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Curriculum Vitae

**­**

Education

**2013** **Ph.D., University of California, Riverside |** Geological Science **|** Advisor – Timothy W. Lyons

**2010** **M.S., University of California, Riverside |** Geological Science **|** Advisor – Timothy W. Lyons

**2006** **B.S., University of California, Riverside |** Environmental Science

Professional Experience

2020-present Associate Professor, Department of Earth, Ocean and Atmospheric Science | National High Magnetic Field Laboratory, Florida State University

2015-2020 Assistant Professor, Department of Earth, Ocean and Atmospheric Science | National High Magnetic Field Laboratory, Florida State University

2013-2015 Agouron Postdoctoral Fellow, Geology and Geophysics Department, Woods Hole Oceanographic Institution | Mentor – Sune Nielsen

2007-2013 Research and Teaching Graduate Assistant, Department of Earth Sciences, University of California, Riverside

2011 Lecturer, Department of Earth Sciences, University of California, Riverside

2006-2007Research Specialist Department of Earth Sciences, University of California, Riverside | Silke Severmann

Awards and Fellowships(since 2014)

2020 SLOAN Research Foundation Fellow

2019 ICDP Deep Dust Drilling

2015 Marine Geosciences Leadership Fellow

2014 NNOCCI Science Fellow

Peer-Reviewed Publications (annual total)

(\*) Primary advisor or mentor

***Book Chapters***

***2021 (1)***

002. B Kendall, MB Andersen, and **JD Owens** (2020) Assessing the Effect of Large Igneous Provinces on Global Oceanic Redox Conditions Using Non‐traditional Metal Isotopes (Molybdenum, Uranium, Thallium), *In Large Igneous Provinces* (eds R.E. Ernst, A.J. Dickson and A. Bekker), doi: 10.1002/9781119507444.ch13

***2020 (1)***

001. **JD Owens** (2020) Application of thallium isotopes: tracking marine oxygenation through manganese oxide burial, *Geochemical Traces in Earth System Science*, doi: 10.1017/9781108688697

***Journals***

***2022 (6)***

063. GT Connock, **JD Owens**, and X-L Liu (2022) Biotic induction and microbial ecological dynamics of Oceanic Anoxic Event 2, *Nature Communications Earth & Environment*, doi: 10.1038/s43247-022-00466-x

062. F Wu, **JD Owens**, CR German, RA Mills, and SG Nielsen (2022) Vanadium isotope fractionation during hydrothermal sedimentation: implications for the vanadium cycle in the oceans, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2022.05.002

061. DD Gregory, L Kovarik, SD Taylor, DE Perea, **JD Owens**, N Atienza, and TW Lyons (2022) Nano-scale trace element zoning in pyrite framboids and implications for paleoproxy applications, *Geology,* doi: 10.1130/G49890.1

060. NP Kozik, BC Gill, **JD Owens**, TW Lyons, and SA Young (2022) Sulfur isotopes and iodine records reveal a protracted cascade of reducing marine conditions associated with Late Ordovician climate change and mass extinctions, *AGU Advances*, doi: 10.1029/2021AV000563

059. X Chen\*, S Li, SM Newby, TW Lyons, F Wu, and **JD Owens** (2022) Black Sea iron and manganese shuttle has no effect on sedimentary thallium and vanadium isotope signature, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2021.11.010

058. AH Caruthers, SM Marroquín, DR Gröcke, M Golding, M Aberhan, TR Them II, JP Trabucho-Alexandre, YP Veenma, **JD Owens**, CA McRoberts, RM Friedman, J Trop, D Szűcs, J Pálfy, and BC Gill (2022) New evidence from a Panthalassan section (Wrangell Mountains, Alaska) for long duration of Rhaetian Stage and regional differences in carbon cycle perturbations at the Triassic-Jurassic transition, *Earth and Planetary Science Letters,* doi: 10.1016/j.epsl.2021.117262

***2021 (6)***

057. CN Bowman, TR Them II, MD Knight, D Kaljo, ME Eriksson, O Hints, T Martma, **JD Owens**, and SA Young (2021) A multi-proxy approach to constrain reducing conditions in the Baltic Basin during the late Silurian Lau carbon isotope excursion, *Palaeogeography, Palaeoclimatology, Palaeoecology,* doi: 10.1016/j.palaeo.2021.110624

056. Z Li, DB Cole, SM Newby\*, **JD Owens**, B Kendall, and CT Reinhard (2021) New constraints on mid-Proterozoic ocean redox from stable thallium isotope systematics of black shales, *Geochimica et Cosmochimica Acta,* doi: 10.1016/j.gca.2021.09.006

055. SM Newby\*, **JD Owens**, SD Schoepfer, and TJ Algeo (2021) Transient ocean oxygenation at end-Permian mass extinction onset shown by thallium isotopes, *Nature Geoscience*, doi: 10.1038/s41561-021-00802-4

054. ST Rader, RM Gaschnig, SM Newby, GE Bebout, MJ Mirakian, and **JD Owens** (2021) Thallium behavior during high-pressure metamorphism in the Western Alps, Europe, *Chemical Geology*, doi: 10.1016/j.chemgeo.2021.120349

053. RM Gaschnig, ST Rader, CT Reinhard, **JD Owens**, NJ Planavsky, X Wang, D Asael, A Greaney, and R Helz (2021) Behavior of the Mo, Tl, and U isotope systems during differentiation in the Kilauea Iki lava lake, *Chemical Geology*, doi: 10.1016/j.chemgeo.2021.120239

052. S Goderis, H Sato, L Ferrière, B Schmitz, D Burney, P Kaskes, J Vellekoop, A Wittmann, P Claeys, SJ de Graaff, T Déhais, NJ de Winter, M Elfman, J-G Feignon, A Ishikawa, C Koeber, P Kristiansson, CR Neal, **JD Owens**, T Schulz, M Sinnesael, F Vanhaecke, SJM Van Malderen, TJ Bralower, SPS Gulick, CM Lowery, JV Morgan, J Smit, MT Whalen, and the IODP-ICDP Expedition 364 Scientists (2021) Globally distributed iridium layer preserved within the Chicxulub impact structure, *Science Advances*, doi: 10.1126/sciadv.abe3647

***2020 (9)***

051. CM Ostrander, **JD Owens**, SG Nielsen, TW Lyons, Y Shu, X Chen, EA Sperling, DT Johnston, SK Sahoo, and AD Anbar (2020) Thallium isotope ratios in shales from South China and northwestern Canada suggest widespread O2 accumulation in marine bottom waters was an uncommon occurrence during the Ediacaran Period, *Chemical Geology*, doi: 10.1016/j.chemgeo.2020.119856

050. ML Abshire, **JD Owens**, J Cofrancesco, M Inthorn, and N Riedinger (2020) Geochemical Signatures for Redepositional Environments: The Namibia Continental Margin, *Marine Geology*, doi: 10.1016/j.margeo.2020.106316

049. RN Bryant, C Jones, MR Raven, **JD Owens**, and DA Fike (2020) Shifting modes of iron sulfidization at the onset of OAE-2 drive regional shifts in pyrite δ34S records, *Chemical Geology*, doi: 10.1016/j.chemgeo.2020.119808

048. F Wu, **JD Owens**, F Scholz, L Huang, S Li\*, N Riedinger, L Peterson, SG Nielsen (2020) Sedimentary vanadium isotope signatures in low oxygen marine conditions, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2020.06.013

047. CN Bowman, A Lindskog, NP Kozik, CG Richbourg, **JD Owens**, and SA Young, (2020) Integrated sedimentary, biotic, and paleoredox dynamics from multiple localities in southern Laurentia during the late Silurian (Ludfordian) extinction event, *Palaeogeography, Palaeoclimatology, Palaeoecology*, doi: 10.1016/j.palaeo.2020.109799

046. SA Young, E Benayoun, NP Kozik, O Hints, T Martma, ST Bergström, and **JD Owens** (2020) Marine redox variability from Baltica during extinction events in the latest Ordovician–early Silurian, *Palaeogeography, Palaeoclimatology, Palaeoecology*, doi: 10.1016/j.palaeo.2020.109792

045. GJ Gilleaudeau, SK Sahoo, CM Ostrander, **JD Owens**, SW Poulton, TW Lyons, and AD Anbar (2020) Molybdenum isotope and trace metal signals in an iron-rich Mesoproterozoic ocean: a snapshot from the Vindhyan Basin, India, *Precambrian Research*, doi: 10.1016/j.precamres.2020.105718

044. H Fan, SG Nielsen, **JD Owens**, M Auro, Y Shu, DS Hardisty, CN Bowman, SA Young, and H Wen (2020) Constraining oceanic oxygenation during the Shuram excursion in South China using thallium isotopes, *Geobiology*, doi: 10.1111/gbi.12379

043. MS Abadi, **JD Owens**, X Liu, TR Them II, X Cui, and GS Soreghan (2020) Atmospheric Dust Stimulated Marine Primary Productivity During Earth’s Penultimate Icehouse, *Geology,* doi: 10.1130/G46977.1

***2019 (11)***

042. F Wu\*, **JD Owens**, L Tang, Y Dong, and F Huang (2019) Vanadium isotopic fractionation during the formation of marine ferromanganese crusts and nodules, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2019.09.007

041. CN Bowman, SA Young D Kaljo, ME Eriksson, TR Them II, O Hints, T Martma, and **JD Owens** (2019) Linking the progressive expansion of reducing conditions to a stepwise mass extinction event in the late Silurian oceans, *Geology*, doi: 10.1130/G46571.1

040. CM Ostrander, SK Sahoo, G Jiang, B Kendall, NJ Planavsky, TW Lyons, SG Nielsen, **JD Owens**, GW Gordon, SJ Romaniello, and AD Anbar (2019) Multiple negative molybdenum isotope excursions in the Doushantuo Formation (South China) fingerprint complex redox-related processes in the Ediacaran Nanhua Basin, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2019.07.016

039. SA Young, A Kleinberg, and **JD Owens** (2019) Geochemical evidence for expansion of marine euxinia during an early Silurian (Llandovery–Wenlock boundary) mass extinction, *Earth and Planetary Science Letters,* doi: 10.1016/j.epsl.2019.02.023

038. CM Ostrander, SG Nielsen, **JD Owens**, B Kendall, GW Gordon, SJ Romaniello, and AD Anbar (2019) Fully oxygenated water columns over continental shelves before the Great Oxidation Event, *Nature Geoscience,* doi: 10.1038/s41561-019-0309-7

037. MR Raven, DA Fike, AS Bradley, ML Gomes, **JD Owens**, and SA Webb (2019) Paired organic matter and pyrite δ34S profiles reveal mechanisms of carbon, sulfur, and iron cycle disruption during Ocean Anoxic Event 2, *Earth and Planetary Science Letters,* doi: 10.1016/j.epsl.2019.01.048

036. H Song, Y Du, TJ Algeo, J Tong, **JD Owens**, H Song, L Tian, H Qiu, Y Zhu, and TW Lyons (2019) Cooling-driven oceanic anoxia during the Smithian-Spathian transition (mid-Early Triassic), *Earth-Science Reviews,* doi: 10.1016/j.earscirev.2019.01.009

035. K Nguyen, GD Love, JA Zumberge, AE Kelly, **JD Owens**, MK Rohrssen, SM Bates, C Cai, and TW Lyons (2019) Absence of biomarker evidence for early eukaryotic life from the Mesoproterozoic Roper Group: Searching across a marine redox gradient in mid-Proterozoic habitability, *Geobiology,* doi: 10.1111/gbi.12329

034. TR Them II\*, CH Jagoe, AH Carothers, BC Gill, SE Grasby, DR Gröcke, R Yin, and **JD Owens** (2019) Terrestrial sources as the primary delivery mechanism of mercury to the oceans across the Toarcian Oceanic Anoxic Event (Early Jurassic), *Earth and Planetary Science Letters,* doi: 10.1016/j.epsl.2018.11.029

033. SG Nielsen, M Auro, K Righter, D Davis, J Prytulak, F Wu\*, and **JD Owens** (2019) Nucleosynthetic vanadium isotope heterogeneity of the early solar system recorded in chondritic meteorites, *Earth and Planetary Science Letters,* doi: 10.1016/j.epsl.2018.10.029

032. F Wu\*, **JD Owens**, T Huang, A Sarafian, KF Huang, I Sen, TJ Horner, J Blusztajn, P Morton, and SG Nielsen (2019) Vanadium Isotope Composition of Seawater, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2018.10.010

***2018 (7)***

031. **JD Owens**, CM Lowery, and TW Lyons (2018) Quantifying the missing sink for global organic carbon burial during a Cretaceous oceanic anoxic event, *Earth and Planetary Letters*, doi: 10.1016/j.epsl.2018.07.021

030. TR Them II\*, BC Gill, AH Caruthers, AM Gerhardt, DR Gröcke, SM Marroqín, TW Lyons, SG Nielsen, JP Trabucho Alexandre, and **JD Owens** (2018) Thallium isotopes reveal protracted anoxia during the Toarcian (Early Jurassic) associated with volcanism, carbon burial, and mass extinction, *Proceeding of the National Academy of Sciences*, doi: 10.1073/pnas.1803478115

029. CM Lowery, TJ Bralower, **JD Owens**, FJ Rodrigues-Tovar, H Jones, J Smit, MT Whalen, P Claeys, K Farley, SPS Gulick, JV Morgan, S Green, E Chenot, GL Christeson, CS Cockell, MJL Coolen, L Ferrière, C Gebhardt, K Goto, DA Kring, J Lofi, R Ocampo-Torres, L Perez-Cruz, AE Pickersgill, MH Poelchau, ASP Rae, C Rasmussen, M Rebolledo-Vieyra, U Riller, H Sato, SM Tikoo, N Tomioka, J Urrutia-Fucugauchi, J Vellekoop, A Wittmann, L Xiao, K E Yamaguchi, W Zylberman (*2018*) Rapid recovery of life at ground zero of the end-Cretaceous mass extinction, *Nature,* doi: 10.1038/s41586-018-0163-6

028. TT Isson, G Love, CL Dupont, CT Reinhard, AJ Zumberge, D Asael, B Gueguen, J McCrow, BC Gill, **JD Owens**, RH Rainbird, AD Rooney, MY Shao, EE Stueeken, KO Konhauser, S John, TW Lyons, and NJ Planavsky (2018) Tracking the Rise of Eukaryotes to Ecological Dominance with Zinc Isotopes, *Geobiology,* doi: 10.1111/gbi.12289

027.DSHardisty, TW Lyons, N Riedinger, TT Isson, **JD Owens**, RC Aller, D Rye, NJ Planavsky, CT Reinhard, BC Gill, AL Masterson, D Asael, and DT Johnston (2018), An evaluation of sedimentary molybdenum and iron as proxies for pore fluid paleoredox conditions, *American Journal of Science*, doi: 10.2475/05.2018.04

026. R Raiswell, DS Hardisty, TW Lyons, DE Canfield, **JD Owens**, NJ Planavsky, SW Poulton, and CT Reinhard (2018) The Iron Paleoredox Proxies: A Guide to Proper Practice, Pitfalls, and Problems, *American Journal of Science*, doi: 10.2475/05.2018.03

025. DM Axelrad, RH Saff, VJM Salters, A Becker, C Jago, **JD Owens**, L Ringenberg, D Gbogbo, and O Fasakin (2018) Lead in Drinking Water in Tallahassee Florida’s Schools – And a Call for Pediatricians to Support Actions to Reduce Children’s Lead Exposure, *The Florida Pediatrician,* 37(1), 6—13

***2017 (5)***

024. CM Ostrander\*, **JD Owens,** and SG Nielsen (2017) Constraining the rate of oceanic deoxygenation leading up to a Cretaceous Oceanic Anoxic Event (OAE-2: ~94 Ma), *Science Advances,* doi: 10.1126/sciadv.1701020

023. **JD Owens**, SG Nielsen, TJ Horner, CM Ostrander\*, and L Peterson (2017) Thallium-isotopic compositions of euxinic sediments as a proxy for global manganese-oxide burial, *Geochimica et Cosmochimica Acta,* doi: 10.1016/j.gca.2017.06.041

022. TR Them II\*, BC Gill, D Selby, DR Gröcke, R Friedman, and **JD Owens** (2017) Evidence for rapid weathering response to climatic warming during the Toarcian Oceanic Anoxic Event, *Nature Scientific Reports,* doi: 10.1038/s41598-017-05307-y

021. X Zhou, HC Jenkyns, W Lu, DS Hardisty, **JD Owens**, TW Lyons, and Z Lu (2017) Organically bound iodine as a bottom-water redox proxy: Preliminary validation and application, *Chemical Geology*, doi: 10.1016/j.chemgeo.2017.03.016

020. **JD Owens**, TW Lyons, DS Hardisty, CM Lowery, Z Lu, B Lee\*, and HC Jenkyns (2017) Patterns of local and global redox variability during the Cenomanian–Turonian Boundary Event (Oceanic Anoxic Event 2) recorded in carbonates and shales from central Italy, *Sedimentology*, doi: 10.1111/sed.12352

***2016 (6)***

019. AJ Dickson, HC Jenkyns, D Porcelli, S van den Boorn, E Idiz, and **JD Owens** (2016) Corrigendum to "Basin-scale controls on the molybdenum-isotope composition of seawater during Oceanic Anoxic Event 2 (Late Cretaceous*)", Geochimica et Cosmochimica Acta,* doi: 10.1016/j.gca.2016.06.025

018. **JD Owens**, CT Reinhard, M Rohressen, GL Love, and TW Lyons (2016) Empirical links between trace metal cycling and marine microbial ecology during a large perturbation to Earth's carbon cycle, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2016.05.046

017. XWang, CT Reinhard, NJ Planavsky, **JD** **Owens**, TW Lyons, and TM Johnson (2016) Sedimentary chromium isotopic compositions across the Cretaceous OAE2 at Demerara Rise Site 1258, *Chemical Geology*, doi: 10.1016/j.chemgeo.2016.03.006

016. SG Nielsen, G Yogodzinski, J Prytulak, T Plank, SM Kay, RW Kay, J Blusztajn, **JD Owens**, M Auro, and T Kading (2016) Tracking along-arc sediment inputs to the Aleutian arc using thallium isotopes, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2016.03.010

015. SK Sahoo, NJ Planavsky, G Jiang, B Kendall, **JD Owens**, X Wang, X Shi, AD Anbar, and TW Lyons (2016) Oceanic oxygenation events in the anoxic Ediacaran ocean, *Geobiology,* doi: 10.1111/gbi.12182

014. SG Nielsen, **JD** **Owens,** and TJ Horner (2016) Analysis of high-precision vanadium isotope ratios by medium resolution MC-ICP-MS, *Journal of Analytical Atomic Spectrometry,* doi: 10.1039/C5JA00397K

***2015 (3)***

013.SSur, **JD Owens**, GS Soreghan, TW Lyons, R Raiswell, NG Heavens, and NW Mahowald (2015) Extreme eolian delivery of reactive iron to late Paleozoic icehouse seas, *Geology*, doi: 10.1130/G37226.1

012.MR Osburn, **JD Owens**, KD Bergmann, JP Grotzinger, and TW Lyons (2015) Dynamic changes in sulfate isotopes preceding the Ediacaran Shuram Excursion, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2015.07.039

011. XZhou, HC Jenkyns, **JD Owens**, CK Junium, X Zhen, BB Sageman, DS Hardisty, TW Lyons, A Ridgwell, and Z Lu (2015) Upper ocean oxygenation dynamics from I/Ca ratios during the Cenomanian-Turonian OAE 2, *Paleoceanography,* doi: 10.1002/2014PA002741

***2014 (1)***

010.LM Wehrmann, MJ Formolo, **JD** **Owens**, R Raiswell, TG Ferdelman, N Riedinger, and TW Lyons (2014) Iron speciation and cycling in glacially influenced high-latitude fjord sediments (West Spitsbergen, Svalbard) – Evidence for a benthic recycling-transport mechanism, *Geochimica et Cosmochimica Acta,* doi: 10.1016/j.gca.2014.06.007

***2013 (2)***

009. **JD Owens**, BC Gill, HC Jenkyns, SM Bates, S Severnman, MMM Kuypers, RG Woodfine, and TW Lyons (2013) Sulfur isotopes track the global extent and dynamics of euxinia during Cretaceous Oceanic Anoxic Event 2, *Proceeding of the National Academy of Sciences*, doi: 10.1073/pnas.1305304110

008.RWScott, MJ Formolo, N Rush, **JD Owens,** and F Oboh-Ikuenob (2013) Upper Albian OAE 1d Event in the Chihuahua Trough, New Mexico, U.S.A, *Cretaceous Research*, doi: 10.1016/j.cretres.2013.08.011

***2012 (3)***

007.NJ Planavsky, A Bekker, A Hofmann, **JD Owens,** and TW Lyons (2012) Sulfur record of rising and falling marine oxygen and sulfate levels during the Lomagundi event, *Proceedings of the National Academy of Sciences*, doi: 10.1073/pnas.1120387109

006. **JD Owens**, TW Lyons, X Li, KG Macleod, G Gordon, MM Kuypers, AD Anbar, W Kuhnt, and S Severmann (2012) Iron isotope and trace metal records of iron cycling in the proto-North Atlantic during the Cenomanian-Turonian oceanic anoxic event (OAE-2), *Paleoceanography*, doi: 10.1029/2012pa002328

005.K Mitchell, PRD Mason, P Van Cappellen, TM Johnson, BC Gill, **JD Owens**, J Diaz, ED Ingall, G-J Reichart, and TW Lyons (2012) Selenium as paleo-oceanographic proxy: A first assessment, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2012.03.038

***2011 (4)***

004.DL Boyer, **JD Owens**, TW Lyons, and ML Droser (2011) Joining forces: Combined biological and geochemical proxies reveal a complex but refined high-resolution palaeo-oxygen history in Devonian epeiric seas, *Palaeogeography, Palaeoclimatology, Palaeoecology*, doi: 10.1016/j.palaeo.2011.04.012

003.RP Brucker, J McManus, S Severmann, **JD Owens,** and TW Lyons (2011) Trace metal enrichments in Lake Tanganyika sediments: Controls on trace metal burial in lacustrine systems, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2010.09.041

002.R Raiswell, CT Reinhard, A Derkowski, **JD Owens**, SH Bottrell, AD Anbar, and TW Lyons (2011) Formation of syngenetic and early diagenetic iron minerals in the late Archean Mt. McRae Shale, Hamersley Basin, Australia: New insights on the patterns, controls and paleoenvironmental implications of authigenic mineral formation, *Geochimica et Cosmochimica Acta*, doi: 10.1016/j.gca.2010.11.013

001.J Yao, J Li, **JD Owens**, and W Zhong (2011) Combing DNAzyme with single-walled carbon nanotubes for detection of Pb(ii) in water, *Analyst*, doi: 10.1039/C0AN00709A

***Submitted***

007. TR Them II\*, **JD Owens**, AH Caruthers, and BC Gill (in prep) Massive marine trace metal drawdown during an Early Jurassic (Toarcian) oceanic anoxic event, *AGU Advances*

006. YP Veenma, K McCabe, AH Caruthers, M Aberhan, M Golding, SM Marroquín, **JD Owens**, TR Them II, BC Gill and JP Trabucho-Alexandre (submitted) The Glass Ramp of Wrangellia: Late Triassic to Early Jurassic Outer Ramp Environments of the McCarthy Formation, Alaska, *Journal of Sedimentary Research*

005. NM Ellis JW van Wijk, CM Lowery, **JD Owens**, and L Liu (submitted) Somali Basin stratigraphy constrains Afar mantle plume dynamic uplift, *Nature*

004. NP Kozik, SA Young, SM Newby, M Liu, D Chen, EU Hammarlund, DPG Bond, TR Them II, and **JD Owens** (submitted) Rapid marine oxygen variability as a driver of the Late Ordovician Mass Extinction, *Nature Geoscience*

003. GT Connock, **JD Owens**, and X Liu (in review) Biomarkers reveal the biotic induction of Oceanic Anoxic Event 2 and microbial response to marine deoxygenation, *Nature Ecology*

002. B Kenlee, **JD Owens**, R Raiswell, SW Poulton, S Severmann, PM Sadler, and TW Lyons (in review) Long-range transport of Saharan dust enhances oceanic iron bioavailability, *Geobiology*

001. LG Hancock, NJ Planavsky, SG Nielsen, **JD Owens**, RJ Behl, and TW Lyons (in review) A coupled molybdenum and thallium isotope assessment of regional and global paleoredox in the Monterey Formation: Implications for relative proxy fidelity, *Earth and Planetary Science Letters*

Conference Presentations **(annual total)**

***2022 (12)***

166. JD Owens, S Li, and SM Newby (2022) Modern sedimentary archives to fingerprint thallium and vanadium isotopes to better constrain the low oxygen isotope signatures, *Geological Society of America*

165. B Kendall, S Yang, X Lu, X Chen, W Zheng, JD Owens, and Young (2022) Uranium and molybdenum isotope evidence for globally extensive marine euxinia on continental margins and in epicontinental seas during the Devonian-Carboniferous Hangenberg crisis, *Geological Society of America*

164. K McCabe, R Reid, AH Caruthers, SM Marroquín, JD Owens, TR Them II, J Trabucho-Alexandre, Y Veenma, and BC Gill (2022) Remineralization and denitrification: Nitrogen as a local redox indicator across the end-Triassic mass extinction, *Geological Society of America*

163. C Bowman, M Marshall, JD Owens, SA Young, GG Soares, and K Lau (2022) Insights into phosphogenesis from a multi-proxy paleo-redox reconstruction of the Permian phosphoria basin, Idaho, USA, *Geological Society of America*

162. TR Them II, SM Marroquín, MD Knight, ML Golding, JD Owens, J Trabucho-Alexandre, Y Veenma, SH Caruthers, and D Gröcke (2022) Comparative analysis of sedimentary mercury geochemical records from land to open ocean during the Triassic-Jurassic transition, *Geological Society of America*

161. SM Newby, SA Young, TR Them II, BC Gill, and JD Owens (2022) A major issue with oceanic anoxic events: oxygen production and possible means to reduce it, *Geological Society of America*

160. SM Newby, SA Young, TR Them II, BC Gill, and JD Owens (2022) A major issue with oceanic anoxic events: oxygen production and possible means to reduce it, *Geological Society of America*

159. JD Owens, SM Newby, S Li, TR Them, G Bonacina, and A Sanfilippo (2022) Spatiotemporal redox variability enveloping an Oceanic Anoxic Event, *Goldschmidt*

158. SM Newby, SA Young, TR Them, BC Gill, and JD Owens (2022) Balancing the redox budgets of Oceanic Anoxic Events, *Goldschmidt*

157. S Li, SM Newby, S Severmann, J McManus, and JD Owens (2022) Fingerprinting subtle redox fluctuations using vanadium isotopes, *Goldschmidt*

156. SM Newby, S Li, S Severmann, J McManus, F Scholz, and JD Owens (2022) Expanding and improving the thallium isotope redox proxy for low-oxygen open ocean conditions, *Goldschmidt*

155. L Tegler, T Horner, Y Wang, F Scholz, JD Owens, L Peterson, W Lu, and S Nielsen (2022) What controls the cadmium isotope composition of organic-rich sediments – Redox or Productivity?, *Ocean Sciences Meeting*

***2021 (7)***

154. C Gfatter, and **JD** **Owens** (2021) Assessing trace metal incorporation using a flow through culturing system for benthic foraminifera, *Geological Society of America*

153. S Li, O Friedrich, **JD** **Owens,** and F Wu(2021) Reconciliation of the paleontological evidence and the geochemical proxies: The local weak oxygenation in the bottom water during OAE2 as tracked by sedimentary V isotope composition, *Geological Society of America*

152. S Marroquín, A Caruthers, M Aberhan, M Golding, D Gröcke, **JD** **Owens,** T Them II, J Trabucho-Alexandre, Y Veenma, and B Gill (2021) A long-term carbon isotope record across the Triassic-Jurassic transition from Alaska, *Geological Society of America*

151. CT Edwards, SA Young, N Kozik, C Bowman, **JD** **Owens,** (2021) Identifying the causes of early Paleozoic mass extictions using new carbonate geochemical proxies: Local evidence of marine anoxia using I/Ca ratios, *Geological Society of America*

150. B Gill, M Aberhan, A Caruthers, M Golding, D Gröcke, S Marroquín, K McCabe, **JD** **Owens,** T Them II, J Trabucho-Alexandre, and Y Veenma (2021) The Grotto Creek succession: A unique record of Lat Triassic – Early Jurassic environmental and biologic change, *Geological Society of America*

149. J Van Wijk, N Ellis, L Liu, CM Lowery, and **JD** **Owens** (2021) Reconstructing paleo-dynamic topography of the ocean basins, *Geological Society of America*

148. MJ Bouwmeester, L Boschman, N Berends, **JD Owens**, BC Gill, and JP Trabucho-Alexandre (2021) Cretaceous Black Shales in the Pacific: The Equatorial Position Hypothesis, *European Geophysical Union*

***2020 (19)***

147. GT Connock, **JD Owens**, and X Liu (2020) Molecular Fossils Reveal Processes Preceding, Initiating and Sustaining the Positive Carbon Isotope Excursion Used to Define Widespread Marine Deoxygenation in the mid-Cretaceous (OAE 2), *American Geophysical Union*

146. **JD Owens**, Chen X, and Wu F(2020) Reconstructing Redox Conditions Using a Mulitproxy Metal Isotope Approach: A Case Study From The Neoproterozoic, *Geological Society of America*

145. **JD** **Owens,** Newby SM, Li S, Wu F, and Chen X(2020) Assessing Potential Diagenetic Signatures on Vanadium and Thallium Isotopes, *Geological Society of America*

144. GT Connock, **JD Owens**, and X Liu (2020) Biomarkers as a Tool to Constrain Ancient Biogeochemical Cycles, *Geological Society of America*

143. X Chen, S Li, SM Newby, TW Lyons, and **JD** **Owens** (2020) The Effects of Iron and Manganese Shuttles on Thallium and Vanadium Isotopes in Black Sea Sediments, *Goldschmidt*

142. **JD Owens**, X Chen, B Kendall, B Holdaway, S Newby, A Anbar, C Ostrander, and SG Nielsen (2020) Thallium Isotopes Track Episodic Manganese Oxide Burial Suggestion Marine Oxygenation during the Archean, *Goldschmidt*

141. B Gill and **JD Owens** (2020) Quantifying Organic Carbon Burial during the Toarcian Oceanic Anoxic Event, *Goldschmidt*

140. B Conacina, E Previde Massara, P Scotti, P Viaggi, A Piva, C Diamond, S Newby, C Hung, A Sanflippo, TW Lyons, and **JD Owens** (2020) The Cretaceous Oceanic Anoxic Events: New Geochemical Data from the Central Atlantic Ocean, *Goldschmidt*

139. Z Li, K Rybacki, **JD Owens**, N Planavsky, S Newby, F Ossa Ossa, A Hofmann, and C Reinhard (2020) Thallium Isotope Evidence for Cryptic Oxygenesis on the Archean Earth, *Goldschmidt*

138. M Vizcaíno, I Yurchenko, R Forkner, A Fildani, **JD Owens**, LE Duncan, and EA Sperling (2020) Meta-Analysis Identifies Global and Regional Change during Cretaceous Ocean Anoxic Event 2, *Goldschmidt*

137. N Atienza, D Gregory, S Taylor, D Perea, **JD Owens**, and T Lyons (2020) Trace Element Mapping in Pyrite Framboids by Atom Probe Tomography, *Goldschmidt*

136. C Reinhard, N Planavsky, F Ossa Ossa, **JD Owens**, A Hofmann, M Fakhraee, S Crowe, and T Lyons (2020) Tracking Oxygenic Photosynthesis on the Archean Earth, *Goldschmidt*

135. MJ Bouweester, L Boschman, N Berends, **JD Owens**, BC Gill, and JPT Alexandre (2020) Cretaceous oceanic anoxia in the Pacific: Preservation of organic matter during equatorial crossings of seamounts, *International Association of Sedimentology*

134. C Gfatter and **JD Owens** (2020) Experimental design to culture organisms for subsequent trace element analyses, *Southeast and Northeast Geological Society of America*

133. JA Wadhams, SM Newby, TR Them II, and **JD Owens** (2020) Thallium isotopes track changing oceanic oxygen across the Paleocene-Eocene Thermal Maximum, *Southeast and Northeast Geological Society of America*

132. SM Newby, S Li, A Karl, S Severmann, J McManus, F Scholz, and **JD Owens** (2020) A detailed investigation of thallium isotopes under low-oxygen open ocean conditions, *Southeast and Northeast Geological Society of America*

131. DJ Govert, SA Young, D Kaljo, O Hints, T Martma, and **JD Owens** (2020) Investigating the role of marine redox conditions in an early Silurian mass extinction (Ireviken event): A deeper water perspective, *Southeast and Northeast Geological Society of America*

130. NP Kozik, BC Gill, **JD Owens**, and SA Young (2020) Geochemical evidence for dynamic marine redox conditions throughout the Late Ordovician (Hirnantian) mass extinction, *Southeast and Northeast Geological Society of America*

129. CM Ostrander, SG Nielsen, **JD Owens**, Y Shu, TW Lyons, G Jiang, DT Johnston, and AD Anbar (2020) Disparate thallium isotope trends in Ediacaran-aged shales from South China and Northwestern Canada, *Gordon Research Conference*

***2019 (28)***

128. S Li, **JD Owens**, J Wadhams, S Newby, and S Severmann (2019) Sedimentary Vanadium Isotope Signatures from an Oxygen Transect across the California Mexico Margin, *American Geophysical Union*

127. CM Ostrander, **JD Owens**, SG Nielsen, and AD Anbar (2019) Tracking the accumulation of O2 in Archean oceans using thallium and molybdenum isotopes, *American Geophysical Union*

126. M LeRoy, BC Gill, TR Them, and JD Owens (2019) Thallium Isotopic Evidence for Widespread Late Devonian Marine Anoxia, *American Geophysical Union*

125. S Goderis, H Sato, L Ferrière, B Schmitz, D Burney, TJ Bralower, SJ de Graaff, T Déhais, NJ de Winter, M Elfman, J-G Feignon, SPS Gulick, A Ishikawa, P Kaskes, C Koeberl, P Kristiansson, CM Lowery, J Morgan, CR Neal, **JD Owens**, T Schulz, M Sinnesael, J Smit, J Vellekoop, MT Whalen, A Wittmann, F Vanhaecke, S Van Malderen, and P Claeys (2019) The Final Settling of Meteoritic Matter on the Peak-Ring of the Chicxulub Impact Structure at Site M0077A of IODP-ICDP Expedition 364, *Large Meteorite Impacts and Planetary Evolution VI*

124. X Chen, F Wu, S Li, E Sperling, B Kendall, TW Dahl, and **JD Owens** (2019) Tracking subtle variations of Neoproterozoic oceanic oxygenation using vanadium isotopes: implications for early animals, *Geological Society of America*

123. BC Gill and **JD Owens** (2019) Quantifying organic carbon burial during the Toarcian oceanic anoxic event, *Geological Society of America*

122. CM Ostrander, SK Sahoo, G Jiang, B Kendall, NJ Planavsky, TW Lyons, SG Nielsen, **JD Owens**, GW Gordon, SJ Romaniello, and AD Anbar (2019) Multiple negative molybdenum isotope excursions in the Doushantuo formation (south china) fingerprint complex redox-related processes in the Ediacaran Nanhua basin, *Geological Society of America*

121. GJ Gilleaudeau, SK Sahoo, CM Ostrander, **JD Owens**, SW Poulton, TW Lyons, and AD Anbar (2019 Molybdenum isotope and trace metal signals in an iron-rich Mesoproterozoic ocean: a snapshot from the Vindhyan basin, India, *Geological Society of America*

120. JA Wadhams, **JD Owens**, SM Newby, and TR Them II (2019) Evidence for increased ocean oxygenation during the recovery of the Paleocene–Eocene Thermal Maximum, *Geological Society of America*

119. CN Bowman, A Likdskog, NP Kozik, **JD Owens**, and SA Young (2019) A basinal expression of the late Silurian (Ludfordian) extinction event: integrated sedimentary, biotic, and paleoredox dynamics in a carbonate platform from southern Laurentia, *Geological Society of America*

118. NP Kozik, SA Young, P Ahlberg, and **JD Owens** (2019) Investigating redox dynamics across the Cambrian-Ordovician boundary: a deep-water perspective from Baltica, *Geological Society of America*

117. MS Abadi, **JD Owens**, X Liu, TR Them II, X Cui, and GS Soreghan (2019) Late Paleozoic iron fertilization from dust enhanced shallow marine primary productivity, *Geological Society of America*

116. SM Newby, **JD Owens**, and TJ Algeo (2019) Brief oxygenation event during extensive anoxia across the Permian-Triassic transition as revealed by thallium isotopes, *Geological Society of America*

115. BK Lee, **JD Owens**, S Severmann, R Raiswell, PM Sadler, and TW Lyons (2019) Bioavailable Fe Supply by Aeolian Dust to the North Atlantic, *Goldschmidt*

114. DD Gregory, DE Perea, SD Taylor, L Kovarik, **JD Owens**, and TW Lyons (2019) The formation of pyrite frambiods: a view from TEM and APT, *Goldschmidt*

113. M Paez-Reyes, **JD Owens**, H Carvajal, T Gaona, I Lerma, A Brandon, S Sahoo, and P Copelandard (2019) Why was there no mass extinction during the Cenomanian-Turonian Oceanic Anoxic Event 2?, *Goldschmidt*

112. C Cao, X-M Liu, **JD Owens**, and DJ Thomas (2019) Globally distinctive redox responses to Oceanic Anoxic Event 2, *Goldschmidt*

111. ST Rader, RM Gaschnig, **JD Owens**, and GE Bebout (2019) Thallium variations during high-pressure metamorphism, *Goldschmidt*

110. M Abshire, N Riedinger, J Cofrancesco, and **JD Owens** (2019) Depositional control on sedimentary trace metal accumulations, *Goldschmidt*

109. B Kendall, X Lu, AI Sheen, S Yang, TW Dahl, **JD Owens**, and CT Reinhard (2019) Towards an Integrated Multi-Proxy Approach to Constrain Proterozoic Global Ocean Redox Conditions Using Redox-Sensitive Trace Metal Enrichments and Isotope Compositions, *GAC-MAC*

108. CM Ostrander, SG Nielsen, **JD Owens**, B Kendall, GW Gordon, SJ Romaniello, and AD Anbar (2019) Fully oxygenated water columns over continental shelves before the Great Oxidation Event, *AbSciCon*

107. **JD Owens**, and BC Gill (2019) Comparing and quantifying the known organic carbon burial with mapped estimates for global burial within 2 OAEs, *Hydrocarbons in space and Time (Invited)*

106. S Li, **JD Owens**, and F Wu (2019) A first assessment of the paleoredox utility of vanadium isotopes using black shales from an ocean anoxic event, *Southeast Geological Society of America*

105. A Lindskog, SA Young, NP Kozik, and **JD Owens** (2019) Trans-Atlantic redox records through a mid-Silurian extinction event, *Southeast Geological Society of America*

104. JA Wadhams, **JD Owens**, and TR Them II (2019) Tracking the initial onset of deoxygenation across the Paleocene-Eocene thermal maximum, *Southeast Geological Society of America*

103. E Benayoun, SA Young, O Hints, T Martma, and **JD Owens** (2019) Paleoredox changes associated with early Silurian extinction events: New geochemical evidence from Baltoscandia, *Southeast Geological Society of America*

102. CN Bowman, SA Young NP Kozik, and **JD Owens** (2019) Geochemical evidence of redox changes associated with the late Silurian LAU/Kozlowskii extinction from carbonate facies of Laurentia and Baltica, *Southeast Geological Society of America*

101. SN Newby, **JD Owens**, and TJ Algeo (2019) Brief oxygenation event during extensive anoxia across the Permian-Triassic transition as revealed by thallium isotopes, *Southeast Geological Society of America*

***2018 (26)***

100. N Riedinger, WP Gilhooly III, and **JD Owens** (2018) Trace metal and iron cycling in deep-subsurface, coal bed-containing sediments off Shimokita (Japan), *American Geophysical Union*

099. TR Them, BC Gill, AH Carothers, DR Gröcke, SM Marroquín, JP Trabucho Alexandre, and **JD Owens** (2018) Are OAEs actually CBEs? Evidence of marine anoxia through the eyes of a novel metal isotope, *Geological Society of America*

098. MS Abadi, GS Soreghan, **JD Owens**, TR Them, and X Liu (2018) Atmospheric Dust Stimulated Marine Primary Productivity During Earth’s Penultimate Icehouse, *Geological Society of America*

097. CN Bowman, SA Young, C Richbourg, NP Kozik, and **JD Owens** (2018) Evidence of oceanic euxinia associated with the late Silurian Lau/Kozlowskii extinction from Laurentian carbonates of Tennessee and Nevada, *Geological Society of America*

096. NP Kozik, SA Young, BC Gill, and **JD Owens** (2018) Investigating Redox Conditions and Mechanisms for the End Ordovician (Hirnantian) Mass Extinction: A western Laurentia Perspective, *Geological Society of America*

095. TL Bandy, **JD Owens**, TR Them, SA Young, and GS Soreghan (2018) Environmental controls on organic carbon productivity in the Midland Basin, *Geological Society of America*

094. SN Newby, **JD Owens**, TJ Algeo (2018) Protracted anoxia during the Permian-Triassic transition as revealed by thallium isotopes, *Geological Society of America*

093. SA Young, A Kleinberg, and **JD Owens** (2018) Dynamic local and global marine redox conditions during an early Silurian extinction (Ireviken event): geochemical evidence from Laurentia, *Geological Society of America*

092. **JD Owens** (2018) Constraining global (de)oxygenation during Phanerozoic climate events, *Ocean Deoxygenation Conference*

091. **JD Owens**, TR Them II, F Wu, and SG Nielsen (2018) Novel isotope systems to better constrain local to global reduced bottom water oxygen contents, *Goldschmidt Conference*

090. TR Them II, CH Jagoe, BC Gill, AH Caruthers, SE Grasy, DR Gröcke, R Yin, and **JD Owens** (2018) Toarcian mercury anomalies record terrestrial disturbance rather than volcanic activity, *Goldschmidt Conference*

089. CN Bowman, SA Young, D Kaljo, ME Eriksson, TR Them II, T Martma, O Hints, and **JD Owens** (2018) Thallium isotopic evidence for widespread ocean anoxia associated with the late Silurian Lau extinction event, *Goldschmidt Conference*

088. F Wu, **JD Owens**, and SG Nielsen (2018) Vanadium isotope a new tool for tracking low oxygen conditions, *Goldschmidt Conference*

087. SM Marroquín, BC Gill, TR Them II, **JD Owens**, DR Gröcke, and AH Caruthers (2018) Investigating the sulphur cycle during the end-Triassic mass extinction from Panthalassa, *Goldschmidt Conference*

086. Z Li, **JD Owens**, NJ Planavsky, K Ozaki, and CT Reinhard (2018) A thallium isotope record of ocean oxygenation during the Lomagundi Event, *Goldschmidt Conference*

085. R Gaschnig, **JD Owens**, SN Newby, CT Reinhard, X Wang, D Asael, NJ Planavsky and R Rudnick (2018) The Tl and Cr isotope composition of the upper continental crust from the Archean to present, *Goldschmidt Conference*

084. CM Ostrander, SG Nielsen, **JD Owens**, BK Kendall, GW Gordon, SJ Romaniello, and AD Anbar (2018) Oxygen oases were persistent and widespread before the GOE, *Goldschmidt Conference*

083. MA Leroy, **JD Owens**, TR Them, and BC Gill (2018) Tracking marine deoxygenation during the Cambrian SPICE event using thallium isotopes, *Goldschmidt Conference*

082. S Marroquín, BC Gill, TR Them II, J Trabucho-Alexandre, M Aberhan, **JD Owens**, D Gröcke, and A Caruthers (2018) Investigating a unique open ocean geochemical record of the end Triassic mass extinction from Panthalassa, *Southeastern Biogeochemistry Symposium*

081. E Benyoun, **JD Owens**, O Hints, T Martma, and SA Young (2018) Expansion of anoxia/euxinia as driver for early Silurian extinction events: New geochemical proxy data from Sweden, *Southeastern Biogeochemistry Symposium*

080. Z Li, CT Reinhard, NJ Planavsky, and **JD Owens** (2018) A thallium isotope record of ocean oxygenation during the Lomagundi Event, *Southeastern Biogeochemistry Symposium*

079. CN Bowman, C Richbourg, **JD Owens,** and SA Young (2018) Geochemical evidence for widespread anoxia-euxinia during the Late Silurian Lau Extinction Event, *Southeastern Biogeochemistry Symposium*

078. TR Them II, AH Caruthers, BC Gill, DR Gröcke, SM Marroquín, and **JD Owens** (2018) Tracking Early Jurassic marine (de)oxygenation, *Southeastern Biogeochemistry Symposium*

077. KM Turner, and **JD Owens** (2018) A Geochemical Analysis of Rare Earth Elements Associated with Significant Phosphate Deposits of West-Central Florida, *Southeastern Biogeochemistry Symposium*

076. F Wu, **JD Owens**, SG Nielsen, CR German, and R Mills (2018) V isotope composition in modern marine hydrothermal sediments, *Southeastern Biogeochemistry Symposium*

075. BJ Holdaway, **JD Owens**, SG Nielsen, CM Ostrander, and AD Anbar (2018) Using thallium isotopes in the ~2.63 Ga Jeerinah Formation from Hamersley Basin, Western Australia, to constrain ancient seafloor oxygenation, *Southeastern Biogeochemistry Symposium*

074. SG Nielsen, K Righter, F Wu, **JD Owens**, J Prytulak, K Burton, and K Davis (2018) Nucleosynthetic Heterogeneity Control Vanadium Isotope Variations in Bulk Chondrites, *Lunar and Planetary Science Conference*

***2017 (22)***

073. **JD Owens**, TW Lyons, and CM Lowery (2017) Assessing global carbon burial during Oceanic Anoxic Event 2, Cenomanian-Turonian boundary event, *American Geophysical Union*

072. TR Them II, AH Caruthers, BC Gill, DR Gröcke, SM Marroquín, and **JD Owens** (2017) Tracking Early Jurassic marine (de)oxygenation, *American Geophysical Union*

071. BJ Holdaway, **JD Owens**, SG Nielsen, CM Ostrander, and AD Anbar (2017) Using thallium isotopes in the ~2.63 Ga Jeerinah Formation from Hamersley Basin, Western Australia, to constrain ancient seafloor oxygenation, *American Geophysical Union*

070. KM Turner, and **JD Owens** (2017) A Geochemical Analysis of Rare Earth Elements Associated with Significant Phosphate Deposits of West-Central Florida, *American Geophysical Union*

069. F Wu, **JD Owens**, SG Nielsen, CR German, and R Mills (2017) V isotope composition in modern marine hydrothermal sediments, *American Geophysical Union*

068. CM Ostrander, SG Nielsen, **JD Owens**, G Jiang, R Zhang, NJ Planavsky, SK Sahoo, TW Lyons, and AD Anbar (2017) Thallium isotopes track fluctuations in global manganese oxide burial during the Ediacaran Period, *American Geophysical Union*

067. S Marroquín, BC Gill, TR Them II, J Trabucho-Alexandre, M Aberhan, **JD Owens**, D Gröcke, and A Caruthers (2017) Investigating a unique open ocean geochemical record of the end Triassic mass extinction from Panthalassa, *American Geophysical Union*

066. MA Leroy, BC Gill, TR Them II, and **JD Owens** (2017) A thallium isotopic record of the Cambrian SPICE event from the Alum Shale, Andrarum Sweden, *Geological Society of America*

065. BC Gill, MA Leroy, A Gerhardt, TR Them II, and **JD Owens** (2017) Deciphering the record of biologic and environmental change during the later Cambrian Steptoean positive carbon isotope excursion, *Geological Society of America*

064. S Marroquín, BC Gill, TR Them II, J Trabucho-Alexandre, M Aberhan, **JD Owens**, D Gröcke, and A Caruthers (2017) Investigating a unique open ocean geochemical record of the end Triassic mass extinction from Panthalassa, *Geological Society of America*

063. C Lowery, HL Jones, TJ Bralower, J Smit, FJ Rodrigues-Tovar, MT Whalen, **JD Owens,** and Expedition 364 Scientists IODP-ICDP (2017) The recovery of life at ground zero, *Geological Society of America*

062. E Benayoun, SA Young, **JD Owens**, ME Eriksson, O Hints, and T Martma (2017) Expansion of anoxia/euxinia as a driver for early Silurian extinction events: new sedimentary and geochemical proxy data from Baltica, *Geological Society of America*

061. CN Bowman, SA Young, **JD Owens**, D Kaljo, O Hints, and T Martma (2017) Oceanographic redox changes associated with the late Silurian LAU extinction event: new geochemical evidence from the priekule-20 drill core, Latvia, *Geological Society of America*

060. F Wu, **JD Owens**, SG Nielsen, F Scholz, N Riedinger, L Peterson, and TW Lyons (2017) The vanadium isotope composition of marine sediments, *Goldschmidt Conference*

059. KS Rybacki, **JD Owens**, NJ Planavsky, and CT Reinhard (2017) Tracing the local accumulation of free oxygen within an Archean marine system using a coupled Fe-Mo-Tl stable isotope approach, *Goldschmidt Conference*

058. R Gaschnig, CT Reinhard, **JD Owens**, NJ Planavsky, X Wang, D Asael, A Graney, R Rudnick, and R Helz (2017) Behavior of Mo, U, and Tl isotopes during differentiation in the Kilauea Iki system, *Goldschmidt Conference*

057. SK Sahoo, GJ Gilleadeau, **JD Owens**, SW Poulton, and TW Lyons (2017) Iron-rich conditions and molybdenum enrichment in a Mesoproterozoic shelf setting: A snapshot from the Vindhyan Basin, India, *Goldschmidt Conference*

056. KS Rybacki, **JD Owens**, NJ Planavsky, and CT Reinhard (2017) Tracing the local accumulation of free oxygen within an Archean marine system using a coupled Fe-Mo-Tl stable isotope approach, *Geobiology Society Conference*

055. E Benayoun, SA Young, and **JD Owens** (2017) Expansion of Anoxia/Euxinia as Driver for Early Silurian Extinction Events: New Geochemical Proxy Data from Sweden, *Southeastern Biogeochemistry Symposium*

054. CN Bowman, SA Young, and **JD Owens** (2017) Oceanographic Redox Changes Associated with the Late Silurian Lau Extinction Event: New Geochemical Evidence from Central Tennessee and Latvia, *Southeastern Biogeochemistry Symposium*

053. N Kozik, SA Young, and **JD Owens** (2017) Investigating the Linkage of Increasing Oxygen to the Great Ordovician Biodiversification Event Using Geochemical Fingerprints in the Appalachian Basin, *Southeastern Biogeochemistry Symposium*

052. CM Lowery, H Jones, J Smit, TJ Bralower, and **JD Owens** (2017) The Recovery of Life in the Chicxulub Crater Following the End Cretaceous Mass Extinction, *Lunar and Planetary Science Conference*

***2016 (10)***

051. J Cofrancesco, N Riedinger, and **JD Owens** (2016) Constraining trace metal paleo-proxies for black shale deposition in upwelling systems: the Benguela upwelling system offshore Namibia, *American Geophysical Union*

050. **JD Owens,** and TW Lyons (2016) Comparing the observed global organic carbon burial versus carbon-isotope-based model estimates during OAE 2: Quantifying the missing sink, *SEPM Research Conference on OAEs*

049. **JD Owens**, CM Ostrander, SG Nielsen, CT Reinhard, BC Gill, CM Lowery, GD Love, M Rohrseen, DS Hardisty, Z Lu, HC Jenkyns, and TW Lyons (2016) The stepwise evolution of marine de-oxygenation during the Cretaceous OAE2, *Geological Society of America*

048. SA Young, **JD Owens**, ME Eriksson, and SM Bergström (2016) Early Silurian (Llandovery) biotic and oceanographic events: insights from new stable isotope geochemistry within the Baltic Basin, *Geological Society of America*

047. TR Them II, BC Gill, HL Grove, D Selby, DR Gröcke, and **JD Owens** (2016) Geochemical evidence for persistent anoxia in eastern Panthalassa during the early Jurassic, *Geological Society of America*

046. CN Bowman, SA Young, and **JD Owens** (2016) Oceanographic redox changes associated with the late Silurian Lau event as evidence from the Brownsport Formation, Tennessee, *Geological Society of America*

045. A Kleinberg, SA Young, and **JD Owens** (2016) Geochemical investigation of environmental changes associated with the early Silurian Ireviken extinction event, *Geological Society of America*

044. NP Kozik, SA Young, and **JD Owens** (2016) Investigating the linkage of increasing oxygen to the Great Ordovician Biodiversification Event using geochemical fingerprints in the Appalachian Basin, *Geological Society of America*

043. SG Nielsen, CM Ostrander, and **JD Owens** (2016) Ocean oxygenation across global climate perturbations recorded by thallium isotopes, *Goldschmidt Conference*

042. F Zhang, C Li, VA Meleshik, BG Pokrovsky, W Shi, M Cheng, B Kendall, SJ Romaniello, **JD Owens,** and AD Anbar (2016) Uranium Isotope Variation Across the Ediacaran Shuram Excursion, *Goldschmidt Conference*

***2015 (6)***

041. **JD Owens**, SG Nielsen, CM Ostrander, L Peterson, and AD Anbar (2015) Development and Applications of Thallium isotopes: a new proxy tracking the extent of manganese oxide burial, *American Geophysical Union (Invited)*

040. CM Ostrander, **JD Owens,** and SG Nielsen (2015) Thallium isotopes tracking Mn-oxide burial – a proxy for deoxygenation during Oceanic Anoxic Event 2, *American Geophysical Union*

039. T Huang, **JD Owens**, A Sarafian, I Sen, DF Huang, J Blusztajn, and SG Nielsen (2015) Development of analytical techniques of vanadium isotope in seawater, *American Geophysical Union*

038. TYS Tang, NJ Planavsky, **JD Owens**, G Love, TW Lyons, and LC Peterson (2015) Tracking Eukaryotic Production and Burial Through Time with Zinc Isotopes, *American Geophysical Union*

037. SA Young, ME Eriksson, and **JD Owens** (2015) Paired sulfur and carbon isotope stratigraphy for the Late Ludfordian (Silurian) of Gotland, Sweden: Implications for environmental, oceanographic, and biotic change, *Geological Society of America*

036. B Lee, **JD Owens,** and TW Lyons (2015) Distribution of Bioavailable Iron in the Pacific Ocean and Relationships to Dust Delivery and Potential Continental Sources, *Goldschmidt Conference*

***2014 (6)***

035. **JD Owens**, and SG Nielsen (2014) Thallium isotope a new tool for tracking the global marine ferromanganese burial, *American Geophysical Union*

034. B Lee, **JD Owens,** and TW Lyons (2014) Implication of eolian delivery and accumulation of highly reactive iron to the Atlantic Ocean, *American Geophysical Union*

033. GS Soreghan, S Sur, **JD Owens**, R Raiswell, NG Heavens, NM Mahowald, and TW Lyons (2014) The biological impact of eolian delivery of reactive iron to late Palaeozoic icehouse seas, *Geological Society of America*

032. A Chappaz, **JD Owens,** and TW Lyons (2014) Molybdenum Speciation in Modern and Ancient Euxinic Settings, *Goldschmidt Conference*

031. B Lee, **JD Owens,** and TW Lyons (2014) Delivery and Accumulation of Highly Reactive Iron to the Open Ocean and Its Implications, *Goldschmidt Conference*

030. **JD Owens**, CT Reinhard, M Rohrssen, GD Love, and TW Lyons (2014) Marine trace-metal drawdown during the Cenomanian-Turonian Oceanic Anoxic Event and implications for global redox and biological perturbation, *Northeast Geobiology Symposium*

***2013 (5)***

029. BC Gill, **JD Owens**, TR Them II, HC Jenkyns, and TW Lyons (2013) A refined investigation into the sulfur and iron cycles during the Toarcian OAE, *American Geophysical Union*

028. CT Reinhard, NJ Planavsky, X Wang, **JD Owens**, TM Johnson, WW Fischer, and TW Lyons (2013) Chromium isotopes in siliciclastic sediments and sedimentary rocks as a developing proxy for Earth surface change, *American Geophysical Union*

027. SK Sahoo, J Ganqing, NJ Planavsky, B Kendall, **JD Owens**, AD Anbar, and TW Lyons (2013) Turbulent times for early animals?, *Geological Society of America*

026. **JD Owens**, CT Reinhard, and TW Lyons (2013) Trace metal drawdown during a Cretaceous oceanic anoxic event: implications for global redox conditions, *Goldschmidt Conference*

025. LM Wehrmenn, MJ Formolo, **JD Owens**, TG Ferdelman, R Raiswell, and TW Lyons (2013) The cycling and transport of glacially derived iron in Arctic fjord sediments, *Goldschmidt Conference*

***2012 (7)***

024. RW Scott, NK Rush, MJ Formolo, FE Obohikuenobe, and **JD Owens** (2012) Late Albian Oceanic anoxia in the Chihuahua trough, South-Central New Mexico, *Geological Society of America*

023. **JD Owens**, LM Wehrmann R Raiswell, and TW Lyons (2012) Enhanced delivery of bioavailable Fe through glacial processes in Kongsfjorden, Svalbard, *Goldschmidt Conference*

022. BC Gill, TW Lyons, **JD Owens**, S Bates, HJ Brumsack, and H Jenkyns (2012) Interpreting the trace metal records of ancient epeiric seaways: Lessons from the Toarcian (Jurassic) black shales of Europe, *Goldschmidt Conference*

021. LM Wehrmann, **JD Owens**, MJ Formolo, TG Ferdelman, and TW Lyons (2012) Glacially derived iron as the key driver for biogeochemical processes in Arctic fjord sediments (West Svalbard), *Goldschmidt Conference*

020. **JD Owens**, BC Gill, H Jenkyns, MMM Kuypers, S Severmann, S Bates, and TW Lyons (2012) Perturbations to the Global Sulfur Cycle during a mid-Cretaceous Oceanic Anoxic Event (OAE 2: Cenomanian/Turonian), *Urbino Summer School of Paleoclimatology (USSP)*

019. **JD Owens**, BC Gill, H Jenkyns, MMM Kuypers, S Severmann, S Bates, and TW Lyons (2012) Perturbations to the Global Sulfur Cycle during a mid-Cretaceous Oceanic Anoxic Event (OAE 2: Cenomanian/Turonian), *European Geophysical Union*

018. **JD Owens**, DL Boyer, ML Droser, and TW Lyons (2012) Low oxygen bottom waters in the Devonian ocean through a combined biological and geochemical approach, *European Geophysical Union*

***2011 (2)***

017. **JD Owens**, TW Lyons, GS Soreghan, M Soreghan, A Chappaz, and R Raiswell (2011) Quantifying bioavailable iron delivery by dust during the icehouse of the late Paleozoic, *American Geophysical Union*

016. **JD Owens**, TW Lyons, S Severmann, B Gill, H Jenkyns, MMM Kuypers, G Gordon, A Anbar, and W Kuhnt (2011) Global Perturbation of the Marine Iron Cycle During OAE-2, *Cretaceous Symposium*

***2010 (6)***

015. S Sur, GS Soreghan, **JD Owens**, TW Lyons, and MJ Soreghan (2010) Eolian delivery of highly reactive iron to the glacial ocean of the late Paleozoic, *American Geophysical Union*

014. **JD Owens**, B Gill, H Jenkyns, and TW Lyons (2010) Perturbations to the Global Sulfur Cycle during Ocean Anoxic Events, *Geological Society of America*

013. R Raiswell, C Reinhard, A Derkowski, **JD Owens**, S Bottrell, A Anbar, and TW Lyons (2010) Formation of syngenetic and early diagenetic iron minerals in the late Archean Mt. McRae Shales: paleooceanographic implications, *Geological Society of America*

012. S Severmann, J McManus, R Poulson-Brucker, **JD Owens**, TW Lyons, A Anbar, and G Gordon (2010) Modern lakes and ancient oceans: trace metals and their isotopes in an anoxic African rift lake, *Goldschmidt*

011. X Li, S Severmann, **JD Owens,** and B Sageman (2010) Hydrothermal contributions to oceanic anoxic event 2? Evidence from trace metals, *Goldschmidt*

010. **JD Owens**, S Severmann, TW Lyons, MMM Kuypers, W Kuhnt, G Gordon, and A Anbar (2010) A δ56Fe record of ocean-scale iron shuttling during OAE 2, *Southern California Geobiology Symposium*

***2006-2009 (9)***

009. B Gill, TW Lyons, **JD Owens**, H Brumsack, and H Jenkyns (2009) A multi geochemical proxy approach to deciphering the Toarcian OAE, *American Geophysical Union*

008. **JD Owens**, GS Soreghan, A Gearhardt, S Sur, and TW Lyons (2009) Iron cycling in a late Paleozoic dust bowl, *American Geophysical Union*

007. DL Boyer, ML Droser, and **JD Owens** (2009) High Resolution Biotic and Geochemical Data from Devonian Dysaerobic Shales of New York State, *NAPC*

006. GS Soreghan, S Sur, TW Lyons, MJ Soreghan, and **JD Owens** (2009) Production and weathering of loess in the late Paleozoic tropical Pangaea and implications for iron delivery to the glacial ocean, *Goldschmidt*

005. **JD Owens**, S Severmann, TW Lyons, MMM Kuypers, W Kuhnt, G Gordon, and A Anbar (2008) Perturbations of the Global Fe Cycle during OAE II, *American Geophysical Union*

004. **JD Owens**, S Severmann, J McMannus, TW Lyons, and B Gill (2008) Sulfur Isotopes in Lake Tanganyika, *Southern California Geobiology Symposium*

003. R Poulson Brucker, J McManus, S Severmann, **JD Owens,** and TW Lyons (2008) Trace Metal Associations in an Anoxic Lake: the relative Roles of Organic Carbon and Reduced Sulfur, *American Geophysical Union*

002. S Severmann, J McManus, WM Berelson, T Riedel, and **JD Owens** (2008) The benthic flux of iron from river-dominated continental shelves of the North Pacific, *Ocean Sciences Meeting*

001. S Severmann, J McManus, **JD Owens**, TW Lyons, G Gordon, and A Anbar (2006) Combined Fe-S stable isotopes in modern anoxic environments and the effects of Fe versus S limitation, *American Geophysical Union*

Grants Awarded

***Federal Grants***

2020 NSF Sedimentary Geology and Paleobiology: *Collaborative research: Multi-disciplinary investigation of the links between volcanism, marine redox, and mass extinction during the Late Triassic and Early Jurassic,* Co-I: JD Owens

2018 NASA Exobiology: *Using vanadium isotopes to investigate small fluctuations in early oceanic oxygenation: implications for the emergence and evolution of early animals,* PI: JD Owens

2018 NSF Sedimentary Geology and Paleobiology: *Discerning Mechanisms of Environmental and Oceanographic Change Associated with the Late Silurian (Ludfordian) Extinction Event,* Co-I: JD Owens

2016 NASA Exobiology: *Tracking the Initiation of Marine Ocean Oxygenation Through Manganese-Oxide Burial Using Thallium Isotopes,* PI: JD Owens

2016 NSF EAR IF: *Acquisition Of A Gas Source Stable Isotope Ratio Mass Spectrometer (IRMS) For Earth And Ocean Sciences Research At Florida State University,* Co-I: JD Owens

2014 NSF OCE: Chemical Oceanography: *Fingerprinting and Calibrating Low Oxygen Conditions Using Vanadium Isotopes,* PI: JD Owens

***Contracts, Private Foundations, and Internal grants***

2022 FSU Developing Scholar Award, PI: JD Owens

2020 SLOAN Research Foundation Fellowship: *Constraining ancient ocean deoxygenation – implications for marine extinctions and future climate scenarios*, PI: JD Owens

2018 FSU PG: *Constraining the Environmental Mechanisms of two mass extinctions during the end the end-Triassic and early Jurassic*, PI: JD Owens

2016 University of Tulsa: *Organic rich shales to discern the global redox conditions*, PI: JD Owens

2016 Exxon: *Collaborative research: Analysis, Evaluation and Measurement of Vanadium Isotope (δ51V) Measurements in Hydrocarbon Systems,* PI: JD Owens

2016 FSU FYAP: *Constraining oxygen variability across glacial-interglacial cycles*, PI: JD Owens

***As a Graduate Student***

2012 Society for Sedimentary Geology (SEPM): *Assessing Dust Delivery of Bioavailable Iron to the Ocean as a Driver and Consequence of Cenozoic Climate Change*

2012 Geological Society of America (GSA): *Assessing Loess Deposits as an archive for Bioavailable Iron Delivery to the Oceans*

Teaching Activities

***FSU Courses Taught (Number of Students)***

* History of Earth Systems (50, 15, 69 52), F 2018–2021 – lower-division earth science course focusing the co-evolution of environment, climate and biological evolution throughout Earth’s history
* Environmental Capstone (88 – co-taught, 33, 34), S 2017–2020 – upper-division field course for Environmental Science majors
* Surficial Biogeochemical cycles (15, 6), F 2017, 2020 – graduate-level class exploring biogeochemical cycles related to climate perturbations including mass balance modeling
* Global climate through time (8), F 2016 – upper-division earth science course focusing on climate and biological interactions throughout Earth’s history
* Graduate Seminar (12), S 2016
* Marine Geology (20, 9), S 2016, S 2021 – graduate-level class exploring early marine geology with a focus on diagenesis in siliclastic sediments

***Guest Lecture***

* Environmental Capstone, 2017–2021
* Marine Geoscience Leadership Panel on Time Management, 2017
* Agouron Geobiology Course, 2015

***FSU Postdoc Advisees***

* Xinming Chen, 2019-2022, now Assistant Professor at Ocean Sciences, Shanghai
* Fei Wu, 2016-2018, now Assistant Professor at Chinese Academy of Geosciences, Wuhan
* Theodore Them (FSU Arts and Science Fellow), 2016-2018, now an Assistant Professor at College of Charleston

***FSU Graduate Student Primary Advisees***

*PhD*

* John Goodin, Started F 2021
* Christian Gfatter, Candidate S 2021
* Siqi Li, Candidate F 2018
* Sean Newby, Candidate S 2018

*Masters*

* Adam Karl, Graduated S 2021
* Terryl Bandy, Graduated S 2019
* Brett Holdaway, Graduated F 2018
* Kyle Turner, Graduated S 2018

***FSU Graduate Student Committee***

*PhD*

* Zhou Liang, Started F 2021
* Chance Hannold, Started S 2020
* Aaron Ashley, Started F 2019
* Srishti Sharma, Candidate F 2017
* Nevin Kozik, Candidate F 2019
* Fajun Sun, Graduated S 2021
* Chelsie Bowman, Graduated F 2020

*Masters*

* Stephen Clapp, Graduated S 2020
* Lindsi Alman, Fall F 2019
* Zhou Liang, Graduated S 2021
* Jennifer Fought, Graduated S 2021
* Daniel Govert, Graduate F 2020
* Matthew Schreck, Graduate S 2020
* Chance Hannold, Graduated F 2019
* Emily Benayoun, Graduated S 2019
* Randall Funderburk, Graduated F 2019
* Brandon Fish, Graduated S 2018
* Nevin Kozik, Graduated Su 2017
* Andrew Kleinberg, Graduated Su 2017

***FSU Undergraduate Research Advisees***

* Jane Wadhams, September 2018- August 2021 – EROP, MagLab REU, Honors Thesis (Graduated)
* Allison Brown, January 2019-August 2020 (Graduated)
* Adam Karl, September 2018-August 2019 (Graduated)
* Brett Faran, June 2018-December 2019 – MagLab REU (Graduated)
* Dalton Langford, Oct 2017-May 2018 (Graduated)
* Travis Spake, Sept 2017-Dec 2017 (Graduated)
* Ashley Prow, Sept 2016-Aug 2017 (Graduated)
* Mary Powell, Mar 2016-May 2017 – MagLab REU (Graduated)
* John Sutton, Jan 2016-Aug 2016 (Graduated)

***External Graduate Advisees***

* Chadlin Ostrander (PhD), Arizona State University, Jul 2016-present
* Bridget Lee (MS and PhD), University of California, Riverside, Aug 2013-present

***Previous Advisees***

* Mackensey Farmer (MS), California State University, San Bernardino, Jul 2012
* Angela Gerhardt (Senior Thesis), University of California, Riverside, 2012
* Mahnoor Rahman and Nicole Perifoy (Awarded Science Fair), Martin Luther King High School, 2011

Significant Professional Services & Activities

***FSU***

* Faculty hiring committee, member 2021-2022 (x2)
* TA committee, member 2020-present
* Faculty hiring committee, member 2020-2021
* Space and building committee, member 2018-present
* Colloquium committee, member 2018-present
* Graduate Entrance Advising committee, member 2017-present
* Laboratory fees committee, member 2017-2019
* Environmental Science curriculum, member 2016-present
* Environmental Science graduate program task force, member 2016-2017
* Website re-design committee, chair 2016-2021

***Panelist***

International Ocean Discovery Program - Science Evaluation Panel 2021-present (2 panels a year)

National Aeronautics and Space Administration– Exobiology and sub-panel chair (x2)

National Science Foundation – Division of Ocean Sciences (x2)

***Editorial***

Editorial Board for *Geology* (2022-2024)

Guest Editor for *Geochimica et Cosmochimica Acta* Special Issue on Proxy Development

***Peer Reviewer***

*Grant Agencies*

American Chemical Society • Austrian Science Funds • Canadian Research Council • Dutch National Science Foundation – Veni • German National Science Foundation • IODP Science Evaluation Panel • Lewis and Clark Astrobiology • National Aeronautics and Space Administration • National Science Foundation • Natural Environmental Research Council • Swiss National Science Foundation

*Journals/Books*

American Chemical Society Earth and Space Chemistry • American Geophysical Union Book Proposal Review • American Journal of Science • Biogeosciences • Chemical Geology • Chemie der Erde – Geochemistry • Climate of the Past • Continental Shelf Research • Earth and Planetary Science Letters • Earth-Science Reviews • Elements Book Review • Environmental Science and Technology • Frontiers • Geochimica et Cosmochimica Acta • Geology • Geochemistry, Geophysics, Geosystems • Geological Society of American Bulletin • Global Planetary Change • Hazardous Materials • Nature • Nature Communications • Nature Geosciences • Nature Scientific Reports • Paleoceanography • Palaeogeography, Palaeoclimatology, Palaeoecology • Paleoworld • Precambrian Research • Proceeding of the National Academy of Sciences • Revue de Micropaléontologie • Science Advances • Science of the Total Environment

***Invited Talks***

2022 – Northwestern
2021 – PASSHE Earth & Environmental Science Seminar
2020 – Geological Society of America (x2)
2018 – Goldschmidt, Florida State University EOAS, Florida State University Biology
2016 – University of Florida, Oklahoma State University, Florida State University Fluids
2015 – Washington University – St. Louis, Florida State University, AGU
2014 – University of Leeds, University Massachusetts – Amherst
2012 – Woods Hole Oceanographic Institution

***Scientific Meeting Convener/Session Chair***

* Southeast GSA 2019, 2021
* Goldschmidt 2012, 2018, 2019
* GSA 2016, 2018
* AGU 2014
* WHOI Paleoclimate Seminar Series 2014–2015
* Southern California Geobiology Symposium 2009

***Scientific Outreach Community Activities (Last 5 Years)***

* Young Engineers - Tallahassee – Geology Rocks (7/20/21)
* Boys and Girls Club of the Big Bend - Tallahassee – Geology Rocks (7/13/21)
* MagLab Open House – Scientist Speed Session – What is a paleo oceanographer and how can they use research to understand Earth's ancient past? (3/2/21)
* Science Café – Ancient Climate Change: The Connection Between Marine Deoxygenation and Extinction Events (10/27/20)
* Science Café - Biological Evolution During Major Climatic Events (1/28/2020)
* Citizen Climate Lobbyist – The extended impact of climate change and additional systems affect: A geological perspective on modern climate change (11/20/2019)
* Challenger Learning Center – Deciphering Climate Change Throughout Geological History: How the Modern Record is Unprecedented (5/21/2019)
* Radio Interview – The Attitude with Arnie Arnesen – (10/20/2018; [link](http://www.wnhnfm.org/the-attitude-with-arnie-arnesen-november-20-2018/))
* Popular Science Article – Volcanic eruptions once caused mass extinctions in the oceans – could climate change do the same? (2018) *The Conversation* ([link](https://theconversation.com/volcanic-eruptions-once-caused-mass-extinctions-in-the-oceans-could-climate-change-do-the-same-99655?utm_source=newsletter&utm_medium=email&utm_campaign=the_big_story_november_13_2018&utm_term=2018-11-13))
* Innovation Park, Invited Speaker – Fingerprinting marine deoxygenation through geologic history (2018)
* TEDxFSU, Invited Speaker – Fingerprinting climate (2018)
* Lincoln High, Guest Speaker, Chemistry and Marine Science (2018)
* Mote Marine Laboratory & Aquarium –Fingerprinting Earth’s climate through history – How modern climate change is unprecedented (2018)
* NNOCCI Science Board Member (2018)
* Water Symposium, Invited Speaker–Deciphering Ancient Climate Change to Better Understand Future Effects on Our Oceans (2017)
* National High Magnetic Field Laboratory Open House – Fingerprinting Geologic History (2015-ongoing)
* MarineLand–Fingerprinting Earth’s climate through history – How modern climate change is unprecedented (2017)

***Professional Societies***

American Geophysical Union • Geochemical Society • Geological Society of America