

Publications: **40 + 3 submitted** (PhD awarded April 2013)
(14 as first-author, 16 as second, third or last author)

Citations: **543** (Google scholar)

H-index: **14 / 23** (Google scholar)

News article: **9**

Invited seminars: **10**

Oral presentations: **35** among which **14** were invited

Google scholar [google scholar](#)

Scopus [Author ID: 54883680700](#)

ORCID <https://orcid.org/0000-0002-2304-1943>

CONTENT	page
PUBLICATIONS LIST.....	2
INVITED SEMINARS.....	5
INVITED ORAL PRESENTATIONS.....	6
ORAL PRESENTATIONS.....	7
POSTER PRESENTATIONS.....	8

PUBLICATIONS LIST

[2022]

40. JEFS. Rodrigues, **A.D. Rosa**, J. López-Sánchez, E. Sebastiani-Tofano, N.M. Nemes, J.L. Martínez, J.A. Alonso, O. Mathon. *EXAFS evidence for the spin-phonon coupling in monoclinic PrNiO₃ nickelate perovskite*. **Journal of Materials Chemistry C**, (accepted)
39. **A.D. Rosa**, A. Dewaele, G. Garbarino, V. Svitlyk, G. Morard, F. De Angelis, M. Krstulović, R., Briggs, T. Irifune, O. Mathon, M.A. Bouhifd. *X-ray study of krypton and xenon under pressure reveals the mechanism of the martensitic transformations*. **Physical Review B**, 105 (14), 144103. <https://doi.org/10.1103/PhysRevB.105.144103>
38. V. Monteseuro, J.-A. Barreda-Argüeso, J. Ruiz-Fuertes, **A.D. Rosa**, H.L Meyerheim, T. Irifune, F. Rodriguez. *Crystal-Field Mediated Electronic Transitions of EuS up to 35 GPa*. **Scientific Reports**, 12, 1217. <https://doi.org/10.1038/s41598-022-05321-9>

[2021]

37. S. Farsang, M. Louvel, C. Zhao, M. Mezouar, **A.D. Rosa**, R.N. Widmer, X. Feng, J. Liu and S.A.T. Redfern (2021). *Deep carbon cycle constrained by carbonate solubility*, **Nature communications**, 12, 1-9. <https://doi.org/10.1038/s41467-021-24533-7>
36. J. Purans, A.P. Menushenkov, S. Besedin, A.A. Ivanov, V. Minkov, I. Pudza, A. Kuzmin, K.V. Klementiev, S. Pascarelli, O. Mathon, **A.D. Rosa**, T. Irifune, M.I. Erements (2021). *Strong anharmonicity and local electronic structure rearrangements in YH₃ under pressure up to 180 GPa*. **Nature communications**, 12, 1765. <https://doi.org/10.1038/s41467-021-21991-x>
35. E. Koemets, I. Leonov, M. Bykov, E. Bykova, S. Chariton, G. Aprilis, T. Fedotenko, S. Clement, J. Rouquette, J. Haines, V. Cerantola, K. Glazyrin, C. McCammon, V. B., Prakapenka, M. Hanand, H.-P. Liermann, V. Svitlyk, R. Torchio, **A.D. Rosa**, T. Irifune, A. V. Ponomareva, I. A. Abrikosov, N. Dubrovinskaja, and L. Dubrovinsky (2021). *Revealing the complex nature of bonding in binary high-pressure compound FeO₂*. **Physical Review Letters**, 126 (10), 106001. <https://doi.org/10.1103/PhysRevLett.126.106001>
34. A. Dewaele, **A.D. Rosa**, N. Guignot, D. Andrault, JEFS. Rodrigues, G. Garbarino (2021). *Stability and equation of state of face-centered cubic and hexagonal close packed phases of argon under pressure*. **Scientific Reports**, 11 (1), 1-12. <https://doi.org/10.1038/s41598-021-93995-y>
33. M. Krstulović, **A.D. Rosa**, N. Biedermann, T. Irifune, M. Wilke (2021). *Structural changes in aluminosilicate glasses up to 164 GPa and the role of large and low charge cations on the densification mechanism of melts*. **Chemical Geology**, 560, 119980. <https://doi.org/10.1016/j.chemgeo.2020.119980>
32. S. Farsang, M. Louvel, **A.D. Rosa**, M. Amboage, S. Anzellini, R. N. Widmer and S.A.T. Redfern (2021). *Effect of salinity, pressure and temperature on the solubility of smithsonite and Zn complexation in crustal and upper mantle hydrothermal fluids*. **Chemical Geology**, 578, 120320. <https://doi.org/10.1016/j.chemgeo.2021.120320>
31. V. Cerantola, **A.D. Rosa**, Z. Konopkova, R. Torchio, E Bambrink, A. Rack, U. Zastrau, S. Pascarelli (2021). *New scientific opportunities in extreme condition science at synchrotrons and free electron lasers*. **Journal of Physics: Condensed Matter**, 33 (27), 27400. <https://doi.org/10.1088/1361-648X/abfd50>
30. M. Krstulović, **A.D. Rosa**, D. Ferreira Sanchez, L. Libon, C. Albers, M. Merkulova, D. Grolimund, T. Irifune, M. Wilke (2021). *Effect of temperature on the densification of silicate melts to lower Earth's mantle conditions*. **Physics of the Earth and Planetary Interiors**, 323, 106823, <https://doi.org/10.1016/j.pepi.2021.106823>

[2020]

29. **A.D. Rosa**, M.A. Bouhifd, G. Morard, R. Briggs, G. Garbarino, T. Irifune, O. Mathon, S. Pascarelli (2020). *Krypton storage capacity of the Earth's mantle*. **Earth and Planetary Science Letters**, 532, 116032. <https://doi.org/10.1016/j.epsl.2019.116032>
28. M. Krstulović, **A.D. Rosa**, N. Biedermann, G. Spiekermann, M. Muñoz, T. Irifune, M. Wilke (2020). *Ge coordination in NaAlGe₃O₈ glass upon compression to 131 GPa*. **Physical Review B**, 101, 214103. <https://doi.org/10.1103/PhysRevB.101.214103>
27. R. Torchio, S. Boccato, F. Miozzi, **A.D. Rosa**, N. Ishimatsu, I. Kantor, N. Sevelin-Radiguet, R. Briggs, T. Irifune, and G. Morard (2020). *Melting curve and phase relations of Fe-Ni alloys at high pressure and high temperature*. **Geophysical Research Letters**, 47, 14. <https://doi.org/10.1029/2020GL088169>
26. S. Boccato, R. Torchio, S. Anzellini, E. Boulard, F. Guyot, T. Irifune, M. Harmand, I. Kantor, F. Miozzi, P. Parisiades, **A.D. Rosa**, D. Antonangeli and G. Morard (2020). *Melting properties by x-ray absorption spectroscopy: common*

signatures in binary Fe-C, Fe-O, Fe-S and Fe-Si systems. *Scientific Reports*, 10, 11663
<https://doi.org/10.1038/s41598-020-68244-3>

[2019]

25. A.D. Rosa, O. Mathon, R. Torchio, J. Jacobs, S. Pasternak, T. Irifune and S. Pascarelli (2019). *Nano-polycrystalline diamond anvils: Key devices for XAS at extreme conditions: Their use, scientific impact, present status and future needs*. *High Pressure Research*. <https://doi.org/10.1080/08957959.2019.1700978>
24. E. Boulard, M. Harmand, F. Guyot, G. Lelong, G. Fiquet, G. Morard, D. Cabaret, S. Boccato, A.D. Rosa, R. Briggs, S. Pascarelli (2019). *Ferrous iron under oxidizing conditions in the deep mantle*. *Geophysical Research Letters*, 46 (3), 1348-1356. <https://doi.org/10.1029/2019GL081922>
23. A Dewaele, A.D. Rosa, N. Guignot (2019). *Argon-neon binary diagram and ArNe₂ Laves phase*. *The Journal of Chemical Physics*, 151 (12), 124708. <https://doi.org/10.1063/1.5119419>
22. V. Svitlyk, G. Garbarino, A.D. Rosa, E. Pomjakushina, A. Krzton-Maziopa, K. Conder, M. Mezouar (2019). *High-pressure polymorphism of BaFe₂Se₃*. *Journal of Physics: Condensed Matter*, 31 085401. <https://doi.org/10.1088/1361-648X/aaf777>

[2018]

21. A.D. Rosa, G. Garbarino, R. Briggs, G. Morard, M.A. Bouhfid, T. Irifune, O. Mathon and S. Pascarelli (2018). *Effect of the fcc-hcp martensitic transition on the equation of state of solid krypton up to 140 GPa*. *Physical Review B*, 97, 094115. <https://doi.org/10.1103/PhysRevB.97.094115>
20. G. Morard, S. Boccato, A.D. Rosa, S. Anzellini, F. Miozzi, L. Henry, G. Garbarino, M. Harmand, F. Guyot, E. Boulard, I. Kantor, T. Irifune, R. Torchio (2018). *Solving controversies on the iron phase diagram under high pressure*. *Geophysical Research Letters*, 45 (11) 074–11,082. <https://doi.org/10.1029/2018GL079950>
19. J. Pohlenz, A.D. Rosa, S. Pascarelli, O. Mathon, S. Belin, G. Landrot, V. Murzin, A. Veligzhanin, A. Shiryayev, T. Irifune, M. Wilke (2018). *Structural controls of CO₂ on Y, La and Sr incorporation into sodium-rich silicate-carbonate melts by in-situ high P-T EXAFS*. *Chemical Geology*, 486, 1-15. <https://doi.org/10.1016/j.chemgeo.2017.12.023>
18. C. Donnerer, M. Moretti Sala, S. Pascarelli, A.D. Rosa, S.N. Andreev, V.V. Mazurenko, T. Irifune, E.C. Hunter, R.S. Perry, D.F. McMorro (2018). *High-pressure insulator-to-metal transition in Sr₃Ir₂O₇ studied by x-ray absorption spectroscopy*. *Physical Review B*, 97, 035106. <https://doi.org/10.1103/PhysRevB.97.035106>
17. R., Giampaoli, I. Kantor, M. Mezouar, S. Boccato, A.D. Rosa, R. Torchio, G. Garbarino, O. Mathon, S. Pascarelli (2018). *Measurement of temperature in the laser heated diamond anvil cell: comparison between reflective and refractive optics*. *High Pressure Research*, 38, 250-269. <https://doi.org/10.1080/08957959.2018.1480017>
16. P. Fornasini, R. Grisenti, T. Irifune, T. Shinmei, S. Pascarelli, A.D. Rosa (2018). *Bond compressibility and bond Grüneisen parameters of CdTe*. *Journal of Condensed Matter*, 30(24):245402. <https://doi.org/10.1088/1361-648X/aac188>
15. C. Crépeisson, C. Sanloup, L. Cormier, M. Blanchard, J. Hudspeth, A.D. Rosa, O. Mathon, T. Irifune. *Kr environments in a feldspathic glass: a high pressure, high temperature X-ray absorption study*. *Chemical Geology*, 493, 525-531 (2018). <https://doi.org/10.1016/j.chemgeo.2018.07.008>
14. H. Garad, S. Usmani, D. Barral, P. David, L. Cagnon, D. Testemale, D. Mannix, and F. Fetta, O. Fruchart, O. Proux, A.D. Rosa, O. Mathon, S. Pascarelli (2018). *Influence of the hole diameter in Cu/Co/Cu antidots: A XANES study*. *Physical Review Materials*, 2, (6), 066001. <https://doi.org/10.1103/PhysRevMaterials.2.066001>
13. A. Riva, A.D. Rosa, C. Clavel, D. Sifre, O. Mathon G. Garbarino, S. Pascarelli (2018). *Heat distribution in the Paris-Edinburgh press assemblies through finite element simulations*. *High Pressure Research*, 38, 303-324. <https://doi.org/10.1080/08957959.2018.1485020>

[2017]

12. Sahle Ch. J., A.D. Rosa, M. Rossi, V. Cerantola, G. Spiekermann, S. Petitgirard, J. Jacobs, S. Huotari, M. Moretti Sala, A. Mirone (2017). *Direct tomography imaging for inelastic X-ray scattering experiments at high pressure*. *Journal of Synchrotron Radiation*, 24(1), 269-275. <https://doi.org/10.1107/S1600577516017100>
11. Mezouar, M., R. Giampaoli, G. Garbarino, I. Kantor, A. Dewaele, G. Weck, S. Boccato, V. Svitlyk, A.D. Rosa, R. Torchio, O. Mathon, O. Hignette, S. Bauchau (2017). *Methodology for in situ synchrotron X-ray studies in the laser-heated diamond anvil cell*. *High Pressure Research*, 37(2) 170-180. <https://doi.org/10.1080/08957959.2017.1306626>
10. S. Merkel, N. Hilairt, P. Raterron, A.D. Rosa (2017). *Apport des rayons X à l'étude de microstructures et propriétés mécaniques sous pression*. *Actes du colloque Rayons X et matière: RX 2015*.

[2016]

9. A.D. Rosa, N. Hilairret, S. Ghosh, J.-P. Perrillat, G. Vaughan, G. Garbarino, S. Merkel (2016). *Evolution of grain sizes and orientations during phase transitions in hydrous Mg₂SiO₄*. **Journal of Geophysical Research – Solid Earth**, 212(10), 7161-7176. <https://doi.org/10.1002/2016JB013360>
8. A.D. Rosa, J. Pohlentz, C. de Grouchy, B. Cochain, Y. Kono, S. Pasternak, O. Mathon, T. Irifune, M. Wilke (2016). *In situ characterization of liquid network structures at high pressure and temperature using X-ray absorption spectroscopy coupled with the Paris-Edinburgh press*. **High Pressure Research**, 36(3), 332-342. <https://doi.org/10.1080/08957959.2016.1199693>
7. A.D. Rosa, M. Merkulova, G. Garbarino, V. Svitlyk, J. Jacobs, Ch. J. Sahle, O. Mathon, M. Munoz, S. Merkel (2016). *Amorphous boron composite gaskets for in situ high-pressure and high-temperature studies*. **High Pressure Research**, 36(4), 564-574. <https://doi.org/10.1080/08957959.2016.1245297>

[2015]

6. A.D. Rosa, C. Sanchez-Valle, J. Wang, S. Saikia (2015). *Elasticity of superhydrous phase B, seismic anomalies in cold slabs and implications for deep water transport*. **Physics of the Earth and Planetary Interiors**, 243, 30-43. <https://doi.org/10.1016/j.pepi.2015.03.009>
5. A.D. Rosa, N. Hilairret, S. Ghosh, J. Jacobs, J.-P. Perrillat, G. Vaughan, G. Garbarino, M. Mezouar, S. Merkel (2015). *In situ monitoring of phase transformation microstructures at Earth's mantle pressure and temperature using multi-grain XRD*. **Journal of Applied Crystallography**, 48(5), 1346-1354. <https://doi.org/10.1107/S1600576715012765>

[2013]

4. A.D. Rosa, C. Sanchez-Valle, C. Nisr, S. Evans, R. Debord, S. Merkel (2013). *Shear wave anisotropy in textured phase D and constraints on deep water recycling in subduction zones*, **Earth and Planetary Science Letters**, 377-378, 13-22. <https://doi.org/10.1016/j.epsl.2013.06.036>
3. A.D. Rosa, M. Mezouar, G. Garbarino, P. Bouvier, S. Ghosh, A. Rohrbach, C. Sanchez-Valle (2013). *Single-crystal equation of state of the hydrous magnesium silicate phase D at mantle pressures and the absence of X-ray diffraction signature of hydrogen bond symmetrization*, **Journal of Geophysical Research**, 118, 6124-6133. <https://doi.org/10.1002/2013JB010060>

[2012]

2. A.D. Rosa, C. Sanchez-Valle, S. Ghosh (2012). *Elasticity of phase D and implication for the degree of hydration of deep subducted slabs*, **Geophysical Research Letters**, 39, L06304. <https://doi.org/10.1029/2012GL050927>

[2011]

1. C. Sanchez-Valle, S. Ghosh, A.D. Rosa (2011). *Sound velocities of ferromagnesian carbonates and the seismic detection of carbonates in eclogites and the mantle*, **Geophysical Research Letters**, 38, L24315. <https://doi.org/10.1029/2011GL049981>

OTHER COMMUNICATIONS / NEWS

1. Long-term storage of atmospheric CO₂ in the deep Earth facilitated by poorly soluble carbonates [ESRF Highlights \(2022\)](#) ([link](#))
2. Revealing the complex nature of bonding in binary high-pressure compound FeO₂ [ESRF Highlights \(2022\)](#) ([link](#))
3. Towards a better understanding of high-temperature superconductivity in superhydrides at ultrahigh pressures [ESRF Highlights \(2022\)](#) ([link](#))
4. Deep impact - How ESRF studies of deep carbon could further climate-change research [ESRF Newsletter \(2021\)](#) ([link](#))
5. The missing volatiles on Earth could be trapped in its solid interior [ESRF Highlights \(2020\)](#) ([link](#))
6. Où se trouvent les volatils manquants ? - Le manteau inférieur terrestre comme possible réservoir? [CNRS news, March \(2020\)](#) ([link](#))
7. Regarder les minéraux du manteau terrestre se transformer en temps réel. [CNRS news, March \(2017\)](#) ([link](#))
8. Prospecting for deep water with X-rays. [ESRF Highlights \(2013\)](#) ([link](#)).

INVITED SEMINARS

1. [Department of Earth and Planetary Systems Science and Department of Physics, University of Hiroshima, October 21st](#)
Noble gases at extreme conditions
2. [Institute of Earth Sciences, University of Heidelberg Jan 26nd 2022.](#)
Where are the missing volatiles? -The Earth's mantle as potential reservoir.
3. [Section of Earth and Environmental Sciences, University of Geneva, Switzerland, planned March 14th March 2022.](#)
Fluid mobile element uptake during serpentinization and implications for their transfer to depth via subduction.
4. [Centre de Recherches Pétrographiques et Géochimique, Nancy, France. Jan 30^{iest} 2020.](#)
Noble gases storage capacity of the Earth's lower mantle and its role as a deep reservoir.
5. [Institute of Geosciences, University of Potsdam, Germany, Jan 23th 2020.](#)
Incorporation of noble gases in the solid lower mantle and the formation history of the atmosphere since Earth's accretion.
6. [Département des sciences de la Terre, ENS de Lyon, France, Dec 13th 2019.](#)
Fluid mobile element uptake during serpentinization and implications for their transfer to depth via subduction.
7. [Freie Universitaet Berlin, Department of Earth Sciences, Mineralogy-Petrology, Germany, Feb 1st 2019.](#)
In-situ studies of highly diluted elements at extreme conditions using XAS, XRF and XRD. New advances with the coming upgrade of the ESRF.
8. [Institute Neel, Grenoble, France, Dec, 2018.](#)
Noble gas storage capacity of the Earth's mantle.
9. [Institut des sciences de la Terre, Isterre, Grenoble, France, Dec, 2018.](#)
Noble gas storage capacity of the Earth's mantle.
10. [Laboratoire Magma et Volcane, Clermont Ferrand, France, April, 2017.](#)
In-situ monitoring of grain size and texture evolution during high P/T phase transitions in Mg₂SiO₄.

INVITED ORAL PRESENTATIONS AT INTERNATIONAL CONFERENCES / WORKSHOPS

1. A.D. Rosa (Feb. 2022) Revealing deep secrets of Planetary Interiors with extreme condition nano-XAS, XRF and XES at the ESRF-EBS beamlines BM23 and ID24-DCM. *ESRF user meeting*.
2. A.D. Rosa (Jan. 2022) *Where are the missing volatiles the Earth's mantle as potential reservoir. Japan-Russia collaborative online seminar*.
3. M. Krstulović, A.D. Rosa, D. Ferreira Sanchez, L. Libon, C. Albers, M. Merkulova, D. Grolimund, T. Irifune, M. Wilke (Dec. 2021) **The Role of Composition and Temperature in the Densification Mechanisms of Aluminosilicate melts at Lower Mantle Conditions. American Geophysical Union fall meeting, New Orleans.**
4. A.D. Rosa (Oct. 2021) *Japan X-ray spectroscopy under extreme conditions: exploring planetary interiors with the Extremely Brilliant Source of the ESRF. High Pressure Conference of Japan.*
5. A.D. Rosa, O. Mathon, G. Spiekermann, M. Wilke, C. Sahle, M. Merkulova, M. Rovezzi, P. Glatzel and A. Manceau (Dec 2019). *New scientific opportunities for high energy-resolution XAS/XES measurements at ambient and extreme conditions - the ID24-EBS project. X-Ray Emission Spectroscopy, ESRF, Grenoble, France.*
6. A.D. Rosa (Nov 28th 2018). *New scientific opportunities for XAS studies at extreme conditions with the coming ESRF upgrade. High pressure topological bridge, ESRF, Grenoble, France.*
7. A.D. Rosa (March 2nd 2019). *Insights into fluid-mobile element uptake during serpentine formation from in-situ synchrotron X-ray absorption studies. International "Hiroshima Institute of Plate Convergence Region Research" symposium at the Hiroshima University, Department of Earth and Planetary Systems Science, Hiroshima, Japan.*
8. A.D. Rosa (Feb-March 2019). *Structure and geochemistry of noble gases at high quality XAS at high P/T International symposium on Science and Technology of nano-polycrystalline diamonds, Geodynamics Research Center, Matsuyama, Japan.*
9. A.D. Rosa, M.A. Bouhifd, G. Morard, R. Briggs, G. Garbarino, T. Irifune, O. Mathon, S. Pascarelli (August 2017). *Noble gas storage capacity of the Earth's mantle. Goldschmidt, Paris, France.*
10. A.D. Rosa, M.A. Bouhifd, G. Morard, R. Briggs, G. Garbarino, T. Irifune, O. Mathon, S. Pascarelli (Sept. 2017). *Noble gas storage capacity of the Earth's mantle. Deep volatile meeting, Tenerife.*
11. M. Merkulova, M. Muñoz, F. Brunet, O. Vidal, K. Hattori, D. Vantelon, N. Trcera, T. Huthwelker, A.D. Rosa, O. Mathon, S. Pascarelli (August 2017). *Redox transfer by serpentinite dehydration in subduction zones, Goldschmidt, Paris, Lyon.*
12. M. Louvel, Etschmann B, Mavrogenes J, Brugger J, Liu W, Williams-Jones A, S. Luginbuehl, R. Brooker, Y. Mei, A.D. Rosa, D. Testemale, J-L. Hazemann (August 2017). *REE+Y Solubility and Speciation in Hydrothermal Fluids: An Updated View from in situ XAS Measurements, Goldschmidt, Paris, France.*
13. C. Sanchez-Valle, A.D. Rosa, N. Bolfan-Casanova, S. Evans, S. Merkel (Dec. 2012). *Shear wave velocities in deformed Al-stishovite and seismic heterogeneities in the mid-mantle, American Geophysical Union fall meeting, San Francisco, CA, United States, MR54A-06.*
14. C. Sanchez-Valle, A.D. Rosa (Dec. 2010), *Elasticity of dense hydrous phases and seismic detectability of hydration in deep subducted slabs, American Geophysical Union fall meeting, San Francisco, CA, United States, MR22A-03.*

ORAL PRESENTATIONS

1. A.D. Rosa, G. Morard, M. Munoz, M.A. Bouhifd, M. Wilke, J.E.F.S. Rodrigues, N. Sévelin-Radiguet, R. Torchio and O. Mathon, (Dec. 2021) *X-ray spectroscopy under extreme conditions: exploring planetary interiors with the Extremely Brilliant Source of the ESRF*. American Geophysical Union fall meeting, New Orleans.
2. A.D. Rosa, A. Dewaele, G. Garbarino, T. Irifune, O. Mathon, M. A. Bouhifd. (Aug. 2021) *X-ray study of krypton and xenon under pressure reveals the mechanism of martensitic transformations*. IUCR, Prague.
3. A.D. Rosa, A. Dewaele, G. Morard, G. Garbarino, T. Irifune, M.A. Bouhifd (July. 2021) *Constraining noble gases solubilities in the Earth's mantle*. Goldschmidt, Lyon, France.
4. A.D. Rosa, G. Morard, A.M. Bouhifd. (Oct. 2021) *Où se trouvent les volatils manquants ? - Le manteau inférieur terrestre comme possible réservoir*. Réunion des sciences de la terre, Lyon, France
5. A.D. Rosa, M. Louvel, A-L. Auzende, L. Truche, E. Nielsen, M. Krstulovic, F. Rodriguez, T. Irifune, M. Munoz, E. Schwarzenbach, M. Wilke. (March 2021) *Ni and Sr uptake during serpentine formation and implications for redox conditions in altered peridotite and element transfer via subduction*. Symposium on Experimental Mineralogy, Petrology and Geochemistry, Potsdam.
6. A.D. Rosa, M. Louvel, A-L. Auzende, L. Truche, T. Irifune, M. Munoz, E. Schwarzenbach, M. Wilke (Dec. 2020) *Quantification of elemental uptake during serpentinization from in-situ experiments: implications for the volatile transfer in subduction zones*. American Geophysical Union fall meeting, San Francisco.
7. A.D. Rosa, O. Mathon, J-L. Hazemann, D. Testemale, G. Garbarino. (Oct. 2020) *Exploring planetary interiors with the extremely brilliant source of the ESRF and extreme condition spectroscopy*. Forum Haute Pression, le d'Oléron.
8. A.D. Rosa, O. Mathon, G. Morard, M. Krstulovic, M. Wilke (Oct. 2019). *Applications of XAS to study melts and trace elements at extreme conditions*. 11th silicate melt workshop, La Petite Pierre, France.
9. M. Krstulovic, A.D. Rosa, N. Biedermann, M. Merkulova, T. Irifune and M. Wilke (Sept. 2019). *Spectroscopic study on the local structure in complex silicate glasses and melts at extreme pressure and temperature conditions*. 11th silicate melt workshop, La Petite Pierre.
10. A.D. Rosa, Morard, G., Dewaele, A., Garbarino, G., Nicolas Guignot, N., Irifune, T. and A. M. Bouhifd (Sept, 2019). *Compression behavior of noble gases to lower mantle pressures and implications for their storage in crystalline lower mantle phases*. European Planetary Science Conference, Geneva, Switzerland.
11. M. Krstulovic A.D. Rosa, N. Biedermann, M. Merkulova, T. Irifune and M. Wilke (Sept, 2019). *Spectroscopic study on the local structure in complex silicate glasses and melts at extreme pressure and temperature conditions*. EHPRG, Prague.
12. M. Krstulovic, A.D. Rosa, S. Pascarelli, M. Munoz, M. Wilke (June. 2018). *Structural changes of silicate melts at extreme conditions*. XAFS, Krakow, Poland.
13. C. Langrand, N. Hilairret, A.D. Rosa, V. Svitlyk, D. Dobson, S. Merkel (April 2018). *Perovskite / Post-Perovskite Phase Transformation: Effect on Grain Sizes and Orientations*. EGU, Vienna.
14. A.D. Rosa, N. Hilairret, S. Ghosh, J-P. Perrillat, G. Garbarino, S. Merkel (Sept. 2016). *Oriented growth and grain size reduction during phase transitions in hydrous Mg₂SiO₄: Implications for slab strength variations at transition zone depth*. EHPRG, Bayreuth.
15. Mezouar, M., R. Giampaoli, G. Garbarino, I. Kantor, A. Dewaele, G. Weck, S. Boccato, V. Svitlyk, A.D. Rosa, R. Torchio, O. Mathon (Sept. 2016). *High pressure High Temperature X-ray studies in the laser heated diamond anvil cell – Problems and solutions*. EHPRG, Bayreuth,
16. A.D. Rosa, S. Merkel, S. G., N. Hilairret, J-P. Perrillat, M. Mezouar, G. Vaughan (July 2014). *Tracking of individual grains of geomaterials during phase transitions using in situ 3D-X-ray diffraction up to 25 GPa and 1000 K*. International Congress on 3D Materials Science Annecy.
17. S. Merkel, A. Malpot, A.D. Rosa, H.-P. Liermann. *3D-XRD investigation of the high pressure α - ω transformation in polycrystalline titanium* (July 2014). International Congress on 3D Materials Science Annecy.
18. A.D. Rosa, C. Sanchez-Valle (Dec. 2012). *Seismic signature of ultra-high pressure hydrous phases in subduction zones and constrains on water recycling*. American Geophysical Union fall meeting 2012, San Francisco.
19. A.D. Rosa, C. Sanchez-Valle, S. Ghosh, S. Merkel (Dec. 2011). *Elasticity and rheology of phase D and implications for seismic anisotropy in deep subducted slabs*. American Geophysical Union fall meeting, San Francisco.
20. A.D. Rosa, C. Sanchez-Valle, J. Wang, S. Saikia (July 2010). *Single-crystal elasticity of superhydrous phase B Mg₁₀Si₃O₁₈H₄ determined by Brillouin scattering, implications for the fate of water in subducted slabs*. IMA 2010, Budapest, Hungary.

21. A.D. Rosa, C. Sanchez-Valle, C. Nisr, C. Bollinger, S. Evans, S. Merkel (Dec. 2010). Deformation mechanisms in Phase D to 45 GPa and implications for the seismic anisotropy in deep subducted slabs. *American Geophysical Union fall meeting, San Francisco.*

POSTER PRESENTATIONS [2010-2022]

1. F. Zecchi, J. Rodrigues, E. Mijiti, G. Garbarino, O. Mathon, A.D. Rosa (July 2022). Thermo-elastic properties of xenon. *User meeting at the ESRF.*
2. F. De Angelis, A.D. Rosa, T. Irifune (June 2019). Effect of the fcc-hcp martensitic transition on the compression behaviour of solid krypton up to 65 GPa from EXAFS and XRD. *High Pressure Workshop at the ESRF.*
3. S. Boccato, R. Torchio, E. Boulard, F. Miozzi, A.D. Rosa, P. Parisiades, T. Irifune, D. Antonangeli, G. Morard (Dec. 2019). Universal signature of melting by x-ray absorption spectroscopy. *American Geophysical Union fall meeting, San Francisco.*
4. A.D. Rosa, G. Garbarino, V. Svitlik, M. Krstulovic, G. Morard, R. W. Briggs, S. Boccato, T. Irifune and M. A. Bouhifd (Dec. 2018). Structure and geochemistry of the noble gases krypton and xenon at Earth's core conditions. *American Geophysical Union fall meeting, Washington.*
5. H. Garad, F. Fettaf, L. Cagnon, D. Barral, P. David, S. Usmani, D. Testemale, A. Rosa, O. Mathon, S. Pascarelli, D. Mannix (May 2018). Magnetic properties of Cu/Co/Cu antidots with different pore size. *Joint European Magnetic Symposia (JEMS) Conference.*
6. S. Merkel, E. Ledoux, C. Langrand, A.D. Rosa, J. Chantel, N. Hilairret (Oct. 2018). Etude expérimentale des interfaces dans le manteau profond. *Reunion de science de la terre, Lille.*
7. S. Merkel, C. Langrand, A.D. Rosa, V. Svitlyk, D. Dobson, N. Hilairret (June 2018). 3D-XRD study of phase transformation microstructures in deep earth minerals. *4th International Congress on 3D Materials Science (3DMS), Elsinore, Denmark.*
8. G. Morard, S. Boccato, A.D. Rosa, S. Anzellini, F. Miozzi, L. Henry, G. Garbarino, M. Harmand, F. Guyot, E. Boulard, I. Kantor, T. Irifune, R. Torchio (Dec. 2017). Triple point fcc-hcp-liquid in the Fe phase diagram determined by in-situ XANES diagnostic and post-mortem XRD and FIB-SEM analysis. *American Geophysical Union fall meeting San Francisco.*
9. C. Sanchez-Valle, C. Plückerthun, I. Kuppenko, A.D. Rosa, S. Petitgirard, W. Crichton and S. Merkel (Dec. 2017). Shear anisotropy in textured carbonates and the detection of carbonated regions in subducting slabs. *American Geophysical Union fall meeting San Francisco.*
10. A.D. Rosa, C. Yildirim, J. Y. Raty, I. Kantor, R. Torchio, S. Pascarelli, G. Garbarino, G. Weck, J.P. Gaspard (August 2017). Exploring liquid-liquid transitions in ZnSe at extreme conditions. *IUCR Hyderabad, India.*
11. C. Langrand, N. Hilairret, A.D. Rosa, V. Svitlyk, D. Dobson, S. Merkel (Sept. 2017). Study of the perovskite to post-perovskite transformation using multigrain crystallography. *HPMPS congress, San Maolo.*
12. G. Morard, S. Boccato, A.D. Rosa, S. Anzellini, F. Miozzi, L. Henry, G. Garbarino, M. Harmand, F. Guyot, E. Boulard, I. Kantor, T. Irifune, R. Torchio (Sept. 2017). Triple point fcc-hcp-liquid in the Fe phase diagram determined by in-situ XANES diagnostic and post-mortem XRD and FIB-SEM analysis. *HPMPS congress, San Maolo.*
13. A.D. Rosa, M. Louvel, S. Luginbuehl, M. Merkulova, M. Krstulovic, T. Irifune, O. Mathon, M. Munoz, M. Wilke (August 2017). Element absorption and release during serpentine reactions: element cycles in subduction zones. *Goldschmidt, Paris.*
14. R. Briggs, S. Boccato, R. Giampaoli, N. Ishimatsu, O. Lord, A.D. Rosa, R. Torchio, S. Pascarelli, T. Irifune (August 2017). Phase diagram and melting of NiSi up to 115 GPa, *Goldschmidt, Paris.*
15. S. Merkel, A.D. Rosa, C. Langrand, N. Hilairret (July 2017). Effect of phase transformations on microstructures in deep mantle materials. *SEDI, Nantes.*
16. S. Merkel, C. Langrand, A.D. Rosa, and N. Hilairret (April 2017). Effect of phase transformations on microstructures in deep mantle materials. *European Geoscience Union, Vienna.*
17. A.D. Rosa, M.A. Bouhifd, G. Morard, R. Briggs, G. Garbarino, T. Irifune, O. Mathon, S. Pascarelli (Feb. 2017). Noble gases in the Earth's core. *ESRF User Meeting.*
18. A. Riva, A.D. Rosa, C. Clavel, Y. Dabin, D. Sifre, S. Pascarelli, O. Mathon, G. Garbarino (Feb. 2017). Expanding the accessible P/T domain of the Paris-Edinburgh-Press, a versatile tool to study liquid network structures at extreme P/T conditions. *ESRF User Meeting.*
19. S. Boccato, G. Morard, R. Torchio, I. Kantor, O. Mathon, P. D'Angelo, S. Anzellini, A.D. Rosa, M. Harmand, F. Guyot, E. Boulard, B. Cochain, G. Garbarino, T. Irifune, S. Pascarelli (Dec. 2016). Melting and local structure of 3d metals under extreme conditions of pressure and temperature. *American Geophysical Union fall meeting San Francisco.*

20. A.D. Rosa, L. Louvel, A. Tsay, M. Krstulovic, M. Merkulova, J. Jacobs, T. Irifune, S. Ghosh, C. Liebske, S. Pasternak, O. Mathon, H. Cardon, M. Munoz, M. Wilke (Sept. 2016). Implementation of a high P/T EXAFS setup at the ESRF beamline BM23 for diluted low Z-elements shown on the example of the partitioning of fluid-mobile elements during serpentine formation. *European Mineralogical Conference, Rimini*.
21. S. Merkel, C. Langrand, N. Hilairiet and A.D. Rosa (Dec. 2015). Applications of multigrain crystallography for the study of post-perovskite microstructures. *American Geophysical Union fall meeting San Francisco*.
22. A.D. Rosa, N. Hilairiet, S. Ghosh, J. Jacobs, J.P. Perrillat, G. Vaughan, G. Garbarino, M. Mezouar, S. Merkel (Dec. 2014). In Situ monitoring of microstructures during subsequent phase transitions in the olivine system up to 30 GPa and 1100 K Using 3D-XRD single-grain analysis. Effects of grain size evolution on the stagnation of slab. *American Geophysical Union fall meeting San Francisco*.
23. A.D. Rosa, S. Merkel, S. Ghosh, N. Hilairiet, J.-Ph. Perrillat, G. Vaughan (Dec. 2013). In situ 3D-X-ray diffraction tracking of individual grains of olivine during high-pressure/ high-temperature phase transitions. *American Geophysical Union fall meeting 2013, San Francisco*.
24. A.D. Rosa, S. Merkel, S. Ghosh, N. Hilairiet, J.-Ph. Perrillat, G. Vaughan (April 2013). X-ray diffraction study of the micromechanical properties of olivine during its HP-HT phase transitions, implications for global mantle convection. *Colloque Plasticité, Paris*.
25. A.D. Rosa, G. Garbarino M. Mezouar, P. Bouvier, S. Ghosh, C. Sanchez-Valle (Dec. 2012). Single crystal equation of state of phase D up to 64 GPa. *American Geophysical Union fall meeting, San Francisco*.
26. C. Sanchez-Valle, A.D. Rosa, S. Ghosh (Dec. 2010). Single-crystal elastic properties of carbonates along the MgCO₃-FeCO₃ join. *American Geophysical Union fall meeting, San Francisco*.
27. A.D. Rosa, C. Sanchez-Valle, J. Wang, S. Saikia (July 2009). Single-crystal elasticity of superhydrous phase B Mg₁₀Si₃O₁₈H₄ determined by Brillouin scattering. *High pressure crystallographic, Erice Sicily*.
28. R. Miletich, A. Ullrich, W. Schranz, A.D. Rosa, T. Balic-Zunic (July 2009). Crystallography of elastic lattice-softening phenomena in silicate structures. *Joint AIRAPT-22 & HPCJ-50 International Conference on High Pressure Science and Technology 2009, Tokyo-Odaiba, Japan*
29. R. Miletich, T. Balic-Zunic and A.D. Rosa (August 2008). The "gillespite-III" phase - the key for understanding a famous high-pressure transition? *XXI Congress of the International Union of Crystallography, IUCr Osaka, Japan*.