

**Mauricio Ibañez-Mejia**

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**EDUCATION**

Ph.D., Geosciences, University of Arizona, Tucson – AZ, USA 2014  
M.Sc., Geosciences, University of Arizona, Tucson – AZ, USA 2010  
B.Sc. with honors, Geology, Colombian National University, Bogotá – Colombia 2007

**PROFESSIONAL APPOINTMENTS**

Assistant Professor, Dept. of Geosciences, University of Arizona 2021-present  
Co-director, Arizona LaserChron Center, University of Arizona 2021-present  
Assistant Professor, Dept. of Earth and Environ. Sciences, University of Rochester 2016–2020  
Adjunct Researcher, Dept. of EAPS, Massachusetts Institute of Technology 2016–2020  
W.O. Crosby Postdoctoral Fellow, Dept. of EAPS, Mass. Institute of Tech. 2014–2016

**HONORS AND AWARDS**

Furth Fund Award, University of Rochester. 2019  
W.O. Crosby Postdoctoral Fellow, Dept. of EAPS, Mass. Institute of Tech. 2014-2016  
AAPG International Meeting Outstanding Talk Award 2013  
Spencer Titley Fellowship, University of Arizona 2013  
Galileo Circle Scholar, University of Arizona 2013  
GSA Student Research Grant with Outstanding Mention 2012  
AAPG Grants-in-Aid, John Teagle Memorial Fund Award (No. 8879) 2012  
Honorary Registration, Colombian National University 2004–2006

**CURRENT AND PENDING FUNDING**

**(Awarded as lead PI: \$1'269,308; Total awarded: \$2'474,634)**

Collaborative Research: The Zirconium Isotope Composition and Variability of the Silicate Earth – A Pilot Study. NSF EAR-CH, \$309,532 (\$403,007 total), Lead P.I., *current* (09/2018 – 08/2021)  
Collaborative Research: Geomagnetic field strength and stability between 500 and 800 Ma: Constraining inner core growth. NSF EAR-PH, \$678,531, co-P.I., *current* (04/2019 – 03/2022)  
Provenance analysis of Tertiary sedimentary sequences in the Lower Magdalena Valley (LMV) basin, Sinú-San Jacinto and Guajira belts: Implications for petroleum systems. Hocol-Ecopetrol, \$404,415, Sole P.I., *current* (04/2019 – 04/2022)  
Collaborative Research: Caught in the Act – The Petrology of Modern Lower-Crust Formation and Foundering in the North Andean Arc. NSF EAR-CH, \$294,796 (\$452,445 total), Lead P.I., *current* (09/2019 – 08/2022)  
Collaborative Research: Improved Geochronology-Based Sediment Provenance Analysis Through Physico-Mechanical Characterization of Zircon Transport. NSF EAR-SGP, \$260,565 (\$536,236 total), Lead P.I., *current* (09/2020 – 08/2023)  
Community Facility Support: Community Facility Support for Geochronology and Thermochronology at the Arizona LaserChron Center. NSF EAR-SGP, \$885,090 co-P.I., *pending* (03/2021 – 02/2024)

**EXPIRED FUNDING**

Age and configuration of the Lower Magdalena Valley basin basement: Identifying the Romeral Suture and Implications for the Development of Oligocene-Pliocene basins. Hocol-Ecopetrol, 2013-2014, \$72,419, Lead P.I., *expired*.  
Paleozoic tectonics and basin formation along the northwestern South American margin. Hocol-Ecopetrol, 2012-2013, \$58,860, Lead P.I., *expired*.  
Combined Geo- and Thermochronologic Constraints on the Llanos-Putumayo-Vaupés Basement: Implications for the structural and landscape development of the Amazon lowlands. Ecopetrol-ICP, 2010-2011, \$40,410, co-P.I., *expired*.

DEPARTMENT OF GEOSCIENCES, THE UNIVERSITY OF ARIZONA

Basement Domains of the Upper Magdalena Valley and the Putumayo basin: A geochronological and petrologic perspective. Ecopetrol-ICP, 2009-2010, \$70,220, Lead P.I., *expired*.

**INVITED DEPARTMENT SEMINARS (NON-CONFERENCE)**

- 2020 Dept. de Geociencias, Universidad Nacional Sede Bogotá, Colombia (virtual)  
Colombian Geological Survey, Bogotá, Colombia (virtual)  
Instituto Potosino de Investigación Científica, San Luis Potosi, Mexico (virtual)  
Geotop research center, University of Quebec, Montreal, Canada (virtual)  
Dept. of Geosciences, University of Arizona, Tucson, AZ  
Dept. of Geosciences, Princeton University, Princeton, NJ
- 2019 Dept. of Earth Sciences, Dartmouth College, Hanover, NH  
Dept. of Earth and Atmospheric Sciences, Cornell University, Ithaca, NY
- 2018 Dept. of Environmental Engineering & Earth Sciences, Clemson University, Clemson, SC  
Dept. of Geological Sciences, University of South Carolina, Columbus, SC  
Dept. of Geological Sciences & Engineering, University of Nevada, Reno, NV  
Dept. of Geology and Geophysics, Texas A&M University, College Station, TX
- 2017 Dept. of Geology, Colgate University, Hamilton, NY.  
Dept. of Geosciences, University of Texas at Dallas, Dallas, TX.  
Dept. of Geosciences, University of São Paulo, São Paulo, SP, Brazil  
Dept. of Geology, University of Illinois Urbana-Champaign, Champaign, IL  
Dept. of EPS, Harvard University, Cambridge, MA  
Dept. of Earth Sciences, Syracuse University, Syracuse, NY
- 2015 Dept. of EAPS, Massachusetts Institute of Technology, Cambridge, MA.
- 2014 Dept. of Earth and Environmental Sciences, U. Rochester, Rochester, NY  
Dept. of Earth and Environmental Sciences Student Seminar, U. Rochester, Rochester, NY

**INVITED CONFERENCE TALKS**

- 2018 Goldschmidt conference, Boston, MA  
Geological Society of America National Meeting, Indianapolis, IN
- 2016 10<sup>th</sup> South American Symposium on Isotope Geology (SSAGI), Puerto Vallarta, Mexico.
- 2014 9<sup>th</sup> South American Symposium on Isotope Geology (SSAGI), São Paulo, Brazil.

**TEACHING EXPERIENCE**

- Courses Taught at University of Rochester (Annually and/or bi-annually from 2016 to 2020)  
EES 206 – Petrology (offered every Fall term)  
EES 247/447 – Chemical Evolution of the Earth (offered every other Spring term)  
EES 230/430 – Principles of Geochronometry (offered every other Spring term)

**POST-DOCTORAL RESEARCHERS MENTORED**

- Dr. Scott A. MacLennan, U. of Arizona 2019–  
Dr. Federico Moreno, U. of Arizona 2020–

**GRADUATE STUDENTS MENTORED (AS PRIMARY ADVISOR)**

- Lisa J. Zieman, PhD, U. of Arizona 2017–  
Hannah G.D. Tompkins, PhD, U. of Arizona 2019–  
Humberto I. Echavarria, PhD, U. of Arizona 2021–

**GRADUATE STUDENTS MENTORED (AS CO-ADVISOR)**

- Samuel Jaramillo, MSc, Universidade Federal do Rio de Janeiro, Brazil 2016–2018  
Marvin Mosquera, MSc, Universidad Nacional de Colombia (Medellin) 2019–

**UNDERGRADUATE SENIOR THESES MENTORED (AS PRIMARY ADVISOR\*/CO-ADVISOR†)**

- Hannah Tompkins\*, B.Sc., U. Rochester 2018–2019  
Derrick Murekezi\*, B.Sc., U. Rochester 2018–2019  
Justin Delgado\*, B.Sc., U. Rochester 2017–2018

DEPARTMENT OF GEOSCIENCES, THE UNIVERSITY OF ARIZONA

David Llano*, B.Sc., U. de Caldas, Colombia	2016–2018
Jorge Restrepo*, B.Sc., U. de Caldas, Colombia	2016–2018
Omar Giraldo*, B.Sc., U. de Caldas, Colombia	2016–2018
Elizabeth Lamberts*, B.Sc., U. Rochester	2016–2017

**AWARDS RECEIVED BY SUPERVISED STUDENTS**

2020	GSA graduate student award to PhD student Hannah Tompkins: “Understanding Zr Stable Isotope Fractionation in Magmatic Environments: Insights from Experimental Systems”.
2020	Mineralogical Society of America (MSA) Student Research in Mineralogy and Petrology to PhD student Hannah Tompkins: “Understanding Zr stable isotope fractionation in magmatic environments: Insights from experimental systems”.
2020	NSF-GRFP award to PhD student Hannah Tompkins.
2019	AGeS2 (Awards for Geochronology Student Research2) Program award to PhD student Lisa Grohn: “Crystallization and eruption history of ultramafic lower-crustal xenoliths in the north Andean arc”.
2019	UCLA SIMS workshop travel grants to PhD students Lisa Grohn and undergraduate Hannah Tompkins.
2018	GSA graduate student award and Lipman Research Award to PhD student Lisa Grohn: “Petrogenesis and eruptive history of xenolith-bearing magmas in the north Andean volcanic zone: insight for lower-crust processes in active continental arcs”.
2018	GSA Northeastern Section undergraduate student award to Hannah Tompkins: “Evaluating Intra-crystalline Zr Stable Isotope Zonation in a Zircon Megacryst”.

**GRADUATE THESIS DEFENSE COMMITTEES (INVITED AS EXTERNAL EVALUATOR)**

Maria F. Almanza, MSc, Universidad Nacional de Colombia (Bogotá)	2016–2017
Yuly T. Valencia, PhD, CICESE Research Institute, Baja California, Mexico	2018–
Jose A. Franco, PhD, Universidad Nacional de Colombia (Bogotá)	2019–

**SYNERGISTIC ACTIVITIES AND ACADEMIC SERVICE**

Scientific Journal Reviewer

ACS Analytical Chemistry, AGU Monographs, Geology, Geochimica et Cosmochimica Acta, Lithos, Frontiers in Earth Science, G-cubed, GSA Bulletin, Tectonics, Earth and Planetary Science Letters, Precambrian Research, Geostandards and Geoanalytical Research, Gondwana Research, Journal of South American Earth Sciences, Brazilian Journal of Geology, Mexican Journal of Geological Sciences, Andean Geology, Colombian Journal of Earth Sciences, Venezuelan Journal of Earth Sciences

Funding Agency Reviewer (*ad-hoc* and/or panel member)

2019 – U.S. National Science Foundation  
2018 – U.S. National Science Foundation  
2017 – U.S. National Science Foundation  
2016 – U.S. National Science Foundation  
2016 – Colombian National Science Foundation (Colciencias)

Professional Affiliations

American Geophysical Union  
Colombian Geological Society  
Geological Society of America  
Mineralogical Association of Canada  
Mineralogical Society de America

**CURRENT AND RECENT COLLABORATORS (ACTIVE IN LAST 48 MONTHS)**

Elias Bloch – University of Lausanne (SWI)  
Patrick Boehnke – University of Chicago (USA)  
Samuel Bowring – Massachusetts Institute of Technology (USA)  
William (Will) Clyde – University of New Hampshire (USA)  
Nicholas Dauphas – University of Chicago (USA)  
Michael P. Eddy – Princeton University (USA)  
Antonio Garcia-Casco – University of Granada (Spain)  
Carlos Garrido – Instituto Andaluz de Ciencias de la Tierra, Granada (Spain)  
T. Mark Harrison – UCLA (USA)  
Oliver Jagoutz – Massachusetts Institute of Technology (USA)  
Alejandro Mora – Hocol (Colombia)  
Andres Mora – Ecopetrol (Colombia)  
Othmar Müntener – University of Lausanne (SWI)  
Alex Pullen – Clemson University (USA)  
Blair Schoene – Princeton University (USA)  
Pulak Sengupta – Jadavpur University (India)  
Ulf Söderlund – Lund University (Sweden) and Swedish Museum of Natural History  
Caroline Strömberg – University of Washington (USA)  
François Tissot – California Institute of Technology (USA)  
Franco Urbani – University of Caracas (Venezuela)  
Jeffrey Vervoort – Washington State University (USA)  
John Valley – University of Wisconsin (USA)  
Gene Yogodinski – University of South Carolina (USA)  
Peter Wilf – Pennsylvania State University (USA)

**ON THE NEWS**

- (08/21/2019) Single-crystal  $^{238}\text{U}/^{235}\text{U}$  measurements of Jack Hills zircon rule out widespread natural nuclear reactors in the Hadean Earth (<https://www.chemistryworld.com/news/uranium-isotopes-in-ancient-grains-indicate-early-earth-was-less-hellish-than-textbook-descriptions/3010869.article>)
- (09/05/2019) The science outreach book “*Hace Tiempo*” is awarded the Alejandro Ángel Escobar award, one of the highest recognitions to science in Colombia ([https://www.elespectador.com/noticias/ciencia/estos-son-los-ganadores-de-los-premios-de-ciencias-mas-importantes-de-colombia-articulo-879712?fbclid=IwAR1UbdYkncAFhkOCgltHx7-ri6HI7B60JTIXh8F94VhSkq\\_cVJXrGF4vfA](https://www.elespectador.com/noticias/ciencia/estos-son-los-ganadores-de-los-premios-de-ciencias-mas-importantes-de-colombia-articulo-879712?fbclid=IwAR1UbdYkncAFhkOCgltHx7-ri6HI7B60JTIXh8F94VhSkq_cVJXrGF4vfA))
- (12/19/2019) Zr stable isotope variability in magmatic systems may provide a new way to probe the chemical evolution of Earth’s crust (<https://phys.org/news/2019-12-insights-formation-earth-crust.html>)
- (08/31/2020) Fossil trunks, leaves and pollen in Neogene strata in southern Peru document rapid uplift of the Central Andean Plateau and establishment of the earliest Puna-like ecosystems (National Geographic Latin America: <https://www.nationalgeographic.com/ciencia/2020/08/exploradores-arbol-fossil-10-millones-de-anos-ofrece-pistas-sobre-andes-peruanos>)

**INTERESTS OUTSIDE OF ACADEMIA**

Outside of work I very much enjoy the outdoors, road biking, hiking and camping. I am a certified advanced scuba diver, sailing enthusiast and co-founder of an independent record label.

## PUBLICATION RECORD

(*Google Scholar h-index: 21; Citations in 2020:320; Total citations: 1367; as of 03/09/2021*)

† = denotes student author

†† = denotes primary PhD advisee

§ = denotes post-doc author

## OUTREACH PUBLICATIONS

1. **Ibañez-Mejia, M.**, (2018) Precámbrico: Cuando se formo la Tierra y apareció la vida? In: Jaramillo, C. y Oviedo, L.H. (Eds.). *Hace tiempo. Un viaje paleontológico ilustrado por Colombia*. Instituto Alexander von Humboldt e Instituto Smithsonian de Investigaciones Tropicales. Bogotá, D.C., Colombia. 124 p. Open-access download at <http://repository.humboldt.org.co/handle/20.500.11761/34291>. (This multi-authored book received the ‘Angel Escobar award’, the highest recognition to scientific achievement in Colombia)

## SUBMISSIONS UNDER REVIEW/REVISION

1. Navarro, M. S., Tonetto, E. M., Oliveira, E. P., **Ibañez-Mejia, M.**, Talavera, C. R., McNaughton, N. J., (*revised version in review*). Peixe Zircon: a new Brazilian reference material for quality control of U-Pb geochronology by LA-ICP-MS. Submitted to *Geostandards and Geoanalytical Research*

2. Klaver, M.§, MacLennan, S.A.§, **Ibañez-Mejia, M.**, Tissot, F.L.H., Vroon, P.Z., Millet, M-A. (*in review*) Reliability of detrital marine sediments as proxy for continental crust composition: the effects of hydrodynamic sorting on Ti and Zr isotope systematics. Submitted to *Geochimica Et Cosmochimica Acta*

3. **Ibañez-Mejia, M.**, Tissot, F.L.H. (*in review*) Reading the isotopic code: insights from heavy isotope systems. *Elements*

4. Tissot, F.L.H., **Ibañez-Mejia, M.**, (*in review*) Unlocking the single-crystal record of heavy stable isotopes. *Elements*

## PUBLICATIONS IN THE PEER-REVIEWED SCIENTIFIC LITERATURE

41. 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. <http://doi.org/10.1016/j.gca.2020.09.028>.

40. Amaya López, C.†, Restrepo Álvarez, J. J., Weber Scharff, M., Cuadros Jiménez, F. A., Botelho, N. F., **Ibañez-Mejia, M.**, Maya Sánchez, M., Pérez Parra, O. M., & Ramírez Cárdenas, C. (2020). The Guaviare Complex: new evidence of Mesoproterozoic (ca. 1.3 Ga) crust in the Colombian Amazonian Craton. *Boletín Geológico*, (47), 5-34. <https://doi.org/10.32685/0120-1425/boletingeo.47.2020.502>

39. Basu, A., Chakrabarty, P., Szymanowski, D., **Ibañez-Mejia, M.**, Schoene, B., Ghosh, N., Georg, B., (2020) Widespread silicic and alkaline magmatism synchronous with the Deccan Traps flood basalts, India. *Earth and Planetary Science Letters*, 552, 116616. <http://doi.org/10.1016/j.epsl.2020.116616>.

38. Martínez, C. †, Jaramillo, C., Correa-Metrío, A., Crepet, W., Moreno, E., Aliaga, A., Moreno, F., Ibañez-Mejia, M., Bush, M. (2020) Neogene climate, vegetation, and elevation history of the Central Andean Plateau. *Science Advances* 6(35), eaaz4724.

37. Bloch, E. M., Jollands, M. C., Devoir, A., Bouvier, A-S., **Ibañez-Mejia, M.**, Baumgartner, L. (2020) Multispecies diffusion of yttrium, rare earth elements and hafnium in garnet. *Journal of Petrology*, 61 (7), 1–29.

36. Tompkins, H.G.D.††, Zieman L.J.††, **Ibañez-Mejia, M.**, Tissot, F.L.H. (2020) Zirconium stable isotope analysis of zircon by MC-ICP-MS: Methods and application to evaluating intra-crystalline zonation in a zircon megacryst. *Journal of Analytical Atomic Spectrometry*, 35, 1167–1186.
35. **Ibañez-Mejia, M.**, Restrepo, J.J., Garcia-Casco, A. (2020) Tectonic juxtaposition of Triassic and Cretaceous meta-(ultra)mafic complexes in the Central Cordillera of Colombia (Medellin area) revealed by zircon U-Pb geochronology and Lu-Hf isotopes. Invited chapter to the book “Geocronologia e Evolução Tectônica do Continente Sul-Americano: a contribuição de Umberto Giuseppe Cordani (ENG: Geochronology and Tectonic Evolution of the South American Continent: honoring the contributions of Prof. Umberto G. Cordani)”, Eds. Bartorelli, A. Teixeira, W., de Brito Neves, B.B., pp 418 - 443.
34. **Ibañez-Mejia, M.**, (2020) The Putumayo Orogen of Amazonia: A synthesis. In: Gómez, J. & Mateus-Zabala, D. (editors), *The Geology of Colombia, Volume 1 Proterozoic – Paleozoic*, p. 101–131.
33. **Ibañez-Mejia, M.**, & Cordani, U.G. (2020). Zircon U–Pb geochronology and Hf–Nd–O isotope geochemistry of the Paleo– to Mesoproterozoic basement in the westernmost Guiana Shield. In: Gómez, J. & Mateus–Zabala, D. (editors), *The Geology of Colombia, Volume 1 Proterozoic – Paleozoic*, p. 65–90.
32. Uruña–Suárez, C.L., Peña–Uruña, M.L., Muñoz–Rocha, J.A., Rayo–Rocha, L.P., Villamizar–Escalante, N., Amaya–Ferreira, S., **Ibañez–Mejia, M.** & Bernet, M. (2020). Zircon U–Pb and fission–track dating applied to resolving sediment provenance in modern rivers draining the Eastern and Central Cordilleras, Colombia. In: Gómez, J. & Mateus–Zabala, D. (editors), *The Geology of Colombia, Volume 3 Paleogene – Neogene*, p. 469–490.
31. Mora–Bohórquez, J.A., Oncken, O., Le Breton, E., **Ibañez–Mejia, M.**, Veloza, G., Mora, A., Vélez, V. & De Freitas, M. (2020). Formation and evolution of the Lower Magdalena Valley Basin and San Jacinto fold belt of northwestern Colombia: Insights from Upper Cretaceous to recent tectono–stratigraphy. In: Gómez, J. & Mateus–Zabala, D. (editors), *The Geology of Colombia, Volume 3 Paleogene – Neogene*, p. 21–66.
30. **Ibañez-Mejia, M.**, Tissot, F.L.H. (2019) Extreme Zr stable isotope fractionation during magmatic fractional crystallization. *Science Advances*, 5(12), eaax8648.
29. Tissot, F., **Ibañez-Mejia, M.**, Boehnke, P., Dauphas, N., McGee, D., Grove, T., Harrison, T.M. (2019)  $^{238}\text{U}/^{235}\text{U}$  measurement in single-zircon crystals: implications for the Hadean environment, magmatic differentiation and geochronology. *Journal of Analytical Atomic Spectrometry*. p. 1–18. <http://doi.org/10.1039/C9JA00205G>
28. Mukherjee, S., Dey, A., Sanyal, S., **Ibañez-Mejia, M.**, & Sengupta, P. (2019). Bulk rock and zircon geochemistry of granitoids from the Chotanagpur Granite Gneissic Complex (CGGC): implications for the late Paleoproterozoic continental arc magmatism in the East Indian Shield. *Contributions to Mineralogy and Petrology*, 174(8), 1–17. <http://doi.org/10.1007/s00410-019-1601-7>
27. Dey, A. †, Karmakar, S., **Ibañez-Mejia, M.**, Mukherjee, S. †, Sanyal, S., Sengupta, P. (2019) Petrology and geochronology of a suite of pelitic granulites from parts of the Chotanagpur Granite Gneiss Complex, eastern India: Evidence for Stenian-Tonian reworking of a late Paleoproterozoic crust. *Geological Journal*, 48, 183–30. <http://doi.org/10.1002/gj.3552>
26. Jaramillo, S., Trouw, R. A. J., Duffles, P., da Costa, R. V., **Ibañez-Mejia, M.**, & Marimon, R. S. (2018). Structural analysis combined with new geothermobarometric and geochronological results of the Além Paraíba shear zone, between Três Rios and Bananal, Ribeira Orogen, SE Brazil. *Journal of South American Earth Sciences*, 90, 118–136. [doi:10.1016/j.jsames.2018.11.018](https://doi.org/10.1016/j.jsames.2018.11.018)
25. Eddy, M. P., **Ibañez-Mejia, M.**, Burgess, S. D., Coble, M. A., Cordani, U. G., DesOrmeau, J., Gehrels, G.E., Li, X., MacLennan, S., Pecha, M., Sato, K., Schoene, B., Valencia, V.A., Vervoort, J.D., Wang, T. (2018). GHR1 Zircon - A New Eocene Natural Reference Material for Microbeam U-Pb Geochronology and

Hf Isotopic Analysis of Zircon. *Geostandards and Geoanalytical Research*, 458, 37–20.  
doi:10.1111/ggr.12246

**24. Ibañez-Mejia, M.**, Pullen, A. Pepper, M., Ghoshal, G., Ibañez-Mejia: J.C. § (2018) Use and abuse of detrital zircon U-Pb geochronology – A case from the Río Orinoco delta, eastern Venezuela. *Geology*. doi:10.1130/G45596.1

**23. Pullen, A., Ibañez-Mejia, M.**, Gehrels, G. E., Giesler, D., & Pecha, M. (2018). Optimization of a Laser Ablation-Single Collector-Inductively Coupled Plasma-Mass Spectrometer (Thermo Element2) for Accurate, Precise, and Efficient Zircon U-Th-Pb Geochronology. *Geochemistry Geophysics Geosystems*, 332(1-2), 19. <http://doi.org/10.1029/2018GC007889>

**22. Ibañez-Mejia, M.**, Bloch, E. M., & Vervoort, J. D. (2018). Timescales of collisional metamorphism from Sm-Nd, Lu-Hf and U-Pb thermochronology: A case from the Proterozoic Putumayo Orogen of Amazonia. *Geochimica Et Cosmochimica Acta*, 235, 103–126. <http://doi.org/10.1016/j.gca.2018.05.017>

**21. Mukherjee, S. †, Dey, A. †, Ibañez-Mejia, M.**, Sanyal, S., Sengupta, P. (2018). Geochemistry, U-Pb geochronology and Lu-Hf isotope systematics of a Suite of A-Type Granitoids from the Chotanagpur Granite Gneissic Complex (CGGC): Implications for Mesoproterozoic Crustal Extension in the East Indian Shield. *Precambrian Research* 305, pp. 40-63, doi: 10.1016/j.precamres.2017.11.018

**20. Mora-Bohorquez, J.A. †, Oncken, O., Le Breton, E., Ibañez-Mejia, M.**, Faccena, C., de Freitas, M., Veloza, G., Vélez, V., Mesa, A. (2017). Linking Late Cretaceous to Eocene tectono-stratigraphy of the San Jacinto fold belt of NW Colombia with Caribbean plateau collision and flat subduction. *Tectonics* 36 (11), pp. 2599-2629, doi: 10.1002/2017TC004612

**19. Bloch, E. §, Ibañez-Mejia, M.**, Murray, K., Vervoort, J., Müntener, O. (2017) Recent crustal foundering in the Northern Volcanic Zone of the Andean arc: Petrological insights from the roots of a modern subduction zone. *Earth and Planetary Science Letters* 476, pp. 47-58, doi: 10.1016/j.epsl.2017.07.041

**18. Harris E.B. †, Strömberg, C.A.E., Sheldon, N.D., Smith, S.Y., Ibañez-Mejia, M.**, (2017). Revised chronostratigraphy and biostratigraphy of the early-middle Miocene Railroad Canyon Section of central-eastern Idaho, USA. *Geological Society of America Bulletin*, B31655.1

**17. Eddy, M.P. †, Jagoutz, O., Ibañez-Mejia, M.** (2017). Timing of initial seafloor spreading in the Newfoundland-Iberia rift. *Geology*, G38766.1

**16. Krause, J.M., Clyde, W.C., Ibañez-Mejia, M.**, Schmitz, M.D., Barnum, T., Bellosi, E.S., Wilf, P. (2017). New age constraints for early Paleogene strata of central Patagonia, Argentina: implications for the timing of South America Land Mammal Ages. *Geological Society of America Bulletin*, B31561.1

**15. Mukherjee, S. †, Dey, A. †, Sanyal, S., Ibañez-Mejia, M.**, Dutta, U., Sengupta, P. (2017). Petrology and U-Pb geochronology of zircon in a suite of charnockitic gneisses from parts of the Chotanagpur Granite-Gneiss Complex (CGGC): Evidence for reworking of a Mesoproterozoic basement during the formation of the Rodinia Supercontinent. *Journal of the Geological Society of London*

**14. Mora-Bohorquez, J.A. †, Ibañez-Mejia, M.**, de Freitas, M., Oncken, O., Vélez, V., Mesa, A., Serna, L. (2017). Structure and Age of the Lower Magdalena Valley Basin Basement, Northern Colombia: New Reflection-Seismic and U-Pb-Hf Insights Into the Termination of the Central Andes Against the Caribbean Basin. *Journal of South American Earth Sciences* 74, pp. 1-26, doi: 10.1016/j.jsames.2017.01.001

**13. Dey, A. †, Mukherjee, S. †, Sanyal, S., Ibañez-Mejia, M.**, Sengupta, P. (2017). Deciphering Sedimentary provenance and timing of sedimentation from a suite of metapelites of the Chotanagpur Granite Gneissic Complex, India: Implications for Proterozoic tectonics in the East-Central part of the Indian Shield, in Mazumder, R. (Ed.): *Sediment Provenance – Influences on Compositional Change from Source to Sink*, Chapter 16, pp. 453-486, Elsevier.

12. Pepper, M., Gehrels, G.E., Pullen, A., **Ibañez-Mejia, M.**, Kapp, P. (2016). Magmatic History and Crustal Genesis of Western South America: Constraints from U-Pb ages and Hf isotopes of detrital zircons in modern rivers. *Geosphere* 12(5), 24 p., doi:10.1130/GES01315.1
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**Abstracts and meetings (last 5 years)**

60. Ziemann, L.J. ††, **Ibañez-Mejia, M.**, Tissot, F.L.H., Tompkins, H.G.D. ††, Pardo, N., Bloch, E. (2019) The zirconium stable isotope systematics of continental crust formation in an active continental arc. *AGU national meeting, San Francisco, USA*

59. **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 national meeting, San Francisco, USA.*

58. Kirkpatrick, H. M. †, Harrison, T.M., Liu, M-C., Bell, E.A., Tissot, F. L. H., **Ibañez-Mejia, M.** (2019) In situ  $\delta^{94/90}\text{Zr}$  variations in zircon as an indicator of magmatic differentiation. *AGU national meeting, San Francisco, USA.*

57. 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 national meeting, San Francisco, USA.*

56. Tissot, F.L.H., **Ibañez-Mejia, M.**, Boehnke, P., Dauphas, N., McGee, D., Grove, T., Harrison, T.M. (2019) Single-grain  $^{238}\text{U}/^{235}\text{U}$  measurements in early Earth zircons: Implications for the Hadean environment, ~~SEP~~ magmatic differentiation and geochronology. *AGU national meeting, San Francisco, USA.*

55. **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? *Goldschmidt meeting, Barcelona, Spain.*

54. Tissot, F.L.H., **Ibañez-Mejia, M.**, Boehnke, P., Dauphas, N., McGee, D., Grove, T., Harrison, T.M. (2019) Single-grain  $^{238}\text{U}/^{235}\text{U}$  measurements in early Earth zircons. *Goldschmidt meeting, Barcelona, Spain.*

53. Kirkpatrick, H. M. †, Harrison, T.M., Liu, Tissot, F. L. H., **Ibañez-Mejia, M.** (2019) In situ  $\delta^{94/90}\text{Zr}$  variations in zircon. *Goldschmidt meeting, Barcelona, Spain.*

52. Tompkins, H. G. D. ††, **Ibañez-Mejia, M.**, Tissot, F. L. H. (2019) Evaluating intra-crystalline Zr stable isotope zonation in a zircon megacryst. Geological Society of America, Northeastern Section, Abstracts with program. doi: 10.1130/abs/2019NE-328186

51. Tompkins, H. G. D. ††, **Ibañez-Mejia, M.** (2019) What can zirconium stable isotopes in zircon tell us? National Conference of Undergraduate Research, Kennesaw State University, Kennesaw, GA.

50. **Ibañez-Mejia, M.** (2018) Proterozoic assembly of the western Guyana Shield: Evidences from its U-Pb-Hf-O isotopic record. *Invited talk at Geological Society of America meeting, Indianapolis, USA.*

49. Grohn, L.J. ††, **Ibañez-Mejia, M.** (2018) Fingerprinting Crustal Foundering in the North Andean Volcanic Zone Using Basalt Geochemistry. *Geological Society of America meeting, Indianapolis, USA.*

48. **Ibañez-Mejia, M.**, Tissot, F.L.H. (2018) An Isotope System From Scratch. *Invited lecture for pre-conference workshop at Goldschmidt meeting, Boston, USA.*

47. **Ibañez-Mejia, M.**, Tissot, F.L.H. (2018) Zr stable isotope fractionation during magmatic processes. *Goldschmidt meeting, Boston, USA.*

46. Basu, A.R., Chakrabarty, P., **Ibañez-Mejia, M.**, Georg, R.B., Ghosh, N. (2018) U-Pb zircon ages of Deccan Acid Igneous Complexes and their temporal relationship with the Cretaceous-Paleogene boundary. *Goldschmidt meeting, Boston, USA.*

45. Pullen, A., **Ibañez-Mejia, M.**, Gehrels, G.E., Ibañez-Mejia, J.C. (2018) What's the big deal with Large-*n* U-Pb geochronology? *GSA Southeastern section meeting 2018, Knoxville - Tennessee*.
44. **Ibañez-Mejia, M.**, DesOrmeau, J.W., Eddy, M.P., Kitajima, K., Valley, J.W. (2017) The oxygen isotope composition of baddeleyite and a test of crystal orientation effects during SIMS analysis. *AGU annual meeting 2017, New Orleans – Louisiana*.
43. DesOrmeau, J.W., **Ibañez-Mejia, M.**, Lafuente, B., Eddy, M.P., Trail, D., Wang, Y. (2017) Testing the crystalline integrity of baddeleyite: A systematic EBSD and confocal laser–Raman spectroscopy study. *AGU annual meeting 2017, New Orleans – Louisiana*.
42. Bloch, E., **Ibañez-Mejia, M.**, Vervoort, J.D., Müntener, O., Murray, K. (2017) Caught in the act: Crustal foundering documented by thermobarometric, Lu-Hf and U-Pb data from Colombian xenoliths. *AGU annual meeting 2017, New Orleans – Louisiana*.
41. Eddy, M.P. §, **Ibañez-Mejia, M.** (2017). GHR1 – A new Eocene natural reference material for U-Pb and Hf isotopic measurements in zircon. *AGU annual meeting 2017, New Orleans – Louisiana*.
40. Strömberg, C A.E., Fredrickson, E.K., Harris, E.B., Caledo, J.J., **Ibañez-Mejia, M.**, Rasmussen, D.L., Sheldon, N.D., Smith, S.Y. (2017). Refining the timing for the mid-Cenozoic grassland expansion in the continental interior of the U.S. *GSA national meeting 2017, Seattle - Washington*.
39. Eddy, M.P. §, **Ibañez-Mejia, M.** (2017). GHR1 – A new Eocene natural reference material for U-Pb and Hf isotopic measurements in zircon. *GSA national meeting 2017, Seattle - Washington*.
38. **Ibañez-Mejia, M.**, Bloch, E.M. §, Murray, K.E. §, Vervoort, J.D., Müntener, O. (2017) A Quaternary xenolith record of lower-crustal pyroxenite formation and foundering in the Andean arc. *Goldschmidt meeting, Paris, France*.
37. Mukherjee, S. †, **Ibañez-Mejia, M.**, Dey, A., Sanyal, S., Sengupta, P. (2017) Petrogenesis of A-type granitoids in the Chotanagpur Granite-Gneiss Complex (CGGC): Evidence for Mesoproterozoic extension in the Indian shield. *Goldschmidt meeting, Paris, France*.
37. Constenius, K., McGimsey, G., Valencia, V., **Ibañez-Mejia, M.**, Domanik, K. (2017). Peperite in the Purcell Lava and a revised age of the Upper Proterozoic Belt-Purcell Supergroup. *GSA Rocky Mountain Section, 69th Annual Meeting, Calgary, Canada*.
35. **Ibañez-Mejia, M.**, Bloch, E., Vervoort, J., Ganguly, J. (2016). Timescales of collisional metamorphism from combined Sm-Nd, Lu-Hf and U-Pb thermochronology. *GSA national meeting 2016, Denver - Colorado*.
34. **Ibañez-Mejia, M.**, Bloch, E., Vervoort, J., Ganguly, J. (2016). Timescales of orogenic metamorphism from combined Sm-Nd, Lu-Hf and U-Pb thermochronology. *10<sup>th</sup> South American Symposium on Isotope Geology (SSAGI). Puerto Vallarta, Mexico*.