

- [30] *Laurent B.*, **Roskosz M.**, Remusat L., Robert F., Leroux H., Depecker C., Nuns N., Lefebvre J.-M. (2015) Early ionizing irradiation witnessed by the D/H distribution in chondritic organic matter, *Nature Communications* **6** #8567.
- [29] **Roskosz M.**, *Sio C.K.*, Dauphas N., Bi W., Tissot F.L.H., Hu M., Zhao J., Alp E.E., (2015) Spinel-olivine-pyroxene equilibrium iron isotopic fractionation and applications to natural samples, *Geochim. et Cosmochim. Acta* **169**, 184-199.
- [28] *Strukelj E.*, Comte M., **Roskosz M.**, Richet P. (2015) Effect of zirconium on the structure and congruent crystallization of a supercooled calcium aluminosilicate melt, *J. American Ceramic Soc. Jace* 13527.
- [27] **Roskosz M.** et Leroux H. (2015) A significant amount of crystalline silica in returned cometary samples: Bridging the gap between astrophysical and meteoritical observations, *Astrophysical Journal Letters*, 801, L7.
- [26] Blanchard M., Dauphas N., Hu M.Y., **Roskosz M.**, Alp E.E., Golden D.C., *Sio C.K.*, Tissot F.L.H., Zhao J., Gao L., Morris R.V., Fornace M., Floris A., Lazzeri M., Balan E. (2015) Reduced partition function ratios of iron and oxygen in Goethite, *Geochim. et Cosmochim. Acta*, **151**, 19-33.
- [25] *Laurent B.*, **Roskosz M.**, Remusat L., Leroux H., Vezin H., Depecker C. (2014) Isotopic and structural signature of experimentally irradiated organic matter, *Geochim. et Cosmochim. Acta*, **142**, 522-534.
- [24] Dauphas N., **Roskosz M.**, Alp E.E., *Sio C.K.*, Tissot F.L.H., Neuville D.R., Hu M., Zhao J., Tissandier L., Médard E., Cordier C. (2014) Redox and structural controls on iron isotope variations in igneous rocks, *Earth Planet. Sci. Lett.* **398**, 127-140.
- [23] *Sio C.K.*, Dauphas N., Teng F.-Z., Chaussidon M., Helz R.T., **Roskosz M.** (2013) Discerning crystal growth from diffusion profiles in zoned olivine by *in-situ* Mg-Fe isotopic analyses, *Geochim. et Cosmochim. Acta*, **123**, 302-321.
- [22] **Roskosz M.**, Bouhifd M.A., Jephcoat A.P., Marty B., Mysen B.O. (2013) Nitrogen solubility in molten metal and silicate at high pressure and temperature. *Geochim. et Cosmochim. Acta*, **121**, 15-28.
- [21] Dauphas N., **Roskosz M.**, Alp E.E., Golden D.C., *Sio C.K.*, Tissot F.L.H., Hu M.Y., Zhao J., Gao L., Morris R.V. (2012) A general moment NRIXS approach to the determination of equilibrium Fe isotopic fractionation factors: Application to goethite and jarosite. *Geochim. et Cosmochim. Acta*, **94**, 254-275.
- [20] *Gillot J.*, **Roskosz M.**, Leroux H., Capet F., Roussel P. (2011) Crystallization of amorphous silicates far from equilibrium part II: Experimental insight into the key role of decoupled cation mobilities, *Journal of Non-Crystalline Solids* **357**, 3467-3473.
- [19] *Gillot J.*, **Roskosz M.**, Leroux H., Depecker C. (2011) Crystallization of amorphous

silicates far from equilibrium part I: A versatile nitrate-based sol–gel synthesis of amorphous porous Ca,Mg-rich silicates, *Journal of Non-Crystalline Solids* **357**, 3461-3466.

[18] **Roskosz M.**, *Gillot J.*, Capet F., Roussel P., Leroux H. (2011) A sharp change in the mineralogy of annealed protoplanetary dust at the glass transition temperature, *Astronomy & Astrophysics* **529**, A111.

[17] Auzende A. L., *Gillot J.*, Coquet A., Hennet L., Ona-nguema G., Bonnin D., Esteve I., **Roskosz M.**, Fiquet G. (2011) Synthesis of amorphous MgO-rich peridotitic starting material for laser-heated diamond anvil cell experiments - application to iron partitioning in the mantle, *High Pressure Research* **31**, 199-213.

[16] Dauphas N., Remusat L., Chen J.H., **Roskosz M.**, Papanastassiou D.A., Stodolna J., Guan Y., Ma C., Eiler J.M. (2010) Neutron-Rich Chromium isotope anomalies in supernova nanoparticles *Astrophysical Journal*, **720**, 1577–1591.

[15] **Roskosz M.**, *Gillot J.*, Capet F., Leroux H. (2009) Surface temperature of protoplanetary disks probed by annealing experiments reflecting Spitzer observations. *Astrophysical Journal Lett.* **707**, L174-L178.

[14] Poitrasson F., **Roskosz M.**, Corgne A. No iron isotope fractionation between molten alloys and silicate melt to 2000 °C and 7.7 GPa: Experimental evidence and implications for planetary differentiation and accretion (2009) *Earth Planet. Sci. Lett.* **278**, 376-385.

[13] Ricolleau A., Fei Y., Cottrell E., Watson H., Deng L., Zhang L., Fiquet G., Auzende A. L., **Roskosz M.**, Morard G., Prakapenka V. (2009) Density profile of pyrolite under the lower mantle conditions, *Geophysical Research Letters* **36**, L06302.

[12] Leroux H., **Roskosz M.**, Jacob D. (2009) Oxidation state of iron and extensive redistribution of sulfur in thermally modified Stardust particles. *Geochim. et Cosmochim. Acta*, **73**, 767-777.

[11] **Roskosz M.**, Leroux H., Watson H.C. (2008) Thermal history, partial preservation and sampling bias recorded by Stardust cometary grains during their capture. *Earth Planet. Sci. Lett.*, **273**, 195-202.

[10] **Roskosz M.**, Toplis M.J., Neuville D.R., Mysen B.O. (2008) Quantification of the kinetics of iron oxidation in silicate melts using Raman spectroscopy: What role of oxygen diffusion? *American Mineralogist*, **93**, 1749-1759.

[9] **Roskosz M.**, Luais B., Watson H. C., Toplis M. J., Alexander C. M. O'D., Mysen B. O. (2006) Experimental quantification of the fractionation of Fe isotopes during metal segregation from a silicate liquid, *Earth Planet. Sci. Lett.* **248**, 851-867.

[8] **Roskosz M.**, Mysen B. O., Cody G. D. (2006) Dual speciation of nitrogen in silicate melts at high pressure and temperature: an experimental study, *Geochim. Cosmochim. Acta*, **70**, 2902-2918.

[7] **Roskosz M.**, Toplis M. J., Richet P. (2006) Crystallization of highly supercooled silicate melts, *Advanced Engineering Materials*, **8**, 12, 1224-1228.

- [6] **Roskosz M.**, Toplis M. J., Richet P. (2006) Kinetic vs. thermodynamic control of crystal nucleation and growth in molten silicates, *J. Non-cryst Solids*, **352**, 180-184.
- [5] Richet P., **Roskosz M.**, Roux J. (2006) Glass formation in silicates: Insights from compositions, *Chem. Geol.*, **225**, 388-401.
- [4] **Roskosz M.**, Toplis M. J., Besson P., Richet P. (2005) Nucleation mechanisms in highly supercooled silicate liquids: Insights from an experimental study of mineral compositions, *J. Non-cryst Solids*, **351**, 1266-1282.
- [3] **Roskosz M.**, Toplis M. J., Richet P. (2005) Experimental determination of crystal growth rates in highly supercooled aluminosilicate liquids: Implications for rate-controlling processes, *Am. Miner.*, **90**, 1146-1156.
- [2] Bouhifd M. A., Richet P., Besson P., **Roskosz M.**, Ingrin J. (2004) Redox state, microstructure and viscosity of a partially crystallized basalt melt, *Earth Planet. Sci. Lett.*, **218**, 31-44.
- [1] **Roskosz M.**, Toplis M. J., Richet P. (2004) The structural role of Ti in aluminosilicate liquids in the glass transition range: Insights from heat capacity and shear viscosity measurements, *Geochim. Cosmochim. Acta*, **68**, 591-606.

Publications de vulgarisation, note éditoriale, chapitres de livre

- [6] **Roskosz M.** and Gouillart E. (2016) “Chemical diffusion in multi-component glass-forming systems”, Chapitre pour “The encyclopedia of Glasses”, Wiley, (2016).
- [5] **Roskosz M.** (2013) Des grains interstellaires aux grains interplanétaires, *L’astronomie*, Juil-Aout 2013, 63, 44-51.
- [4] **Roskosz M.** and Leroux H. (2012) Les météorites de Fer, *Les cahiers du règne minéral*, 1-2012, 30-35.
- [3] **Roskosz M.**, Caracas R. and Rouxel O. (2009) Advances in experimental and theoretical isotope geochemistry Preface. *Chem. Geol.* **267**, 109-110.
- [2] *Strukelj. E.*, Neuville D .R., Cochain B., Richet P., Hennet L., Thiaudière D., Guillot B. **Roskosz M.**, and Comte M. (2009) Medium range order changes in a silicate melt : The first step towards crystallization- A in situ, high-temperature XANES-EXAFS study. *Verre.* **15**, n°4, 47-49.
- [1] Richet P. and **Roskosz M.** (2006) Vitrification et cristallisation des silicates : Des aperçus nouveaux. *Verre*, **12**, n°3, 4-13.