Clara L. Blättler

Princeton University 617-678-6211
Dept. of Geosciences, Guyot Hall blattler@princeton.edu
Princeton, NJ 08544 http://www.princeton.edu/geosciences/people/blattler/

EDUCATION

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

PROFESSIONAL APPOINTMENTS

2012–	Postdoctoral fellow/associate, Princeton University**,** Department of Geosciences
2015–	Simons Foundation Postdoctoral Fellow
2012–2014	Agouron Institute Postdoctoral Fellow

HONORS AND AWARDS

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

RESEARCH INTERESTS

- Geological carbon cycle and climate history
- Mineralogy and isotope geochemistry of carbonates and evaporites
- Chemical composition of seawater
- Early Earth environments and habitability
- Analytical tools: metal isotope analysis (MC-ICP-MS), trace element analysis (ICP-MS, ICP-OES), X-ray diffraction, ion chromatography, geochemical numerical/box models

PUBLICATIONS

Manuscripts in preparation:

---- **Blättler, C.L.**, Bergmann, K.D., Kah, L.C., Higgins, J.A. Marine sulfate concentrations during the Proterozoic–Phanerozoic transition.

---- **Blättler, C.L.**, Higgins, J.A., Pruss, S.B. Early aragonitic biomineralizers: New evidence from the Nama Group.

Submitted articles:

---- **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. Two-billion-year-old evaporites capture Earth's great oxidation. Submitted manuscript.

---- 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., Ling Hui Mee, A., 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., Nath, B.N., Niino, K., Petruny, L.M., Pratiwi, S.D., Su, X., Sloss, C.R., Yao, Z. Cyclic anoxia and organic rich carbonate sediments on a drowned carbonate platform: Early Miocene Maldives. Submitted manuscript.

---- Ahm, A.S.C., Bjerrum, C.J., **Blättler, C.L.**, Swart, P.K., Higgins, J.A. Quantifying early marine diagenesis in shallow-water carbonate sediments. In review at *Geochimica et Cosmochimica Acta*.

---- Betzler, C., Eberli, G.P., Lüdmann, T., Reolid, J., Kroon, D., Reijmer, J.J.G., Swart, P.K., Wright, J.D., Young, J.R., 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., Nakakuni, M., Nath, B.N., Niino, K., Petruny, L.M., Pratiwi, S.D., Slagle, A.L., Sloss, C.R., Su, X., Yao, Z., Refinement of Miocene sea level and monsoon events from the sedimentary archive of the Maldives (Indian Ocean). In review at *Progress in Earth and Planetary Science*.

---- Kunkelova, T., Jung, S.J.A., de Leau, E.S., Odling, N., Thomas, A., 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., Nath, B.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., Hayman, S., Spezzaferri, S., Kroon, D. A 2 million year record of continental aridity from the Maldives. In review at *Progress in Earth and Planetary Science*.

---- 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. Calcareous drift fan: A new drift type in a carbonate setting. In review at *Marine Geology*.

Peer-reviewed articles:

---- Higgins, J.A., **Blättler, C.L.**, Lundstrom, E.A., Santiago-Ramos, D.P., Akhtar, A.A., Ahm, A.S.C., Bialik, O.M., Holmden, C., Bradbury, H.J., Murray, S.T., Swart, P.K. Mineralogy, early marine diagenesis, and the chemistry of shallow water carbonate sediments. *Geochimica et Cosmochimica Acta* (in press).

2017 **Blättler, C.L.**, Higgins, J.A. 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.

2017 **Blättler, C.L.**, Kump, L.R., Fischer, W.W., Paris, G., Kasbohm, J.J., Higgins, J.A. Constraints on ocean carbonate chemistry and pCO_2 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. The abrupt onset of the modern South Asian Monsoon winds. *Scientific Reports* 6, 29838. doi: 10.1038/srep29838.

2016 Gothmann, A.M., Bender, M.L., **Blättler, C.L.**, Swart, P.K., Giri, S.J., Adkins, J.F., Stolarski, J., Higgins, J.A. 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.

2016 Owen, R.A., Day, C.C., Hu, C.-Y., Liu, Y.-H., Pointing, M.D., **Blättler, C.L.**, Henderson, G.M. 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. 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. Calcium isotopes in evaporites record variations in Phanerozoic seawater SO_4 and Ca. *Geology* 42, 711–714. doi:10.1130/G35721.1.

2014 **Blättler, C.L.**, Stanley, S.M., Henderson, G.M., Jenkyns, H.C. 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. 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. 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.

Other:

2017 Betzler, C., Eberli, G.P., Alvarez Zarikian, C.A., and the **Expedition 359 Scientists**, Maldives Monsoon and Sea Level. Proceedings of the International Ocean Discovery Program, 359: College Station, TX. doi:10.14379/iodp.proc.359.2017.

INVITED PRESENTATIONS

2017 AGU Fall Meeting, invited oral presentation (upcoming)
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
USGS Rocky Mountain Science Seminar

2016 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

---

TEACHING EXPERIENCE

Guest lecturer: (Princeton University, Department of Geosciences)

2017	El Niño, Global Climate Changes and Earth's Habitability
2014	Fundamentals of Solid Earth Science

Teaching assistant / demonstrator: (University of Oxford, Department of Earth Sciences)

2011–2012	St Edmund Hall tutorials: Planet Earth–Climate change–Alternative energy
2011, 2012	Mathematical problem-solving for Earth sciences
2009	Radiogenic isotope geochemistry / stable isotope geochemistry
2008	Atmosphere & hydrosphere

Field trip assistant: (University of Oxford, Department of Earth Sciences)

2010, 2011	Isle of Arran field course
2011	Pembrokeshire field course
2009–2011	Dorset field course

Supervised projects:

2011	M.D. Pointing, MESc: University of Oxford, Earth Sciences (co-supervised with G.M. Henderson and C.C. Day)

FIELD / SEAGOING EXPERIENCE

2015	IODP Expedition 359, Maldives Monsoon and Sea Level (JOIDES Resolution)
2014	Agouron Advanced Geobiology Field Course
2013	Site Survey Cruise RR1313 (R/V Roger Revelle)
2011	Sampling in the Cretaceous Chalk, England
2010	Assistant to K. Amor: Younger Dryas sediments, various locations in US/Canada
2007	Assistant to P.F. Hoffman and S.B. Pruss: Neoproterozoic Otavi Group, Namibia

---

OUTREACH AND SERVICE

2015–	Women In STEM Leadership Council, Princeton University
2015–	PWiGS (Princeton Women in Geosciences) co-leader
2013–	PWiGS (Princeton Women in Geosciences) mentor
2012	UNIQ summer school tutorial leader, University of Oxford
2008–2012	Student representative to the Graduate Student Forum, University of Oxford

Reviewer for:

Astrobiology
Biogeosciences
Chemical Geology
Climate of the Past
Earth and Planetary Science Letters
Geobiology
Geochimica et Cosmochimica Acta
The Geological Society of America Bulletin
Geology
JGR-Biogeosciences
Nature Communications
NERC
NSF
Sedimentology

Memberships:

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