

Jessica M. Warren - Professor, University of Delaware

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EDUCATION

- 2007 **Ph.D.** in Geochemistry and Geophysics, MIT/WHOI Joint Program
The Oceanic Upper Mantle: Rheological and Geochemical Constraints
- 2003 **M.A.** in Natural Sciences, University of Cambridge
- 2000 **M.Sci.** in Natural Sciences, University of Cambridge
- 1999 **B.A. First Class** in Natural Sciences, University of Cambridge

APPOINTMENTS

- 2022-present **Professor**, Department of Earth Sciences, University of Delaware
- 2023-present **Visiting Professor**, Department of Earth Sciences, University of Cambridge
- 2023-present **Visiting Professor**, Institut de Physique du Globe de Paris
- 2014-present **Research Associate**, National Museum of Natural History, Smithsonian Institution
- 2018-2022 **Associate Professor**, Department of Earth Sciences, University of Delaware
- 2015-2018 **Assistant Professor**, Department of Geological Sciences, University of Delaware
- 2014-2016 **Visiting Investigator**, Dept. of Terrestrial Magnetism, Carnegie Institution for Science
- 2015 **Sabbatical Visitor**, Department of Earth Sciences, University of Oxford
- 2010-2015 **Assistant Professor**, Department of Geological Sciences, Stanford University
- 2008-2010 **Postdoctoral Fellow**, Dept. of Terrestrial Magnetism, Carnegie Institution for Science
- 2001-2007 **Research Assistant**, Dept. of Geology & Geophysics, Woods Hole Oceanographic Inst.

HONORS AND AWARDS

- 2013-2018 CAREER Award, National Science Foundation
- 2013-2015 Frederick E. Terman Faculty Fellowship, Stanford University
- 2008-2010 Carnegie Postdoctoral Fellow, Carnegie Institution of Washington
- 2002-2003 Stanley W. Watson Fellowship, MIT/WHOI Joint Program
- 2001-2002 Charles Davis Hollister Fellowship, MIT/WHOI Joint Program
- 1998-1999 Skerne Scholarship, University of Cambridge

PUBLICATIONS

(*invited; † Warren lab member; ‡ student collaborator)

- Bader, J.A.[‡], W. Zhu, L. Montési, C. Qi, B. Cordonnier, D.L. Kohlstedt, and **J.M. Warren**, 2024. Effects of Stress-driven Melt Segregation on Melt Orientation, Melt Connectivity and Anisotropic Permeability, *Journal of Geophysical Research*, accepted.
- Kumamoto, K.M., L.N. Hansen, T. Breithaupt, David Wallis, B.-S. Li, D.E.J. Armstrong, D.L. Goldsby, Y. Li, **J.M. Warren**, and A.J. Wilkinson, 2024. The effect of intracrystalline water on the mechanical properties of olivine at room temperature, *Geophysical Research Letters*, accepted.
- Lin, K.-Y.[†], **J.M. Warren**, and F.A. Davis, 2023. Trace elements in abyssal peridotite olivine record melting, thermal evolution, and melt refertilization in the oceanic upper mantle, *Contributions to*

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- Mineralogy and Petrology*, 178, 66, doi:10.1007/s00410-023-02044-6.
- *Warren, J.M.** and L.N. Hansen, 2023. Ductile deformation of the lithospheric mantle. *Annual Reviews of Earth and Planetary Sciences*, doi:10.1146/annurev-earth-031621-063756. *Invited review paper.*
- Boettcher, M.S., E.C. Roland, **J.M. Warren**, R.L. Evans, and J.A. Collins, 2023. Observing a seismic cycle at sea, *Eos*, 104, doi:10.1029/2023EO230076.
- Kohli, A.H., M. Wolfson-Schwehr, C. Prigent[†], and **J.M. Warren**, 2021. Oceanic transform fault seismicity and slip mode influenced by seawater infiltration, *Nature Geoscience*, 14, 606-611, doi:10.1038/s41561-021-00778-1.
- Birner, S.K., E. Cottrell, **J.M. Warren**, K.A. Kelley, and F.A. Davis, 2021. Melt addition to mid-ocean ridge peridotites increases spinel Cr# with no significant effect on recorded oxygen fugacity, *Earth and Planetary Science Letters*, 566, 116951, doi:10.1016/j.epsl.2021.116951.
- Patterson, S.N.[†], K.J. Lynn[†], C. Prigent[†], and **J.M. Warren**, 2021. High temperature hydrothermal alteration and amphibole formation in Gakkel Ridge abyssal peridotites, *Lithos*, 392-393, 106107, doi:10.1016/j.lithos.2021.106107.
- Lynn, K.J.[†] and **J.M. Warren**, 2021. The potential for aqueous fluid-rock and silicate melt-rock interactions to re-equilibrate hydrogen in peridotite nominally anhydrous minerals, *American Mineralogist*, 106, 701-714, doi:10.2138/am-2021-7435.
Special Collection: Volatile Elements in Differentiated Planetary Interiors
- Hansen, L.N., M. Faccenda, and **J.M. Warren**, 2021. A review of mechanisms generating seismic anisotropy in the upper mantle, *Physics of the Earth and Planetary Interiors*, 313, 106662, doi:10.1016/j.pepi.2021.106662.
Special Issue: Physical Properties and Observations of the Lithosphere-Asthenosphere System
- Wallis, D., L.N. Hansen, K.M. Kumamoto, C.A. Thom, O. Plümper, M. Ohl, W.B. Durham, D.L. Goldsby, D.E.J. Armstrong, C.D. Meyers, R. Goddard, **J.M. Warren**, T. Breithaupt, M.R. Drury, A.J. Wilkinson, 2020. Dislocation interactions during low-temperature plasticity of olivine strengthen the lithospheric mantle, *Earth and Planet. Sci. Lett.*, 543, 116349, doi:10.1016/j.epsl.2020.116349.
- Prigent, C.[†], **J.M. Warren**, A.H. Kohli, and C. Teyssier, 2020. Fracture-mediated deep seawater flow and mantle hydration on oceanic transform faults, *Earth and Planetary Science Letters*, 532, 115988, doi:10.1016/j.epsl.2019.115988.
- Kohli, A.H.[‡] and **J.M. Warren**, 2020. Evidence for a deep hydrologic cycle on oceanic transform faults, *Journal of Geophysical Research*, 125, e2019JB017751, doi:10.1029/2019JB017751.
- Warren, J.M.**, M.D. Behn, W. Fan, T. Morrow, C. Prigent[†], D.M. Schwartz, J. Andrys[‡], M. Bahruth[†], J. Gong, K.-Y. Lin[†], A.T. Gardner, D. Kot, M. Rapa, B. Kelly, and P. A'Hearn, 2019. AT42-20 Cruise Report for the 2019-2021 Gofar Transform Fault Earthquake Prediction Experiment, Leg 1: OBS Deployment and Rock Dredging, *Technical Report*, doi:10.1575/1912/25464.
- Kumamoto, K.M.[†], **J.M. Warren**, and L.N. Hansen, 2019b. Evolution of the Josephine Peridotite shear zones: 2. Influences on olivine CPO evolution, *Journal of Geophysical Research*, 124, 12,763-12,781, doi:10.1029/2019JB017968.

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- Kumamoto, K.M.[†], **J.M. Warren**, and E.H. Hauri, 2019a. Evolution of the Josephine Peridotite shear zones: 1. Compositional variation and shear initiation, *Geochemistry, Geophysics, Geosystems*, 20, 5765-5785, doi:10.1029/2019GC008399.
- Nevitt, J.M., **J.M. Warren**, K.M. Kumamoto[†], and D.D. Pollard, 2019. Using geologic structures to constrain constitutive laws not accessible in the laboratory, *Journal of Structural Geology*, 125, 55-63, doi:10.1016/j.jsg.2018.06.006.
- Boneh, Y., E. Schottenfels, K. Kwong, I. van Zelst, X. Tong, M. Eimer, M.S. Miller, L. Moresi, **J.M. Warren**, D.A. Wiens, M. Billen, J. Naliboff, and Z. Zhan, 2019. Intermediate-depth earthquakes controlled by incoming plate hydration along bending-related faults, *Geophysical Research Letters*, 46, 3688-3697, doi:10.1029/2018GL081585.
- D'Errico, M.E.[†], M.A. Coble, and **J.M. Warren**, 2019. In situ measurements of lead and other trace elements in abyssal peridotite sulfides, *American Mineralogist*, 104, 190-206, doi:10.2138/am-2019-6516. *Special Collection: Planetary Processes as Revealed by Sulfides and Chalcophile Elements*
- Birner, S.K.[†], E. Cottrell, **J.M. Warren**, K.A. Kelley, and F.A. Davis, 2018. Peridotites and basalts reveal broad congruence between two independent records of mantle f_{O_2} despite local redox heterogeneity, *Earth and Planetary Science Letters*, 494, 172-189, doi:10.1016/j.epsl.2018.04.035.
- Birner, S.K.[†], **J.M. Warren**, E. Cottrell, F.A. Davis, K.A. Kelley, and T.J. Falloon, 2017. Forearc peridotites from Tonga record heterogeneous oxidation of the mantle following subduction initiation, *Journal of Petrology*, 58, 1755-1780, doi:10.1093/petrology/egx072.
- Kumamoto, K.M.[†], C.A. Thom[‡], D. Wallis, L.N. Hansen, D.E.J. Armstrong, **J.M. Warren**, D. Goldsby, and A.J. Wilkinson, 2017b. Size effects resolve discrepancies in 40 years of work on low-temperature plasticity in olivine, *Science Advances*, 3, e1701338, doi:10.1126/sciadv.1701338.
- Nevitt, J.M.[†], **J.M. Warren**, and D.D. Pollard, 2017b. Testing constitutive equations for brittle-ductile deformation associated with faulting in granitic rock, *Journal of Geophysical Research*, 122, 6269-6293, doi:10.1002/2017JB014000.
- Nevitt, J.M.[†], **J.M. Warren**, S. Kidder, and D.D. Pollard, 2017a. Comparison of thermal modeling, microstructural analysis, and Ti-in-quartz thermobarometry to constrain the thermal history of a cooling pluton during deformation in the Mount Abbot Quadrangle, CA, *Geochemistry, Geophysics, Geosystems*, 18, 1270-1297, doi:10.1002/2016GC006655.
- Day, J.M.D., R.J. Walker, and **J.M. Warren**, 2017. ^{186}Os - ^{187}Os and highly siderophile element abundance systematics of the mantle revealed by abyssal peridotites and Os-rich alloys, *Geochimica et Cosmochimica Acta*, 200, 232-254, doi:10.1016/j.gca.2016.12.013.
- Kumamoto, K.M.[†], **J.M. Warren**, and E.H. Hauri, 2017a. New SIMS reference materials for measuring water in upper mantle minerals, *American Mineralogist*, 102, 537-547, doi:10.2138/am-2017-5863.
- Davis, F.A., E. Cottrell, S.K. Birner[†], **J.M. Warren**, and O.G. Lopez, 2017. Revisiting the electron microprobe method of spinel-olivine-orthopyroxene oxybarometry applied to spinel peridotites, *American Mineralogist*, 102, 421-435, doi:10.2138/am-2017-5823.
- Birner, S.K.[†], **J.M. Warren**, E. Cottrell, and F.A. Davis, 2016. Hydrothermal alteration of seafloor peridotites does not influence oxygen fugacity recorded by spinel oxybarometry, *Geology*, 44, 535-538,

- doi:10.1130/G38113.1.
- Hansen, L.N., C. Qi, and **J.M. Warren**, 2016c. Olivine torsion experiments constrain the nature of the oceanic lithosphere-asthenosphere boundary, *Proceedings of the National Academy of Sciences*, 113, 10503-10506, doi:10.1073/pnas.1608269113.
- Hansen, L.N., C.P. Conrad, Y. Boneh, P.A. Skemer, **J.M. Warren**, and D.L. Kohlstedt, 2016b. Viscous anisotropy of textured olivine aggregates, Part 2: Micromechanical model, *Journal of Geophysical Research*, 121, 7137-7160, doi:10.1002/2016JB013240.
- Hansen, L.N., **J.M. Warren**, M.E. Zimmerman, and D.L. Kohlstedt, 2016a. Viscous anisotropy of textured olivine aggregates, Part 1: Measurement of the magnitude and evolution of anisotropy, *Earth and Planetary Science Letters*, 445, 92-103, doi:10.1016/j.epsl.2016.04.008.
- ***Warren, J.M.**, 2016. Global variations in abyssal peridotite compositions, *Lithos*, 248-251, 193-219, doi:10.1016/j.lithos.2015.12.023. *Invited review paper*.
- D'Errico, M.E.[†], **J.M. Warren**, and M. Godard, 2016. Evidence for chemically heterogeneous Arctic mantle beneath the Gakkel Ridge, *Geochimica et Cosmochimica Acta*, 174, 291-312, doi:10.1016/j.gca.2015.11.017.
- Harvey, J., **J.M. Warren**, and S.B. Shirey, 2016. Mantle sulfides and their role in Re-Os-Pb isotope geochronology, *Reviews in Mineralogy and Geochemistry*, 81, 579-649, doi:10.2138/rmg.2016.81.10.
- Hansen, L.N.[†] and **J.M. Warren**, 2015. Quantifying the effect of pyroxene on deformation of peridotite in a natural shear zone, *Journal of Geophysical Research*, 120, 2717-2738, doi:10.1002/2014JB011584.
- Sleep, N.H. and **J.M. Warren**, 2014. Effect of latent heat of freezing on crustal generation at ultraslow spreading rates, *Geochemistry, Geophysics, Geosystems*, 15, 3161-3174, doi:10.1002/2014GC005423.
- Garber, J.M.[‡], S.M. Roeske, **J.M. Warren**, S.R. Mulcahy, W.C. McClelland, L.J. Austin, P.R. Renne, and G.I. Vujovich, 2014. Crustal shortening, exhumation, and strain localization in a collisional orogen: The Bajo Pequeño Shear Zone, Sierra de Pie de Palo, Argentina, *Tectonics*, 33, 1277-1303, doi:10.1002/2013TC003477.
- Warren, J.M.** and E.H. Hauri, 2014. Pyroxenes as tracers of mantle water variations, *Journal of Geophysical Research*, 119, 1851-1881, doi:10.1002/2013JB010328.
- Nevitt, J.M.[†], D.D. Pollard, and **J.M. Warren**, 2014. Evaluation of transtension and transpression within contractional fault steps: Comparing kinematic and mechanical models to field data, *Journal of Structural Geology*, 60, 55-69, doi:10.1016/j.jsg.2013.12.011.
- Blusztajn, J., N. Shimizu, **J.M. Warren**, and H.J.B. Dick, 2014. In-situ Pb isotopic analysis of sulfides in abyssal peridotites from ultraslow spreading ridges: New insights into heterogeneity and evolution of the oceanic upper mantle, *Geology*, 42, 159-162, doi:10.1130/G34966.1.
- Skemer, P.A., **J.M. Warren**, L.N. Hansen[†], G. Hirth, and P.B. Kelemen, 2013. The influence of water and LPO on the initiation and evolution of mantle shear zones, *Earth and Planetary Science Letters*, 375, 222-233, doi:10.1016/j.epsl.2013.05.034.
- Craddock, P.R., **J.M. Warren**, and N. Dauphas, 2013. The chondritic Fe isotopic composition of the

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- Earth, *Earth and Planetary Science Letters*, 365, 63-76, doi:10.1016/j.epsl.2013.01.011. Featured in *Nature News & Views: Halliday, A.N.*, 2013. Small differences in sameness, *Nature*, 497, 43-45.
- Warren, J.M.** and S.B. Shirey, 2012. Pb and Os isotopic constraints on the oceanic mantle from single abyssal peridotite sulfides, *Earth and Planetary Science Letters*, 359-360, 279-293, doi:10.1016/j.epsl.2012.09.055.
- Recanati A.[‡], M.D. Kurz, **J.M. Warren**, and J. Curtice, 2012. Helium distribution in a mantle shear zone from the Josephine Peridotite, *Earth and Planetary Science Letters*, 359-360, 161-172, doi:10.1016/j.epsl.2012.09.046.
- Skemer, P.A., **J.M. Warren**, and G. Hirth, 2012. The influence of deformation history on the interpretation of seismic anisotropy, *Geochemistry, Geophysics, Geosystems*, 13, Q03006, doi:10.1029/2011GC003988.
- Suyehiro, K., C. Bertka, D.K. Blackman, B. Ildefonse, P.B. Kelemen, A.J. Mangum, G. Myers, J. Phipps-Morgan, M. Schrenk, Y. Tatsumi, and **J.M. Warren**, 2011. Executive Summary: "Mantle Frontier" Workshop, *Scientific Drilling*, 11, 51-55, doi:10.2204/iodp.sd.11.07.2011.
- Warren, J.M.** and N. Shimizu, 2010. Cryptic variations in abyssal peridotite composition: Evidence for recent melt-rock reaction at the ridge, *Journal of Petrology*, 51(1-2), 395-423, doi:10.1093/petrology/egp096.
- Dick, H.J.B., C.J. Lissenberg, and **J.M. Warren**, 2010. Mantle melting, melt transport, and delivery beneath a slow-spreading ridge: The paleo-MAR from 23°15'N to 23°45'N, *Journal of Petrology*, 51(1-2), 425-467, doi:10.1093/petrology/egp088.
- Skemer, P.A., **J.M. Warren**, P.B. Kelemen, and G. Hirth, 2010. Microstructural and rheological evolution of a mantle shear zone, *Journal of Petrology*, 51(1-2), 55-80, doi:10.1093/petrology/egp057.
- Warren, J.M.**, N. Shimizu, C. Sakaguchi, H.J.B. Dick, and E. Nakamura, 2009. An assessment of mantle heterogeneity based on abyssal peridotite isotopic compositions, *Journal of Geophysical Research*, 114, B12203, doi:10.1029/2008JB006186.
- Kurz, M.D., **J.M. Warren**, and J. Curtice, 2009. Mantle deformation and noble gases: helium and neon in oceanic mylonites, *Chemical Geology* 266, 10-18, doi:10.1016/j.chemgeo.2008.12.018.
- Warren, J.M.**, G. Hirth, and P.B. Kelemen, 2008. Evolution of olivine lattice preferred orientation during simple shear in the mantle, *Earth and Planetary Science Letters*, 272, 501-512, doi:10.1016/j.epsl.2008.03.063.
- Courtier, A.M., M.G. Jackson, J.F. Lawrence, Z. Wang, C.-T.A. Lee, R. Halama, **J.M. Warren**, R. Workman, W. Xu, M.M. Hirschmann, A.M. Larson, S.R. Hart, C. Lithgow-Bertelloni, L. Stixrude, W.-P. Chen, 2007. Correlation of seismic and petrologic thermometers suggests deep thermal anomalies beneath hotspots, *Earth and Planetary Science Letters* 264, 308-316, doi:10.1016/j.epsl.2007.10.003.
- Dantas, C., G. Ceuleneer, M. Gregoire, M. Python, R. Freydier, **J.M. Warren**, and H.J.B. Dick, 2007. Pyroxenites from the Southwest Indian Ridge, 9-16°E: Cumulates from incremental melt fractions produced at the top of a cold melting regime, *Journal of Petrology*, 48(4), 647-660, doi:10.1093/petrology/egl076.
- Warren, J.M.** and G. Hirth, 2006. Grain size sensitive deformation mechanisms in naturally deformed peridotites, *Earth and Planetary Science Letters* 248, 423-435, doi:10.1016/j.epsl.2006.06.006.

GRANTS

- 2024-2028** NSF Marine Geology and Geophysics, OCE-2318851: *Collaborative Research: Chain Transform Fault: Understanding the dynamic behavior of a slow-slipping oceanic transform system*; PI: J.M. Warren; \$552,903; co-PIs: M.D. Behn (Boston College), M.S. Boettcher (University of New Hampshire), Jianhua Gong (Indiana University), D. Lizarralde (Woods Hole Oceanographic Institution), and V.D. Wanless (Boise State University). Multi-institution project with two research cruises with a total cost of \$6.7M.
- 2020-2024** NSF Petrology & Geochemistry, EAR-1939964: *INTERN supplement for "Evaluating the causes of protracted explosive eruptions at Kilauea Volcano, Hawaii"*; PI: J.M. Warren; \$55,000.
- 2021-2024** NSF Petrology & Geochemistry and Geophysics, EAR-2113408: *Calibrating olivine crystallographic preferred orientation as a mantle water detector*; PI: J.M. Warren; \$317,667.
- 2021-2025** FONDECYT Chile: *Length-scales of chemical, isotopic, and structural heterogeneity in the mantle section of the 6 Ma Taitao ophiolite*; PI: M. Schilling (UACH). Warren is a project collaborator.
- 2020-2024** NSF Marine Geology & Geophysics, OCE-1832868: *INTERN supplement for "Capturing 4D Variations in Stress, Slip, and Fault-Zone Material Properties"*; PI: J.M. Warren; \$51,431.
- 2020-2023** NSF GeoPRISMS: *Cooperative Institute for Dynamic Earth Research: Fluid and Magma Transport at Plate Boundaries*; PIs: B. Buffett, B. Romanowicz, M. Manga (UC Berkeley). Warren is a member of the workshop organizing committee and contributed to proposal preparation.
- 2020-2024** NSF Petrology & Geochemistry, EAR-1939964: *Evaluating the causes of protracted explosive eruptions at Kilauea Volcano, Hawaii*; PIs: K.J. Lynn and J.M. Warren; \$255,595.
- 2019-2024** NSF: *Research Coordination Network: In-Situ Rock Deformation (ISRDR)*; PI: W. Zhu (U Maryland). Warren is a member of the steering committee and contributed to proposal preparation.
- 2018-2024** NSF Marine Geology & Geophysics, OCE-1832868: *Collaborative Research: Capturing 4D Variations in Stress, Slip, and Fault-Zone Material Properties: The 2019-2021 Gofar Transform Fault Earthquake Prediction Experiment*; PI: J.M. Warren; \$233,808; collaboration with M. Boettcher (University of New Hampshire), E. Roland (Western Washington University), and J.J. McGuire, M.D. Behn, J.A. Collins, W. Fan, C. German (Woods Hole Oceanographic Institution). Multi-institution project with three research cruises and 51 ocean bottom seismometers with a total cost of \$10M.
- 2018-2019** US Science Support Program: *Supplementary Workshop Participation for the New Caledonia Peridotite Amphibious Drilling Workshop*; PI: J.M. Warren, co-PIs: P.B. Kelemen, A. Farough, E.C. Ferré, F. Klein, R. Price, M.O. Schrenk, J.W. Shervais; \$12,000 for participant travel expenses.
- 2015-2018** International Continental Scientific Drilling Program: *Oman Drilling Project*, PI: P.B. Kelemen (Columbia Univ.); co-PIs: J.M. Warren and 36 others; funding for drilling-related operations only.
- 2015** Stanford Nano Shared Facilities Seed Grant: *NanoSIMS technique development of volatile analyses in nominally anhydrous minerals*; PI: J.M. Warren; \$15,120.
- 2014-2018** NSF Marine Geology & Geophysics, OCE-1620276: *Collaborative Research: Upper mantle oxygen fugacity from source to surface*; PI: J.M. Warren; \$189,068; collaboration with E. Cottrell and F.A. Davis (Smithsonian Institution) and K.A. Kelley (University of Rhode Island); \$336,848 total.

- 2014-2018** NSF Tectonics, EAR-1619880: *Collaborative Research: Deformation-induced hydration of peridotite mylonites in nature and experiments*; PI: J.M. Warren; \$243,709; collaboration with C. Teyssier and M. Zimmerman (University of Minnesota); \$385,414 total.
- 2013-2020** NSF Petrology & Geochemistry, Tectonics, and Geophysics; EAR-1255620: *CAREER: Investigating the relationship between mantle shear localization, melt flow and water content*; PI: J.M. Warren; \$550,069.
- 2011-2012** NSF Major Research Instrumentation, EAR-1125782: *MRI: Acquisition of an electron microprobe for research in Earth sciences, materials science, and applied physics*; PI: J. Stebbins, co-PIs: M. Grove, I. Fisher, J.M. Warren, R. Sinclair; \$761,133.
- 2011-2012** France-Stanford Center Seed Fund: *France-Stanford Collaboration in mantle geochemistry and petrology*; PI: J.M. Warren, co-PIs: B. Ildefonse, M. Godard (Université de Montpellier); \$12,100.
- 2010-2012** NSF Petrology & Geochemistry, EAR-0948609: *Noble gas behavior during upper mantle deformation*; PI: M.D. Kurz (WHOI); \$370,541 total, with subcontract for \$61,402 to J.M. Warren.

PRESENTATIONS

Invited seminars (selected):

- 2024, Institute for Geophysics & Tectonics, University of Leeds
Fluid-rock interactions and their influence on earthquakes at the bottom of the ocean
- 2024, Rocks, Melts & Fluids Research Group, University of Leeds
Exploring the seafloor: The rock record of hydrothermal fluid circulation
- 2024, The Sedgwick Club, University of Cambridge
Twenty Thousand Leagues Under the Sea: The rock record of hydrothermal fluid circulation
- 2023, Microgeodynamics Seminar, University of Cambridge
The rock record of fluid-flow, earthquakes, and creep in oceanic transform faults
- 2023, Earth and Planets Laboratory, Carnegie Institution for Science:
Fluid-rock interactions and their influence on earthquakes at the bottom of the ocean
- 2023, Lecture, Summer Program, Cooperative Institute for Dynamic Earth Research, Berkeley, CA:
The role of fluids in high temperature fault zones: Constraints from geology and geophysics
- 2022, InterRidge Webinar:
The rock record of creep and earthquakes along oceanic transform faults
- 2022, Delaware Mineralogical Society:
Earthquakes at the bottom of the ocean: The mineral record of seismicity and creep in transform faults
- 2021, Department of Earth Sciences Seminar, University of Cambridge:
The influence of seawater infiltration on oceanic transform fault slip behavior
- 2021, Seismo Lab Seminar, California Institute of Technology:
The influence of seawater infiltration on oceanic transform fault seismicity and slip mode
- 2021, Geological Society of Washington:
Global oceanic transform faults: the link between fluid flow and seismic behavior
- 2020, Department of Earth, Environmental and Planetary Sciences Colloquia, Brown University:
The rheology of oceanic transform faults: from mylonites to breccias
- 2019, Workshop on Mantle Water, Lamont Doherty Earth Observatory:
Current analytical challenges for measuring water in NAMs
- 2019, Geology Department Colloquium, University of Maryland:
Using fault-zone geology to understand oceanic transform fault seismicity
- 2018, Earth and Atmospheric Sciences Seminar Series, Cornell University:
Using fault-zone geology to understand oceanic transform fault seismicity
- 2018, Solid Earth Brown Bag, Princeton University, NJ:

- Using the rock record to understand oceanic transform fault seismicity*
 2017, Lecture, Summer Program, Cooperative Institute for Dynamic Earth Research, Berkeley, CA:
Relating seismic anisotropy to natural mantle samples
- 2016, Department of Earth and Planetary Sciences, Washington University in St. Louis, MO:
The role of fluid flow in ductile processes at oceanic transform faults.
- 2015, Department of Earth Sciences, University of Oxford, UK:
The role of the mantle in oceanic transform fault deformation.
- 2014, Department of Mineral Sciences, National Museum of Natural History, DC:
The Mantle Beneath Global Seafloor Volcanism.
- 2013, Department of Earth Sciences, University of California Santa Barbara, CA:
Constraints on mantle evolution from sulfide Pb and Os isotopes.
- 2012, Department of Earth & Planetary Sciences, Harvard University, MA:
Water in the Oceanic Upper Mantle.
- 2011, Whole Earth Seminar, University of California Santa Cruz, CA:
How Depleted is the Upper Mantle?

Invited conference presentations:

- 2022, Invited Talk, Workshop on Rheology of Earth's Interior Across Scales, Paris, France:
Fluid-driven phase transformations in shear zones and their influence on lithospheric strength
- 2020, Keynote, Tectonics Community Science Workshop, Virtual Event:
Constraints from the rock record on shear localization at oceanic transform faults
- 2018, Invited Talk, American Geophysical Union Fall Meeting, Washington, DC:
Observations of a complex interplay between melt, water, grain size, and viscous anisotropy during shear localization in the lithospheric mantle.
- 2018, Keynote, Goldschmidt Conference, Boston, MA:
Source versus process: Peridotite constraints on magma genesis.
- 2017, Invited Talk, Goldschmidt Conference, Paris, France:
Constraints on mantle Pb, Se, and Te behavior from in situ analyses of peridotite sulfides.
- 2017, Keynote, Deformation Mechanisms, Rheology and Tectonics Conference, Inverness, UK:
The role of fluids in the brittle-ductile transition at oceanic transform faults.
- 2016, Keynote, Goldschmidt Conference, Yokohama, Japan:
Reconciling the compositions of ridge basalts and peridotites.
- 2016, Invited Talk, CIDER Community Workshop, Point Reyes, CA:
Using olivine rheology to constrain plate boundaries.
- 2015, Keynote, COMPRES Annual Meeting, Colorado Springs, CO:
Exploring mantle properties using abyssal peridotites.
- 2014, Invited Talk, Gordon Research Conference on Rock Deformation, Andover, NH:
Initiation and Evolution of Ductile Mantle Shear Zones.
- 2013, Keynote, Goldschmidt Conference, Florence, Italy:
Global Abyssal Peridotite Constraints on the Upper Mantle.
- 2011, Invited Talk, Goldschmidt Conference, Prague, Czech Republic:
Mantle heterogeneity constraints from abyssal peridotite sulfide Pb and Os isotopic compositions.
- 2011, Invited Talk, EarthScope Institute on the Lithosphere-Asthenosphere Boundary, Portland, OR:
Global abyssal peridotite constraints on oceanic LAB formation.
- 2009, Invited Talk, American Geophysical Union Fall Meeting, San Francisco, CA:
Causes and Consequences of Mantle Heterogeneity From Observations of Abyssal Peridotites.
- 2008, Invited Talk, Third COE-21 International Symposium, Misasa, Japan:
Magma Genesis at Ultra-Slow Spreading Ridges.
- 2007, Invited Talk, American Geophysical Union Fall Meeting, San Francisco, CA:
Mechanisms of Ductile Shear Localization From Observations of Naturally Deformed Peridotites.

LAND AND SEA FIELD WORK

- 2022 Shore-based scientist for *Gofar Leg 3: OBS Recovery and AUV Sentry Dives*.
 2019 R/V Atlantis: Chief scientist for *The 2019-2021 Gofar Transform Fault Earthquake Prediction Experiment Leg 1: OBS Deployment and Rock Dredging*.
 2018 Josephine Peridotite and Trinity Ophiolite: Structural and geochemical sampling.
 2015 Josephine Peridotite, Oregon: Sampling of shear zones A and B.
 2014 Trinity Ophiolite, California: TLS survey of Kangaroo Lake section.
 2013 Josephine Peridotite, Oregon: Sampling of Fresno Bench shear zones.
 2012 Trinity Ophiolite and Josephine Peridotite: Peridotite structural and geochemical sampling.
 2011 Oman Ophiolite: Sampling of deformed peridotites for noble gas project.
 2010 Josephine Peridotite, Oregon: Sampling of deformed peridotites for mantle noble gas project.
 2004 R/V Knorr, with ROV Jason-2 and AUV ABE: *Magnetic and Structural Studies of a Lower Crustal Exposure of Ocean Lithosphere: Kane Megamullion, Mid-Atlantic Ridge 23° 30'N*.
 2003 Josephine Peridotite, Oregon, and Trinity Ophiolite, California: Peridotite sampling.
 2003 R/V Melville: *Investigation of the Oblique and Orthogonal Supersegments of the SWIR*.
 2001 R/V Yokosuka, with DSV Shinkai-6500: *Investigation of Atlantis Bank*.
 1999 Ardnamurchan, Scotland: Sampling of a contact metamorphic aureole.
 1998 Apache National Forest, Arizona: Geologic field mapping.

TEACHING

University of Delaware:

- GEOL302 *Igneous and Metamorphic Petrology* (UG): Spring 2017, 2019, 2020, 2021, 2022, 2023
 GEOL405 *Introduction to Research* (UG): Fall 2018
 GEOL438/639, MAST438 *Marine Plate Tectonics* (UG/G): Fall 2020 (w/ McGear), 2021, 2022
 GEOL601 *Geological Sciences at Delaware* (G): Fall 2017, 2018; guest lectures 2020-2022
 GEOL666/866 *Special Problem: Ultramafics in the Field* (G): Fall 2018
 GEOL802 *Marine Geology and Geophysics* (G): Fall 2019
 GEOL866 *Special Problem: Geophysical Field Methods* (G): Fall 2019
 GEOL866 *Special Problem: Ocean Island Volcanism* (G): Spring 2021
 UNIV401/402 *Senior Thesis* (UG): AY2019-2020, AY2021-2022

Stanford University:

- GES 104 *Introduction to Petrology* (UG): 2011, 2012, 2013, 2015
 GES 190 *Advanced Field Methods: Ultramafics in the Field* (UG/G): 2012, 2014
 GES 209 *Microstructures*, w/ Miller (UG/G): 2011.
 GES 263 *Introduction to Isotope Geochemistry*, Guest lecturer (UG/G): 2011, 2014
 GES 290 *Department Seminar in Geological and Environmental Sciences* (G): 2012, 2013, 2015
 GES 315 *Literature of Structural Geology*, w/ Pollard (G): 2012, 2013, 2014, 2015
 GES 340 *Seminar on the Earth's Interior*, w/ Mao (G): 2011, 2013
 GES 382 *Mantle Geochemistry* (G): 2012

ADVISING

Postdocs:

- Nadine Grambling, 2022-present
 Kendra Lynn, 2017-2020, now Research Geologist at U.S. Geological Survey
 Cécile Prigent, 2017-2020, now Assistant Professor at Institut de Physique du Globe de Paris
 Lars Hansen, 2012-2013, now Associate Professor at University of Minnesota

Graduate Students:

- Abigail Nalesnik, Ph.D. candidate, 2020-present, University of Delaware
 Kuan-Yu Lin, Ph.D. candidate, 2018-present, University of Delaware

- Melinda Bahruth, M.S. 2023, University of Delaware: *Basaltic Breccia Constraints on the Shallow Rheology of the Gofar Transform Fault*
- Suzanne Birner, Ph.D. 2018, Stanford University: *Variations in the Oxygen Fugacity of the Upper Mantle*
- Kathryn Kumamoto, Ph.D. 2018, Stanford University: *Exploring the Rheological Properties of the Upper Mantle: From the Field to the Laboratory*
- Megan D'Errico, Ph.D. 2016, Stanford University: *Heterogeneity and Depletion of the Mantle Assessed From Abyssal Peridotite Geochemistry*
- Nikolaus Deems, M.S. 2016, Stanford University: *Deformation history and depth to the brittle-ductile transition for peridotite mylonites from St. Paul Transform Fault, Mid-Atlantic Ridge*
- Johanna Nevitt, Ph.D. 2015, Stanford University, co-advised with D. Pollard: *Fault-related deformation within the brittle-ductile transition*

Undergraduate Research Advisor:

- Ilene Kruger, 2023-present, Colorado College, Buster Scholarship, co-advised with N. Grambling
- Janelle Hayward, 2021-2022, University of Delaware, Winter Fellow
- Natalie Zimmermann, 2019-2020, University of Delaware, Summer Fellow, Senior Thesis
- Raphael Affinito, 2018-2020, University of Delaware, Summer & Winter Fellow, Senior Thesis
- Sierra Patterson, 2018, University of Delaware, Summer Fellow
- EKela Autry, 2015, Stanford University, Summer Fellow
- Oscar Lopez, 2015, Smithsonian Institution, REU Fellow, co-advised with E. Cottrell

Ph.D. External Examiner: Sophie Cox (Cardiff University, 2021).

Ph.D. Thesis Committees: Ningli Zhao (Brown University, 2021), Emmanuel Codillo (MIT/WHOI Joint Program, 2022), Emmanuel Chinkaka (U. of Delaware, current).

Ph.D. Thesis Committees (Stanford): Sarah Barrett (2015), Pablo García Del Real (2016), Arjun Kohli (2015; chair), Yingxia Shi (2016), Mary Reagan (2018).

Ph.D. Qualifying Exam Committees (Stanford): Sarah Barrett (2012), Pablo García Del Real (2011), Ryan McCarty (2013), Mary Reagan (2014), Yingxia Shi (2012), Meredith Townsend (2013).

M.S. Committees: Abe Torchinsky (Stanford, 2012), David Sheu (Stanford, 2012), Kate Kaminski (U. Idaho, 2016), Rajani Shrestha (U. Delaware, 2023), Lazaro Oliva (U. Delaware, 2023).

Faculty Resource Advisor: Meredith Townsend, DARE Program 2014-2016 (PhD, Stanford, 2017).

Undergraduate Major Advisor: E. Smith (BS, Stanford, 2013).

OUTREACH

- 2023 Interactive module on rocks, UD Laboratory School Pre-K/K Class
- 2022 Presenter, *Teaching with GeoMapApp*, virtual GeoMapApp workshop
- 2022 Presentation, *Being a Geologist*, UD Laboratory School Pre-K/K Class
- 2018 Judge, Outstanding Student Presentation Award, AGU Fall Meeting
- 2018 Presentation, *Preparing CVs and Resumes*, UD Graduate Student Brown Bag
- 2018 *Ocean Rocks!* exhibit, Delaware Coast Day
- 2018 *Ocean Rocks!* outreach event, Smithsonian National Museum of Natural History
- 2018 Terrestrial Laser Scanning Field Module for Geol306
- 2018 Guest professor, Geoscience Theater 3000
- 2017 Judge, Outstanding Student Presentation Award, AGU Fall Meeting
- 2016 Judge, Outstanding Student Presentation Award, AGU Fall Meeting
- 2014 Judge, Outstanding Student Presentation Award, AGU Fall Meeting
- 2014 Class blog for Stanford GES190 Field Class *Ultramafics in the Field*
- 2014 Panelist, Advisor/advisee relationships for new graduate students, Stanford
- 2012 Class blog for Stanford GES190 Field Class *Research in the Field*
- 2012 Panelist, Recruitment Retreat, Stanford Diversity Outreach for Doctoral Education
- 2011 Panelist, *What does it mean to be a scientist?*, Geoscape Workshop for K-12 teachers

UNIVERSITY SERVICE

Service at University of Delaware:

2023 Department of Earth Sciences Promotion & Tenure Committee
 2016-2023 Upgrades to petrology teaching infrastructure
 2022-2023 EarthScope Consortium, alternate institution member representative
 2021-2022 CEOE pod for Unlearning Racism in Geoscience (URGE)
 2021-2022 Search committee for a department chair and tenure-track faculty member
 2021 Search committee for a department business administrator
 2020-2023 Graduate College Council, alternate representative for CEOE
 2020 Committee for creating a Department of Earth Sciences code of conduct
 2019-2023 Department of Earth Sciences Graduate Admissions Committee
 2017-2019 Earth Sciences Graduate Program Committee
 2018-2019 Chair, Tenure-Track Geophysics Faculty Search Committee
 2018-2019 Evaluation committee for Department of Geological Sciences Chair
 2018 Search committee for CEOE Communications Specialist
 2017 Geological Sciences Strategic Planning Committee [Chair]

Service at Stanford University:

2014-2015 SEEES Field Coordinator Search Committee
 2013-2015 Electron Microprobe Steering Committee
 2011-2015 Department Seminar Coordinator
 2010-2015 Undergraduate Field Program Committee [Chair 2014-2015]
 2011-2012 Geochronology Steering Committee
 2010-2012 ICP-MS & Clean Lab Executive Board

PROFESSIONAL SERVICE

Professional Affiliations

2002-present **Member**, American Geophysical Union
 2014-present **Member**, Geochemical Society
 2008-present **Member**, Geological Society of Washington
 2002-present **Member**, Mineralogical Society of America

Committees:

2020-present **Committee on Solid Earth Geophysics**, National Academy of Sciences
 2023-present **Roebling Medal Selection Committee**, Mineralogical Society of America
 2022-present **Finance Committee**, Geological Society of Washington
 2021-present **Planning Committee**, Petrology and High-T Geochemistry Community (PetroNet)
 2019-present **Steering Committee**, In-Situ Rock Deformation Research Coordination Network
 2021-2022 **Selection Committee**, Established renewed involvement of US in InterRidge
 2017-2022 **Editorial Board**, Lithos
 2017-2020 **Steering & Oversight Committee**, GeoPRISMS
 2013-2015 **Education & Outreach Committee**, DEFORM Consortium
 2011-2016 **Steering Committee**, Physical Properties of Earth Materials (AGU Focus Group)
 2009 **Council Member**, Geological Society of Washington

Workshop convener:

2023 **Organizing Committee**, Summer Program, Coop. Inst. for Dynamic Earth Research
 2019 **Organizing Committee**, GeoPRISMS AGU Mini-Workshop: Data, Science, & Education Legacy
 2019 **Organizing Committee**, GeoPRISMS AGU Mini-Workshop: Synthesis and Integration
 2019 **Organizing Committee**, Workshop on Mantle Water
 2019 **Steering Committee**, New Caledonia Peridotite Amphibious Drilling Workshop
 2019 **Organizing Committee**, GeoPRISMS Theoretical and Experimental Institute
 2017 **Organizing Committee**, Summer Program, Coop. Inst. for Dynamic Earth Research

Conference session convener/chair: (last 7 years)

2022	COSEG Fall Event	<i>Panel II moderator: Electromagnetic Methods</i>
2022	Goldschmidt Conference	<i>Formation and evolution of oceanic and continental lithospheric mantle</i>
2021	COSEG Fall Event	<i>Panel II moderator: How Are Plates Made and How Do They Evolve?</i>
2021	Rift-2-Ridge Workshop	<i>Leader of Q&A for day 1 talks</i>
2020	Goldschmidt Conference	<i>Mantle Formation and Evolution from Lithosphere to Deep Mantle</i>
2020	ISRDC CHESSE Workshop	<i>In-situ Rock Deformation: Summary and planning forward</i>
2019	Fluid Transport Modeling	<i>Models for microscopic and short-time-scale mechanisms</i>
2019	Mantle Water Workshop	<i>Discussion session on SIMS and FTIR measurements</i>
2018	AGU Fall Meeting	<i>An integrated approach for obs., exp., & models of deformation</i>
2018	Japan Geoscience Union	<i>The lithosphere and the asthenosphere</i>
2017	AGU Fall Meeting	<i>PPEM: Transient and steady state rock deformation</i>

Funding Panels

2022	Panelist , National Science Foundation
2015-2019	Grant Committee , MSA Mineralogy/Petrology Research
2016	Panelist , National Science Foundation
2014	Panelist , National Science Foundation

Proposal reviewer: National Science Foundation; Department of Energy; European Research Council; Fondo Nacional de Desarrollo Científico y Tecnológico Chile; InterRidge.

Manuscript reviewer: Contributions to Mineralogy and Petrology; Earth and Planetary Science Letters; Geochimica et Cosmochimica Acta; Geology; Geophysical Research Letters; International Geology Review; Journal of Geophysical Research; Journal of Petrology; Lithos; Nature; Nature Communications; Nature Geoscience; Reviews in Mineralogy and Geochemistry; Tectonophysics.

Workshop and short course participation:

2022	The Geological Fingerprints of Slow Earthquakes, Penrose Conference
2021	Rift-2-Ridge, GeoPRISMS Meeting
2021	Pacific Array Workshop
2021	Young Petrology & Geochemistry Pod, Unlearning Racism in Geoscience (URGE)
2021	Second ISRDC-RCN Virtual Science Workshop
2020	CIG Tectonics Community Science Workshop
2020	In-Situ Rock Deformation CHESSE Workshop
2020	Bystander Intervention Workshop
2019	Fluid Transport Modeling Workshop, Modeling Collaboratory for Subduction
2019	Workshop on Mantle Water
2019	New Caledonia Peridotite Amphibious Drilling Workshop
2017	Summer Program, Cooperative Institute for Dynamic Earth Research
2016	Community Workshop, Cooperative Institute for Dynamic Earth Research
2014	Workshop on Exploration of the Eastern Pacific Ocean, Ocean Exploration Trust
2013	Workshop on Ductile Rheology of the Southern California Lithosphere, SCEC
2012	Workshop on Scientific Drilling in the Samail Ophiolite, Sultanate of Oman
2012	Workshop on Advancing Experimental Rock Deformation Research
2012	Building U.S. Strategies for 2013-2023 Scientific Ocean Drilling, IODP
2010	Reaching the Mantle Frontier Workshop, Deep Carbon Observatory
2009	MARGINS Volatiles in the Subduction Factory Theoretical & Experimental Institute
2009	Cooperative Institute for Deep Earth Research Community Workshop
2009	Marine Geoscience Leadership Symposium
2006	Summer Program, Cooperative Institute for Deep Earth Research

WHITE PAPERS

- Parnell-Turner, R., **J.M. Warren**, S.J. Sim, Z. Eilon, and L. Montesi, 2021. White paper: U.S. Inter-Ridge Membership, *Rift2Ridge Workshop*.
- Wada, I., L. Karlstrom, D. Arcay, L. Caricchi, P. Fulton, T. Gerya, K. Iacovino, T. Keller, R. Lauer, G. Lotto, L. Montesi, T. Sun, H. Vrijmoed, and **J.M. Warren**, 2019. Modeling Collaboratory for Subduction RCN: Fluid Migration Workshop Report.
- Warren, J.M.**, J.J. McGuire, C.R. German, and J.A. Collins, 2014. White Paper: Hydrothermal circulation search on the Garrett transform fault, East Pacific Rise, *Workshop on Exploration of the Eastern Pacific Ocean*, Ocean Exploration Trust.
- McGuire, J.J., J.A. Collins, and C.R. German, **J.M. Warren**, 2014. White Paper: Searching for hydrothermal circulation on the Gofar transform fault, East Pacific Rise, *Workshop on Exploration of the Eastern Pacific Ocean*, Ocean Exploration Trust.
- Kelley, K.A., **J.M. Warren**, E. Cottrell, and D. Cardace, 2014. White Paper: Forearc to Arc Transition in the Northern Tonga Trench, *Workshop on Exploration of the Eastern Pacific Ocean*, Ocean Exploration Trust.

CONFERENCE ABSTRACTS

*Since 2019 (*invited; †Warren lab member; ‡student collaborating with lab)*

- Behn, M.D., M.S. Boettcher, **J.M. Warren**, and Greg Hirth, 2023. A rheologic model for the thermal structure and seismogenic behavior of oceanic transform faults, *AGU Fall Meeting*, San Francisco, CA.
- Chesley, C.J., R.L. Evans, E. Attias, N. Hummel, P. Koenig, J. Perez, K.P. Enright, **J.M. Warren**, B. Fluegel, A. Gase, J.D. Kim, and C. Armerding, 2023. Characterizing an earthquake rupture barrier at the Gofar oceanic transform fault using controlled-source electromagnetic data, *AGU Fall Meeting*, San Francisco, CA.
- Gong, J., W. Fan, M.S. Boettcher, J.J. McGuire, **J.M. Warren**, M.D. Behn, E.C. Roland, and Y. Liu, 2023. Ridge-transform fault interaction controls earthquake swarm activity at the Gofar transform fault, *AGU Fall Meeting*, San Francisco, CA.
- Grambling, N.L.[†], **J.M. Warren**, G. Hirth, C.D. Meyers, and N. Zhao, 2023. Refining conditions for the development of E-Type olivine fabrics from Talkeetna Arc, Alaska, and experimentally deformed olivine aggregates, *AGU Fall Meeting*, San Francisco, CA.
- Lin, K.-Y.[†], **J.M. Warren**, M.E. Schilling, G. Plissart, A. Corgne, N. Akizawa, R. Anma, M. Alvear[‡], E. González[‡], and C. Marín[‡], 2023. Snapshot of nascent Pacific oceanic lithosphere emplaced via ridge-trench collision – the Taitao ophiolite, *AGU Fall Meeting*, San Francisco, CA.
- Roland, E.C., P. Koenig, M.S. Boettcher, **J.M. Warren**, and M.D. Behn, 2023. Fault zone complexity and kinematics from AUV-Sentry micro-bathymetry along rupture segments and barriers at the Gofar Transform Fault – East Pacific Rise, *AGU Fall Meeting*, San Francisco, CA.
- Tracy, D., E.C. Roland, P. Koenig, M.S. Boettcher, and **J.M. Warren**, 2023. New analysis of fault damage and the hydrogeologic structure of the Gofar Transform Fault from AUV-Sentry seafloor photography, *AGU Fall Meeting*, San Francisco, CA.

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- Alvear Kayiza, M.[‡], M. Schilling, G. Plissart, A. Corgne, K.-Y. Lin[†], N. Akizawa, **J.M. Warren**, E. González[‡], C. Marín[‡], and A. Rivera[‡], 2023. Petrological processes involved in the formation of the mantle-crust transition zone of Taitao ophiolite, Aysén, Chile, *XVI Congreso Geológico Chileno*, Santiago, Chile.
- González, E.[‡], G. Plissart, M. Schilling, A. Corgne, K.-Y. Lin[†], N. Akizawa, C. Prigent, **J.M. Warren**, M. Alvear[‡], C. Marín[‡], and A. Rivera[‡], 2023. Origin of the mafic and ultramafic mylonitic rocks at the base of the Taitao Ophiolite, Aysén, Chile, *XVI Congreso Geológico Chileno*, Santiago, Chile.
- Marín Oyarzún, C.[‡], M. Schilling, G. Plissart, A. Corgne, K.-Y. Lin[†], N. Akizawa, **J.M. Warren**, M. Alvear[‡], E. González[‡], and A. Rivera[‡], 2023. Petrological heterogeneities at the metric to micrometric scales of mantle rocks from the Taitao ophiolite, Aysén Region, Chile, *XVI Congreso Geológico Chileno*, Santiago, Chile.
- Plissart, G., N. Akizawa, M. Schilling, A. Corgne, K.-Y. Lin[†], M. Alvear[‡], C. Marín[‡], E. González[‡], **J.M. Warren**, and R. Anma, 2023. First report of a massive chromitite from the Taitao ophiolite (Chile): an enigmatic origin leading to PGM and Y-REE phosphate crystallization, *XVI Congreso Geológico Chileno*, Santiago, Chile.
- Rivera Salgado, A.[‡], G. Plissart, M. Schilling, A. Corgne, K.-Y. Lin[†], N. Akizawa, and **J.M. Warren**, 2023. Origin and evolution of albitites present in the Taitao ophiolitic sequence (Taitao Peninsula, Aysén Region, Chile), *XVI Congreso Geológico Chileno*, Santiago, Chile.
- Chinkaka, E.[‡], A. Vatuva, **J.M. Warren**, K.F. Davis, and J.M. Klinger, 2023. Detection of Lithium-Rich Pegmatites Using ASTER Multispectral Image Analysis: insights from the Karibib Pegmatite Belt, Namibia, *29th Colloquium of African Geology*, Windhoek, Namibia.
- Birner, S.K., E. Cottrell, F.A. Davis, and **J.M. Warren**, 2023. Refractory peridotites at ultraslow-spreading ridges record ultra-low oxygen fugacity, *Goldschmidt Conference*, Lyon, France.
- Cottrell, E., S.K. Birner, F.A. Davis, and **J.M. Warren**, D. Canil, and C.H. Langmuir, 2023. Records of Archean mantle oxygen fugacity, *Goldschmidt Conference*, Lyon, France.
- Warren, J.M.**, C. Prigent, S.K. Birner, E. Cottrell, F.A. Davis, and K.J. Lynn, 2023. Abyssal peridotite constraints on hydrothermal fluid circulation, *Goldschmidt Conference*, Lyon, France.
- Lin, K.-Y.[†], **J.M. Warren**, and F.A. Davis, 2023. Abyssal peridotites from different tectonic regimes record contrasting closure temperatures and cooling rates, *Gordon Research Conference on the Interior of the Earth*, South Hadley, MA.
- Nalesnik, A.[†], J. Schmith, T. Rose, D.A. Swanson, K.J. Lynn, and **J.M. Warren**, 2023. First grain-size data of Kulanaokuaiki Tephra Units 1, 3, and 5 from explosive eruptions of Kilauea Volcano, HI, USA, *IAVCEI Scientific Assembly*, Rotorua, New Zealand.
- Nalesnik, A.[†], K.J. Lynn, T. Rose, K.-Y. Lin[†], and **J.M. Warren**, 2023. Explosive Eruptions of Kilauea Volcano (HI): Constraints from Glass Chemistry of the Upper-Kulanaokuaiki Tephra, *IAVCEI Scientific Assembly*, Rotorua, New Zealand.
- Behn, M.D., M.S. Boettcher, J.-A. Olive, **J.M. Warren**, and G. Hirth, 2022. A rheologic model for the seismicogenic behavior of oceanic transform faults, *AGU Fall Meeting*, Chicago, IL.

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- Gong, J., W. Fan, M.S. Boettcher, J.J. McGuire, J.A. Collins, **J.M. Warren**, M.D. Behn, E.C. Roland, C.R. German, and Y. Liu, 2022. Seismotectonics of the Easternmost Segment of Gofar Transform Fault, *AGU Fall Meeting*, Chicago, IL.
- Koenig, P.[‡], E.C. Roland, M.S. Boettcher, **J.M. Warren**, C.R. German, R.L. Evans, A. Gase, W. Fan, J. Gong, Y. Liu, and M. Bahruth[†], 2022. The surface expression of the Gofar oceanic transform fault, East Pacific Rise using newly acquired, 1m-resolution multibeam bathymetry from AUV Sentry, *AGU Fall Meeting*, Chicago, IL.
- Myers, M.L., C. Condit, **J.M. Warren**, R.M. Holder, E.H.G. Cooperdock, V. Guevara, E. Rader, A. Bauer, and E. Mixon, 2022. PETRONET: A petrology and high-temperature geochemistry community built within an antiracist and inclusive framework, *AGU Fall Meeting*, Chicago, IL.
- Condit, C., M.L. Myers, **J.M. Warren**, R.M. Holder, E.H.G. Cooperdock, V. Guevara, E. Rader, A. Bauer, and E. Mixon, 2022. PETRONET: A petrology and high-temperature geochemistry community built within an antiracist and inclusive framework, *Geological Society of America Abstracts with Programs*, 54(5), <https://doi.org/10.1130/abs/2022AM-381164>.
- Moyer, P.A., M.S. Boettcher, J. Gong, W. Fan, J.J. McGuire, **J.M. Warren**, M.D. Behn, J.A. Collins, E.C. Roland, C.R. German, and Y. Liu, 2022. Variations in Earthquake Stress Drop on Gofar Transform Fault at the End of the 2008 and 2020 Seismic Cycles, *Southern California Earthquake Center Annual Meeting*, Palm Springs, CA.
- Birner, S.K., E. Cottrell, **J.M. Warren**, and F.A. Davis, 2022. Heterogeneity in oxygen fugacity recorded by mid-ocean ridge peridotites, in *Understanding Oxygen Fugacity in Geoscience International School*, Trieste, Italy.
- Lin, K.-Y.[†], **J.M. Warren**, and F.A. Davis, 2022. Evaluating the effects of spreading rate and melt-addition on the closure temperatures recorded by peridotite thermometers, *Goldschmidt Conference*, Honolulu, HI.
- Lynn, K.J., T. Rose, D.C.S. Ruth, D.A. Swanson, and **J.M. Warren**, 2022. Years to decades of pre-eruptive storage recorded by olivine from the basaltic subplinian deposit of Kulanaokuaiki Tephra Unit 3 (900 C.E.), Kilauea Volcano (HI), *Goldschmidt Conference*, Honolulu, HI.
- Nalesnik, A.[†], K.J. Lynn, T. Rose, **J.M. Warren**, and K.-Y. Lin[†], 2022. Glass chemistry of the Kulanaokuaiki Tephra Units 4 and 5 deposited from explosive eruptions of Kilauea Volcano (HI), *Goldschmidt Conference*, Honolulu, HI.
- Birner, S.K., E. Cottrell, **J.M. Warren**, K.A. Kelley, and F.A. Davis, 2022. The effects of melt addition on mid-ocean ridge peridotites, *Geological Society of America Abstracts with Programs*, 54(4), doi:10.1130/abs/2022NC-374815.
- Warren, J.M.**, M.S. Boettcher, M.B. Bahruth[†], M.D. Behn, G. Hirth, A.H. Kohli, Y. Liu, P.A. Moyer, C. Prigent[†], E. Roland, M. Wolfson-Schwehr, 2022. Using fault zone samples to understand the slip behavior of oceanic transform faults, *Geological Society of America Penrose Conference on "The geological fingerprints of slow earthquakes"*, Santa Catalina Island, CA.
- Bahruth, M.B.[†], **J.M. Warren**, C. Prigent[†], D.M. Schwartz, J.L. Andrys[‡], K.-Y. Lin[†], M.D. Behn, T.A. Morrow, W. Fan, J. Gong, E. Roland, M.S. Boettcher, Y. Liu, C.R. German, and J.A. Collins, 2021. Aseismic movement of Gofar Transform Fault may be aided by formation of clay-bearing basaltic

- breccias, *AGU Fall Meeting*, New Orleans, LA.
- Boettcher, M.S., **J.M. Warren**, M.D. Behn, and G. Hirth, 2021. A Synoptic Model for Slip on Mid-Ocean Ridge Transform Faults, *AGU Fall Meeting*, New Orleans, LA.
- *Gong, J., W. Fan, M.S. Boettcher, J.J. McGuire, J.A. Collins, **J.M. Warren**, M.D. Behn, E. Roland, C.R. German, Y. Liu, and T.A. Morrow, 2021. Using microearthquakes to investigate the earthquake preparation process at the Gofar Transform Fault, East Pacific Rise, *AGU Fall Meeting*, New Orleans, LA.
- Kumamoto, K.M., L.N. Hansen, D. Wallis, B.-S. Li, D.E.J. Armstrong, D.L. Goldsby, **J.M. Warren**, and A.J. Wilkinson, 2021. Water does not influence the plasticity of olivine at low temperatures, *AGU Fall Meeting*, New Orleans, LA.
- Lin, K.-Y.[†] and **J.M. Warren**, 2021. Trace element systematics of abyssal peridotite olivine: implications for ridge melting and melt transport, *AGU Fall Meeting*, New Orleans, LA.
- Morrow, T.A., E. Roland, **J.M. Warren**, M.D. Behn, J.A. Collins, W. Fan, J. Gong, C. Prigent[†], D.M. Schwartz, M.B. Bahruth[†], J.L. Andrys[‡], K.-Y. Lin[†], M.S. Boettcher, J.J. McGuire, Y. Liu, and C.R. German, 2021. 4CAST Gofar: New Observations of Structure, Tectonics, Magmatism, and Hydrothermal Activity within the Gofar Transform Fault, *AGU Fall Meeting*, New Orleans, LA.
- Moyer, P.A., M.S. Boettcher, J. Gong, W. Fan, J.J. McGuire, **J.M. Warren**, M.D. Behn, J.A. Collins, E.C. Roland, C.R. German, and Y. Liu, 2021. Variations in Earthquake Stress Drop on Gofar Transform Fault at the End of the 2020 Seismic Cycle, *AGU Fall Meeting*, New Orleans, LA.
- Schwartz, D.M., J.L. Andrys[‡], **J.M. Warren**, M.D. Behn, M.B. Bahruth[†], K.-Y. Lin[†], C. Prigent[†], T.A. Morrow, M.D. Schmitz, and M.S. Boettcher, 2021. Insights into 3 Ma of Mid-Ocean Ridge Mantle Source Heterogeneity from the Gofar Transform Fault, East Pacific Rise, *AGU Fall Meeting*, New Orleans, LA.
- Rowe, M.C., A. Johnson, J. Hammond, S. Wang, R.L. Hervig, and **J.M. Warren**, 2020. Mantle H₂O and δ D associated with melt reactions in a supra-subduction ophiolite, *Goldschmidt Conference*, Virtual.
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