

Nevin P. Kozik

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My overarching interest is in low temperature sedimentary geochemistry, specifically in biogeochemical cycling of bioessential elements. I utilize geochemical proxies to further our understanding of how the biosphere, lithosphere, atmosphere, and cryosphere interact throughout Earth's history.

Education

Doctorate Florida State University
Dissertation title: "A Tour of Ordovician Paleoredox Conditions: A Primary Driver for Ancient Biodiversity"

Masters Florida State University
Thesis title: "Sea Level and Marine Redox Dynamics Within The Appalachian Basin During The Middle-Late Ordovician: Implications for The Great Ordovician Biodiversification Event (GOBE)"

Bachelors University of California, Riverside
Bachelor of Science in Geology

Professional Appointments

2026-present Assistant Professor (starting in Fall 2026)
University of Oklahoma

2024-2026 Postdoctoral Research Associate
University of Oklahoma

2022-2024 Visiting Assistant Professor
Occidental College

2015-2022 Graduate Student
Florida State University

2012-2014 Undergraduate researcher assistant
University of California, Riverside

Peer Reviewed Publications

Tu, C, **Kozik, N.P.**, Young, S.A., Owens, J.D., Ahlberg, P., Lyons, T.W., (submitted) Decoupling of Redox Conditions Between the Surface and Deep Ocean Over the Early Middle Ordovician. *Geophysical Research Letters*

- Allman, L.J., Bowman, C.N., Fryda, J., **Kozik, N.P.**, Owens, J.D., Young, S. A., 2024, Constraining reducing conditions in the Prague Basin during the late Silurian Lau/Kozlowskii extinction event. *Journal of the Geological Society of London*, doi:10.1144/jgs2023-108
- Lindskog, A., Young, S.A., Bowman, C.N., **Kozik, N.P.**, Newby, S.M., Eriksson, M.E., Pettersson, J., Molin, E., and Owens, J.D., 2023, Oxygenation of the Baltoscandian shelf linked to Ordovician biodiversification. *Nature Geoscience*, doi:10.1038/s41561-023-01287-z.
- Kozik, N. P.**, Young, S. A., Lindskog, A., Ahlberg, P., & Owens, J. D. (2023). Progressive marine oxygenation and climatic cooling at the height of the Great Ordovician Biodiversification Event. *Global and Planetary Change*, v. 227, 104183
<https://doi.org/10.1016/j.gloplacha.2023.104183>
- Kozik, N. P.**, Young, S. A., Lindskog, A., Ahlberg, P., & Owens, J. D. (2023). Protracted oxygenation across the Cambrian–Ordovician transition: A key initiator of the Great Ordovician Biodiversification Event? *Geobiology*, 00, 1– 18.
<https://doi.org/10.1111/gbi.12545>
- Kozik, N.P.**, Young, S.A., Newby, S.M., Liu, M., Chen, D., Hammarlund, E.U., Bond, D.P.G., II, T.R.T., and Owens, J.D., (2022), Rapid marine oxygen variability: Driver of the Late Ordovician mass extinction. *Science Advances*, v. 8345, p. 1–9,
<https://doi.org/10.1126/sciadv.abn8345>
- Kozik, N. P.**, Gill, B. C., Owens, J. D., Lyons, T. W., & Young, S. A. (2022). Geochemical Records Reveal Protracted and Differential Marine Redox Change Associated With Late Ordovician Climate and Mass Extinctions. *AGU Advances*, 3(1), 1–28.
<https://doi.org/10.1029/2021AV000563>
- Bowman, C. N., Lindskog, A., **Kozik, N. P.**, Richbourg, C. G., Owens, J. D., & Young, S. A. (2020). Integrated sedimentary, biotic, and paleoredox dynamics from multiple localities in southern Laurentia during the late Silurian (Ludfordian) extinction event. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 553(May), 109799.
<https://doi.org/10.1016/j.palaeo.2020.109799>
- Young, S. A., Benayoun, E., **Kozik, N. P.**, Hints, O., Martma, T., Bergström, S. M., & Owens, J. D. (2020). Marine redox variability from Baltica during extinction events in the latest Ordovician–early Silurian. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 554(May), 109792. <https://doi.org/10.1016/j.palaeo.2020.109792>
- Adiatma, Y. D., Saltzman, M. R., Young, S. A., Griffith, E. M., **Kozik, N. P.**, Edwards, C. T., et al. (2019). Did early land plants produce a stepwise change in atmospheric oxygen during the Late Ordovician (Sandbian ~458 Ma)? *Palaeogeography, Palaeoclimatology, Palaeoecology*, 534(January). <https://doi.org/10.1016/j.palaeo.2019.109341>

Kozik, N. P., Young, S. A., Bowman, C. N., Saltzman, M. R., & Them, T. R. (2019). Middle–Upper Ordovician (Darriwilian–Sandbian) paired carbon and sulfur isotope stratigraphy from the Appalachian Basin, USA: Implications for dynamic redox conditions spanning the peak of the Great Ordovician Biodiversification Event. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 520(August 2018), 188–202.
<https://doi.org/10.1016/j.palaeo.2019.01.032>

Grants, Honors and Awards

ConocoPhillips Student Assistance Grant	2014
Indiana University, Bloomington Geological Field Camp	\$1,000
Joseph Banks Endowed Memorial Scholarship	2017
Florida State University	\$1,500
Geological Society of America Travel Grant	2015-2020
Florida State University	\$200
Graduate Student Research Grant	2019
Geological Society of America	\$2,500
Winchester Scholar Research Assistantship	2015-2017
Florida State University	\$20,000
Congress of Graduate Students Travel Grant	2015-2020
Florida State University	\$200
Instructional Competency Micro-Credential Program	2025
The University of Oklahoma Graduate College	

Teaching Experience

Florida State University

GLY 1000L/ESC 1000L: Dynamic Earth
(2015-2020, Teaching Assistant)

GLY 2010L: Physical Geology
(2016-2020, Teaching Assistant)

GLY 2100L/ESC 3100: Historical Geology
(2018-2019, Teaching Assistant)-complete
recreation of laboratory

GLY 4125: Global Climate through Time
(2017, Guest Lecturer)

GLY 4544L: Sedimentology and
Stratigraphy (2019-2021, Teaching
Assistant)

GLY 4790: Geologic Summer Field Camp
(2018-2021, Teaching Assistant)

GLY 4750: Field Methods
(2020-2022, Instructor of Record)-
recreation of course

Occidental College

GEO 105: Earth, Our Environment
(2022-2023, Instructor of Record)

GEO 215: Evolution of the Earth
(2023, Instructor of Record)

GEO 390: Biogeochemistry of marine
systems, past and present
(Spring 2023, Instructor of record)-
complete creation of course

University of Oklahoma

GEOL 1114: Physical Geology
(2026, Instructor of Record)

Analytical Skills and Field Experience

Instrumentation

Finnigan MAT Delta Plus XP IRMS

-Peripherals: ThermoFinnigan Gas Bench II Autocarbonate device, Costech Elemental Analyzer Delta V ThermoFinnigan IRMS

-Peripheral: Thermo Flash II Elemental Analyzer

Agilent 7500 Quadrupole ICP-MS

Neptune MC-ICP-MS

-Peripheral: Aridus II autosampler

Field Experience

Taos/Sangre De Christo Range, New Mexico, USA

-Field supervision of undergraduate geologic field camp course.

Clinch Mountain, Tennessee, USA

-Sampling and sequence stratigraphic analysis of the Middle-Late Ordovician aged Chickamauga Limestone Group.

South Holston Lake, Virginia, USA

-Sampling of the Middle-Late Ordovician aged Lenoir and Paperville/Blockhouse Formations.

Roberts Mountain, Nevada, USA

-Sampling of the Roberts Mountain and Pete Hanson Creek Formations.

Copenhagen Canyon, Nevada, USA

-Sampling of the Copenhagen and Hanson Creek Formations.

Tornquist Zone, Scania, Sweden

-Sampling of a series of drill cores that span the entirety of the Ordovician for geochemical analysis.

Prague Basin, Czech Republic

-Sampling of a series of outcrops that span the majority of the Silurian for geochemical analysis.

Rio Negro, Argentina

-Sampling of the Rio Negro Formation to identify iron reactivity and dust content

Santa Barbara, California

-Sampling of the Monterey Formation to identify iron reactivity and dust content

Conference Abstracts

NP Kozik, X Liu, SA Young, JD Owens, G Soreghan (2025) Iron fertilization potentials of differing types of atmospheric dust, *Geological Society of America*

C Tu, **NP Kozik**, SA Young, JD Owens, P Ahlberg, TW Lyons (2024) Decoupling of Redox Conditions Between the Surface and Deep Ocean Over the Early Middle Ordovician, *Goldschmit*

SA Young, A Lindskog, **NP Kozik**, JD Owens (2023) The utility of multi-lithology, multi-proxy approaches to unraveling local-to-global deep-time biogeochemical events: a holistic case study of links between Middle Ordovician biodiversification and marine oxygenation, *Geological Society of America*

CN Bowman, L Allman, J Fryda, **NP Kozik**, JD Owens, SA Young (2023) Constraining reducing conditions in the Prague Basin during the late Silurian Lau/Kozlowskii extinction event, *Geological Society of America*

NP Kozik, M Liu, EU Hammarlund, DPG Bond, TR Them II, SM Newby, JD Owens, SA Young

- (2021) Multiple fluctuations in marine oxygen associated with the Late Ordovician Mass Extinction, *AGU Fall Meeting*
- NP Kozik**, M Liu, EU Hammarlund, DPG Bond, TR Them II, SM Newby, JD Owens, SA Young (2021) High frequency fluctuations in marine oxygen associated with the Late Ordovician Mass Extinction, *IGCP 2021 Lille*
- NP Kozik**, SA Young, P Ahlberg, JD Owens (2019) Investigating redox dynamics across the Cambrian-Ordovician boundary: a deep-water perspective from Baltica, *Geological Society of America*
- CN Bowman, A Lindskog, **NP Kozik**, JD Owens, SA Young (2019) A basinal expression of the late Silurian (Ludfordian) extinction event, *Geological Society of America*
- 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, *Geological Society of America Southeastern Section*
- A Lindskog, SA Young, **NP Kozik**, and JD Owens (2019) Trans-Atlantic redox records through a mid-Silurian extinction event, *Geological Society of America Southeastern Section*
- 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*
- DY Adiatma, MR Saltzman, **NP Kozik**, SA Young (2018) Carbon isotope stratigraphy of the Sandbian stage in the Central Appalachian Basin, *Geological Society of America*
- 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*
- NP 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*
- NP Kozik**, SA Young (2017) Sequence Stratigraphic Analysis of the Evan's Ferry Roadcut, TN: A New Prospective for Late Ordovician (Sandbian) Sea Level from the Appalachian Basin, *Geological Society of America*
- NP Kozik**, SA Young (2017) Sequence Stratigraphic Analysis of the Evan's Ferry Roadcut, TN: A New Prospective for Late Ordovician (Sandbian) Sea Level from the Appalachian Basin, *Southeastern Biogeochemistry Symposium*
- 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*

Significant Professional Services and Activities

Reviewer for: Precambrian Geology; Carbonates and Evaporites; Global and Planetary Change; Chemical Geology; Marine and Petroleum Geology; Palaeogeography, Palaeoclimatology, Palaeoecology, Earth and Planetary Science Letters; Geobiology; Sedimentary Geology; Estonian Journal of Earth Sciences; Journal of Asian Earth Sciences; Geological Magazine; Geochemistry, Geophysics, Geosystems; Nature Geoscience, Geology

SE-NE GSA Sectional Meeting
 Technical session chair (canceled due to COVID-19)

2020

Invited Talks:

University of California, Riverside; Graduate Seminar – 2022
Drexel University; Seminar in Mass Extinctions – 2024
University of Oklahoma, John D. Pigott Colloquium Series – 2025

Mentorship

Steven “Lance” Newman – 2016-2017
-Carbon and sulfur isotope stratigraphy of Late Ordovician Chickamauga Group
Emily Benayoun – 2016-2019
-Carbon, sulfur, iron and Mo chemostratigraphy of the Röstånga-1 drill core, Sweden
Adam Silver – 2015-2016
-Carbon and sulfur isotope chemostratigraphy of the Katian GSSP, Black Knob Ridge, Oklahoma
Adolfo Calero – 2017-2018
-Sulfur isotopic analysis of Lake Vida, McMurdo Dry Valleys, Antarctica
Claudia Richbourg – 2017-2018
-Carbon and sulfur isotope stratigraphy of the upper Silurian Brownsport Fm, Tennessee
Lindsay Allman – 2018-2021
-Carbon, sulfur, and iron geochemistry of the upper Silurian Kopania Fm, Czech Republic
Jane Wadhams – 2019-2021
-Iron geochemical cycling associated with the PETM
Westly Owings – 2019-2020
-Sulfur and iron geochemistry of Middle Ordovician, Röstånga 2 drill core, Sweden
Adam Karl – 2019-2021
-Carbon, sulfur, and iron geochemistry of North Florida wetlands
Jade Greene – 2022-present
-Sulfur geochemistry of Northern Florida springs system
Mahdi Maaleki Moghadam – 2022-2023
-Trace element cycling associated with the Middle Silurian Mulde event
Merid Schwartz – 2022-2023
-Trace element cycling associated the Great Ordovician Biodiversification Event
Carter Smith – 2024
-Grain size analysis of IODP cores
Silas Sneed – 2025-2026
-Grain size analysis of the Rio Negro and Monterey Formations
Burke Jones – 2025
-Sedimentological field techniques for collection of samples for the Monterey Formation

Outreach

National High Magnetic Field Laboratory open house (FSU): 2015-2022
Pineview Elementary School Science Day (FSU): 2018
Leon High School scientist panel (FSU): 2019
Skype a Scientist (FSU): 2020-2022
Occidental College majors fair: 2022-2023
Experience Occidental: 2022-2024
Upward Bound (Occidental College): 2022-2024

Red Dirt Collective: 2024-present

Certificates

American College of Surgeons Committee on Trauma “Stop the Bleed”
American Red Cross – CPR and Sudden Illness Response