

# Clara L. Blättler

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## EDUCATION

2012 DPhil: University of Oxford, Earth Sciences  
2008 AB: Harvard College, Earth and Planetary Sciences

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## PROFESSIONAL APPOINTMENTS

2018– Assistant Professor, University of Chicago, Dept. of the Geophysical Sciences  
2012–2018 Postdoctoral research scientist, Princeton University, Dept. of Geosciences  
2015–2018 Simons Foundation Postdoctoral Fellow  
2012–2014 Agouron Institute Postdoctoral Fellow

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## HONORS AND AWARDS

2019 Sloan Research Fellowship (Ocean Sciences)  
2015 Simons Foundation Fellowship, Collaboration on the Origins of Life  
2012 Agouron Institute Geobiology Fellowship  
2008 Rhodes Scholarship (Massachusetts and University College)  
2008 Phi Beta Kappa (Harvard College)  
2005–2006 John Harvard Scholarship  
2005 Detur Book Prize

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## PUBLICATIONS

### Submitted manuscripts:

---- Crockford, P.W., Kunzmann, M., **Blättler, C.L.**, Planavsky, N.J., Ahm, A.S.C.,  
Murphy, J.G., Halverson, G.P., Halevy, I., Higgins, J.A. Reconstructing the  $\delta^7\text{Li}$   
of late Tonian seawater using paired  $\delta^{44}\text{Ca}$  and  $\delta^{26}\text{Mg}$  isotopes in early diagenetic  
dolomite. In review at *Geology*.

---- Thiagarajan, N., Crémière, A., **Blättler, C.**, Lepland, A., Kirsimäe, K., Higgins, J., Brunstad, H., Eiler, J. Stable and Clumped Isotope Characterization of Authigenic Carbonates in Methane Cold Seep Environments. In press at *Geochimica et Cosmochimica Acta*.

### Published articles:

2020 **Blättler, C.L.**, Bergmann, K.D., Kah, L.C., Gómez-Pérez, I., Higgins, J.A., 2020. Constraints on Meso- to Neoproterozoic seawater from ancient evaporite deposits. *Earth and Planetary Science Letters* 532, 115951. doi:10.1016/j.epsl.2019.115951.

2019 Lanci, L., Zanella, E., Jovane, L., Galeotti, S., Alonso-García, M., Alvarez-Zarikian, C.A., Bejugam, N.N., Betzler, C., Bialik, O.M., **Blättler, C.L.**, Eberli, G.P., Guo, J.A., Haffen, S., Horozal, S., Inoue, M., Kroon, D., Laya, J.C., Ling Hui Mee, A., Lüdmann, T., Nakakuni, M., Niino, K., Petruny, L.M., Pratiwi, S.D., Reijmer, J.J.G., Reolid, J., Slagle, A.L., Sloss, C.R., Su, X., Swart, P.K., Wright, J.D., Yao, Z., Young, J.R., 2019. Magnetic properties of early Pliocene sediments from IODP Site U1467 (Maldives platform) reveal changes in the monsoon system. *Palaeogeography, Palaeoclimatology, Palaeoecology* 533, 109283. doi:10.1016/j.palaeo.2019.109283.

Swart, P.K., **Blättler, C.L.**, Nakakuni, M., Mackenzie, G.J., Betzler, C., Eberli, G.P., Reolid, J., Alonso-García, M., Slagle, A.L., Wright, J.D., Kroon, D., Reijmer, J.J.G., Hui Mee, A.L., Young, J.R., Alvarez-Zarikian, C.A., Bialik, O.M., Guo, J.A., Haffen, S., Horozal, S., Inoue, M., Jovane, L., Lanci, L., Laya, J.C., Lüdmann, T., Nagender Nath, B., Niino, K., Petruny, L.M., Pratiwi, S.D., Su, X., Sloss, C.R., Yao, Z., 2019. Cyclic anoxia and organic rich carbonate sediments within a drowned carbonate platform linked to Antarctic ice volume changes: Late Oligocene–early Miocene Maldives. *Earth and Planetary Science Letters* 521, 1–13. doi:10.1016/j.epsl.2019.05.019.

**Blättler, C.L.**, Higgins, J.A., Swart, P.K., 2019. Advected glacial seawater preserved in the subsurface of the Maldives carbonate edifice. *Geochimica et Cosmochimica Acta* 257, 80–95. doi:10.1016/j.gca.2019.04.030.

2018 Kunkelova, T., Jung, S.J.A., de Leau, E.S., Odling, N., Thomas, A.L., Betzler, C., Eberli, G.P., Alvarez-Zarikian, C.A., Alonso-García, M., Bialik, O.M., **Blättler, C.L.**, Guo, J.A., Haffen, S., Horozal, S., Ling Hui Mee, A., Inoue, M., Jovane, L., Lanci, L., Laya, J.C., Lüdmann, T., Bejugam, N.N., Nakakuni, M., Niino, K.,

Petruny, L.M., Pratiwi, S.D., Reijmer, J.J.G., Reolid, J., Slagle, A.L., Sloss, C.R., Su, X., Swart, P.K., Wright, J.D., Yao, Z., Young, J.R., Lindhorst, S., Stainbank, S., Rueggeberg, A., Spezzaferri, S., Carrasqueira, I., Hu, S., Kroon, D., 2018. A two million year record of low-latitude aridity linked to continental weathering from the Maldives. *Progress in Earth and Planetary Science* 5, 20 pp. doi:10.1186/s40645-018-0238-x.

Pruss, S.B., **Blättler, C.L.**, Macdonald, F.A., Higgins, J.A., 2018. Calcium isotope evidence that the earliest metazoan biomineralizers formed aragonite shells. *Geology* 46, 763–766. doi:10.1130/G45275.1.

Lüdmann, T., Betzler, C., Eberli, G.P., Reolid, J., Reijmer, J.J.G., Sloss, C.R., Bialik, O.M., Alvarez-Zarikian, C.A., Alonso-García, M., **Blättler, C.L.**, Guo, J.A., Haffen, S., Horozal, S., Inoue, M., Jovane, L., Kroon, D., Lanci, L., Laya, J.C., Ling Hui Mee, A., Nakakuni, M., Nath, B.N., Niino, K., Petruny, L.M., Pratiwi, S.D., Slagle, A.L., Su, X., Swart, P.K., Wright, J.D., Yao, Z., Young, J.R., 2018. Carbonate delta drift: A new sediment drift type. *Marine Geology* 401, 98–111. doi:10.1016/j.margeo.2018.04.011.

**Blättler, C.L.**, Claire, M.W., Prave, A.R., Kirsimäe, K., Higgins, J.A., Medvedev, P.V., Romashkin, A.E., Rychanchik, D.V., Zerkle, A.L., Paiste, K., Kreitsmann, T., Millar, I.L., Hayles, J.A., Bao, H., Turchyn, A.V., Warke, M.R., Lepland, A., 2018. Two-billion-year-old evaporites capture Earth's great oxidation. *Science* 360, 320–323. doi:10.1126/science.aar2687.

Ahm, A.S.C., Bjerrum, C.J., **Blättler, C.L.**, Swart, P.K., Higgins, J.A., 2018. Quantifying early marine diagenesis in shallow-water carbonate sediments. *Geochimica et Cosmochimica Acta* 236, 140–159. doi:10.1016/j.gca.2018.02.042.

Betzler, C., Eberli, G.P., Lüdmann, T., Reolid, J., Kroon, D., Reijmer, J.J.G., Swart, P.K., Wright, J., Young, J.R., Alvarez-Zarikian, C., Alonso-García, M., Bialik, O.M., **Blättler, C.L.**, Guo, J.A., Haffen, S., Horozal, S., Inoue, M., Jovane, L., Lanci, L., Laya, J.C., Hui Mee, A.L., Nakakuni, M., Nath, B.N., Niino, K., Petruny, L.M., Pratiwi, S.D., Slagle, A.L., Sloss, C.R., Su, X., Yao, Z., 2018. Refinement of Miocene sea level and monsoon events from the sedimentary archive of the Maldives (Indian Ocean). *Progress in Earth and Planetary Science* 5, 18 pp. doi:10.1186/s40645-018-0165-x.

Higgins, J.A., **Blättler, C.L.**, Lundstrom, E.A., Santiago-Ramos, D.P., Akhtar, A.A., Crüger Ahm, A.-S., Bialik, O., Holmden, C., Bradbury, H., Murray, S.T.,

- Swart, P.K., 2018. Mineralogy, early marine diagenesis, and the chemistry of shallow-water carbonate sediments. *Geochimica et Cosmochimica Acta* 220, 512–534. doi:10.1016/j.gca.2017.09.046.
- 2017 Betzler, C., Eberli, G.P., Alvarez Zarikian, C.A., and the **Expedition 359 Scientists, Maldives Monsoon and Sea Level**, 2017. Proceedings of the International Ocean Discovery Program, 359: College Station, TX. doi:10.14379/iodp.proc.359.2017.
- Blättler, C.L.**, Higgins, J.A., 2017. Testing Urey’s carbonate–silicate cycle using the calcium isotopic composition of sedimentary carbonates. *Earth and Planetary Science Letters* 479, 241–251. doi:10.1016/j.epsl.2017.09.033.
- Blättler, C.L.**, Kump, L.R., Fischer, W.W., Paris, G., Kasbohm, J.J., Higgins, J.A., 2017. Constraints on ocean carbonate chemistry and pCO<sub>2</sub> in the Archaean and Palaeoproterozoic. *Nature Geoscience* 10, 41–45. doi:10.1038/ngeo2844.
- 2016 Betzler, C., Eberli, G.P., Kroon, D., Wright, J.D., Swart, P.K., Nath, B.N., Alvarez-Zarikian, C.A., Alonso-García, M., Bialik, O.M., **Blättler, C.L.**, Guo, J.A., Haffen, S., Horozal, S., Inoue, M., Jovane, L., Lanci, L., Laya, J.C., Ling Hui Mee, A., Lüdmann, T., Nakakuni, M., Niino, K., Petruny, L.M., Pratiwi, S.D., Reijmer, J.J.G., Reolid, J., Slagle, A.L., Sloss, C.R., Su, X., Yao, Z., Young, J.R., 2016. The abrupt onset of the modern South Asian Monsoon winds. *Scientific Reports* 6, 29838. doi:10.1038/srep29838.
- Gothmann, A.M., Bender, M.L., **Blättler, C.L.**, Swart, P.K., Giri, S.J., Adkins, J.F., Stolarski, J., Higgins, J.A., 2016. Calcium isotopes in scleractinian fossil corals since the Mesozoic: Implications for vital effects and biomineralization through time. *Earth and Planetary Science Letters* 444, 205–214. doi:10.1016/j.epsl.2016.03.012.
- Owen, R.A., Day, C.C., Hu, C.-Y., Liu, Y.-H., Pointing, M.D., **Blättler, C.L.**, Henderson, G.M., 2016. Calcium isotopes in caves as a proxy for aridity: Modern calibration and application to the 8.2 kyr event. *Earth and Planetary Science Letters* 443, 129–138. doi:10.1016/j.epsl.2016.03.027.
- 2015 **Blättler, C.L.**, Miller, N.R., Higgins, J.A., 2015. Mg and Ca isotope signatures of authigenic dolomite in siliceous deep-sea sediments. *Earth and Planetary Science Letters* 419, 32–42. doi:10.1016/j.epsl.2015.03.006.

- 2014 **Blättler, C.L.**, Higgins, J.A., 2014. Calcium isotopes in evaporites record variations in Phanerozoic seawater SO<sub>4</sub> and Ca. *Geology* 42, 711–714. doi:10.1130/G35721.1.
- Blättler, C.L.**, Stanley, S.M., Henderson, G.M., Jenkyns, H.C., 2014. Identifying vital effects in *Halimeda* algae with Ca isotopes. *Biogeosciences* 11, 7202–7217. doi:10.5194/bg-11-7202-2014.
- 2012 **Blättler, C.L.**, Henderson, G.M., Jenkyns, H.C., 2012. Explaining the Phanerozoic Ca isotope history of seawater. *Geology* 40, 843–846. doi:10.1130/G33191.1.
- 2011 **Blättler, C.L.**, Jenkyns, H.C., Reynard, L.M., Henderson, G.M., 2011. Significant increases in global weathering during Oceanic Anoxic Events 1a and 2 indicated by calcium isotopes. *Earth and Planetary Science Letters* 309, 77–88. doi:10.1016/j.epsl.2011.06.029.

## INVITED PRESENTATIONS

- 2019 University of Washington, School of Oceanography/Quaternary Research Center  
University of California, Los Angeles, Department of Earth, Planetary, and Space Sciences  
Gordon Research Conference, Interior of the Earth  
Rice University, Department of Earth, Environmental & Planetary Sciences  
Northwestern University, Department of Earth and Planetary Sciences
- 2018 Goldschmidt conference, keynote and invited oral presentation  
University of Arizona, Department of Geosciences  
Stanford University, School of Earth, Energy & Environmental Sciences, Department of Geological Sciences  
University of Miami, Rosenstiel School of Marine & Atmospheric Science, Department of Marine Geosciences  
University of California, Santa Barbara, Department of Earth Science  
University of Wisconsin–Madison, Department of Geoscience  
University of Chicago, Department of the Geophysical Sciences
- 2017 AGU Fall Meeting, invited oral presentation  
Geobiology Society Conference  
Cornell University, Department of Earth and Atmospheric Sciences  
University of California, Santa Cruz, Department of Earth and Planetary Sciences  
Washington University in St. Louis, Department of Earth and Planetary Sciences

- 2016 USGS Rocky Mountain Science Seminar  
 Johns Hopkins University, Department of Earth and Planetary Sciences  
 Brown University, Department of Earth, Environmental and Planetary Sciences  
 Texas A&M University, Department of Geology and Geophysics  
 University of California, Berkeley, Department of Earth and Planetary Science  
 Lamont-Doherty Earth Observatory, Geochemistry Seminar  
 Yale University, Department of Geology & Geophysics
- 2015 MIT, Department of Earth, Atmospheric, and Planetary Sciences, COG3 Seminar  
 WHOI, Department of Marine Chemistry & Geochemistry
- 2014 AGU Fall Meeting, invited oral presentation  
 Harvard University, Department of Earth and Planetary Sciences, Geobiology/  
 Paleobiology Seminar  
 Rutgers University, Department of Earth and Planetary Sciences
- 2012 Binghamton University, Department of Geological Sciences and Environmental  
 Studies
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## TEACHING

- 2020 GEOS 23600: Chemical Oceanography
- 2019 GEOS 33850: Low-Temperature Geochemistry
- 2019 GEOS 29002: Field Course in Modern and Ancient Environments
- 2008–2012 Teaching assistant/demonstrator, University of Oxford, Dept. of Earth Sciences:  
 Mathematical problem-solving for Earth sciences  
 Radiogenic isotope geochemistry, stable isotope geochemistry  
 Atmosphere & hydrosphere
- 2009–2011 Field trip assistant, University of Oxford, Dept. of Earth Sciences:  
 Isle of Arran field course  
 Pembrokeshire field course  
 Dorset field course
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## FIELD / SEAGOING EXPERIENCE

- 2019 Excursion to East Arm of the Great Slave Lake
- 2019 Field course, San Salvador Island, The Bahamas (co-instructor)
- 2015 IODP Expedition 359, Maldives (R/V JOIDES Resolution)
- 2014 Agouron Advanced Geobiology Field Course, west Texas and New Mexico
- 2013 Site Survey Cruise RR1313, western Pacific (R/V Roger Revelle)
- 2011 Sampling the Cretaceous Chalk, England

2010 Field assistant, sampling Younger Dryas sediments, US/Canada  
2007 Field assistant, sampling Neoproterozoic Otavi Group, Namibia

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## **SERVICE**

### **Outreach and EDI activities:**

2019 Upward Bound College Prep Program, Saturday Academy, University of Chicago  
2019 Skype a Scientist program participant  
2017 IODP-ECORD School of Rock, Brussels  
2017 American Chemical Society National Chemistry Week, Princeton  
2015–2018 Women In STEM Leadership Council, Princeton University  
2013–2018 PWiGS (Princeton Women in Geosciences), Princeton University  
2012 UNIQ Summer School, University of Oxford  
2008–2012 Representative to the Graduate Student Forum, University of Oxford

### **Manuscripts reviewed for:**

<i>Astrobiology</i>	<i>The Geological Society of America Bulletin</i>
<i>Biogeosciences</i>	<i>Geology</i>
<i>Chemical Geology</i>	<i>JGR-Biogeosciences</i>
<i>Climate of the Past</i>	<i>Nature Communications</i>
<i>Earth and Planetary Science Letters</i>	<i>Nature Geoscience</i>
<i>Geobiology</i>	<i>PNAS</i>
<i>Geochem., Geophys., Geosystems</i>	<i>Science Advances</i>
<i>Geochimica et Cosmochimica Acta</i>	<i>Sedimentology</i>

### **Proposals reviewed for:**

ACS Petroleum Research Fund	NSF
NERC	US-Israel BSF

### **Memberships:**

American Geophysical Union (Paleoceanography & Paleoclimatology)  
The Geochemical Society  
Earth Science Women's Network