

Blair Schoene

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Education

Massachusetts Institute of Technology, Ph.D., Earth, Atmospheric, and Planetary Sciences, 2006
The Colorado College, B.A., Geology, 1999

Professional Appointments

Professor of Geosciences, Princeton University	(2021-)
Associate Professor of Geosciences, with tenure, Princeton University	(2016-2021)
Assistant Professor of Geosciences, Princeton University	(2009-2016)
Post-Doctoral Research Fellow, University of Geneva, Switzerland	(2006-2009)
Visiting Assistant Professor, The Colorado College	(2006)

Research Overview

My research uses field, geochemical, and geochronological approaches to understanding the evolution of the Earth and Solar System over thousand- to billion-year timescales. I use radioisotope geochronology to measure time and the rates of natural processes, and I run an isotope geochemistry and geochronology facility that uses mass spectrometry and microanalytical techniques to probe increasingly small domains of minerals for geochemical and age records of geologic processes. My recent focuses include understanding the causes and consequences of mass extinction events and associated climate catastrophes; magmatic and ore-deposit systems; as well as understanding the origins of the Moon and Earth. My work advances our understanding of past environments in Earth history, the interaction of the solid Earth and the biosphere on geologic and human timescales, and the processes of magmatism and ore deposit formation in a variety of tectonic settings.

Laboratories Overseen

Director: Princeton radiogenic isotope geology laboratory (est. 2011)
Home to ultra-clean labs for pure U-Pb, Rb-Sr, Sm-Nd isotope separation and analysis and geochronology, as well as sample preparation for major and trace element analysis
Hosts two Isotopx Phoenix Thermal Ionization Mass Spectrometers
Equipped with rock processing and mineral separation facilities
Access to a Thermo quadrupole and MC-ICPMSs, Agilent QQQ ICPMS, ESI laser

Awards/Honors

Recipient of the Reginald Daly Lectureship award from AGU	2023
Herbette Foundation Fellow, Univ. of Lausanne, Switzerland	2023
The F.W. Clarke Award – Geochemical Society	2013
Award for excellence in teaching - E.A.P.S., M.I.T.	2003
M.I.T. Walter A. Rosenblith Fellowship	2000-2001
Rocky Mountain Association of Geologists Outstanding Student Award	1999
Phi Beta Kappa academic honorary society	1999
Cum laude academic honors - Colorado College	1999
Academic distinctions in Geology - Department of Geology - Colorado College	1999
The Darrel M. Putman Scholarship award in geology - Colorado College	1998
Dean's List - Colorado College	1997-1999

Selected Journal Publications from the last 5 years

Full list available at Google Scholar publication page:

<https://scholar.google.com/citations?user=mO3Q4AwAAAAJ&hl=en&oi=sra>

‡after a name indicates a Princeton student or postdoc author

- McKanna, A.J. ‡, Koran, I. ‡, **Schoene, B.**, Guevara, V.E., Hanchar, J.M., Volkert, R., Mueller-Harder, C., Maeder, J., Lewis, L. ‡, 2025, Magnetite-(Apatite) Deposits in the New Jersey Highlands, USA: Geochronological Evidence for Long-Lived, Orogen-Scale Mineralization During the Grenville Orogeny, *GSA Bulletin*, DOI: 10.1130/B38511.1
- Watts, E. ‡, Ye, J., Gaynor, S.P. ‡, Memeti, V. and **Schoene, B.**, 2025. Insights from megacryst-included zircon dates on the spatial extent of magma mixing in the Tuolumne Intrusive Suite, California, USA. *Geochemistry, Geophysics, Geosystems*, 26(5), p.e2024GC012120.
- Westerhold, T., Dallanave, E., Penman, D., **Schoene, B.**, Röhl, U., Gussone, N. and Kuroda, J., 2025. Earth orbital rhythms links timing of Deccan trap volcanism phases and global climate change. *Science Advances*, 11(10), p.eadr8584.
- Dauphas, N., Zhang, Z.J., Chen, X., Barboni, M., Szymanowski, D. ‡, **Schoene, B.**, Leya, I. and McKeegan, K.D., 2025. Completion of lunar magma ocean solidification at 4.43 Ga. *Proceedings of the National Academy of Sciences*, 122(2), p.e2413802121. DOI: 10.1073/pnas.2413802121
- Kasbohm, J., **Schoene, B.**, Thomas, E. and Hull, P., 2024. High-precision U-Pb geochronology for the Miocene Climate Optimum and a novel approach for calibrating age models in deep-sea sediment cores. *Geology*, 52(10), pp.747-752. DOI: 10.1130/G52255.1
- Barboni, M., Szymanowski, D. ‡, **Schoene, B.**, Dauphas, N., Zhang, Z.J., Chen, X. and McKeegan, K.D., 2024. High-precision U-Pb zircon dating identifies a major magmatic event on the Moon at 4.338 Ga. *Science Advances*, 10(30), p.eadn9871. DOI: 10.1126/sciadv.adn987
- McKanna, A. J. ‡, **Schoene, B.**, and Szymanowski, D. ‡, 2024, Geochronological and geochemical effects of zircon chemical abrasion: insights from single-crystal stepwise dissolution experiments: *Geochronology*, v. 6, no. 1, p. 1-20.
- Anttila, E. S. C., Macdonald, F. A., Szymanowski, D. ‡, **Schoene, B.**, Kylander-Clark, A., Danhof, C., and Jones, D. S., 2023, Timing and tempo of organic carbon burial in the Monterey Formation of the Santa Barbara Basin and relationships with Miocene climate: *Earth and Planetary Science Letters*, v. 620, p. 118343.
- Kasbohm, J. ‡, **Schoene, B.**, Mark, D. F., Murray, J., Reidel, S., Szymanowski, D., Barfod, D., and Barry, T., 2023, Eruption history of the Columbia River Basalt Group constrained by high-precision U-Pb and ⁴⁰Ar/³⁹Ar geochronology: *Earth and Planetary Science Letters*, v. 617, p. 118269.
- Zieman, L., Ibañez-Mejia, M., Rooney, A. D., Bloch, E., Pardo, N., **Schoene, B.**, and Szymanowski, D. ‡, 2023, To sink, or not to sink: The thermal and density structure of the modern northern Andean arc constrained by xenolith petrology: *Geology*, v. 51, no. 6, p. 586-590.
- Kinney, S.T., MacLennan, S.A. ‡, Szymanowski, D. ‡, Keller, C.B., VanTongeren, J.A., Setera, J.B., Jaret, S.J., Town, C.F., Strauss, J.V., Bradley, D.C., Olsen, P.E., **Schoene, B.**, 2022, Onset of long-lived silicic and alkaline magmatism in eastern North America precedes CAMP emplacement, *Geology*, v. 50 (11), p. 1301-3105
- Eddy, M.P., ‡ Pamukçu, A.S. ‡, **Schoene, B.**, Steiner-Leach, T. ‡, Bell, B.A., 2022, Constraints on the Timescales and Processes that Led to High-SiO₂ Rhyolite Production in the Searchlight Pluton, NV, USA, *Geosphere*, v. 18 (3), p. 1000-1019
- O'Connor, L. ‡, Szymanowski, D. ‡, Eddy, M.P. ‡, Samperton, K.M. ‡, **Schoene, B.**, 2022, A red bole zircon record of cryptic silicic volcanism in the Deccan Traps, India, *Geology*, v. 50 (4), p. 460-464
- Schoene, B.**, Eddy, M. P. ‡, Keller, C. B. ‡, and Samperton, K. M. ‡, 2021, An evaluation of Deccan Traps eruption rates using geochronologic data: *Geochronology*, v. 3, no. 1, p. 181-198;
- Schaen, A.J., **Schoene, B.**, Dufek, J., Singer, B.S., Eddy, M.P. ‡, Jicha, B.R., Cottle, J.M., 2021, Transient rhyolite melt extraction to produce a shallow granitic pluton, *Science Advances*, v. 7, no. 21, p. eabf0604; DOI: 10.1126/sciadv.abf0604.