

# FRANÇOIS L.H. TISSOT

ASSISTANT PROFESSOR & INVESTIGATOR, HERITAGE MEDICAL RESEARCH INSTITUTE  
THE ISOTOPARIUM, GPS DIVISION, CALIFORNIA INSTITUTE OF TECHNOLOGY  
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LAST UPDATED  
JULY 17, 2023

[WEBSITE](#)  
[RESEARCH GATE](#)  
[GOOGLE SCHOLAR](#)

RESEARCH INTERESTS Isotope geo/cosmochemistry, early solar system processes, planetary evolution, geo-/cosmo-chronology, paleoredox conditions in Earth's atmosphere and ocean, isotope metallomics.

EMPLOYMENT **2018-present** Assistant Professor of Geochemistry GPS Division, Caltech, USA.  
**2018-2021** Visiting Faculty, PS-MED Oncology City of Hope, USA.  
**2017-2018** Visiting Associate in Geochemistry GPS Division, Caltech, USA.  
**2018 (Jan-Jul)** Postdoctoral Researcher EAPS Department, MIT, USA.  
**2016-2017** W.O. Crosby Postdoctoral Fellow EAPS Department, MIT, USA.

EDUCATION **2009-2015** Ph.D. The University of Chicago, IL, USA.  
**2009** M.Sc. in Sanitary Engineering, Luleå University of Technology, Luleå, Sweden.  
**2009** Engineering degree in Hydrogeology, École Nationale Supérieure de Géologie, Nancy, France.

HONORS & AWARDS

- NSF CAREER Award, 2022-2027.
- Packard Fellow for Science and Engineering, Class of 2021.
- Investigator, HMRI, Merkin Institute, 2021-2024.
- Invited contribution into "L'Astronomie" magazine: "A la poursuite du Curium-247" (Feb 2018).
- Ninninger Meteorite Award, Center for Meteorite Studies, 2015.
- Crosby Postdoctoral Fellowship, MIT, 2015.
- LPI Career Development Award, 2015.
- McCormick Fellowship, The University of Chicago, 2010-2011.
- Runner up, Physical Sciences Teaching Assistant Prize, 2010.

INTELLECTUAL PROPERTY **2013** "Pneumatically/hydraulically actuated fluoropolymer-HPLC chromatographic system for use with harsh reagents", U.S. Patent Number 9,884,266 (OrLab Chromatography LLC).

TEACHING

- Ge-219: Non-Traditional Isotopes Seminar (Spring 19'-21').
- Ge-140b: Radiogenic Isotope Geochemistry (Winter 20', 22').
- Ge-141: Isotope Cosmochemistry (Fall 20', 22').
- Ge-109: Oral Presentation (Spring 23').

*Guest lecturer:*

- In G. Budde's *Frontiers in Solid Earth Geochemistry* class, Brown University (Winter 23').
- In K. Batygin's *The Formation and Evolution of Planetary Systems* class, Caltech (Fall 22').
- In X.-M. Liu's *Non-Traditional Stable Isotope* class, UNC, Chapel Hill (USA) (Fall 21').
- In Ge-10: *Frontiers in Geological and Planetary Sciences*, Caltech (Winter 19', 23').
- In T. Burbine's *Asteroid* class, Mount Holyoke (MA, USA) (Winter 18').

FUNDING **\$4,092,193 total**

- 2023-2025 3CPE Award (\$64,000). Co-PI (w/ K. Batygin). Early Solar System evolution.
- 2023-2025 CES Grant (\$20,000). Co-PI (w/ C. Bucholz). U in ophiolites and ocean oxygenation.
- 2022-2027 NSF Petrology & Geochemistry (\$780,000). CAREER: Deciphering the uranium isotope record of igneous accessory phases.
- 2021-2022 3CPE Award (\$48,000). Co-PI (w/ C. Bucholz). U in ophiolites and ocean oxygenation.
- 2021-2026 Packard Fellowship (\$875,000).
- 2021-2024 HMRI Grant (\$690,000). Isotopic biomarkers: New frontier in diagnosis and prognosis.

- 2021-2023 NSF Marine Geology & Geophysics (\$482,262). Quantifying biological, diagenetic and global redox effects on uranium ‘stable’ isotopes in deep-sea corals across glacial-interglacial cycles.
- 2021-2024 NASA FINESST (\$135,000). (FI: Ren Marquez). Mo isotope dichotomy in CAIs: Result of unrecognized biases or true clues to Solar System evolution?
- 2021-2022 Innovation in Education Fund (\$4,500). The non-traditional stable isotope periodic table website.
- 2021-2022 3CPE Award (\$26,000). Co-PI (w/ K. de Kleer). IR spectroscopy of CAIs.
- 2021-2023 CES Grant (\$20,000). A sharper picture of ancient marine anoxia?
- 2021-2023 GPS Discovery Fund (\$75,000). Identifying ancient stellar dust in nebular condensates?
- 2020-2023 NASA FINESST (\$135,000). (FI: Haoyu Li). Revisiting early Solar System chronology: A combined investigation of U, Pb and Al-Mg systematics of mineral separates from CAIs.
- 2020-2022 GPS Discovery Fund (\$50,000). U isotopes in single-zircon crystals as tracers of magma redox conditions and evolution?
- 2020-2021 3CPE Award (\$10,000). A novel isotopic tracer for impact events
- 2020-2022 CES Grant (\$20,000).  $^{230}\text{Th}/\text{U}$  burial dating in emu and *G. newtonii* eggshells?
- 2019-2021 De Logi Science and Technology Grant (\$210,351 to Caltech). Co-PI (w/ B. Weiss). A rocky messenger.
- 2019-2021 President’s and Director’s Research and Development Fund (PDRDF) (\$199,009 to Caltech). Co-PI (w/ V. Scott). Mapping and isotope ratios age-dating instrument.
- 2019-2020 GPS Discovery Fund (\$50,000). Can Cu isotopes elucidate the mechanisms of cancer?
- 2018-2021 NSF Petrology & Geochemistry (\$93,475 to Caltech). Co-PI (w/ M. Ibañez-Mejia). Collaborative research: The zirconium isotope composition and variability of the silicate Earth – A pilot study.
- 2016 Europlanet Transnational Access (TA) project (\$2,500). Investigations of W isotopic variations in coarse-grained CAIs.
- 2015 Europlanet Transnational Access (TA) project (\$2,096). Investigations of Mo isotopic variations in fine-grained and coarse-grained CAIs.
- 2012-2014 ACS Petroleum Research Fund (\$100,000). PI (w/ N. Dauphas).  $^{238}\text{U}/^{235}\text{U}$  ratio as tracer of paleoredox conditions: The oxygenation of the global ocean throughout Earth history.

SYNCHROTRON  
BEAMTIME

**PI**

- Advanced Photon Source (APS), beamline 13-ID-E: U XAS. 6 shifts in Cycle 1 (2023).
- Advanced Photon Source (APS), beamline 13-ID-E: U XAS. 9 shifts in Cycle 3 (2022).
- Advanced Photon Source (APS), beamline 13-ID-E: U XAS. 9 shifts in Cycle 2 (2022).
- Advanced Photon Source (APS), beamline 13-ID-E: U XAS. 9 shifts in Cycle 2 (2021).
- Advanced Photon Source (APS), beamline 13-ID-E: U XAS. 9 shifts in Cycle 1 (2021).

**User**

- Advanced Photon Source (APS), beamline 3-ID-B: Fe NRIXS. 15 shifts in Cycle 2 (2013).
- Advanced Photon Source (APS), beamline 3-ID-B: Fe NRIXS. 18 shifts in Cycle 1 (2013).
- Advanced Photon Source (APS), beamline 3-ID-B: Fe NRIXS. 18 shifts in Cycle 1 (2011).

STUDENTS &  
POSTDOCTORATES

**Current**

- Rosa Grigoryan (postdoc, 2022-).
- Michael Kipp (postdoc, 2019-).
- Teng Ee Yap (graduate student, 2022-).
- Shane Houchin (graduate student, 2020-, co-advisor w/ C. Bucholz).
- Emily Miaou (graduate student, 2018-).
- Haoyu Li (graduate student, 2018-).
- Ren Marquez (graduate student, 2018-).

**Alumni**

- Nicole (Xike) Nie (postdoc, 2022-2023).
- Roxana Shafiee (postdoc, 2022-2023).
- Hannah Tompkins (graduate student, 2019-2022, co-advisor w/ M. Ibañez-Mejia).

- Gerrit Budde (postdoc, 2019-2021).
- Eugenia Hyung (postdoc, 2019-2021).
- Elizabeth Niespolo (postdoc, 2019-2021).
- Frank Pavia (postdoc, 2020-2021).

MENTORSHIP AND  
PRE-DOCTORAL  
RESEARCH  
OPPORTUNITIES

**Undergraduate students**

- Annabelle Gao (WAVE student at the Isotoparium, 2022).
- Paras Choudhary (SURF student at the Isotoparium, 2022).
- Leonard Shaw (B.S. Geo.Sci. 16', 2015-2016).
- Magdalena Naziemiec (B.S. Chemistry 15', 2014-2015).
- Garrett Healy (undergraduate at the Origins Lab, 2014-2015).
- Benjamin M. Go (B.S. Geo.Sci. 15', 2013-2015).

**High school students**

- Janie Drum, Polytechnic School (2022-2023).
- Will Ross, Muir High School (Summer 2022).
- Marcos Villarreal, Muir High School (Summer 2022).

SERVICE

- *Review Panel*: NASA panelist (17') and external reviewer (18', 20', 22'), NSF panelist (23') and external reviewer (20', 23'), 'Marie Curie Postdoctoral Fellowship' reviewer.
- *Peer-reviewer*: AGU Books, Am. J. of Science (AJS), The Astrophysical Journal (ApJ), Chemical Geology, Communications Earth & Environment, EPSL, Earth-Science Reviews, Environ. Sci. & Tech., Geochemical Journal, Geochemical Perspective Letters, GCA, Geology, Geostandards and Geoanalytical Research, Icarus, International Journal of Mass Spectrometry, Journal of Geophysical Research: Solid Earth, Nature Astronomy, Nature Geoscience, PNAS, Reviews in Mineralogy and Geochemistry (RiMG), Science, Science Advances.
- *Session chair/convener*: AGU meeting 2016; Goldschmidt meeting 2018, 2022; International Conference of Deep Space Sciences 2023.
- *Organizing committee*: Annual Meeting of The Meteoritical Society 2023.
- *Guest Editor* (w/ M. Ibañez-Mejia) of *Elements* vol 17, Issue 6 (2021): Heavy Stable Isotopes: From Crystal to Planets.
- *Division life*: Division Seminar scheduling (19'-20').
- *Committee member*: Postdoctoral Scholar/Visiting Associate Committee, Caltech (19'-present).
- *Diversity & Education*: GPS Division 'Diversity, Equity and Inclusion Committee' member (20'-21').

PROFESSIONAL  
SOCIETIES

American Geophysical Union (AGU), Geochemical Society (GS), Meteoritical Society (MetSoc).

PUBLIC OUTREACH

- Collaboration with the [Veritasium](#) youtube channel for a [25 min video](#) on *Clair Patterson's legacy*.
- Caltech Alumni Annual Seminar Day, "From galactic chemical evolution to cancer: How isotope ratios track it all?", May 18<sup>th</sup>, 2019.
- Article in "L'Astronomie" magazine: "A la poursuite du Curium-247", Feb 2018.
- The Great Rock Show, MIT Open House, 2016.
- Climate detectives, MIT Open House, 2016.
- Meteorite science lab, French-American Science Festival, 2011, 2012 & 2015.

SELECTED NEWS  
COVERAGE

- "Earth Formed from Dry, Rocky Building Blocks", Caltech News, Eureka Alert, Phys.org, Jul 2023.
- "Cosmochemist François Tissot Named a Packard Fellow", Caltech News, Oct 2021.
- "New Type of Stellar Grain Discovered", Caltech News, Jul 2020.
- "New insights into the formation of Earth's crust", Phys.org, Dec 2019.
- "New Geochemistry Technique Yields Clues about Earth's Earliest Days", Caltech News, Nov 2019.
- "Uranium isotopes in ancient grains indicate early Earth was less hellish than textbook descriptions", Chemistry World, Aug 2019.
- "Grande chasse dans le Cosmos", l'Est Républicain, Mar 2016.
- "Rare element found in 'Curious Marie' meteoritic inclusion can reveal clues about how the solar

system formed and the date of planets”, Daily Mail, Mar 2016.

“Cosmochemists find evidence of rare element in early solar system”, UChicago News, Mar 2016.

**PUBLICATIONS** Google scholar total citations = 1654; h-index = 19.  
Web of Science total citations = 1314; h-index = 17, self-citations = 9.74 %.  
\*student contribution, <sup>Φ</sup>postdoctorate contribution  
=authors contributed equally

### In preparation

\*Gao A., <sup>Φ</sup>Kipp M.A., \*Li H., Adkins J., **Tissot F.L.H.** A protocol for cleaning of deep-sea corals for U isotope analyses. (In prep for GCA)

MacLennan S.A., Ibañez-Mejia M., **Tissot F.L.H.**, Keller C.B., Yogodzinski G.M. Magmatic source and differentiation influence zirconium isotopic composition in arc lavas. (In prep for Geology)

Fischer-Gödde M., Tusch J., Goderis S., Bragagni A., Mohr-Westheide T., Messling N., Elfers B.-M., Schmitz B., Reimold W.U., Maier W., Claeys P., Köberl C., **Tissot F.L.H.**, Münker C. Ruthenium isotopic evidence for an outer solar system origin of the Chicxulub asteroid impactor (In prep for Nature)

**Tissot F.L.H.**, <sup>Φ</sup>Budde G., Burkhardt C., Kleine T., Krot A.N., \*Marquez R.T., Heck P.R., Simon S.B., Sptizer F. Are molybdenum isotope variations in CAIs the result of unrecognized biases or true windows into Early Solar System evolution? (In prep for ApJ)

### Submitted

Zieman L.J., Ibañez-Mejia, M., **Tissot F.L.H.**, Tompkins H.G.D., Pardo N., Block E. Zirconium stable isotope fractionation during intra-crustal magmatic differentiation in an active continental arc. (In review at GCA)

Hu J.Y., Dauphas N., **Tissot F.L.H.**, Yokochi R., Ireland T.J., Williams H.M. Determination of Rare Earth Element isotopes using sample standard bracketing and interference corrected double-spike approaches (In review at ACS Earth and Space Chemistry)

\*Li H., <sup>Φ</sup>Kipp M.A., Kim S.L., Kast E.R., Eberle J.J., **Tissot F.L.H.** Exploring U isotopes in shark teeth as a paleo-redox proxy. (In review at GCA)

Huang L., **Tissot F.L.H.**, Ibañez-Mejia M., Forsch K.O., Arendt C., Choy A., Aarons S.M. High-precision zirconium stable isotope analysis of seawater by iron co-precipitation and MC-ICP-MS. (In revision for GCA)

<sup>Φ</sup>Pavia F.J., Cooperdock E.H.G., de Obeso J.C., Sims K.W.W., **Tissot F.L.H.**, Klein F. Uranium isotopes as unique tracers of serpentinite weathering (In revision for EPSL)

Kulenguski J.T., Gilleaudeau G.J., Kaufman A.J., <sup>Φ</sup>Kipp M.A., **Tissot F.L.H.**, Goepfert T.J., Pitts A.D., Pierantoni P., Evans M.N., Elrick M. Temporally-offset uranium and carbon isotope excursions across Cretaceous OAE 2 indicate that the global spread of marine euxinia drove enhanced organic carbon burial (In revision for Palaeogeography, Palaeoclimatology, Palaeoecology)

\*Miaou E. & **Tissot F.L.H.** Copper isotopes in serum do not track cancerous tumor evolution, but organ failure (In revision for Metallomics)

### Accepted or published

47. **Tissot F.L.H.**, Ibañez-Mejia M., Rabb S.A., Kraft R., Vocke R.D., Fehr M.A., Schönbacher M., Tang H., Young

E.D. A community-led calibration of the Zr isotope Reference Materials: NIST Candidate RM 8299 and SRM 3169. (Accepted at JAAS)

46. <sup>Φ</sup>Budde G., **Tissot F.L.H.**, Kleine T., \*Marquez R.T.C. Spurious molybdenum isotope anomalies resulting from non-exponential mass fractionation. *Geochemistry*, **XXX**, XX-XX.
45. \*Yap T.E & **Tissot F.L.H.** The NC-CC dichotomy explained by significant addition of CAI-like dust to the Bulk Molecular Cloud (BMC) composition. *Icarus*, **XXX**, XX-XX.
44. \*Liu W., Zhang Y., **Tissot F.L.H.**, Avice G., Ye Z., Yin Q.Z. I/Pu reveals Earth mainly accreted from volatile-poor differentiated planetesimals. *Science Advances*, **9** (27), eadg9213.
43. Kirkpatrick H.M., Harrison T.M., Ibañez-Mejia M., **Tissot F.L.H.**, MacLennan S.A., Bell E.A. (2023) Temperature and co-crystallization effects on Zr isotopes. *Geochimica et Cosmochimica Acta*, **352**, 69-85.
42. \*Tompkins H.G.D., Ibañez-Mejia, M., **Tissot F.L.H.**, Block E., Wang Y., Trail D. (2023) Zircon-growth experiments reveal limited equilibrium Zr isotope fractionation in magmas. *Geochemical Perspectives Letters*, **25**, 25-29.
41. Nie N.X., Chen X.-Y., Zhang Z.J., Hu J.Y., \*Liu W., **Tissot F.L.H.**, Teng F.-Z., Shahar A., Dauphas N. (2023) Rubidium and potassium isotopic variations in planetary bodies: Accretion signatures and planetary overprints. *Geochimica et Cosmochimica Acta*, **344**, 207-229.
40. \*Li H. & **Tissot F.L.H.** (2023) UID: The uranium isotope database. *Chemical Geology*, **618**, 121221.
39. **Tissot F.L.H.**, Collinet M., Namur O., Grove T.L. (2022) The case for the angrite parent body as the archetypal first-generation planetesimal: Large, reduced and Mg-enriched. *Geochimica et Cosmochimica Acta*, **338**, 278-301.
38. \*Marquez R.T.C. & **Tissot F.L.H.** (2022) COSMO: double spike optimization for sample-limited analyses of isotopically anomalous materials. *Chemical Geology*, **612**, 121095.
37. <sup>Φ</sup>Kipp M.A., \*Li H., Ellwood M., John S., Middag R., Adkins J.F., **Tissot F.L.H.** (2022) <sup>238</sup>U, <sup>235</sup>U and <sup>234</sup>U in seawater and deep-sea corals: A high-precision reappraisal. *Geochimica et Cosmochimica Acta*, **336**, 231-248.
36. <sup>Φ</sup>Budde G., Archer G.J., **Tissot F.L.H.**, Kleine T. Origin of the analytical <sup>183</sup>W effect and its implications for tungsten isotope analyses. *Journal of Analytical Atomic Spectrometry*, **37**, 2005-2021.
35. Ma C., Beckett J.R., **Tissot F.L.H.**, Rossman G.R. (2022) New minerals in Type A inclusions from Allende and clues to processes in the early solar system: Paqueite, Ca<sub>3</sub>TiSi<sub>2</sub>(Al,Ti,Si)<sub>3</sub>O<sub>14</sub>, and burnettite, CaVAISiO<sub>6</sub>. *Meteoritics & Planetary Science*, **57** (6), 1300-1324.
34. Baziotis I.P., Ma C., Guan Y., L. Ferrière L., Xydous S., Hu J., <sup>Φ</sup>Kipp M.A., **Tissot F.L.H.**, Asimow P.D. (2022) Unique evidence of fluid alteration in the Kakowa (L6) ordinary chondrite. *Scientific Reports*, **12**, 5520.
33. <sup>Φ</sup>Kipp M.A. & **Tissot F.L.H.** (2022) Inverse methods for the consistent quantification of seafloor anoxia using uranium isotopes data from marine sediments. *Earth and Planetary Science Letters*, **577**, 117240.
32. **Tissot F.L.H.** & Ibañez-Mejia M. (2021) Unlocking the single-crystal record of heavy stable isotopes. *Elements*, **17** (6), 389-394.
31. Ibañez-Mejia M. & **Tissot F.L.H.** (2021) Reading the isotopic code of heavy elements. *Elements*, **17**, 379-382.
30. Nie N.X., Dauphas N., Hopp T., Hu J.Y., Zhang Z.J., Yokochi R., Ireland T., **Tissot F.L.H.** (2021) Chromatography purification of Rb for accurate isotopic analysis by MC-ICPMS: A comparison between AMP-PAN, cation-exchange, and Sr resins. *Journal of Analytical Atomic Spectrometry*, **36**, 2588-2602.

29. <sup>Φ</sup>Hyung E. & Tissot F.L.H. (2021) Routine high-precision Nd isotope analyses: An optimized chromatographic purification scheme. *Journal of Analytical Atomic Spectrometry*, **36**, 1946-1959.
28. Mirzapoiiazova T., Xiao G., Mambetsariev B., Nasser M.W., \*Miaou E., Singhal S., Srivastava S., Mambetsariev I., Nelson M.S., Nam A., Behal A., Arvanitis L.D., Muschen M., Tissot F.L.H., Kulkarni P., Kovach J.S., Sattler M., Batra S.K., Salgia R. (2021) Protein phosphatase 2A as a therapeutic target in small cell lung cancer. *Molecular Cancer Therapeutics*, **20**, 1820-1835.
27. Klaver M., MacLennan S.A., Ibañez-Mejia M., Tissot F.L.H., Vroon P.Z., Millet M.A. (2021) Reliability of detrital marine sediments as proxy for continental crust composition: the effects of hydrodynamic sorting on Ti and Zr isotope systematics. *Geochimica et Cosmochimica Acta*, **310**, 221-239.
26. =Charlier B.L.A., =Tissot F.L.H., Vollstaedt H., Dauphas N., Wilson C.J.N., Marquez R.T. (2021) Survival of *p*-process presolar carriers in the nebula revealed by stepwise-leaching of refractory inclusions. *Science Advances*, **7** (28), eabf6222.
25. Chen X., Tissot F.L.H., Jansen M., Bekker A., Liu C.X., Nie N.X., Halverson G.P., Veizer J., Dauphas N. (2021) U isotope records of shales and carbonates through geologic time. *Geochimica et Cosmochimica Acta*, **300**, 164-191.
24. \*Li H., Tissot F.L.H., Lee S.-G., <sup>Φ</sup>Hyung E., Dauphas N. (2021) Distribution coefficients of the REEs, Sr, Y, Ba, Th, and U between  $\alpha$ -HIBA and AG50W-X8 resin. *ACS Earth and Space Chemistry*, **5**, 55-65.
23. Hu J.Y., Dauphas N., Tissot F.L.H., Yokochi R., Ireland T.J., Zhang J.Z., Davis A.M., Ciesla F.J., Grossman L., Charlier B.L.A., Roskosz M., Alp E.E., Hu M.Y., Zhao J. (2021) Heating events in the nascent solar system recorded by rare earth element isotopic fractionation in refractory inclusions. *Science Advances*, **7** (2), eabc2962.
22. Méheut M., Ibañez-Mejia M., Tissot F.L.H. (2021) Drivers of zirconium isotope fractionation in Zr-bearing phases and melts: the roles of vibrational, nuclear field shift and diffusive effects. *Geochimica et Cosmochimica Acta*, **292**, 217-234.
21. \*Tompkins H.G.D., Zieman L.J., Ibañez-Mejia M., Tissot F.L.H. (2020) Zr stable isotope analysis of zircon by MC-ICP-MS: Application to evaluating intra-crystalline zonation in a zircon megacryst. *Journal of Analytical Atomic Spectrometry*, **35**, 1167-1186.
20. Pravdivsteva O., Tissot F.L.H., Dauphas N., Amari, A. (2020) Evidence of presolar SiC in the Allende *Curious Marie* calcium aluminum rich inclusion. *Nature Astronomy*, **4** (6), 617-624.
19. Ibañez-Mejia M. & Tissot F.L.H. (2019) Extreme Zr stable isotope fractionation during magmatic fractional crystallization. *Science Advances*, **5** (12), eaax8648.
18. Charlier B.L.A., Tissot F.L.H., Dauphas N., Wilson C.J.N. (2019) Nucleosynthetic, radiogenic and stable strontium isotopic variations in fine- and coarse-grained CAIs from Allende. *Geochimica et Cosmochimica Acta*, **265**, 413-430.
17. Tissot F.L.H., Ibañez-Mejia M., Boehnke P., Dauphas N., McGee D., Grove T.L. (2019) <sup>238</sup>U/<sup>235</sup>U measurement in single-zircon crystals: Implications for the Hadean environment, magmatic differentiation and geochronology. *Journal of Analytical Atomic Spectrometry*, **34**, 2035-2052.
16. Tissot F.L.H., Chen C., Go B.M., Naziemiec M., Healy G., Bekker A., Swart P.K., Dauphas N. (2018) Control of eustasy and diagenesis on the <sup>238</sup>U/<sup>235</sup>U of carbonates and evolution of the seawater (<sup>234</sup>U/<sup>238</sup>U) during the last 1.4 Myr. *Geochimica et Cosmochimica Acta*, **242**, 233-265.
15. Dauphas N., Hu M.Y., Baker E.M., Hu J., Tissot F.L.H., Alp E.E., Roskosz M., Zhao J., Bi W., Liu J., Lin J.-F., Nie N.X., Heard A. (2018) SciPhon: a data analysis software for nuclear resonant inelastic X-ray scattering with applications to Fe, Kr, Sn, Eu and Dy. *Journal of Synchrotron Radiation*, **25**, 1581-1599.
14. Davis A.M., Zhang J., Greber N.D., Hu J., Tissot F.L.H., Dauphas N. (2018) Titanium isotopes and rare earth

patterns in CAIs: Evidence for thermal processing and gas-dust decoupling in the protoplanetary disk. *Geochimica et Cosmochimica Acta*, **221**, 275-295.

13. **Tissot F.L.H.**, Dauphas N., Grove T.L. (2017) Distinct  $^{238}\text{U}/^{235}\text{U}$  ratios and REE patterns in plutonic and volcanic angrites: Geochronologic implications and evidence for U “stable” isotope fractionation during magmatic processes. *Geochimica et Cosmochimica Acta*, **213**, 593-617.
12. Tang H., Liu M.-C., McKeegan K.D., **Tissot F.L.H.**, Dauphas N. (2017) *In-situ* isotopic studies of the U-depleted Allende CAI *Curious Marie*: Pre-accretionary alteration and the co-existence of  $^{26}\text{Al}$  and  $^{36}\text{Cl}$  in the early solar nebula. *Geochimica et Cosmochimica Acta*, **207**, 1-18.
- 11b. **Tissot F.L.H.**, Dauphas N., Grossman L. (2016) Erratum for the Research Article: “Origin of uranium isotope variations in early solar nebula condensates”. *Science Advances*, **2** (12), e1602881.
- 11a. **Tissot F.L.H.**, Dauphas N., Grossman L. (2016) Origin of uranium isotope variations in early solar nebula condensates. *Science Advances*, **2** (3), e1501400.
10. Roskosz M., Sio C.K., Dauphas N., Bi W., **Tissot F.L.H.**, Hu M.Y., Zhao J., Alp E.E. (2015) Spinel-olivine-pyroxene equilibrium iron isotopic fractionation and applications to natural peridotites. *Geochimica et Cosmochimica Acta*, **169**, 184-199.
9. **Tissot F.L.H.** & Dauphas N. (2015) Uranium isotopic compositions of the crust and ocean: Age corrections, U budget and global extent of modern anoxia. *Geochimica et Cosmochimica Acta*, **167**, 113-143.
8. 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., Etienne Balan E. (2015) Reduced partition function ratios of iron and oxygen in goethite. *Geochimica et Cosmochimica Acta*, **151**, 19-33.
7. Dauphas N., Roskosz M., Alp E.E., Neuville D., Hu M., Sio C.K., **Tissot F.L.H.**, Zhao J., Tissandier L., Médard E., Cordier C. (2014) Magma redox and structural controls on iron isotope variations in Earth’s mantle and crust. *Earth and Planetary Science Letters*, **398**, 127-140.
6. Pourmand A., **Tissot F.L.H.**, Arienzo M., Sharifi A. (2014) Introducing a comprehensive data reduction and uncertainty propagation algorithm for U-Th geochronometry with extraction chromatography and isotope dilution MC-ICP-MS. *Geostandards and Geoanalytical Research*, **38-2**, 129-148.
5. Asael D., **Tissot F.L.H.**, Reinhard C.T., Rouxel O., Dauphas N., Lyons T.W., Ponzevera E., Liorzou C., Chéron S. (2013) Coupled molybdenum, iron and uranium stable isotopes as oceanic paleoredox proxies during the Paleoproterozoic Shunga Event, *Chemical Geology*, **362**, 193-210.
4. Ireland T.J., **Tissot F.L.H.**, Yokochi R., Dauphas N. (2013) Teflon-HPCL: a novel chromatographic system for application to isotope geochemistry and other industries. *Chemical Geology*, **357**, 203-214.
3. Telus M., Dauphas N., Moynier F., **Tissot F.L.H.**, Teng F.-Z., Nabelek P.I., Craddock P.R., Groat L.A. (2012) Iron, magnesium, zinc and uranium isotopic fractionation during continental crust differentiation: The tale from migmatites, granites, and pegmatites. *Geochimica et Cosmochim Acta* **97**, 247-265.
2. **Tissot F.L.H.**, Dauphas N., Reinhard C., Lyons T., Asael D., Rouxel O. (2012) Mo and U Geochemistry and Isotopes. Chapter 7.10.6 In **Reading the Archive of Earth’s Oxygenation** (Melezhik, V.A. et al., Eds.). *Volume 3: Global Events in the Fennoscandian Arctic Russia - Drilling Early Earth Project*, 1500-1506.
1. Dauphas N., Roskosz M., Alp E.E., Golden D.C., Sio C.K., **Tissot F.L.H.**, Hu M., 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. *Geochimica et Cosmochimica Acta*, **94**, 254-275.

TALKS / SEMINARS

**2023 - ETH**, Isotopic dichotomy, first-generation planetesimals and the dry accretion of the Earth. *GeoPetro*

*Seminar, Jun 22<sup>nd</sup>, Zürich, Switzerland.*

- 2023 - Miami**, The U paleoredox proxy: it's not just for deep time anymore. (*Virtual*) *GEOTOPICS Seminar Series, Mar 6<sup>th</sup>, Miami, FL.*
- 2023 - Wyoming**, Why rare and dry meteorites might be Earth's major building blocks. *Distinguished Lecture Series, Feb 27<sup>th</sup>, Laramie, WY.*
- 2022 - Caltech**, A clean lab's journey from cosmochemistry to medical research, (or why we'd love you to pee in a cup!). *GPS Division seminar, Oct 3<sup>rd</sup>, Pasadena, CA.*
- 2022 - Stanford**, The U paleoredox proxy: it's not just for deep time anymore. *Geological Sciences Seminar, May 17<sup>th</sup>, Stanford, CA.*
- 2022 - IReNA**, Solar System isotopic anomalies. (*Virtual*) *Origins of the Isotopes Workshop, May 3<sup>rd</sup>.*
- 2021 - IReNA**, Nucleosynthetic anomalies in the Solar System. (*Virtual*) *Origins of the Isotopes Workshop, Sept 28<sup>th</sup>-30<sup>th</sup>.*
- 2021 - Scripps**, How robust is the U isotope seafloor anoxia proxy? (*Virtual*) *Oceanography Seminar, March 8<sup>th</sup>, San Diego, CA.*
- 2019 - UCLA**, Novel isotope systems in zircon: Implications for Hadean environment, magmatic differentiation and geochronology. *Geocheminar, Oct 31<sup>st</sup>, Los Angeles, CA.*
- 2019 - Caltech**, Chasing extinct elements and mysterious carriers: Isotope constraints on Solar System Formation. *DIX Planetary Science Seminar, Oct 8<sup>th</sup>, Pasadena, CA.*
- 2019 - UC Riverside**, Building, refining and pushing non-traditional stable isotope systems: Caveats and prospects from U and Zr Isotopes. *May 28<sup>th</sup>, Riverside, CA.*
- 2017 - Rochester & Harvard**, Uranium stable isotopes: from stars to starfish. *Sept 22<sup>nd</sup>, Rochester, NY & Oct 4<sup>th</sup>, Cambridge, MA.*
- 2017 - MIT**, Solar System formation and nucleosynthesis of heavy elements: A perspective from fine-grained CAIs. *Special Seminar, Feb 27<sup>th</sup>, Cambridge, MA.*
- 2017 - Caltech**, The chase for <sup>247</sup>Cm and what it reveals about the stellar environment of *r*-process nucleosynthesis. *GPS Division seminar, Jan 5<sup>th</sup>, Pasadena, CA.*
- 2017 - Caltech**, Can U isotopes really track the global extent of oceanic anoxia? *Geoclub seminar, Jan 4<sup>th</sup>, Pasadena, CA.*
- 2016 - Princeton**, Can U isotopes really track the global extent of oceanic anoxia, today and in the past? *EGGS seminar, Dec 1<sup>st</sup>, NJ, USA.*
- 2016 - ENS, Lyon & MHNH, Paris & CRPG, Nancy & GET, Toulouse**, La chasse au <sup>247</sup>Cm et ses implications pour l'environnement du processus *r* de la nucléosynthèse stellaire. *From Sept 26<sup>th</sup> to Oct 5<sup>th</sup>, France.*
- 2016 - MIT**, The chase for <sup>247</sup>Cm and what it reveals about the stellar environment of *r*-process nucleosynthesis. *COG3 seminar, Mar 11<sup>th</sup>, Cambridge, MA.*
- 2015 - The University of Chicago**, From the MetSoc to the Postdoc: A Journey with Larry. *Symposium in Honor of Lawrence Grossman, On the Occasion of his Retirement, Dec 3<sup>rd</sup>.*
- 2013 - The University of Chicago**, Teflon-HPLC: Getting the most out of small mass samples. *Presolar Grain Workshop, Jan 26<sup>th</sup>.*

OTHER  
PUBLICATIONS



**Tissot F.L.H.** (2018) A la poursuite du Curium-247. *L'Astronomie*, broad audience outreach article.

**Tissot F.L.H.** (2015) Geochemistry and Cosmochemistry of Uranium Stable Isotopes. *The University of Chicago*, [Ph.D dissertation](#).

CONFERENCE  
ABSTRACTS

102. Charlier B.L.A., **Tissot F.L.H.**, Amelin Y. (2023) Are presolar materials preserved in coarse-grained CAIs from Allende? Insights from step-leaching experiments. *33<sup>rd</sup> Annual V.M. Goldschmidt Conference, July 9-14, Lyon, France.*
101. Huang L., **Tissot F.L.H.**, Ibañez-Mejia M., Forsch K.O., Arendt C., Choy A., Aarons S.M. (2023) High-precision zirconium isotope analysis of Pacific seawater reveals large mass-dependent fractionations in the ocean. *33<sup>rd</sup> Annual V.M. Goldschmidt Conference, July 9-14, Lyon, France.*
100. Ziemann L.J., Ibañez-Mejia, M., **Tissot F.L.H.**, Tompkins H.G.D., Pardo N., Block E. (2023) Intra-crustal zirconium stable isotope systematics in an active continental arc. *33<sup>rd</sup> Annual V.M. Goldschmidt Conference, July 9-14, Lyon, France.*
99. **Tissot F.L.H.**, <sup>Φ</sup>Kipp M.A., \*Li H., Ellwood M., John S, Middag R., Adkins J.F. (2023) Reappraising the U isotope composition of seawater and deep-sea corals: Implications for paleo-environmental reconstructions. *33<sup>rd</sup> Annual V.M. Goldschmidt Conference, July 9-14, Lyon, France.* **[Oral Presentation]**
98. Fischer-Gödde M., Tusch J., Goderis S., Bragagni A., Mohr-Westheide T., Messling N., Elfers B.-M., Schmitz B., Reimold W.U., Maier W., Claeys P., Köberl C., **Tissot F.L.H.**, Münker C. (2023) Ruthenium isotope composition of the K-Pg impactor and terrestrial impact structures. *33<sup>rd</sup> Annual V.M. Goldschmidt Conference, July 9-14, Lyon, France.*
97. Fischer-Gödde M., Tusch J., Messling N., Goderis S., Bragagni A., Mohr-Westheide T., Elfers B.-M., Schmitz B., Reimold W.U., **Tissot F.L.H.**, Koeberl C., Claeys P., Maier W.D., Münker C. (2023) Ruthenium isotope composition of terrestrial impact rocks – A new tool for deducing genetic signatures of meteoritic projectiles. *Lunar Planet. Sci. 54, #2313.*
96. <sup>Φ</sup>Budde G., \*Marquez R.T.C., Ivanova M.A., **Tissot F.L.H.** (2023) Molybdenum isotope systematics of Calcium-Aluminum-rich inclusions. *Lunar Planet. Sci. 54, #2203.*
95. \*Mueller J.M., Ehlmann B.L., Rossman G.R., Greenberger R.N., Marquez R.T., Ivanova M.A., **Tissot F.L.H.**, de Kleer K. (2023) A spectral database of Calcium-Aluminum-rich inclusions and applications to asteroid observations. *Lunar Planet. Sci. 54, #1925.*
94. \*Yap T.E & **Tissot F.L.H.** (2023) Ryugu/CI chondrites as an endmember composition of the CC reservoir & an illustrative mixing model for Cr, Ti, & Fe isotopic and elemental compositions of CC chondrites. *Lunar Planet. Sci. 54, #1902.*
93. Nie N.X., Chen X.-Y., Zhang Z.J., Hu J.Y., \*Liu W., **Tissot F.L.H.**, Teng F.-Z., Shahar A., Dauphas N. (2023) Rb and K isotopic variations in non-carbonaceous chondrites and Mars. *Lunar Planet. Sci. 54, #1755.*
92. **Tissot F.L.H.**, Collinet M., Namur O., Grove T.L. (2023) The angrite parent body as the archetypal first-generation planetesimal: Large, reduced and Mg-enriched. *Lunar Planet. Sci. 54, #1221.* **[Oral Presentation]**
91. **Tissot F.L.H.**, Collinet M., Namur O., Grove T.L. (2022) The case for the angrite parent body as the archetypal first-generation planetesimal: Large, reduced and Mg-enriched. *Inaugural Forming and Exploring Habitable Worlds, International Meeting, Nov 07-13, Edinburg, UK.* **[Oral Presentation]**
90. <sup>Φ</sup>Budde G., **Tissot F.L.H.**, Kleine T., \*Marquez R.T.C. (2022) Apparent Mo isotope anomalies resulting from non-exponential mass fractionation. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawaii, USA.*
89. \*Miaou E. & **Tissot F.L.H.** (2022) What drives copper isotope effects in the serum of cancer patients? Mechanistic insights from box modeling. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu,*

Hawai'i, USA.

88. <sup>Φ</sup>Kipp M.A., Bubphananee K., Stüeken E, **Tissot F.L.H.**, Algeo T., Brocks J., Dahl T, Kinsley J, Buick R. (2022) A shale-hosted selenium isotope record of Paleozoic ocean oxygenation. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
87. Bucholz C.E., Hernández-Montenegro J.D., Sosa E.S., **Tissot F.L.H.**, <sup>Φ</sup>Kipp M.A. (2022) Fractionation of iron isotopes between strongly peraluminous granites and their sedimentary sources: a case study of the Archean Ghost Lake batholith. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
86. \*Marquez R.T.C., Charlier B.L.A., Abbott T., Smeets P., Heck P.R., **Tissot F.L.H.** (2022) Search for the carriers of p-process anomalies in Early Solar System condensates. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
85. \*Li H., <sup>Φ</sup>Kipp M.A., Kim S., Kast E.R., **Tissot F.L.H.** (2022) Shark teeth: a new U isotopic archive for paleo-redox reconstruction? *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
84. \*Tompkins H.G.D., Ibañez-Mejia, M., **Tissot F.L.H.**, Block E., Wang Y., Trail D. (2022) Experimental constraints on Zr stable isotope fractionation during magmatic zircon crystallization. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
83. \*Houchin S., **Tissot F.L.H.**, Ibañez-Mejia M., Newville M., Lanzirotti A., <sup>Φ</sup>Pavia F. (2022) The oxidation state of uranium in zircon by U M4-edge X-ray absorption spectroscopy. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
83. Sosa E.S., Bucholz C.E., Hernández-Montenegro J.D., **Tissot F.L.H.**, <sup>Φ</sup>Kipp M.A., Kay S.M., Kay R.W. (2022) Iron isotopes in mantle and cumulate xenoliths from Adak Island, Central Aleutians. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
82. **Tissot F.L.H.**, Ibañez-Mejia M., Vocke R.D., Rabb S.A., Fehr M.A., Schönbacher M., Tang H., Young E.D. (2022) Establishing and calibrating the Zr isotope Reference Material (iRM). *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA. [Poster]*
81. Ibañez-Mejia M., Garrido C.J., **Tissot F.L.H.** (2022) Controls on the Zr stable isotope composition and variability of Earth's upper mantle. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
80. \*Liu W., Zhang Y., **Tissot F.L.H.**, Avice G., Ye Z., Yin Q.Z. (2022) How do I and Pu partition during core formation? Constraints from first-principles molecular dynamics and implications. *32<sup>nd</sup> Annual V.M. Goldschmidt Conference, July 11-15, Honolulu, Hawai'i, USA.*
79. Borlina C.S., Weiss B.P., Bai X.-N., Mansbach E.N., Lima E.A., Chatterjee N., **Tissot F.L.H.**, McKeegan K.D. (2022) Paleomagnetism of Calcium Aluminum-rich inclusions. *GSA Cordilleran and Rocky Mountain Joint Section Meeting , Las Vegas, NE, 15-17 March 2022.*
78. Burney D., Liu Y., <sup>Φ</sup>Kipp M.A., Eiler J., **Tissot F.L.H.**, Farley K. (2022) A new martian gabbroic shergottite, Northwest Africa (NWA) 13134. *Lunar Planet. Sci. 53 , #2530.*
77. Bai X.-N., Borlina C.S., Weiss B.P., Mansbach E.N., Chatterjee N., Tung P., Harrison R., Lima E.A., **Tissot F.L.H.**, McKeegan K.D. (2022) Calcium-aluminum-rich inclusion paleomagnetism: a theoretical perspective. *Lunar Planet. Sci. 53, #2000.*
76. Borlina C.S., Weiss B.P., Bai X.-N., Mansbach E.N., Chatterjee N., Tung P., Harrison R., Lima E.A., **Tissot F.L.H.**, McKeegan K.D. (2022) Paleomagnetism of Calcium Aluminum-rich inclusions. *Lunar Planet. Sci. 53, #1913.*
75. Borlina C.S., Weiss B.P., Bai X.-N., Lima E.A., Chatterjee N., **Tissot F.L.H.**, McKeegan K.D. (2021) Pa-

leomagnetism of calcium-aluminum-rich inclusions from CO chondrites. *AGU Fall meeting, New Orleans, LA & Online Everywhere, 13-17 December 2021, #GP45E-0450.*

74. <sup>Φ</sup>Pavia F.J., Cooperdock E.H.G., de Obeso J.C., **Tissot F.L.H.**, Kelemen P.B., Sims K.W.W., Klein F. (2021) Uranium isotopes in serpentinites as tracers of redox conditions and weathering. *AGU Fall meeting, New Orleans, LA & Online Everywhere, 13-17 December 2021, #DI22A-06.*
73. <sup>Φ</sup>Hyung E. & **Tissot F.L.H.** (2021) An optimized chromatographic purification scheme using Îs-HIBA chemistry for routine high-precision Nd isotope analyses. *AGU Fall meeting, New Orleans, LA & Online Everywhere, 13-17 December 2021, #V25B-0101.*
72. Hu J.Y., Dauphas N., **Tissot F.L.H.**, Yokochi R., Ireland T.J., Zhang J.Z., Davis A.M., Ciesla F.J., Grossman L., Charlier B.L.A., Roskosz M., Alp E.E., Hu M.Y., Zhao J. (2021) Insights into the evolution of the Early Solar System from REE kinetic isotopic fractionations in refractory inclusions. *AGU Fall meeting, New Orleans, LA & Online Everywhere, 13-17 December 2021, #V13A-09.*
71. Ryan-Davis J., Bucholz C., Sisson T., **Tissot F.L.H.**, Druzhinina Z., Present T.M. (2021) Field, petrologic and geochemical evidence for upper-crustal ultramafic cumulate fractionation to generate intermediate plutons at Emigrant Gap, Sierra Nevada, California. *GSA, Connects, 10-13 October 2021, Portland, Oregon, USA, #203-8.*
70. \*Tompkins H.G.D., Ibañez-Mejia M., **Tissot F.L.H.**, Wang Y., Trail D. (2021) Experimental constraints on zirconium stable isotopes fractionation during magmatic zircon crystallization. *GSA, Connects, 10-13 October 2021, Portland, Oregon, USA, #60-3.*
69. Hu J.Y., Dauphas N., **Tissot F.L.H.**, Yokochi R., Ireland T.J., Zhang J.Z., Davis A.M., Ciesla F.J., Grossman L., Charlier B.L.A., Roskosz M., Alp E.E., Hu M.Y., Zhao J. (2021) Heating events in the nascent solar system recorded by rare earth element isotopic fractionation in refractory inclusions. *84<sup>th</sup> Annual Meeting of the Meteoritical Society, August 15-21, Chicago, USA, #6284.*
68. <sup>Φ</sup>Kipp M.A. & **Tissot F.L.H.** (2021) Robustly quantifying seafloor anoxia using uranium isotope data from ancient marine sediments. *31<sup>st</sup> Annual V.M. Goldschmidt Conference, July 4-9, Global Virtual.*
67. <sup>Φ</sup>Budde G., Archer G.J., **Tissot F.L.H.**, Kleine T. (2021) Remarks on the analytical <sup>183</sup>W effect and the interpretation of terrestrial W isotope variations. *31<sup>st</sup> Annual V.M. Goldschmidt Conference, July 4-9, Global Virtual.*
66. **Tissot F.L.H.**, Charlier B.L.A., Vollstaedt H., Dauphas N., Wilson C.J.N., \*Marquez R.T.C. (2021) Evidence for the survival of a *p*-process anomaly carrier in fine-grained CAIs from Allende. *Lunar Planet. Sci. 52, Virtual, #2641. [Oral Presentation]*
65. \*Marquez R.T.C., Charlier B.L.A., **Tissot F.L.H.** (2021) Search for the carriers of anomalous nucleosynthetic signatures in early Solar System condensates. *Lunar Planet. Sci. 52, Virtual, #2635.*
64. Liu N., Oglione R.C., **Tissot F.L.H.**, Dauphas N. (2021) Is there presolar dust in the Allende *Curious Marie* Calcium, Aluminum-rich inclusion? *Lunar Planet. Sci. 52, Virtual, #2382.*
63. Kirkpatrick H.M., Harrison T.M., Bell E.A., Liu M.-C., **Tissot F.L.H.**, MacLennan S.A., Ibañez-Mejia M. (2020) Are Zr stable isotopes tracking magmatic differentiation in the zoned La Posta pluton? *AGU Fall meeting, Online Everywhere, 1-17 December 2020, #V032-0004.*
62. <sup>Φ</sup>Niespolo E.M., Miller G.M., **Tissot F.L.H.** (2020) Testing Australian megafaunal avian eggshells for <sup>230</sup>Th/U burial dating. *AGU Fall meeting, Online Everywhere, 1-17 December 2020, #V036-08.*
61. Pravdivtseva O., **Tissot F.L.H.**, Dauphas N., Amari S. (2020) Evidence of presolar SiC in the Allende fine-grained CAIs. *30<sup>th</sup> Annual V.M. Goldschmidt Conference, August 21-26, Global Virtual.*
60. Kirkpatrick H.M., Harrison T.M., Liu M.-C., **Tissot F.L.H.**, Ibañez-Mejia M. (2020)  $\delta^{94}/^{90}\text{Zr}$  variations in granites. *30<sup>th</sup> Annual V.M. Goldschmidt Conference, August 21-26, Global Virtual.*
59. Budde G., **Tissot F.L.H.**, Burkhardt C., Kleine T. (2020) Nucleosynthetic W-Mo isotope variations in Solar

System materials. *30<sup>th</sup> Annual V.M. Goldschmidt Conference, August 21-26, Global Virtual.*

58. Aléon J., Aléon-Toppani A., **Tissot F.L.H.**, Brisset F., Boukari C. (2020) Insights into CAI Secondary Alteration from Mineralogy and Halogens Distribution in *Curious Marie*. *Lunar Planet. Sci. 51*. [Conference canceled, COVID-19].
57. Pravdivtseva O., Meshik A., **Tissot F.L.H.**, Dauphas N. (2020) Xenon Isotopic Studies of Aqueous Alteration in Fine-Grained Allende CAIs. *Lunar Planet. Sci. 51*. [Conference canceled, COVID-19].
56. Hu J.Y., Dauphas N., **Tissot F.L.H.**, Davis A.M., Ciesla F., Yokochi R., Ireland T.J. (2020) Stable Isotopic Fractionation of 8 REEs in Group II CAIs and Insights into Early Solar System Evolution. *Lunar Planet. Sci. 51*. [Conference canceled, COVID-19].
55. **Tissot F.L.H.**, Ibañez-Mejia M., Boehnke P., Dauphas N., McGee D., Grove T.L. (2019) Single-grain  $^{238}\text{U}/^{235}\text{U}$  measurement in Early Earth zircons: Implications for the Hadean environment, magmatic differentiation and geochronology. *AGU Fall meeting, San Francisco, 9-13 December 2019, #V31G-0130*. [Poster]
54. Ziemann L., Ibañez-Mejia M., **Tissot F.L.H.**, Tompkins H.G.D., Pardo N., Bloch E.M. (2019) The Zirconium Stable Isotope Systematics of Continental Crust Formation in an Active Continental Arc. *AGU Fall meeting, San Francisco, 9-13 December 2019, #V54A-03*.
53. Méheut M., Ibañez-Mejia M., **Tissot F.L.H.** (2019) Does equilibrium zircon crystallization drive Zr stable isotope fractionation in magmatic systems? An *ab-initio* investigation. *AGU Fall meeting, San Francisco, 9-13 December 2019, #V51E-0092*.
52. Ibañez-Mejia M., Garrido C.J., **Tissot F.L.H.** (2019) The Effects of Partial Melting and Re-fertilization in the Zr Stable Isotope Composition of Earth's Upper Mantle. *AGU Fall meeting, San Francisco, 9-13 December 2019, #V51E-0091*.
51. Kirkpatrick H.M., Harrison T.M., Liu M.-C., Bell E.A., Ibañez-Mejia M., **Tissot F.L.H.** (2019) Zr Isotope Variations in Zircon as an Indicator of Magmatic Differentiation. *AGU Fall meeting, San Francisco, 9-13 December 2019, #V51E-0090*.
50. Ibañez-Mejia M., **Tissot F.L.H.**, Tompkins H.G.D. (2019) Zr stable isotope variability on Earth: is zircon the culprit or a passive witness? *GSA, Annual Meeting in Phoenix, Arizona, USA, #104-1*.
49. **Tissot F.L.H.**, Ibañez-Mejia M., Boehnke P., Dauphas N., McGee D., Grove T.L. (2019) Single-grain  $^{238}\text{U}/^{235}\text{U}$  Measurement in Early Earth Zircons. *29<sup>th</sup> Annual V.M. Goldschmidt Conference, August 18-23, Barcelona, Spain, #3383*. [Oral Presentation]
48. Kirkpatrick H.M., Harrison T.M., Liu M.-C., **Tissot F.L.H.**, Ibañez-Mejia M. (2019) In situ  $\delta^{94}/^{90}\text{Zr}$  variations in zircon. *29<sup>th</sup> Annual V.M. Goldschmidt Conference, August 18-23, Barcelona, Spain, #1696*.
47. Ibañez-Mejia M., **Tissot F.L.H.**, Grohn L.J., Tompkins H.G.D. (2019) Zr stable isotope variability in the silicate Earth: is zircon to blame?. *29<sup>th</sup> Annual V.M. Goldschmidt Conference, August 18-23, Barcelona, Spain, #1460*.
46. Hu J.Y., Dauphas N., **Tissot F.L.H.**, Yokochi R., Ireland T.J. (2019) A New Perspective on Refractory Element Fractionation From REE Isotope Systematics in CAIs. *29<sup>th</sup> Annual V.M. Goldschmidt Conference, August 18-23, Barcelona, Spain, #1404*.
45. Charlier B.L.A., **Tissot F.L.H.**, Dauphas N., Vollstaedt H., Wilson C.J.N. (2019) Initial  $^{87}\text{Sr}/^{86}\text{Sr}$  chronology of Allende fine-grained CAIs from step leaching experiments. *29<sup>th</sup> Annual V.M. Goldschmidt Conference, August 18-23, Barcelona, Spain, #540*.
44. \*Tompkins H.G.D., Ibañez-Mejia M., **Tissot F.L.H.** (2019) Evaluating Intra-Crystalline Zr Stable Isotope Zonation in a Zircon Megacryst. *GSA, Northeastern Section - 54<sup>th</sup> Annual Meeting, #21-6*.
43. \*Marquez R.T. & **Tissot F.L.H.** (2019) Optimal Double Spike For High-Precision Measurements of Stable Isotopes in Early Solar System Materials. *Lunar Planet. Sci. 50, #3159*.

42. **Tissot F.L.H.**, Burkhardt C., Budde G., Kleine T. (2019) Multi-Elemental and Isotopic Characterization of Coarse-Grained Allende CAIs. *Lunar Planet. Sci.* 50, #3136. **[Poster]**
41. Pravdivtseva O., **Tissot F.L.H.**, Dauphas N., Amari S. (2019) *s*-process Noble Gas Enrichments in the Allende Fine-Grained CAIs: Case for a Presolar SiC Carrier. *Lunar Planet. Sci.* 50, #2006.
40. Hu J.Y., Dauphas N., **Tissot F.L.H.**, Yokochi R., Ireland T.J. (2019) Insights into Evaporation/Condensation Processes in the Early Solar System from Mass-Dependent Fractionations of REEs in Type II CAIs. *Lunar Planet. Sci.* 50, #1938.
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