

# Jabrane Labidi

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Isotope Geochemist

## Education

- 2017 - now **Postdoctoral associate**, UCLA Department of Earth, Planetary, and Space Sciences.
- 2015 - 2017 **Postdoctoral associate**, Tuebingen University.
- 2013 - 2015 **Postdoctoral fellow**, Geophysical Laboratory - Carnegie Institution of Washington.
- 2009 - 2013 **Thesis**, *Origin, dynamic and sulfur multiple isotope composition in the terrestrial mantle*, Institut de Physique du Globe de Paris - Université Paris Diderot.
- 2007 - 2009 **M.Sc.**, *Sciences de la Terre et des Planetes, Geochimie*, Institut de Physique du Globe de Paris.  
Mention Tres Bien

## Publications

- 2017 **Chlorine isotope fractionation between chloride ( $\text{Cl}^-$ ) and dichlorine ( $\text{Cl}_2$ ).**  
Giunta, T., **Labidi J.**, Eggenkamp, H.G.M.,  
*Geochimica et Cosmochimica Acta*, In press
- 2017 **A method for Se isotope analysis of low ng-level geological samples via double spike and hydride generation MC-ICP-MS.**  
Kurzawa T., Koenig S., **Labidi J.**, Yierpan, A., Schoenberg, R.  
*Chemical Geology*, In press
- 2017 **Mass independent sulfur isotope signatures in CMs : implications for sulfur chemistry in the early solar system.**  
Labidi J., Farquhar J., Alexander C.M.O., Eldridge D., Oduro H.  
*Geochimica et Cosmochimica Acta*, V. 196, p. 326-350
- 2016 **Negligible sulfur isotope fractionation during partial melting : Evidence from Garrett transform fault basalts and implications for the late-veener and the hadean matte.**  
Labidi J., Cartigny P  
*Earth and Planetary Science Letters*, V. 451, p.196-207
- 2016 **Primordial metallic melt in the deep mantle.**  
Zhang Z., Dorfman S., **Labidi J.**, Zhang S., Li M., Manga M., Stixrude L., McDonough W., Williams Q.  
*Geophysical Research Letters*, V. 43 (8), p. 3693-3699
- 2016 **Experimentally determined sulfur isotope fractionation between metal and silicate and implications for planetary differentiation.**  
Labidi J., Shahar A., Le Losq C., Hillgren V., Mysen B.O., Fei Y., Farquhar J.  
*Geochimica et Cosmochimica Acta*, V. 175, p. 181-195
- 2015 **Multiple sulfur isotope composition of oxidized Samoan melts and the implications of a sulfur isotope mantle array in chemical geodynamics.**  
Labidi J., Cartigny P., Jackson M.  
*Earth and Planetary Science Letters*, V. 417, p. 28-39

- 2014 **An Early Inner Solar System Origin for Anomalous Sulfur Isotopes in Differentiated Protoplanets.**  
Antonelli M., Kim S.T., Peters M., Labidi J., Cartigny P., Walker R., Lyons J., Hoek J., Farquhar J.  
*Proceedings of the National Academy of Sciences*, V. 111, p. 17749-17754
- 2014 **Sulfur isotope budget ( $^{32}\text{S}$ ,  $^{33}\text{S}$ ,  $^{34}\text{S}$  and  $^{36}\text{S}$ ) in Pacific-Antarctic ridge basalts : A record of mantle source heterogeneity and hydrothermal sulfide assimilation.**  
Labidi J., Cartigny P., Hamelin C., Moreira M., Dosso L.  
*Geochimica et Cosmochimica Acta*, V. 133, p. 47-67
- 2013 **Non-chondritic sulphur isotope composition of the terrestrial mantle.**  
Labidi J., Cartigny P., Moreira M.  
*Nature*, V. 501, p. 208-211
- 2012 **Determination of multiple sulfur isotopes in glasses : a reappraisal of the MORB  $\delta^{34}\text{S}$ .**  
Labidi J., Cartigny P., Birck J.L., Assayag N., Bourrand J.J  
*Chemical Geology*, V. 334, p. 189-198

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## Laboratory skills

### Mass Spectrometry

High precision measurement of  $^{32,33,34,36}\text{S}$  and  $^{74,76,77,78,80,82}\text{Se}$  abundances with ThermoFinnigan's MAT 253 and Neptune-Plus mass spectrometers, respectively

### Wet chemistry

Sulfur and selenium chemistry ; method development on silicate glasses and chondrites

### Fluorination and vacuum techniques

F<sub>2</sub> generation and waste control ; chromatographic purification of SF<sub>6</sub>, CO<sub>2</sub> and O<sub>2</sub> under vacuum

### Experimental petrology

Piston cylinder experiments for elemental and isotopic partitioning between metals, sulfides, and silicates.

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## Invited talks

- June 2016 **California Institute of Technology - GeoClub**, *Sulfur isotope composition of CM - insights into the early solar system dynamics .*
- September 2015 **Geophysical Laboratory, Carnegie Institution of Washington**, *Sulfur isotope composition of CM - insights into the early solar system dynamics .*
- June 2015 **Smithsonian Institution - National Museum of Natural History**, *Sulfur isotope insights on planetary differentiation.*
- May 2014 **Geophysical Laboratory, Carnegie Institution of Washington**, *The sulfur isotope systematics in mid-oceanic ridges.*
- October 2013 **Department of Geology, University of Maryland**, *Sulfur isotope evidence for volatile depletion in late-accreted components.*
- April 2013 **Domaines Oceaniques - Université de Brest**, *Multiple Sulfur Isotope in Basalts : insights into Sulfur dynamics and origin in the Earth's mantle.*

- Fevrier 2012 **Centre de Recherche Petrographiques et Geochimiques de Nancy**, *Multiple Sulfur Isotope in Basalts : Chemical Geodynamics in the South Atlantic Mantle.*
- August 2011 **Goldschmidt Conf., Prague, Czech Republic**, *Multiple Sulfur Isotope in Basalts : Chemical Geodynamics in the South Atlantic Mantle*, Invited Talk.

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### Students co-supervision/mentoring

- February to April 2012 **Damian Walver - IPGP**, *Carbon isotope composition of organic matter in a cold slab environment*, Undergraduate student.
- February to April 2013 **Florentin Le Monnier - IPGP**, *Modification of sulfide chemical composition across metamorphism*, Undergraduate student.
- October 2013 to now **James Dottin - UMd**, *Sulfur isotope composition of ocean island basalts, pallasites, and martian rocks*, Graduate student.

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### Community service

- June 2012 **Co-chair of the sulfur isotopes session**, *ISI Workshop, Washington D.C. Carnegie Institution, USA.*
- 2014-2015 **Coordinator of the geochemistry seminars**, *Department of Geology, University of Maryland.*
- confidential date **Executive secretary at NASA Panel.**