



Karrie Weaver

Technical Director, SIGMA Lab Facility; Research Scientist and Engineer,
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Bio

CURRENT ROLE AT STANFORD

Technical Director, SIGMA Shared Lab Facility

LINKS

- SIGMA Facility webpage: <http://sigmalab.stanford.edu>

Professional

PROFESSIONAL INTERESTS

Characterization of natural and engineered materials through the use of inductively coupled plasma mass spectrometry (ICP-MS).

Publications

PUBLICATIONS

- **Organic Electrochemical Transistor Channel Materials: Copolymerization Versus Physical Mixing of Glycolated and Alkoxyated Polymers** *ADVANCED FUNCTIONAL MATERIALS*
Bynens, L., Zhang, K., Cavassin, P., Goossens, A., Vanderspikken, J., Castillo, T. C. H., Tsokkou, D., Marks, A., Magni, A., Weaver, K., Lutsen, L., Inal, S., Vandewal, et al
2025
- **Origins of hydrogen peroxide selectivity during oxygen reduction on organic mixed ionic-electronic conducting polymers** *ENERGY & ENVIRONMENTAL SCIENCE*
Duran, A., Liang, A., Denti, I., Yu, H., Pearce, D., Marks, A., Penn, E., Treiber, J., Weaver, K., Turaski, L., Maria, I. P., Griggs, S., Chen, et al
2023
- **On the Importance of Chemical Precision in Organic Electronics: Fullerene Intercalation in Perfectly Alternating Conjugated Polymers** *ADVANCED FUNCTIONAL MATERIALS*
Vanderspikken, J., Liu, Z., Wu, X., Beckers, O., Moro, S., Quill, T., Liu, Q., Goossens, A., Marks, A., Weaver, K., Hamid, M., Goderis, B., Nies, et al
2023
- **The Searsville Lake Site (California, USA) as a candidate Global boundary Stratotype Section and Point for the Anthropocene series.** *The anthropocene review*
Stegner, M. A., Hadly, E. A., Barnosky, A. D., La Selle, S., Sherrod, B., Anderson, R. S., Redondo, S. A., Viteri, M. C., Weaver, K. L., Cundy, A. B., Gaca, P., Rose, N. L., Yang, et al
2023; 10 (1): 116-145
- **The Searsville Lake Site (California, USA) as a candidate Global Boundary Stratotype Section and Point for the Anthropocene Series** *ANTHROPOCENE REVIEW*
Stegner, M., Hadly, E. A., Barnosky, A. D., La Selle, S., Sherrod, B., Anderson, R., Redondo, S. A., Viteri, M. C., Weaver, K. L., Cundy, A. B., Gaca, P., Rose, N. L., Yang, et al

2023

- **The effect of residual palladium on the performance of organic electrochemical transistors.** *Nature communications*
Griggs, S., Marks, A., Meli, D., Rebetez, G., Bardagot, O., Paulsen, B. D., Chen, H., Weaver, K., Nugraha, M. I., Schafer, E. A., Tropp, J., Aitchison, C. M., Anthopoulos, et al
2022; 13 (1): 7964
- **Chromium isotope fractionation during reduction of Chromium(VI) by Iron(II/III)-bearing clay minerals** *GEOCHIMICA ET COSMOCHIMICA ACTA*
Joe-Wong, C., Weaver, K. L., Brown, S. T., Maher, K.
2021; 292: 235–53
- **Complexation by Organic Matter Controls Uranium Mobility in Anoxic Sediments.** *Environmental science & technology*
Bone, S. E., Cliff, J. n., Weaver, K. n., Takacs, C. J., Roycroft, S. n., Fendorf, S. n., Bargar, J. R.
2020
- **Sources of Blood Lead Exposure in Rural Bangladesh** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Forsyth, J. E., Weaver, K. L., Maher, K., Islam, M., Raqib, R., Rahman, M., Fendorf, S., Luby, S. P.
2019; 53 (19): 11429–36
- **Isotopic Fingerprint of Uranium Accumulation and Redox Cycling in Floodplains of the Upper Colorado River Basin.** *Environmental science & technology*
Lefebvre, P., Noel, V., Lau, K. V., Jemison, N. E., Weaver, K. L., Williams, K. H., Bargar, J. R., Maher, K.
2019
- **Thermodynamic controls on redox-driven kinetic stable isotope fractionation** *Geochemical Perspectives Letters*
Joe-Wong, C., Weaver, K. L., Brown, S. T., Maher, K.
2019: 20-25
- **Uranium isotope evidence for an expansion of marine anoxia during the end-Triassic extinction** *Geochemistry, Geophysics, Geosystems*
Jost, A. B., Bachan, A., Van De Schootbrugge, B., Lau, K. V., Weaver, K. L., Maher Kate, Payne, J. L.
2017; 18
- **Isotopic Evidence for Reductive Immobilization of Uranium Across a Roll-Front Mineral Deposit** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Brown, S. T., Basu, A., Christensen, J. N., Reimus, P., Heikoop, J., Simmons, A., WoldeGabriel, G., Maher, K., Weaver, K., Clay, J., DePaolo, D. J.
2016; 50 (12): 6189-6198
- **Marine anoxia and delayed Earth system recovery after the end-Permian extinction.** *Proceedings of the National Academy of Sciences of the United States of America*
Lau, K. V., Maher, K., Altiner, D., Kelley, B. M., Kump, L. R., Lehrmann, D. J., Silva-Tamayo, J. C., Weaver, K. L., Yu, M., Payne, J. L.
2016; 113 (9): 2360-2365
- **A spatially resolved surface kinetic model for forsterite dissolution** *GEOCHIMICA ET COSMOCHIMICA ACTA*
Maher, K., Johnson, N. C., Jackson, A., Lammers, L. N., Torchinsky, A. B., Weaver, K. L., Bird, D. K., Brown, G. E.
2016; 174: 313-334
- **Rise and fall of late Pleistocene pluvial lakes in response to reduced evaporation and precipitation: Evidence from Lake Surprise, California** *GEOLOGICAL SOCIETY OF AMERICA BULLETIN*
Ibarra, D. E., Egger, A. E., Weaver, K. L., Harris, C. R., Maher, K.
2014; 126 (11-12): 1387-1415

PRESENTATIONS

- Sr-Nd isotope and trace element geochemistry of Precambrian zircon: a potential new source of information on early Earth mantle evolution - Goldschmidt Geochemistry Conference, 2004
- The importance of being plumes: Entrainment, isotopes, melting, and vertical structure of the Earth's mantle - American Geophysical Meeting, Fall 2004
- Disturbed Sr and Nd isotope systematics in zircons with concordant SHRIMP U-Pb ages - American Geophysical Meeting, Fall 2004
- Sr-isotopic evolution of the mantle - Goldschmidt Geochemistry Conference, 2005

- Geochemical Stratigraphy Near the Core-mantle Boundary: Evidence from Hawaii Drilling Project Results - Goldschmidt Geochemistry Conference, 2006
- Pb isotopic composition as a tracer of human lead exposure in Bangladesh - Goldschmidt Geochemistry Conference (July 6, 2025 - July 11, 2025)