.pr.360.2016)
- [5] Mollex G., **France L.**, Burnard P., Boudoire G. (2015) Genesis and evolution of highly alkaline magmas at Oldoinyo Lengai, Tanzania. *Proceeding of the 13<sup>th</sup> Biennial SGA meeting, 24-27 August 2015, Nancy, France*
- [4] Damon A.H. Teagle, Benoit Ildefonse, Peter Blum, Natsue Abe, Bénédicte Abily, Yoshiko Adashi, Jeffrey C. Alt, Ryo Anma, Graham Baines, Jeremy Deans, Henry J.B. Dick, Daisuke Endo, Eric C. Ferré, **Lydéric France**, Marguerite Godard, Gilles Guérin, Michelle Harris, Yoon-Mi Kim, Juergen H. Koepke, Mark D. Kurz, C. Johan Lissenberg, Sumio Miyashita, Antony Morris, Ryo Oizumi, Betchaida D. Payot, Marie

- Python, Parijat Roy, Jessica L. Till, Masako Tominaga, Douglas S. Wilson, Natalia Zakharova (2012) Proceedings IODP, 335: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:[10.2204/iodp.proc.335.2012](https://doi.org/10.2204/iodp.proc.335.2012)
- [3] Damon A.H. Teagle, Benoit Ildefonse, Peter Blum, Natsue Abe, Bénédicte Abily, Yoshiko Adashi, Jeffrey C. Alt, Ryo Anma, Graham Baines, Jeremy Deans, Henry J.B. Dick, Daisuke Endo, Eric C. Ferré, **Lydéric France**, Marguerite Godard, Gilles Guérin, Michelle Harris, Yoon-Mi Kim, Juergen H. Koepke, Mark D. Kurz, C. Johan Lissenberg, Sumio Miyashita, Antony Morris, Ryo Oizumi, Betchaida D. Payot, Marie Python, Parijat Roy, Jessica L. Till, Masako Tominaga, Douglas S. Wilson, Natalia Zakharova (2012) IODP Expedition 335: Deep Sampling in ODP Hole 1256D. *Scientific Drilling*, **13**: 28-34. doi:[10.2204/iodp.sd.13.04.2011](https://doi.org/10.2204/iodp.sd.13.04.2011)
- [2] Damon A.H. Teagle, Benoit Ildefonse, Peter Blum, Natsue Abe, Bénédicte Abily, Yoshiko Adashi, Jeffrey C. Alt, Ryo Anma, Graham Baines, Jeremy Deans, Henry J.B. Dick, Daisuke Endo, Eric C. Ferré, **Lydéric France**, Marguerite Godard, Gilles Guérin, Michelle Harris, Yoon-Mi Kim, Juergen H. Koepke, Mark D. Kurz, C. Johan Lissenberg, Sumio Miyashita, Antony Morris, Ryo Oizumi, Betchaida D. Payot, Marie Python, Parijat Roy, Jessica L. Till, Masako Tominaga, Douglas S. Wilson, Natalia Zakharova (2011) Battling through the thermal boundary layer: Deep sampling in ODP Hole 1256 during IODP Expedition 335. *InterRidge News*, **20**: 12-17
- [1] **Expedition 335 Scientists** (2011) Superfast spreading rate crust 4: drilling gabbro in intact ocean crust formed at a superfast spreading rate. *IODP Prel. Rept.*, 335. doi:[10.2204/iodp.pr.335.2011](https://doi.org/10.2204/iodp.pr.335.2011)

### **Communications :**

(Author's name in italics has presented the work, students are underlined)

- [70] **L. France**, C. Nicollet, M. Lombard, B. Debret, C. Berthod, B. Ildefonse, J. Koepke (2017) Oman Drilling Project GT3 site survey: dynamics at the roof of an oceanic magma chamber. *AGU, New Orleans (US)*
- [69] G. Mollex, **L. France**, E. Füre, R. Bonnet, R.E. Botcharnikov, L. Zimmermann, S. Wilke, E. Deloule, G. Chazot, E.O. Kazimoto, B. Marty, P. Burnard (2017) The Oldoinyo Lengai volcano plumbing system architecture, and composition from source to surface. *Goldschmidt, Paris (France)*
- [68] **L. France**, M. Boulanger, G. Mollex, J.L. Devidal (2017) Oldoinyo Lengai natrocarbonatite derives from classical calciocarbonatite. *Goldschmidt, Paris (France)*
- [67] A. Mourey, **L. France**, D. Laporte, A. Gurenko (2017) Characterization of volatile contents in primitive magmas of an active carbonatitic volcanic complex (Oldoinyo Lengai, Tanzania). *Goldschmidt, Paris (France)*
- [66] *J.B. Sylvan*, V.P. Edgcomb, G. Burgaud, F. Klein, F. Schubotz, **and the IODP Exp. 360 Scientific Party** (2016) Microbiology of the lower ocean crust - Preliminary results from IODP Expedition 360, Atlantis Bank. *AGU*
- [65] *J.R. Deans*, M.J. Cheadle, C. Ferrando, O. Plümper, G. Viegas, **and the IODP Exp. 360 Scientific Party** (2016) Insights into oceanic core complex formation from structural studies of IODP Hole U1473A, Expedition 360 Atlantis Bank, Southwest Indian Ridge. *AGU*
- [64] *H.J.B. Dick*, C.J. MacLeod, P. Blum, **and the IODP Exp. 360 Scientific Party** (2016) Lateral Variability of the Lower Ocean Crust at Atlantis Bank, SW Indian Ridge, Results of IODP Expedition 360. *AGU*
- [63] *C.J. MacLeod*, H.J.B. Dick, P. Blum, **and the IODP Exp. 360 Scientific Party** (2016) The Nature of the Intrusive Crust and Moho at Slower Spreading Ridges: SloMo Leg 1 (IODP Expedition 360). *AGU*



- [62] *L. Kavanagh, A.O. Martinez, M. Burgio, J. Zhang, and the IODP Exp. 360 Scientific Party* (2016) Outreach Aboard the JOIDES Resolution During IODP Exp. 360: Bringing Cutting Edge Research on Mid Ocean Ridge Processes to Classrooms Worldwide. *AGU*
- [61] *M. Burgio, J. Zhang, L. Kavanagh, A.O. Martinez, and the IODP Exp. 360 Scientific Party* (2016) Education and Outreach from the JOIDES Resolution during IODP Expedition 360: linking onboard research and classroom activities during and after the Expedition. *AGU*
- [60] *A. Morris, J. Bowles, M. Tivey, and the IODP Exp. 360 Scientific Party* (2016) Paleomagnetic Constraints on the Evolution of Atlantis Bank: Results from IODP Expedition 360 “SW Indian Ridge Lower Crust and Moho”. *AGU*
- [59] *P. Blum, H.J.B. Dick, C.J. MacLeod, and the IODP Exp. 360 Scientific Party* (2016) IODP Exp 362T: Additional Coring and Remediation in Hole U1473A - Continuing the Journey to the Moho. *AGU*
- [58] *M.J. Cheadle, B.E. John, M.A. Coble, J. Koepke, M.E. Rioux, C.Z. Liu, and the IODP Exp. 360 Scientific Party* (2016) The age of IODP Site 1473, Atlantis Bank: Constraints from initial zircon U-Pb dating and geochemistry by SIMS. *AGU*
- [57] *A. Sanfilippo, L. France, B. Ghosh, C.Z. Liu, T. Morishita, J.H. Natland, H.J.B. Dick, C.J., MacLeod, and the Expedition 360 Scientific Party* (2016) Igneous stratigraphy and rock-types of a long transect of the lower crust formed at the Atlantis Bank core complex (SW Indian Ridge): preliminary results from IODP Expedition 360. *AGU*
- [56] *J.H. Natland, M.J. Cheadle, H.J.B. Dick, L. France, and the Expedition 360 Scientific Party* (2016) Mobility of late-stage magmatic liquids and the development of detachment faults at slowly-spreading ridge. *AGU*
- [55] *G. Mollex, L. France, P. Burnard, E. Füri* (2016) Genesis and evolution of highly alkaline magmas at Oldoinyo Lengai, Tanzania. *International DINGUE Conference, Nancy, France*
- [54] *L.A. Fischer, M. Erdmann, L. France, P.E. Wolff, E. Deloule, C. Zhang, M. Godard, J. Koepke* (2016) Trace element evidence for anatexis at oceanic magma chamber roofs and the role of partial melts for contamination of fresh MORB. *Annual meeting of the Deutsche Mineralogische Gesellschaft*
- [53] *N. Abe, B. Ildefonse, D.K. Blackman, H.J.B. Dick, C.J. MacLeod, P. Blum, and the IODP Exp. 360 Scientific Party* (2016) Physical properties and borehole information of Hole U1473A, IODP Exp. 360 Indian Ridge Lower Crust and Moho (SloMo) 26<sup>th</sup> *Goldschmidt conference, Yokohama, Japan*
- [52] *G. Mollex, L. France, P. Burnard, G. Boudoire* (2015) Genesis and evolution of highly alkaline magmas at Oldoinyo Lengai, Tanzania. *13<sup>th</sup> SGA Biennial meeting “Mineral resources in a sustainable world”, Nancy, France*
- [51] *L. France, B. Mary, E. Deloule, M. Muñoz, J. Koepke, L. Letourneur, B. Ildefonse, N. Bolfan-Casanova, B. Devouard, F. Deschamps* (2015) Do MORBs record the oxidation state of Earth’s upper mantle ? 25<sup>th</sup> *Goldschmidt conference, Prague, CZ*
- [50] *G. Mollex, L. France, P. Burnard, G. Boudoire* (2015) Genesis and evolution of highly alkaline magmas at Oldoinyo Lengai, Tanzania. 25<sup>th</sup> *Goldschmidt conference, Prague, CZ*
- [49] *X. Gu, E. Deloule, L. France, J. Ingrin* (2015) The two-stage melt metasomatism revealed by lithium isotopes distribution in peridotite xenoliths from Allegre (French Massif Central). 25<sup>th</sup> *Goldschmidt conference, Prague, CZ*
- [48] *C. Scheffer, O. Vanderhaeghe, A. Tarantola, P. Lanari, L. Ponthus, L. France, A. Photiades* (2015) Tectonic evolution of the western boundary of the Attico-Cycladic complex (Lavrio, Greece). *EGU; Geophysical Research Abstracts Vol. 17, EGU2015-6168*

- [47] G. Mollex, **L. France**, P. Burnard, F. Faure, A. Pack (2014) Genèse et évolution des magmas carbonatitiques et de leurs magmas silicates associés: étude pétro-géochimique d'échantillons du volcan Oldoinyo Lengai, Tanzanie. *RST-Pau*; 3-3-04
- [46] E. Guillermin, O. Vanderhaeghe, C. Scheffer, A. Tarantola, **L. France** (2014) Burial and syn-orogenic exhumation in the Hellenides belt : structural and petrographic record in Southern Evia, Greece. *RST-Pau*; 3-8-28
- [45] C. Scheffer, O. Vanderhaeghe, A. Tarantola, L. Ponthus, **L. France**, A. Photiades (2014) Transition entre accretion tectonique et effondrement post-orogénique: Enregistrement métamorphique et structural des nappes du Laurion (Grèce). *RST-Pau*; 3-7-23
- [44] **L. France**, J. Humbert, S. Medynski, R. Pik, P. Burnard, A. Pack (2014) Cycles magmatiques et organisation de la plomberie magmatique dans un rift en cours d'océanisation; l'exemple du segment Dabbahu / Manda-Hararo (Afar, Ethiopie). *RST-Pau*; 3-4-07
- [43] M. Python, B. Abily, **L. France** (2014) Magmatism and metamorphism at the sheeted dyke-gabbro transition zone: new insight from beerbachite from ODP/IODP Hole 1256D and Oman ophiolite. *EGU; Geophysical Research Abstracts Vol. 16, EGU2014-14291*
- [42] S. Medynski, R. Pik, P. Burnard, M. Stab, C. Vye-Brown, **L. France** (2014) Structure and evolution of a magmatic rift segment close to continental breakup. *EGU; Geophysical Research Abstracts Vol. 16, EGU2014-15261*
- [41] S. Medynski, R. Pik, P. Burnard, **L. France**, K. Whaler (2014) The Afar region as an analogue of mature oceanic ridges: a model for slow spreading centers? *EGU; Geophysical Research Abstracts Vol. 16, EGU2014-9539*
- [40] X. Gu, E. Deloule, **L. France**, J. Ingrin (2014) Major elements composition, Li distribution and isotopic composition in peridotite xenoliths from Allegre and Mont Coupet (French Massif Central). *EGU; Geophysical Research Abstracts Vol. 16, EGU2014-6362*
- [39] M. Erdmann, L.A. Fischer, **L. France**, E. Deloule, J. Koepke (2013) Felsic melt generation at the MOR magma chamber roof: Trace element evidence of experimental hydrous partial melts for anatexis processes at the East-Pacific Rise. *AGU*
- [38] L.A. Fischer, M. Erdmann, **L. France**, E. Deloule, J. Koepke (2013) Generation of felsic melts within fast-spreading oceanic crust: Experimental partial melting of hydrothermally altered sheeted dike. *AGU*
- [37] **L. France**, J. Koepke, B. Ildefonse, C.J. MacLeod, M. Godard, E. Deloule (2013) The main MORB crustal contaminant: Geochemistry of magma chamber roof experimental anatexis melts, and residues. *Goldschmidt conference, Florence, Italia*
- [36] L.A. Fischer, M. Erdmann, **L. France**, E. Deloule, J. Koepke (2013) Experimental study on hydrous partial melting of hydrothermally altered dolerite: Generation of felsic melts within fast-spreading ocean crust. *Joint annual meeting of the Deutsche Mineralogische Gesellschaft & Geologische Vereinigung e.v. / Sediment, GEOFLUIDS: Lubricants of the dynamic Earth, Tübingen, Germany.*
- [35] M. Erdmann, L.A. Fischer, **L. France**, E. Deloule, J. Koepke (2013) Trace element contents of experimental hydrous partial melts from the MOR magma chamber roof: evidence for crustal contamination and felsic melt generation. *Joint annual meeting of the Deutsche Mineralogische Gesellschaft & Geologische Vereinigung e.v. / Sediment, GEOFLUIDS: Lubricants of the dynamic Earth, Tübingen, Germany.*
- [34] M. Python, R. Oizumi, **L. France**, B. Abily (2013) Petrographical and geochemical characteristics of the sheeted dyke-gabbro transition zone in ODP / IODP Hole 1256D. *Post-cruise meeting of the IODP Expedition 335, Cargese, Corsica, France*
- [33] M. Erdmann, L. Fisher, **L. France**, S. Freund, J. Koepke (2013) Hydrous partial melting at the dike / gabbro transition at fast-spreading ridges – an experimental study. *Post-cruise meeting of the IODP Expedition 335, Cargese, Corsica, France*

- [32] M. Dierick, **L. France**, M. Erdmann, J. Koepke (2013) Magma chamber processes at IODP 1256D Hole: A highly detailed petrological and geochemical study of upper oceanic gabbros. *Post-cruise meeting of the IODP Expedition 335, Cargese, Corsica, France*
- [31] **L. France**, B. Abily, M. Python, J. Alt, N., Abe (2013) Heating at magma chamber margins triggers granoblastic rocks eating. *Post-cruise meeting of the IODP Expedition 335, Cargese, Corsica, France*
- [30] C. Zhang, J. Koepke, **L. France**, M. Godard (2013) Anatexis and differentiation during formation of felsic melts at the roof of axial magma chamber : Evidence from IODP Hole 1256D. *Post-cruise meeting of the IODP Expedition 335, Cargese, Corsica, France*
- [29] G. Boudoire, **L. France** (2013) Nouvelles contraintes preliminaries sur la genèse et l'évolution des carbonatites de l'Oldoinyo Lengai. *Meeting « Observer, quantifier, modéliser les processus magmatiques et leurs produits, Clermont-Ferrand, France*
- [28] S. Medynski, R. Pik, P. Burnard, C. Vye-Brown, P.H. Blard, **L. France**, I. Schimmelpfennig, D. Ayalew, G. Yirgu (2013) Quantitative geomorphology applied to volcanic and tectonic settings applied to the topographic evolution of an active rift segment – the Dabbahu rift example, Afar, Ethiopia. *EGU*
- [27] G. Boudoire, **L. France**, G. Reb (2013) Petrology of melt inclusions bearing xenoliths from the Oldoinyo Lengai, Tanzania. *36<sup>th</sup> MDSG Winter Meeting, Leicester, UK*
- [26] J. Trela, E.C. Ferré, J. Deans, B. Ildefonse, R. Anma, A. Morris, **and the IODP Exp. 335 Scientific party** (2012) Shape-preferred orientation (SPO) of oceanic gabbros at IODP Hole 1256D: Implications for magmatic processes. *AGU*
- [25] S. Medynski, A. Williams, R. Pik, P. Burnard, C. Vye, **L. France**, D. Ayalew, G. Yirgu (2012) Volcanic evolution on an active magmatic rift segment on a 100Kyr timescale: exposure dating of lavas from the Manda Hararo/Dabbahu segment of the Afar Rift. *AGU*
- [24] J. Trela, E. Ferré, J. Deans, R. Anma, A. Morris, **and the IODP Exp. 335 Scientific party** (2012) Shape-preferred orientation (SPO) of oceanic gabbros at IODP Hole 1256D: Implications for magmatic processes. *EGU*
- [23] M. Python, **L. France**, B. Abily, and the IODP Exp. 335 Scientific party (2012) Petrographical and geochemical characteristics of the sheeted dyke-gabbro transition zone in the IODP Hole 1256D. *EGU*
- [22] S. Medynski, R. Pik, P. Burnard, **L. France**, A. Williams, C. Vye, D. Ayalew, G. Yirgu (2012) Interplay between tectonics and magmatism during the last stages of continental breakup: the Manda-Hararo rift segment, Afar, Ethiopia. *Afar Rift Consortium, Magmatic Rifting & Active Volcanism Conference, Addis Ababa, Ethiopia*
- [21] M.D. Kurz, J.M. Curtice, **and the IODP Exp. 335 Scientific party** (2011) Noble gases in the oceanic crust: Preliminary results from IODP Hole 1256D. *AGU*
- [20] D.A.H. Teagle, B. Ildefonse, P. Blum, **and the IODP Exp. 335 Scientific party** (2011) Battling through the thermal boundary layer: Deep sampling in ODP Hole 1256D during IODP Expedition 335. *AGU*
- [19] J. Koepke, R. Botcharnikov, J. Berndt, S.T. Feig, **L. France** (2011) Interaction between seawater and magma or very hot rock in the deep fast-spreading oceanic crust: Constraints from experimental petrology. *AGU*
- [18] N. Bolfan-Casanova, M. Muñoz, C. McCammon, E. Deloule, A. Férot, S. Demouchy, **L. France**, D. Andrault, S. Pascarelli (2011) Ferric Iron and water incorporation in wadsleyite under hydrous and oxidizing conditions: a XANES and SIMS study. *7th European Conference on Mineralogy and Spectroscopy*



- [17] N. Abe, B. Ildefonse, D.A.H. Teagle, **and the IODP Exp. 335 Scientific party** (2011) The progress of the oceanic basement drilling - the status of the Mohole Project - *Japanese Domestic conference, Japanese Association of Mineralogical Society*
- [16] N. Bolfan-Casanova, M. Muñoz, C. McCammon, E. Deloule, A. Férot, S. Demouchy, **L. France**, D. Andrault, S. Pascarelli (2011) Ferric Iron and water incorporation in wadsleyite under hydrous and oxidizing conditions. *Goldschmidt Conference*
- [15] S. Medynski, R. Pik, C. Vye, A. Williams, P. Burnard, **L. France** (2011) Interplay between tectonics and magmatism during the last stages of continental breakup: the Dabbahu rift segment, Afar, Ethiopia. *EGU*
- [14] **L. France** (2010) Magmatic/Hydrothermal Interactions at Fast Spreading Mid-Ocean Ridges: Implications on the Dynamics of the Axial Melt Lens. *RST*
- [13] C. Nicollet, B. Debret, **L. France** (2010) Le métamorphisme océanique dans le complexe gabbroïque de l'ophiolite d'Oman. *RST*
- [12] **L. France**, B. Ildefonse, J. Koepke, F. Bech (2010) A new method to estimate the oxidation state of basaltic series from microprobe analyses. *RST*
- [11] **L. France**, B. Ildefonse, J. Koepke, M. Godard, C.J. MacLeod (2010) Melting the hydrothermally altered sheeted dike complex: Chemical composition of the main MORB crustal contaminant. *Goldschmidt conference*
- [10] **L. France**, B. Ildefonse, J. Koepke, M. Godard, C.J. MacLeod (2010) Melting the Hydrothermally Altered Sheeted Dike Complex: Chemical Composition of the Main MORB Crustal Contaminant. *Experimental Mineralogy Petrology Geochemistry XIII*
- [9] M. Andreani, M. Muñoz, A. Delacour, C. Marcaillou, M. Godard, **L. France** (2009) Serpentinization at oceanic hydrothermal sites with emphasis on iron incorporation in serpentine. *International Clay Conference, Italy*
- [8] **L. France**, B. Ildefonse, J. Koepke, C.J. MacLeod, M. Godard (2009) Melting the hydrothermally altered sheeted-dike complex: Experiments and Chemical compositions. *AGU*
- [7] **L. France**, B. Ildefonse, J. Koepke (2009) Dynamics of the Axial Melt Lens/Dike transition at fast spreading ridges: assimilation and hydrous partial melting. *Geophysical Research Abstracts EGU2009*
- [6] G. Chazot, **L. France**, J. Kornprobst, L. Dallai, R. Vannucci. (2008) Late-orogenic mantle garnet pyroxenites evidence mantle refertilization during exhumation of orogenic belt. *AGU*
- [5] **L. France**, B. Ildefonse, J. Koepke (2008) The fossilisation of a dynamic melt lens at fast spreading centers: insights from the Oman ophiolite. *AGU*
- [4] **L. France**, G. Chazot, J. Kornprobst, L. Dallai, R. Vannucci, C. Bosq (2008) Petrological and Geochemical Study of Late-Orogenic Mantle Garnet Pyroxenites. Implications on Magmatism in Old Orogenic Regions. *Geophysical Research Abstracts* 10:A07386\_SRef-ID: 1607-7962/gra/EGU2008-A-07386
- [3] **L. France**, B. Ildefonse, J. Koepke, C. Cordier, F. Bech (2008) A new method to constrain the oxidation state of basaltic series from microprobe analysis. *Geophysical Research Abstracts* 10:A04345\_SRef-ID: 1607-7962/gra/EGU2008-A-04345
- [2] **L. France**, B. Ildefonse, J. Koepke (2008) Processes governing the magmatic-hydrothermal interface at the sheeted dike complex-gabbro transition : From the comparison between the IODP Hole 1256D and the Oman ophiolite to a general model? *Geophysical Research Abstracts* 10:A04325\_SRef-ID: 1607-7962/gra/EGU2008-A-04325
- [1] F. Boudier, **L. France**, J Koepke, A Nicolas (2007) Root Zone of Sheeted Dike Complex. An hydrous interface in Oman and in the 1256d IODP Hole. *Geochimica et Cosmochimica Acta* 71-15: A112

## **Other presentations, Abstracts...:**

- [11] L. France, B. Ildefonse, C. Ferrando, and the Expedition 360 Scientific Party (invited seminar, November 2016) Succès de SloMo-1 : ~800m de croûte océanique inférieure (Exp. 360, Atlantis Massif, SWIR). *Journées IODP-France, CNRS, Paris, France*
- [10] L. France (invited seminar, May 2013) Magma chamber processes at fast spreading mid-ocean ridges: Magmatic / hydrothermal interactions, and MORB contamination. *ETH, Zürich, CH*
- [9] L. France (invited seminar, June 2011) Interactions entre processus magmatiques et hydrothermaux aux dorsales océaniques à expansion rapide: Implications sur le fonctionnement de la lentille magmatique axiale et sur la contamination des MORBs. *Institut de Physique du Globe de Paris (IPGP), Paris, France*
- [8] L. France (invited seminar, January 2011) Interactions magmatiques / hydrothermales aux dorsales océaniques à expansion rapide: Implications sur le dynamisme de la lentille magmatique et sur la contamination des MORBs. *Laboratoire Magmas & Volcans, Clermont-Ferrand, France*
- [7] L. France (invited conference) Interactions magmatiques / hydrothermales aux dorsales océaniques à expansion rapide: Implications sur le dynamisme de la lentille magmatique et sur la contamination des MORBs. *Journées analytiques et expérimentales de la SFMC. Paris, France*
- [6] L. France (invited seminar, May 2010) Interactions magmatiques / hydrothermales aux dorsales océaniques à expansion rapide: Implications sur le dynamisme de la lentille magmatique et sur la contamination des MORBs. *Centre de recherches pétrographiques et géochimiques (CRPG), Nancy, France*
- [5] L. France (invited seminar, April 2010) Interactions magmatiques / hydrothermales aux dorsales océaniques à expansion rapide: Implications sur le dynamisme de la lentille magmatique et sur la contamination des MORBs. *Institut des Sciences de la Terre de Paris, Université Pierre et Marie Curie (P.VI), Paris, France*
- [4] L. France (seminar December 2009) Magmatic/Hydrothermal Interactions at Fast Spreading Mid-Ocean Ridges: Implications on the Dynamics of the Axial Melt Lens. *Geosciences Cergy, Cergy-Pontoise University, France*
- [3] L. France (May 2009) Processus magmatiques et hydrothermaux à la transition gabbro/complexe filonien dans la croûte océanique : forage IODP (puits 1256D, Océan Pacifique Est) et Ophiolite d'Oman. *PhD student congress, Montpellier, France*
- [2] L. France (May 2008) Processus magmatiques et hydrothermaux à la transition gabbro/complexe filonien dans la croûte océanique : forage IODP (puits 1256D, Océan Pacifique Est) et Ophiolite d'Oman. *PhD student congress, Montpellier, France*
- [1] L. France (seminar April 08) I-The Root zone of the sheeted dike complex. II-A new method to constrain the oxidation state of basaltic series from microprobe analyses. *Institute of Mineralogy, Hannover, Germany*

## **Outreach & Media**

- \*2017 Public conference “Géologues en terres inconnues“ organized by the SGA Student Chapter
- \*2016 Media related to article *France et al. (2016)* in *Lithos* about French volcanic provinces:
  - \*Article by *AFP (Agence France Presse, International)*
  - \*Article by *Science et Vie* a scientific monthly outreach journal (National)
  - \*Article by “*Passeur de sciences*” from *Le Monde* newspaper (web, National)
  - \*results presented in *La Tête au Carré* radio show on *France Inter* (National)
  - \*TV news of *France 3 Auvergne* channel (12h, 22/06, Regional)

- \*Article by *La Montagne* newspaper (web and paper version, Regional)
- \*Article by *L'Est Républicain* newspaper (web and paper version, Regional)
- \*Article by *Sciences & Avenir* (web, National)
- \*Article on *France Television* website (National)
- \*Article by *France 24* (web, National)
- \*Article by *L'Obs* (web, National)
- \*Article by *Orange news* (web, National)
- \*2015 15 webcasts with primary school, college and University students during IODP Exp. 360.
- \*2015 Interview about IODP Exp. 360 in “*Passeur de Sciences*” from *Le Monde* newspaper (National)

### **Scientific coordination:**

- \*2016-2018 Participation to the *ICDP Oman Drilling project* (crustal section), in charge of defining the drilling site for GT3 drilling hole. (Co-)Lead Scientist during GT3 drilling phase.
- \*2017 Proponent and chairman of the session “*Carbonatites, Alkaline Magmatism and Associated Mineral Resources*” at Goldschmidt 2017 International conference
- \*2016 Proponent and chairman of the session “*New advances in understanding Mid-Ocean Ridges Processes from Ocean Drilling and Ophiolites*” at AGU 2016 International conference
- \*2015-2016 Coordinator of the Igneous Petrology group during *IODP Expedition 360* at Atlantis Bank (*SloMo-1*)
- \*2014-2016 Co-proponent of the *IODP SloMo* proposal
- \*2015 Proponent and chairman of the session “*REE and other mineralization associated with carbonatites and alkaline rocks*” at SGA-2015 “*Mineral resources in a sustainable world*” International conference
- \*2015- Member of the SGA 2015 international conference “*Mineral resources in a sustainable world*” steering comity

### **Administration:**

- \*2017- ... Elected member of the Science council of the Université de Lorraine
- \*2016-2017 Elected member of the Science council of the Université de Lorraine
- \*2015- In charge of Master ‘Terre & Planètes’ (Master Research)
- \*2013-2017 Elected member of the steering committee of the SFMC (Société Française de Minéralogie et Cristallographie)
- \*2012-2015: Member of the CRPG’s steering committee
- \*2012-2015: In charge of the scientific animation of the CRPG’s MAGMA group
- \*2010- Member of the advisory of department Geosciences
- \*2010- Member of the school board of department Geosciences

### **Additional in Geosciences:**

#### **Teaching:**

2010-... Lorraine University

- \*In charge of geochemistry teaching (LICENCE)
- \*In charge of Petrology teaching (2<sup>nd</sup> year of LICENCE)
- \*In charge of magmatology teaching (1<sup>st</sup> and 2nd year of MASTER)
- \*In charge of 4 teaching units (L2, L3, M1, M2, ~ 275h)
- \*Practice in general geology (LICENCE)
- \*Practice in magmatic petrology (microscopy); (LICENCE)
- \*Geochemical cycles (MASTER)
- \*Magmatology & Volcanology (MASTER)
- \*Mapping magmatic regions (LICENCE)
- \*Oceanic crust and ridges (LICENCE)
- \*Field mapping in metamorphic regions (Pyrénées; MASTER)
- \*Field mapping in metamorphic regions (Ardèche; LICENCE)
- \*Elaboration organisation of the field school "*Magmatic processes and Volcanology*" (MASTER)
- \*Field school "*Active Earth: tectonics, geomorphology, and volcanology*", Italia (Apennins, Napoli, Eolian Islands); (MASTER)

2009/2010 ATER (teaching and research, University of Cergy Pontoise):

- \*24h of lectures : “France geology” and “metamorphism” (MASTER)
- \*12h of lectures de cours “geodynamics and metamorphism” (LICENCE)
- \*10h of lectures “petrology” (LICENCE)
- \*12h of lectures “sedimentology” (LICENCE)
- \*36h of field work teaching “Alps : structure and evolution” (LICENCE)
- \*36h of field work teaching “volcanology, magmatism, petrology and hercinian chain: French Massif Central” (MASTER)

2007

- \*12 hours of lectures in colleges on « *Une vision globale des sciences de la Terre* ».
- \*42 hours of field work with the MASTER 2 students of Clermont-Ferrand. “*Magmatic and metamorphic petrology in the Alp Ophiolites.*”

#### **Research student supervision:**

##### **Post-doc: (4)**

2018/2019 \***Carlotta Ferrando** (CRPG, Nancy). Title: "*Magma chamber processes at slow spreading ridges: origin of first order textural variations at Atlantis Bank, South West Indian Ridge*"

2017/2019 \***Céline Baudouin** (CRPG, Nancy – ETH Zürich). Title: "*Protracted differentiation at Oldoinyo Lengai carbonatite volcano & implications for REE deposits*"

2016/2017 \***Carole Berthod** (CRPG, Nancy). Title: "*Magma – hydrothermal interactions at the sheeted dike / gabbro transition at fast-spreading ridges*"

2015/2016 \***Aurélien Beaumais** (CRPG, Nancy). Title: "*Li-Be-B contents and isotopic systematic in subduction related melt inclusions*"

*from Vanuatu arc: new constraints on magma source".*  
(Collaboration Etienne Deloule).

#### **Thèse/PhD: (5)**

- 2017/2020 \***Valentin Casola** (CRPG, Nancy – LMV, Clermont-Ferrand).  
Title: "*Mantle source and genesis of carbonatite parental  
magmas: the main REE deposits on Earth*". (Co-direction  
Didier Laporte, Evelyn Füri, Etienne Deloule).
- 2016/2019 \***Marine Boulanger** (CRPG, Nancy ; Institut für Mineralogie,  
Hanovre, Allemagne). Title: "*Mechanism of deep crust  
accretion at (ultra) slow spreading ridges*". (Co-direction  
Juergen Koepke, Raphaël Pik).
- 2013/2017 \***Gaëlle Mollex** (CRPG, Nancy). Title: "*Genèse et evolution des  
magmas carbonatiques: Etude petro-géochimique de la  
plomberie de l'Oldoinyo Lengai (Tanzanie)*". (Co-direction Pete  
Burnard, Evelyn Füri).
- 2012/2017 \***Martin Erdmann** (Institut für Mineralogie, Hanovre,  
Allemagne): Title: "*The generation of felsic magmas in the  
oceanic crust: assimilation-fractional crystallization processes  
versus re-melting of the crust. A geochemical-experimental  
coupled study*". (co-direction Juergen Koepke, Etienne Deloule).
- 2012/2016 \***Xiaoyan Gu** (CRPG, Nancy). Title: "*Light element  
distribution and isotopic compositions in granulite and  
peridotite xenoliths from the Massif Central (France) and  
Carpathian Panonian basin (Hungary)*". (Co-direction Etienne  
Deloule, Jannick Ingrin).

#### **MASTER: (28 projects)**

- 2017-2018 \***Julien Jacquet** (Master ; Université de Lorraine) Sujet : "*Re-  
Os datation of cumulate mantle pyroxenites from Cameroon and  
France: time constraints on mantle refertilization events*". (co-  
encadrement Laurie Reisberg).
- 2017 \***Constance Bérard & Martial Saquer** (2A, ENSG ;  
Université de Lorraine) Sujet : "*Caractérisation par ASM des  
fabriques magnétiques de laves pour retracer leur provenance  
dans les conduits magmatiques*". (co-encadrement Julien  
Charreau).
- 2016-2017 \***Clément Vorgy** (Master ; Université de Lorraine) Sujet : "*Cl,  
F, S, and redox conditions during the differentiation process in  
the Oldoinyo Lengai plumbing system*". (co-encadrement  
Fleurice Parat).
- 2016 \***Lydie Vuille & Nicolas Delcourt** (2A, ENSG ; Université de  
Lorraine) Sujet : "*Etude de l'anisotropie de susceptibilité  
magnétique (ASM) du volcan du Sarcoui (Auvergne)*". (co-  
encadrement Julien Charreau).
- 2015-2017 \***Adrien Mourey** (Master ; Université de Lorraine) Sujet :  
"*Caractérisation des magmas primitifs de l'Oldoinyo Lengai*".
- 2015-2016 \***David Madre** (Master ; Université de Lorraine) Sujet :  
"*Evolution du système magmatique de la marge Ouest-Afar au  
cours de son extension : Assimilation et stockage dans la croûte,  
révélés par la composition isotopique en oxygène des zircons*".
- 2015-2016 \***Robin Bonnet** (Master ; Université de Lorraine) Sujet :

- "Teneurs en volatils des inclusions magmatiques des magmas primitifs de la Chaîne des Puys (France) : nouvelles contraintes sur l'organisation de la plomberie magmatique".
- 2015-2016 \***Marine Boulanger** (Master ; Université de Lorraine) Sujet : "Partage des éléments majeurs et traces lors de l'immiscibilité entre liquides silicatés et carbonatitiques."
- 2014-2015 \***Robin Bonnet** (Master ; Université de Lorraine) Sujet : "Teneurs en volatils des inclusions magmatiques de l'Oldoinyo Lengai (Tanzanie) : nouvelles contraintes sur l'organisation de la plomberie magmatique". (co-encadrement Gaelle Mollex).
- 2014-2015 \***Adrien Mourey** (Licence ; Université de Lorraine) Sujet : "Etude pétrologique d'enclaves cumulatives échantillons les chambres profondes dans la région de l'Oldoinyo Lengai (Tanzanie)"
- 2013-2015 \***Mickael Demacon** (Master ; Université de Lorraine) Sujet : "Étude pétrologique, géochimique et isotopique des laves du Sarcoui (Chaîne des Puys, Auvergne, France)".
- 2014 \***Maéva Lombard** (2A, ENSG ; Université de Lorraine). Sujet: "Etude pétrologique du sommet d'une chambre magmatique de dorsale médio-océanique ; cas de l'ophiolite d'Oman".
- 2013-2014 \***Julien Humbert** (Master ; Université de Lorraine) Sujet : "Étude pétrologique et géochimique des enclaves de la caldera centrale du segment de rift de Manda Hararo (Afar, Ethiopie) : fonctionnement d'une chambre magmatique à la transition Océan - Continent"
- 2013 \***Mickael Demacon & Vincent Kan** (Licence ; Université de Lorraine). Sujet : "Étude pétrologique de laves trachytiques de la Chaîne des Puys, (Auvergne, France)".
- 2012-2013 \***Julien Humbert** (Master 1 ; Université de Lorraine). Sujet : "Étude pétrologique et géochimique des enclaves de la caldera centrale du segment de rift de Manda Hararo (Afar, Ethiopie) : fonctionnement d'une chambre magmatique à la transition Océan - Continent"
- 2012-2013 \***Guillaume Boudoire** (Master ; Université de Lorraine). Sujet : Nouvelles contraintes sur le système magmatique de l'Oldoinyo Lengai, Tanzanie.
- 2012-2013 \***Malorie Dierick** (Master ; Université de Lorraine). Sujet : Nouvelles contraintes sur le fonctionnement des chambres magmatiques au niveau des dorsales rapides. Première étude pétro-géochimique in-situ des gabbros échantillonnés par forage dans la croûte océanique (Forage IODP 1256D, Plaque Cocos, Pacifique).
- 2011-2012 \***Marion Bécouze & Pauline Gosselin & Marion Michou** (2A, ENSG ; Université de Lorraine). Subject: "Étude pétrologique et géochimique des enclaves de la caldera centrale du segment de rift de Manda Hararo (Afar, Ethiopie) : fonctionnement d'une chambre magmatique à la transition Océan - Continent". (co-encadrement Raphael Pik).
- 2011-2012 \***Anis Mahdadi** (2A, ENSG ; Université de Lorraine). Subject: "Mise au point de standards pour l'analyse des isotopes de l'oxygène dans les pyroxènes et plagioclases."
- 2011-2012 \***Guillaume Boudoire & Guillaume Reb** (2A, ENSG ;



- Université de Lorraine). Subject: "*Nouvelles contraintes sur l'origine des magmas carbonatitiques. Etude pétro-géochimique de xénolites cumulatives provenant de l'Ol Doinyo Lengai (Tanzanie).*"
- 2011-2012 \***Aurélie Tourniaire** (2A, ENSG ; Université de Lorraine). Subject: "*Développement d'un outil de quantification des abondances modales et de la répartition des minéraux au sein d'un assemblage minéralogique complexe : application aux premiers objets solides du système solaire*". (co-encadrement Yves Marrocchi).
- 2011-2012 \***Léandre Ponthus** (M2 ; Université de Lorraine). Subject: "*Evolution thermomécanique des roches métamorphiques de Lavrion (Grèce) : étude pétrographique, géochimique et microstructurale.*". (co-encadrement Olivier Vanderheaghe).
- 2011 \***Lucie Letourneur**: Subject: "*Comparaison des compositions élémentaires et isotopiques en Bore (in-situ) des minéraux des gabbros supérieurs des dorsales à expansion rapide (ophiolite d'Oman et dorsale Est Pacifique). Implications sur le fonctionnement du système magmatique*".
- 2010-2011 \***Nicolas Gallois** et **Clément Rinaldo**: Subject: "*Développement d'un outil de quantification des abondances modales et de la répartition des minéraux au sein d'un assemblage minéralogique complexe: application aux premiers objets solides du système solaire*". (co-direction Yves Marrocchi).
- 2010-2011 \***Léandre Ponthus**: Subject: "*Etude pétro-géochimique d'une métaophiolite (HP-BT) de Grèce*". (co-direction Olivier Vanderheaghe).
- 2010-2011 \***Marine Tridon**: Subject: "*Etude du magmatisme récent au niveau d'un segment de rift continental: l'exemple du segment de Dabbahu, Afar, Ethiopie*". (co-direction Sarah Medynski).
- 2010-2011 \***Tim Müller** (Institut für Mineralogie, Hanovre, Allemagne): Subject: "*Gabbros from IODP Site 1256 (Equatorial Pacific): Insight into axial magma chamber processes at fast-spreading ocean ridges*". (co-direction Juergen Koepke).
- 2009 \***Baptiste Debret**: Subject: "*Evolution métamorphique d'une croûte océanique de ride rapide : Etude pétrologique de quelques métagabbros de l'ophiolite d'Oman*". (co-direction Christian Nicollet).
- 2007 \***Riccarda Maekeler**: Subject: "*Petrological and petrostructural studies of sheeted dike xenoliths in the underlying gabbros of the 1256D Hole (IODP). Implications for the enclosing gabbros evolution*".

#### Others:

- 2017 \*Participation to the **ICDP Oman Drilling Project**; (co-)Lead Scientist for GT3 drilling Hole  
\***Sampling of ODP Hole 735B**, Kochi (Japan) core repository
- 2015-2016 \***IODP Expedition 360** (Atlantis Bank, SW Indian ridge)

- 10/2015      \***Field work**, sampling, Aeolian Island, Italy
- 2014            \***Field work**, mapping & sampling, Oldoinyo Lengai, Tanzania  
 \***Field work**, mapping & sampling, French Massif Central
- 11/2013        \***Field work**, mapping and sampling, Afar, Ethiopia
- 2011            \***IODP Expedition 335** (Plaque Cocos)  
 \***Field work**, mapping and sampling, Afar, Ethiopia  
 \***Field work**, mapping and sampling, Greece
- Winter 2007 and 2008 (2 times 6weeks)  
**Field work** on the Oman Ophiolite\_Study of the Root Zone of the Sheeted Dike Complex.
- 09/07            **Workshop** “*hydrothermalism in the Oceanic crust*”, Hannover\_Germany
- 08/07            **Work at the IODP center** of College Station (Texas\_US) on cores of the IODP Hole 1256D
- Summer 2005 (5 weeks)  
**Field and laboratory work** on the collapse deposits of the Ticsani volcano Peru
- Summer 2004 (5 weeks)  
**Laboratory training** “Muséum National d’Histoire Naturelle (MNHN)” mineralogy and petrology Laboratory, Paris, France

**Field camps:**

Pic St-Loup (France\_sedimentology) , Ardèche\*2 (France\_metamorphism), Corbières (France\_tectonics), French Massif-Central (metamorphism, sedimentology and volcanology), Cap Creus (Spain\_metamorphism), Alpes (Italy and France\_ophiolites), Italian volcanoes

**Others :**

***Climbing and mountaineering***

***Climbing teacher:***

- Summer 2003 (4 months):  
 FORESTLAND; Divonne-les-Bains 01, France; Accrobranch park (≈ 300 passages daily); Team responsible (4 persons) and security responsible
- Summer 2002 (2 months):  
 FORESTLAND; Divonne-les-Bains 01, France; Accrobranch park supervisor
- 2000-2002: CLUB ALPIN FRANÇAIS; St-Etienne, France; Weekly climbing teaching (25 young students)
- Other: Via-Ferrata teaching

***Adolescents supervising (BAFA diploma):***

Summers 2000 & 2001:

NEIGE & SOLEIL; Estavar (66), France; Holyday centre;  
BAFA Climbing speciality

***Other formations:***

AFPS (First helps)

Fist helps in hostile environment

Driving licence

English (fluent)

German (beginner)

Software: Word, Excel, Matlab programming, Image J, Surfer,  
Envi, Power-Point...

***Summer works:***

Mailing, Fruits picking, Pepinierist

***Other interests:***

Concerts, festival & theatre; Travelling (Morocco, India,  
Eastern Europe, Peru, Australia, Tanzania, USA, Iceland,  
Ireland, Portugal, Sri Lanka...)