

## **Oliver Jagoutz**

### *Curriculum Vitae*

*Professor of Geology, MIT*

#### **RESEARCH INTERESTS**

Natural process of carbon sequestration, interplay tectonics, magmatic systems and atmospheric conditions, formation and evolution of planetary crust, petrology and geochemistry,

#### **DEGREES**

- 2004 Ph.D. Geology, Swiss Federal Institute of Technology (ETH),  
Zurich, Switzerland (Supervisor J.P. Burg) (Title: The Zoned Ultramafic  
Complexes of the Kohistan paleo-Island arc)
- 2000 Diplom, Geology, University of Mainz, Germany

#### **EMPLOYMENT**

- 2021- Full Professor  
Massachusetts Institute of Technology, Cambridge, MA
- 2016-2021 Tenured Associate Professor  
Massachusetts Institute of Technology, Cambridge, MA
- 2014-2016 Associate Professor  
Massachusetts Institute of Technology, Cambridge, MA
- 2008-2014 Assistant Professor,  
Massachusetts Institute of Technology, Cambridge, MA
- 2005-2007 Postdoctoral Researcher, University of Bern, Switzerland
- 2003 Visiting Research Scientist, Tokyo Institute of Technology, Japan
- 2000-2004 Graduate Research Assistant, Swiss Federal Institute of Technology (ETH),  
Zurich, Switzerland
- 1998 Summer Internship at the Geological Survey of Austria
- 1991-1993 Nurse, Johannes Guttenberg University Hospital, Mainz, Germany

#### **HONORS AND AWARDS**

- 2016 VAMOS visiting scientist, University of Mainz, Germany
- 2008-2011 Kerr-McGee Assistant Professor, Massachusetts Institute of Technology,  
Cambridge, MA
- 2003 Visiting Research Scientist, Tokyo Institute of Technology, Japan
- 2002 Tokyo Tech Award, Swiss Federal Institute of Technology (ETH),  
Zurich, Switzerland
- 1999 Erasmus Scholar, European Union
- 1997 Fellowship for Young Researchers, University of Mainz, Germany

## **FIELD EXPERIENCE**

I have extensive experience in field work in various geological settings including remote and politically unstable areas: Among others in Achaean high grade metamorphic terrains/greenstone belts (NE Zimbabwe), in foreland fold and thrust belts (Glarus Alps, Switzerland), in the Basin and Range province (Western US), in the Betic-Rift (NE Morocco) and in Island arc magmatic complexes (Himalayan orogeny, NE Pakistan, NW India, Mongolia).

## **SEAGOING EXPERIENCE**

I was watch leader on the 2012 ‘KAPOW’ cruise (Kane-Atlantis Petrological Ocean-ridge Work) to the Mid Atlantic ridge (PI Langmuir). Aim of the expedition was to study possible petrologic differences of symmetric and asymmetric spreading ridge segments between the Kane and Atlantis fracture zones (24°- 30° N).

## **TEACHING EXPERIENCE**

At the Massachusetts Institute of Technology:

- 12.001 Introduction into Geology
- 12.113 Structural Geology
- 12.114 Field Geology
- 12.115 Field Camp
- 12.491 Special Seminar in Geology
- 12.474 Origin & Evolution of the Continental Crust

I organized various multi-day field excursions to the Swiss Alps, Kohistan arc, Pakistan and the Ladakh arc, India. I was a co-organizer of the 2010 WHOI geodynamic seminar and the subsequent fieldtrip. Every year I lead the MIT field camp in the western US during IAP. In 2011 and 2013 I organized excursions for 30+ people to the western Himalayas.

## **STUDENTS AND POSTDOCS SUPERVISED:**

**Current PhD students (anticipated dates of defense):** Zachary Molitor (MIT, 2024), Joshua Murray (MIT, 2024), Hongze Bo (2027)

### **Past:**

#### ***PhD and Master:***

Craig Martin (MIT, 2023, *now Assistant Professor UT Austin*), William Shinevar (MIT/WHOI Joint Program, co-supervised with M. Behn; 2021), Harry Matchette-Downes (MIT, second general; 2021), Max Collinet (MIT, second general; 2020; *now at German Aerospace Center*); Benjamin Klein (MIT, 2018; *now postdoc at Boston College*); Emilie Bowman, Master (MIT, 2018; *now at the University of Arizona*), Michael Eddy (MIT, co-supervised with S. Bowring; 2016, *now Assistant Professor at Purdue*), Claire Bucholz, PhD (MIT/WHOI Joint Program, 2015; *now Assistant Professor at Caltech*), Katie Pesce, Master (MIT, 2013, *now private industry*), Christian Manthei, Master (MIT, 2012, *now chef*), Jessica Stanley, Masters (MIT, 2009 *now Assistant Professor at University of Idaho*), Alex Gysi, Master (ETH Zurich, 2007; *now Assistant Professor at Colorado Schools of Mines*), Andreas Enggist, Master (ETH Zurich, 2007; *now Assistant Professor at University of Alberta*)

### **Senior Thesis:**

James Pershken 2015 (MIT), Benjamin Thompson 2013 (MIT), Anna Brunner 2012 (MIT), Alison Piaseki 2009 (MIT), Lukas Martin 2007 (University of Bern).

### **Postdocs:**

**Current:** Cameron Murphy (2023-), Renas Kohsnaw (2024-), Juliet Ryan Davis (2024-), Prasenjit Ghosh (2024-)

**Past:** Tushar Mital (2020-2022, *Crosby Postdoc*, now faculty at Penn State), Ze Liu (2020-2022 *Chinese Government Fellowship*, now professor at the University of China, Beijing); Hervé Rezeau (2018-2022 *SNF mobility Postdoc*, now faculty at University of Arizona) Liang Guo (2018-2020 Chinese Government Scholarship); Mauricio Ibanez-Mejia (Jan 2015- 2017 *Crosby Postdoc*, now faculty of University of Arizona); Nicholas Van Buer (Jan 2012—April 2013; now Professor at Cal Poly Pomona); Antonio M. Alvarez-Valero (June 2010—Dec 2010; now full professor at the University of Salamanca, Spain); Pierre Bouilhol (2008—2010; now Maitre de Conference University of Nantes, France)

**Recent UROPs and Summer Interns (not complete):** Megan Gunther (2019), Jade Fischer (2018), L. Dove (2015), A. Jeager (2014), A. Shi-Yong (2013), Q. Yan (2013), K. Kochanski (2013), A. Thomas (2013), J. Pershken (2012, 2013), A. Bockelie (2012), B. Thompson (2012), F. Wu (2012), S. Diehl (2011), S. Whittemore (2010)

### **Recent thesis committee and general exam member:**

Emmanuel Codillo (MIT/WHOI), Ekatarina Bolotskaya (MIT), Eva Golos (MIT), B. Klein (MIT), Mike Eddy (MIT), A. Bauer (MIT), M. Shangshang (BU), B. Klein (MIT); D. Yang (MIT); N. Dixon (MIT), B. B. Black (MIT), E. Shea (MIT); C. B. Till (MIT), A. Terminel (MIT), M. Eddy (MIT), A. Andrews (MIT), M. Slim (MIT), G. Garapic (BU), S. Brown (MIT)

## **SOCIETY MEMBERSHIP**

American Geophysical Union (AGU)  
European Geoscience Union (EGU)  
Geochemical Society

## **SYNERGISTIC ACTIVITIES**

Internal to MIT:

2023- Chair of EAPS Climate and (sustainable) natural resources Faculty Search Committee  
2023- Chair of the Energy Education Task Force (EETF)  
2021- Chair of the Program in Geology, Geochemistry and Geobiology at EAPS, MIT  
2021-2022 Chair of the EAPS Geochemistry Faculty Search Committee  
2019-2021 Member of the Subcommittee on the Communication Requirement  
2019-2022 Chair of the Joint Program committee in Marine Geology and Geophysics  
2016-2022 Member of the Joint Program Committee in Marine Geology and Geophysics  
2018-2019 Member of the EAPS Solid Earth Search Committee  
2017-2019 Member of the EAPS Diversity Council  
2016 Invited Lecturer on the 2016 MIT German Alumni Club K-12 conference

2015-2017 Member of the EAPS ad-hoc Committee on Undergraduate Education  
 2014-2015 Member of the EAPS Solid Earth Search Committee  
 2014 Invited Lecturer at the 2014 MIT German Alumni Club K-12 conference: “Wie Entstehen Kontinente?” *invited Keynote (in German)* Erfurt, Germany  
 2014 Invited Lecturer at the MIT New York Alumni Club “Unraveling some mysteries of Continental Crust formation” Hayden Planetarium, American Museum of Natural History, New York, NY  
 2012-2014 Member of the EAPS ad-hoc Committee on Graduate Education  
 2011-2014 Member of the WHOI/MIT Committee for Marine Geology and Geophysics  
 2011-2012 Member of the EAPS Geophysics Search Committee  
 2011-2012 Member of the EAPS ad-hoc Committee on Undergraduate Education

External:

2021 Chair of AGU Bucher Medal Committee  
 2020 Chair of AGU Bucher Medal Committee  
 2019 Chair of AGU Bucher Medal Committee  
 2018 Chair of AGU Bucher Medal Committee  
 2016 Member AGU Bucher Medal Committee  
 2015- Editor *Frontiers*  
 2014 NSF Panel member for Petrology and Geochemistry  
 2012-2015 Associate Editor *Terra Nova*  
 2011-2012 Secretary of Geochemistry Division of the European Geosciences Union

Regular proposal reviewer for NSF, NERC, Swiss National Science Funds etc.

Regular paper reviewer for *Nature*, *Science*, *Geology*, *Earth and Planetary Science Letters*, *Journal of Petrology*, *JGR*, *Contribution to Mineralogy and Petrology*, *Chemical Geology* etc.

**WORKSHOP AND CONFERENCE ORGANIZATION**

2023 Steering Committee: Hutton Symposium on Granites and Related Rocks  
 Baveno, Italy  
 2021 Theme Chair: “Continental Crust Formation and Evolution”,  
 V. M. Goldschmidt Conference, Lyon, France  
 2019 Convener: “Origin and Evolution of the Continental Crust”  
 AGU Fall Meeting, San Francisco, CA  
 2018 Convener: “Formation of felsic rocks in different tectonic setting through time”  
 AGU Fall Meeting, San Francisco, CA  
 2014 Convener: “The Making of a Continent”  
 AGU Fall Meeting, San Francisco, CA  
 2014 Convener: “The scum of the Earth - the composition of the continental crust and mechanisms for its production through time”  
 V. M. Goldschmidt Conference, Sacramento, USA  
 2014 Convener: “The dynamics of margins of continents”  
 V. M. Goldschmidt Conference, Sacramento, USA  
 2013 Convener: “Deep crustal processes in magmatic arcs”  
 AGU Fall Meeting, San Francisco, CA  
 2013 Convener: “Understanding the Lower Continental Crust: Where are We Now?”  
 V. M. Goldschmidt Conference, Florence, Italy  
 2012 Convener: “Extraction of crust from the mantle through time: from the Archean to the present”

- V. M. Goldschmidt Conference, Montreal, Canada
- 2011 Theme Chair: “Continental Crust Formation and Evolution”,  
V. M. Goldschmidt Conference, Prague, Czech Republic
- 2011 Convener: “Petrologic, Geochemical and Tectonic Links between the Continental Crust and Lithospheric Mantle”,  
V. M. Goldschmidt Conference, Prague, Czech Republic
- 2009 Convener: “Field, Petrological, Textural, Geochemical and Rheological Approaches to Understand Mantle Processes: A New Look at Old Problems”  
AGU Fall Meeting, San Francisco, CA
- 2008 Convener: “The Influence of Geologic Processes in the Lower Continental Crust and Upper Mantle on Crustal Formation and Mantle Geochemistry From Field, Petrological, Geochemical, and Geophysical Perspective”  
AGU Fall Meeting, San Francisco, CA

### **SELECTED INVITED PRESENTATIONS**

- 2022 “New Constraints on the India-Kohistan/Ladakh-Eurasia collision and its influence on the global climate” University of Arizona Department Seminar
- 2022 “The water content of modern arc magmas: A path to understand Archean tectonics?”  
Harvard EPS Department seminar
- 2021 “RICH and FAMOS: A tale of two melting regimes and their influence on copper deposits” Keynote for FAMOS meeting (UK consortium) (remote)
- 2021 “Do low latitude arc continent collision set the global climate ?” New Mexico Tech (remote)
- 2020 “Build-up of arc crust (and hence Continental Crust....)” UC Santa Babara
- 2020 “Continental Crust formation in the Archean vs modern times” *invited Keynote*  
EGU Conference, Vienna, Austria
- 2019 “The evolution of the India Eurasia collision in the western Himalaya” *invited Keynote*  
EGU Conference, Vienna, Austria
- 2019 “Build-up of arc crust (and hence Continental Crust....)” *invited Keynote*  
GeoPrisms workshop, Austin TX
- 2019 “Low-latitude arc–continent collision as a driver for global cooling”  
The Van Tuyl Lecture at Colorado School of Mines
- 2018 “Build-up of arc crust (and hence Continental Crust....)” *invited Keynote*  
GeoPrisms ExTerra workshop, Washington D.C.
- 2018 “Low-latitude arc–continent collision as a driver for global cooling”  
The Harrington STEM Lecture at STUNY New Paltz
- 2018 “Low-latitude arc–continent collision as a driver for global cooling” Princeton University
- 2018 “On the importance of crystallization-differentiation for the generation of SiO<sub>2</sub>-rich melts and the compositional build-up of arc (and continental) crust” *invited Keynote*  
EGU Conference, Vienna, Austria
- 2018 “Low-latitude arc–continent collision as a driver for global cooling” Harvard University
- 2018 “Low-latitude arc–continent collision as a driver for global cooling” Colby College
- 2016 “Low-latitude arc–continent collision as a driver for global cooling” University of Mainz, Germany

- 2016 “Low-latitude arc–continent collision as a driver for global cooling” Woods Hole Oceanographic Institute
- 2016 “The India-Asia collision, the view from the west” Redcliff Seminar, Harvard University
- 2015 “Continental Crust formation as constrained by modern arc processes” *invited Keynote*  
GSA Conference, Baltimore, Maryland
- 2015 “It takes two to tango: The origin of the super fast India-Eurasia convergence rates”  
Rutgers University, NJ
- 2015 “Why do Intermediate Magmas Stall?” *invited Keynote*  
V. M. Goldschmidt Conference, Prague, Czech Republic
- 2014 “Unraveling some mysteries of Continental Crust formation”  
University of Mainz, Germany
- 2014 “It takes two to tango: The origin of the super fast India-Eurasia convergence rates.”  
UC Davis, CA
- 2014 “It takes two to tango: The origin of the super fast India-Eurasia convergence rates.”  
Woods Hole Oceanographic Institution, MA
- 2014 “Why do melts stall?” *invited Keynote*  
V. M. Goldschmidt Conference, Sacramento, CA
- 2014 “Unraveling some mysteries of Continental Crust formation”  
Physics Department, MIT, Cambridge MA
- 2013 “Unraveling some mysteries of Continental Crust formation”  
Caltech, Pasadena, CA
- 2013 “The origin of the superfast convergence rate between India and Eurasia and the timing of the India-Eurasia collision.” *invited Keynote*  
Stanford-USTC-MIT (SUM) Workshop Hefei, China
- 2013 “Constraints on mass fluxes in arcs and the origin of the continental Moho”  
Woods Hole Oceanographic Institution, MA
- 2013 “It takes two to tango: The origin of the super fast India-Eurasia convergence rates.”  
Department of Earth Sciences ETH Zurich
- 2012 “The arc delaminate: a geochemical reservoir twice the size of the continental crust”  
*invited talk* AGU Fall Meeting, San Francisco, CA
- 2012 “The formation of continental crust in arcs. Can it Work?”  
Department of Geology and Geophysics, Yale University, New Haven CT
- 2011 “The formation of the continental crust in arcs: a perspective from the lower arc crust”  
Lamont-Doherty Earth Observatory, Palisades, NY
- 2011 “How is continental crust formed in arcs?”  
Department of Earth Sciences, University of Southern California, CA
- 2011 “The 4D Evolution of the Kohistan-Ladakh Arc Batholith” *invited talk*  
AGU Fall Meeting, San Francisco, CA
- 2010 “The role of different liquid lines of descent for Continental Crust formations: Insights from the Kohistan Arc”  
Woods Hole Oceanographic Institution, MA
- 2010 “The composition of the modern juvenile arc crust and the nature of crustal delaminates in arcs” *invited talk*  
AGU Fall Meeting, San Francisco, CA
- 2010 “Deformation associated with melt percolation in the upper mantle: field, structural and petrological evidences from the Beni Bousera Ultramafic massif (NE Morocco).” *invited talk*

- GSA Conference, Denver, CO
- 2010 “Continental Crust formation mechanisms inferred from the Kohistan arc.”  
Department of Earth Sciences, Rice University, Houston, TX
- 2009 “Continental Crust formation mechanisms inferred from the Kohistan arc.”  
Department of Geosciences, Princeton University, Princeton, NJ
- 2009 “Dynamics of melt extraction channels? Evidence from the Beni Bousera ultramafic massif.” *invited talk*  
AGU Fall Meeting, San Francisco, CA
- 2009 “Continental Crust formation mechanisms inferred from the Kohistan arc.”  
Department of Earth Sciences, Memorial University,  
Newfoundland, Canada
- 2009 “Continental Crust formation mechanisms inferred from the Kohistan arc.”  
Department of Earth Sciences, Boston University, Boston, MA
- 2008 “The respective roles of flux- and decompression melting and their relevant liquid lines of decent for Continental Crust formation: evidences from the Kohistan arc.”  
Woods Hole Oceanographic Institution, MA
- 2008 “Magmatic activity in time and space within an embryonic magma-poor oceanic crust.”  
*invited talk* International Geological Congress, Oslo, Norway

### **RECENT COLLABORATORS**

L. Royden (MIT), L. Caricchi (University of Geneva), M. Schmidt (ETH Zurich), T. Grove (MIT), F. McDonald (UC Santa Barbara), M. Behn (Boston College), P. Kelemen (LDEO), J. Hancher (Memorial University), R. Upadhyay (Nanital University, India), J. Richards (University of Alberta), T. Becker (University of Texas, Austin), B. Jicha (University of Wisconsin-Madison).

### **PEER REVIEWED PUBLICATIONS**

- (60) J. Murray\*<sup>1</sup>, **O. Jagoutz** (2024): Olivine alteration and the loss of Mars’ early atmospheric carbon. *Science Advances* (*accepted pending revision*)
- (59) Z. Molitor\*, T. Mittal\*, **O. Jagoutz** (2024): The Viscosity of a Partially Molten Layer in a Paleo-Orogenic Plateau. *Earth and Planetary Science Letters* (*under review*)
- (58) Z. Molitor\*, L. Royden, **O. Jagoutz** (2024): Dynamic Pressure as the Primary Compensation Mechanism around Mantle Plume Swells. *Journal of Geophysical Research* (*under review*)
- (57) J. Murray\*, **O. Jagoutz** (2024): Palaeozoic cooling modulated by ophiolite weathering through organic carbon preservation *Nature Geoscience*, 17, 1, 88-93
- (56) A.H.M.J. Triaud, J. de Wit, F. Klein, B. V. Rackham, M. Turbet, P. Niraula, A. Glidden, **O. Jagoutz**, M. Pec, J.J. Petkowski, S. Seager, F. Selsis (2024): Atmospheric carbon depletion as a tracer of water oceans and biomass on temperate terrestrial exoplanets, *Nature Astronomy*, 8, 17-29

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<sup>1</sup> \*denote supervised student or postdoc

- (55) C. R. Martin\*, **O. Jagoutz**, R. Upadhyay, J.A. van Tongeren, P.A. Mueller, and B.P. Weiss (2023): Paleomagnetic constraints on the age of the Shyok Suture Zone. *Journal of Geophysical Research: Solid Earth* 128 (10), e2022JB026137
- (54) B.Z. Klein\*, **O. Jagoutz**, M.W. Schmidt, N. Kueter (2023): A Global Assessment of the Controls on the Fractionation of Arc Magmas. *Geochemistry, Geophysics, Geosystems* 24, 5, e2023GC010888
- (53) H. Rezeau\*, **O. Jagoutz**, P. Beaudry, G. Izon, P. Kelemen, S. Ono (2023): The role of immiscible sulfides for sulfur isotope fractionation in arc magmas: Insights from the Talkeetna island arc crustal section, south-central Alaska. *Chemical Geology* 10.1016/j.chemgeo.2023.121325
- (52) W. J. Shinevar\* E.M. Golos\*, **O. Jagoutz**, M.D. Behn, R.D. van der Hilst (2023): Mantle Thermochemical Variations beneath the Continental United States Through Petrologic Interpretation of Seismic Tomography. *Earth and Planetary Science Letters* 602
- (51) W.J. Shinevar\*, **O. Jagoutz**, M.D. Behn (2022): WISTFUL: Whole-Rock Interpretative Seismic Toolbox for Ultramafic Lithologies. *Geochemistry, Geophysics, Geosystems*, 23(8), p.e2022GC010329.
- (50) B. M. Urann, V. Le Roux, **O. Jagoutz**, O. Müntener, M. Behn, E. Chin (2022): The root of the problem: a lower crustal perspective on water in subduction zones. *Nature Geosciences*, 15, 501–508
- (49) Ze Liu\*, DC Zhu, H, Rezeau, **O. Jagoutz**, Q. Wang, Y. Eyuboglu (2022): Late Cretaceous Transition from Calc-alkaline to Alkaline Magmatism in the Eastern Anatolian Plateau: Implications for Microblock Collision Timing. *Journal of Petrology*, 62, 5
- (48) I. Ahmad, J. P. Richards, D. G. Pearson, L. Jingao, SJ. Barnes, M.T. Shah, M. Leybourne, P. Jugo, **O. Jagoutz** (2021): Fractionation of sulfide-phases controls the chalcophile-metal budget of arc magmas: Evidence from the Chilas Complex, Kohistan arc, Pakistan. *Economic Geology* 24
- (47) M.J. Lewis, C.E. Bucholz \*, **O. Jagoutz** (2021): Evidence for polybaric fractional crystallization in a continental arc: Hidden Lakes mafic complex, Sierra Nevada batholith, California. *Contributions to Mineralogy and Petrology*, 176, 90
- (46) H. Rezeau\*, B.Z. Klein\*, **O. Jagoutz** (2021): Mixing dry and wet magmas in the lower crust of a continental arc: New petrological insights from the Bear Valley Intrusive Suite, southern Sierra Nevada, California. *Contributions to Mineralogy and Petrology*, 176, 73
- (45) W. J. Shinevar\*, **O. Jagoutz**, J. VanTongeren (2021): UHT Lower Crustal Conditions in the Gore Mountain Garnet Amphibolite. *Journal of Petrology* 62, 4
- (44) B.Z. Klein\*, **O. Jagoutz**, J. Ramezani (2021): High-precision geochronology requires that ultrafast mantle-derived magmatic fluxes built the transcrustal Bear Valley Intrusive Suite, Sierra Nevada, California, USA. *Geology*, 49 (1), 106-110



- (43) B.Z. Klein\*, **O. Jagoutz** (2021): Construction of a trans-crustal magma system: Building the Bear Valley Intrusive Suite, southern Sierra Nevada, California. *Earth and Planetary Science Letters*, 553, 116624
- (42) Z. Liu\*, DC. Zhu, **O. Jagoutz**, H. Rezeau\*, Q. Wang, Y. Eyuboglu (2021): Pluton formation due to Damp Tholeiitic and Wet Calc-alkaline Liquid Lines of Descent: An Example of the Yusufeli and Camlikaya Intrusions, Eastern Pontides, NE Turkey. *Journal of Petrology* 62, 5
- (41) C.R. Martin\*, **O. Jagoutz**, R. Upadhyay, L. H. Royden, M. P. Eddy, E. E. Bailey, C. I.O. Nichols, B. P. Weiss (2020): Paleocene latitude of the Kohistan-Ladakh arc indicates multi-stage India-Eurasia collision. *Proceedings of the National Academy of Sciences* 117 (47) 29487-29494;
- (40) H. Rezeau\*, **O. Jagoutz** (2020): The role of dry, damp and wet fractionation in arc magmas for the formation of porphyry copper deposits. *Ore Geology Reviews*, 126, 103744
- (39) L. Guo\*, **O. Jagoutz**, W.J. Shinevar\*, HF. Zhang (2020): Formation and composition of the Late Cretaceous Gangdese arc lower crust in southern Tibet. *Contributions to Mineralogy and Petrology* 175, 58
- (38) O. Gianola\*, M.W. Schmidt, **O. Jagoutz**, O. Sambuu (2019): The crust-mantle transition of the Khantaishir arc ophiolite (western Mongolia). *Journal of Petrology* 60, 4, 673-700
- (37) F.A. Macdonald, N.L. Swanson-Hysell, Y. Park, L. Lisiecki, **O. Jagoutz** (2019): Arc-continent collisions in the tropics set Earth's climate state. *Science* 12, 364 pp 181-184
- (36) **O. Jagoutz**, P. Bouilhol\*, U. Schaltegger, O Müntener (2018): The isotopic evolution of the Kohistan Ladakh arc from subduction initiation to continent arc collision. *Geological Society of London Special Publications*, 486
- (35) W.J. Shinevar\*, M.D. Behn, G. Hirth, **O. Jagoutz** (2018): Inferring Crustal Viscosity from Seismic Velocity: Application to the Lower Crust of Southern California. *Earth and Planetary Science Letters* 494, 83-91.
- (34) **O. Jagoutz**, B.Z. Klein\*, (2018): On the importance of crystallization-differentiation for the generation of SiO<sub>2</sub>-rich melts and the compositional build-up of arc (and continental) crust. *American Journal of Sciences Vol. 318* p23-63.
- (33) O. Gianola\* M. W. Schmidt, **O. Jagoutz**, O. Sambuu (2017): Incipient boninitic arc crust built on denudated mantle: the Khantaishir ophiolite (western Mongolia). *Contributions to Mineralogy and Petrology*, 172, 92
- (32) B.Z. Klein\*, **O. Jagoutz**, M. Behn (2017): Archean crustal compositions promote full mantle convection. *Earth and Planetary Science Letters* 474, 516-526
- (31) M. W. Schmidt, **O. Jagoutz**, (2017): Global systematics of primitive arc melts. *Geochemistry, Geophysics, Geosystems* 18, 2817-2854
- (30) M.P. Eddy\*, **O. Jagoutz**, M. Ibanez-Meja, (2017): Timing of Initial Seafloor Spreading in the Newfoundland-Iberia Rift. *Geology*, 45, 6, 527-530

- (29) C. E. Bucholz\*, **O. Jagoutz**, J. VanTongeren, Z. Wang (2017): Oxygen Isotope Trajectories of Crystallizing Melts. *Geochimica Cosmochimica Acta* 207, 154-184
- (28) C. E. Bucholz\*, M. P. Eddy\*, **O. Jagoutz**, S. Bowring, (2017): Constraining the Timescales of Magmatic Differentiation with U-Pb Zircon Geochronology. *Geology*, 45,1,11-14.
- (27) **O. Jagoutz**, F.A. Macdonald, L. Royden (2016): Low-latitude arc-continent collision as a driver for global cooling. *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1523667113
- (26) **O. Jagoutz**, L. Royden, A. Holt, T. Becker (2015): Anomalously fast convergence of India and Eurasia caused to double subduction. *Nature Geoscience*, 475-478
- (25) **O. Jagoutz**, P. Kelemen (2015): Deep Petrological Processes and Structure of Island Arcs. *Annual Review of Earth and Planetary Science*, 43, 12.1-12.42 (invited contribution)
- (24) B. Jicha, **O. Jagoutz** (2015): Magma Flux vs. Crust Production in Oceanic Arcs. *Elements*, 11 (3), 105-111 (invited contribution)
- (23) N.J. Van Buer\*, **O. Jagoutz**, R. Upadahay, M. Guillong (2015): Mechanical decoupling at mid-crustal level where the Karakoram and Longmu-Gozha Co conjugate faults intersect in western Tibet. *Earth and Planetary Science Letters*, 413,144-157
- (22) N. Chatterjee, **O. Jagoutz** (2015): Exhumation of the UHP Tso-Morari eclogite as a diapir rising through the mantle wedge. *Contribution to Mineralogy and Petrology*, 169 (1)
- (21) C. E. Bucholz\*, **O. Jagoutz**, M. W. Schmidt (2014): Fractional Crystallization of High-K Arc Magmas: Biotite- vs. Amphibole-dominated Fractionation Series in the Dariv Igneous Complex, Western Mongolia *Contribution to Mineralogy and Petrology*, 168, 1072-1100
- (20) A. Alvarez Valero\*, **O. Jagoutz**, J. Stanley\*, C. Manthei\*, A. El Maz , A. Moukadiri, A. Piaseki\* (2014): Crustal attenuation as tracer for the emplacement of the Beni Bousera ultramafic massif (Betic-Rifean belt). *Geological Society of America Bulletin*, doi:10.1130/B31040.1
- (19) C. E. Bucholz\*, **O. Jagoutz**, M. W. Schmidt (2014): The Dariv Igneous Complex, Western Mongolia Part 1: Petrology and Mineral Chemistry of an Arc-Related Alkaline Fractionation Sequence. *Contribution to Mineralogy and Petrology*, 167:994
- (18) **O. Jagoutz** (2014): Arc crustal differentiation processes. *Earth and Planetary Science Letters*, 396,267-277.
- (17) **O. Jagoutz**, M. Behn (2013): Foundering of lower arc crust as an explanation for the origin of the continental Moho. *Nature*, 504, 131-134.
- (16) **O. Jagoutz**, M.W. Schmidt, A. Enggist\*, J.P. Burg, D. Hamid, S. Hussain (2013): TTG-type plutonic rocks formed in a modern arc batholith by hydrous fractionation in the lower arc crust. *Contribution to Mineralogy and Petrology*, 166, 1099-1118.

- (15) **O. Jagoutz**, M.W. Schmidt (2013): The composition of the foundered complement to the continental crust and a re-evaluation of fluxes in arcs. *Earth and Planetary Science Letters* 371–372, 177–190.
- (14) D.J. Shillington, H.J.A. Van Avendonk, M.D. Behn, P.B. Kelemen, **O. Jagoutz** (2013): Constraints on the composition of the Aleutian arc lower crust from  $V_P/V_S$ . *Geophysical Research Letters* 40, 2579-2584.
- (13) P. Bouilhol\*, **O. Jagoutz**, J.M. Hanchar, F. Dudas (2013): Dating the India / Eurasia collision through arc magmatic records. *Earth and Planetary Science Letters*, 366, 163-175.
- (12) **O. Jagoutz** (2013): Were ancient granitoid compositions influenced by contemporaneous atmospheric and hydrosphere oxidation states? *Terra Nova*, 25,95-10.1
- (11) **O. Jagoutz**, M. W. Schmidt (2012): The formation and bulk composition of modern juvenile continental crust: the Kohistan arc. *Chemical Geology*, 298-299, 78-96.
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