Blair Schoene

Assistant Professor
Princeton University
Department of Geosciences
219 Guyot Hall
Princeton, NJ 08544, USA

Phone: +1 609 258 5747
fax: +1 609 258 2593
email:bschoene@princeton.edu
web: http://www.princeton.edu/geosciences/people/schoene/

Education

Massachusetts Institute of Technology
Ph.D., Geology, September 2006
Thesis title: "A thermotectonic framework for the growth and stabilization of the eastern Kaapvaal craton, Southern Africa"
Thesis advisor: Samuel A. Bowring

The Colorado College
B.A., Geology, May 1999
Thesis title: "Field, petrographic, and geochemical characterization of stratigraphy at the base of the Vinalhaven pluton, Vinalhaven Island, Maine"
Thesis advisor: David P. Hawkins

Professional Appointments

Assistant Professor of Geosciences
Princeton University (2009-)

Post-Doctoral Research Fellow
Section of Earth Sciences, University of Geneva (2006-2009)

Visiting Assistant Professor
Department of Geology, The Colorado College (2006)

Teaching

Assistant professor: Princeton University

GEO372, Rocks. An introduction to petrology.
Schedule: two 80-minute lecture periods and one 3-hour lab/week, 2 weekend and 1 one-week field trip

Teaching (cont.)

GEO373, Structural Geology.
Schedule: two 80-minute lecture periods and one 3-hour lab/week, 2 weekend and 1 one-week field trip

GEO464, Radiogenic Isotopes.
Schedule: two 80-minute lecture periods/week; no lab

GEO556, Formation and Evolution of Continental Lithosphere
Schedule: two 80-minute lecture periods/week; no lab

GEO505, GEO506; Essentials of Geoscience
Schedule: one 80-minute lecture, one 3-hour discussion period
For two weeks of the semester only

Pre-Princeton teaching experience

Course Instructor: University of Geneva (2007-2009)
Taught and assisted the following undergraduate courses:
Excursion au Terrain III^{me} année (field course in the alps)
Isotopes Radiogenique III^{me} année (Isotope Geology)
Cartographie au Terrain (field mapping course; Fall 2008)
Introduction à Petrologie II^{me} année (Introduction to Petrology; Fall 2008)
Visiting Assistant Professor: The Colorado College (Fall 2006)
Introduction to Geology
Geologic Time and the Rates of Earth Processes
Teaching Assistant: *Environmental Earth Science* - M.I.T. (Fall 2002, 2003, 2005)
Teaching Assistant: *Field Geology* - Univ. Cape Town, South Africa (Summer 2004)
Teaching Assistant: *Isotope Geology* - M.I.T. (Spring 2004, 2006)
Teaching Assistant: *Introduction to Petrology*- M.I.T. (Fall 2004)
Paraprofessional: Fulltime teaching assistant – The Colorado College (1999-2000)

Laboratories Overseen – Princeton University

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 an IsotopX PhoeniX62 Thermal Ionization Mass Spectrometer
Shared access to a Thermo Element2 ICPMS and Thermo iCAP quadrapole ICPMS
Equipped with rock processing and mineral separation facilities
Current members include 4 PhD students, 1 Postdoc, and 2 undergraduates

Awards/Honors

The F.W. Clarke Award – Geochemical Society 2013
This is the highest honor given by the Geochemical Society to an early career scientist: http://www.geochemsoc.org/awards/fwclarkeaward/

Award for excellence in teaching - E.A.P.S., M.I.T. 6/03

M.I.T. Walter A. Rosenblith Fellowship 2000-2001

Rocky Mountain Association of Geologists Outstanding Student Award 5/99

Phi Beta Kappa academic honorary society 5/99

Cum laude academic honors - Colorado College 5/99

Academic distinctions in Geology - Department of Geology - Colorado College 5/99

The Darrel M. Putman Scholarship award in geology - Colorado College 5/98

Dean's List - Colorado College 1997-1999

Funding Obtained

2011, January: NSF Sedimentology and Paleobiology
PI: Adam Maloof; CO-PI: Blair Schoene
Title: *Testing models for the origin of the deepest carbon-isotope anomaly in Earth history? The Wonoka Formation of South Australia*
Amount requested: $224,115

2011, March: Department of Geosciences Philips equipment fund
PI: Blair Schoene
Title: *Acquisition of cathodoluminescence detector for essential mineral characterization prior to geochronology; acquisition of desolvating nebulizer input system to Element2 ICP-MS*.
Amount requested: $54,862

2012, January: NSF Petrology and Geochemistry
PI: Blair Schoene
Title: *Testing Models for Magma Transfer and Emplacement In 4-Dimensions: The Bergell Intrusion, N. Italy*
Amount received: $297,487
Duration: 7/1/12-7/1/15

Funding obtained (cont.)

2014, April: NSF Earthscope
PI: Becky Flowers, CO-PIs Arrowsmith, Metcalf, Rittenour, Schoene
Title: *Collaborative Research: EarthScope Geochronology: A Student Research and Training Program and Earthscope Institute*
Amount received: $32,770
Duration: 03/01/14 - 08/31/16

2015, April: NSF-EAGER
PI: Blair Schoene, CO-PI Gerta Keller
Title: *A high-precision U-Pb age model for the Deccan Traps*
Amount received: $89,136
Duration: 04/01/15 - 03/31/16

Service to Princeton University

Princeton University Priorities Committee, 2012-2014.
This committee is responsible for overseeing additions and increases to the University's annual budget. It meets twice a week from October-January each year.
http://www.princeton.edu/provost/priorities-committee/

Co-Leader of 14 day alumni trip "Rocks and Docs" to Nepal, Spring 2012
This trip was co-sponsored by Princeton Journeys (http://alumni.princeton.edu/journeys/) and Outdoor Action (http://www.princeton.edu/~oa/index.shtml), and took ~20 alumni trekking to the basecamp of Annapurna. I gave daily lectures on geology and my father ('68) gave daily lectures on high altitude pulmonology.

Service to Geosciences at Princeton University

Hess Fellowship committee 2009

Undergraduate work committee 2009-2012

Graduate work committee 2012-

Undergraduate advising:

Academic advisor
Member, advising committee, fall 2009-spring 2012
Advised 4 junior majors, 2009-2010
Advised 7 junior, 3 senior majors, 2010-2011
Advised 4 junior, 4 senior majors, 2011-2012

Undergraduate advising (cont.)

Junior Projects
Co-advisor, Mike Eddy, Fall 2009, Cambrian carbonate geochemistry
Advisor, Nick Burton, Fall 2011, Secular variation in MORB geochemistry
Advisor, Jeff Gronewold, Fall 2011, Volcanic-plutonic geochemical relations
Advisor, Andrea Beale, Fall 2012, U-Pb geochronology of the Elba plutonic suite
Advisor, Lauren Lewis, Spring 2013, relationship between rock age and vertical relief
Advisor, Yuem Park, Fall 2013, Granulites from the Ross Lake Shear zone
Co-advisor Preston Kemeny, Spring 2014, geochemistry of redboles, Deccan traps, India
Advisor, Ryan Barker, Spring 2015, probing CA-TIMS with Raman and geochemistry
Reader on 3 JPs 2009-2010; 5 JPs 2010-2011; 5 JPs 2011-2012; 4 JPs 2012-2013, 4 JPs 2013-2014, 4 JPs 2014-2015

Senior theses
Primary advisor, Mike Eddy, 2010-2011, geologic evolution of the Pimple Hills, NJ
Primary advisor, Jacquie Nesbit 2011-2012, Carbonate thermometry of Grenville rocks
Primary advisor, Jeff Gronewold 2012-2013, U-Pb geochronology and geochemistry of mafic enclave suites from the Bergell Pluton
Primary advisor, Lauren Lewis, 2013-2014, geochronology of nelsonite ore deposits, NW New Jersey
Primary advisor, Trevor Klee, 2014-2015, mass balance in an island arc
Primary advisory, Yuem Park, 2014-2015, structural history of the Ross Lakes Shear Zone, Cascade Mountains, WA
Reader 1 ST Spring 2010; 3 ST Spring 2011; 2 ST Spring 2012; 3 ST Spring 2013; 3 ST Spring 2014;

Graduate student advising:

Primary advisor for 3 PhD students
Kyle Samperton ('16)
Brenhin Keller ('16)
Scott MacLennan ('18)

Co-adviser for 3 PhD students
Jon Husson ('14, defended 9/14); thesis title: Constraining timing and origin of unusual carbon cycle dynamics in the terminal Proterozoic and Middle Paleozoic eons
Garret Tate ('14, defended 7/14); thesis title: Structural deformation, exhumation and uplift of the Timor fold-thrust belt
Jennifer Kasbohm ('18)

Postdoctoral scholar advising:

Mélanie Barboni (2011-2014; now at UCLA)

Editor/Reviewer

Journal editorial activity

Associate Editor: *Science Advances (June 2015-)*

Editorial Advisory Board: *Earth and Planetary Science Letters (2012-)*

Reviewer for international journals:

American Journal of Science
American Mineralogist
Chemical Geology
Contributions to Mineralogy and Petrology
Earth and Planetary Science Letters
Elements
Encyclopedia of Earth Sciences, Geochronology
Geochemistry, Geophysics and Geosystems
Geochimica et Cosmochimica Acta
Geological Magazine
Geological Society of America Bulletin
Geology
Journal of Petrology
Journal of Asian Earth Sciences
Lithos
Nature Communications
Nature Geoscience
Precambrian Research
Proceedings of the National Academy of Sciences
Science
Tectonics

Reviewer for NSF programs:

EAR Instrumentation and facilities
EAR Major Research Instrumentation
EAR Petrology and Geochemistry
EAR Sedimentology and Paleobiology
EAR Tectonics

Reviewer foreign NSF programs:

Swiss National Science Foundation (SFN)
Dutch National Science Foundation (NWO)
Canadian National Science Foundation (CRC)
Canadian Foundation for Innovation (CFI)

Outreach and Synergistic Activities

Member of NSF Geochronology Steering Committee (2013-2015): chosen as one of seven US geochronologists with the charge of assessing status of geochronologic infrastructure in the US and to make recommendations for future development in infrastructure and broader support for geochronology; included organizing 3 workshops preceding Goldschmidt 2014, the 2014 Thermochronology conference and during GSA 2014. The committee presented a finalized document at NSF in Arlingont, VA, in March 2015, and are now evaluating a way forward through continued interaction with the geochronology community.

Co-PI on an NSF-funded Earthscope student training network, which connects graduate students with geochronology labs and provides funding for their PhD work. Students who write successful proposals (as reviewed by an external committee; first round awards were made May 2015) will travel to a participating geochronology lab and their food and lodging, analytical expenses, and training will be funded through Earthscope. This also involved organizing and teaching a short-course in geochronology that preceded GSA 2014 in Vancouver.

Member of NSF/NASA committee charged with assessing the future of exobiology research in the Earth and Planetary Sciences. A working group of dozens of scientists was assembled in the summer of 2014 for a 5 day workshop to explore the future of scientific investigation related the development of life and habitable environments from the Hadean to the Neoproterozoic. I am now part of a smaller group of 4 scientists who met with NSF and NASA in May 2015 to present the findings of the working group.

Participant in numerous geochronology and earth history working groups, including EARTHTIME (2004-), synergy in U-Pb LA-ICPMS (2009-2012), NASA/NSF Exobiology workshop (2014), decay constants working group (2014-)

External expert for Adamello 4D, a multi-institutional project funded by the Swiss NSF focused on understanding the structural, geochronological, thermal, and petrological history of the Adamello batholith. Included organizing and teaching U-Pb geochronology shortcourse (3 days) in Geneva, Switzerland in June 2010 and participation in 3 field workshops in Italy in 2009, 2010, and 2012.

Hosted/organized numerous sessions at international meetings.

Invited Talks and Lectures

April 2006: Department Seminar, Department of Mineralogy, University of Geneva

November 2006: Seminar Series, Geology Department, Colorado College

March 2007: KU Geology Colloquium Series, Department of Geology, University of Kansas

February 2008: Speaker's Club Colloquium, Department of Earth Science, University of California, Santa Barbara

March 2008: Solid Earth seminar series, Department of Geosciences, Princeton University

April 2008: IGMR-IMP seminar series, Institute of Isotope Geochemistry and Mineral Resources, ETH - Zurich

January 2010: Seminar series, Geological and Planetary Sciences, Caltech

April 2010: EAS weekly seminar, Earth and Atmospheric Science, Cornell University

December 2010: INVITED talk; AGU fall meeting session: high-precision geochronology.

April 2011: Department of Geosciences Colloquium, SUNY Stonybrook

March 2012: Geology Department seminar, Amherst College, Amherst, Massachusetts

June 2012: KEYNOTE address, Goldschmidt conference 2012, Montréal, Quebec. Session title: Extraction of crust from the mantle through time: from the Archean to the present

September 2012: KEYNOTE address, Adamello 4D conference on batholith construction, Bagolino, Italy.

October 2012: Rutgers University, Department of Earth and Planetary Sciences

December 2012: INVITED talk; AGU fall meeting session: High resolution geochronology

February 2013: Mass. Inst. of Technology, Department lecture series, Earth, Atmospheric, and Planetary Sciences

April 2013: American Museum of Natural History, New York, Earth Science lecture series

August 2013: KEYNOTE address, Goldschmidt conference: records in accessory minerals

August 2013: Clarke Medal Lecture, Goldschmidt conference, Florence, Italy

October 2013: University of Wisconsin, Madison, Department of Geoscience Weeks Lecture

October 2013: University of Southern California, Department of Earth sciences, department lecture series.

October 2013: KEYNOTE address, GSA annual meeting, Denver, Colorado, P-T-X in magmatic systems

January 2014: Dept. Terrestrial Magnetism, Carnegie Institute of Washington lecture series

April 2014: Dept. of Geosciences, Lehigh University

June 2014: KEYNOTE address, Goldschmidt meeting, Sacramento, CA, Accessory mineral geochronology

October 2014: INVITED address, Pardee Symposium, GSA annual meeting, Vancouver, BC; mass extinctions, impacts, and volcanism

December 2014: Department colloquium; Earth and Planetary Sciences, Harvard Univ.

April 2015: Weekly lecture; Department of Earth Sciences, Univ. Illinois Urbana-Champaign

August 2015 (scheduled): KEYNOTE, Goldschmidt annual meeting, Prague, Czech Republic, Archean tectonics and crustal evolution

September 2015 (scheduled): weekly seminar; Department of Geosciences, Princeton Univ.

October 2015 (scheduled): Department colloquium; Department of Earth, Atmospheric, and Planetary Sciences, Purdue Univ.

Popular press

Following publication of Schoene et al., (2015) in Science:

Radio interview on Canadian Broadcasting's Quirks&Quarks
(http://www.cbc.ca/radio/quirks/quirks-quarks-for-jan-3-2015-1.2881357/dinosaur-demise-and-the-deccan-traps-1.2881404)
Radio interview on WHYY Philadelphia (NPR) (http://www.newsworks.org/index.php/health-science/item/76699-volcanoes-may-have-contributed-to-dinosaurs-demise-princeton-scientists-find)
Princeton press release (http://www.princeton.edu/main/news/archive/S41/89/26O49/)
New York Times (http://www.nytimes.com/2015/02/01/opinion/sunday/the-death-of-the-dinosaurs.html?_r=0)
Washington Post (http://www.washingtonpost.com/news/speaking-of-science/wp/2014/12/11/did-a-massive-volcanic-eruption-in-india-kill-off-the-dinosaurs/)
Science News (https://www.sciencenews.org/article/mega-volcanism-indicted-dinosaur-demise?tgt=nr)
Live Science (http://www.livescience.com/49097-lava-flows-led-dinosaur-extinction.html)
TIME.com (http://time.com/3629647/dinosaurs-volcanoes-extinction/)
Wall Street Journal: India
(http://www.princeton.edu/geosciences/people/schoene/http://blogs.wsj.com/indiarealtime/2014/12/18/volcanoes-in-india-may-have-helped-wipe-out-the-dinosaurs/)
Decoded Science
(http://www.princeton.edu/geosciences/people/schoene/http://blogs.wsj.com/indiarealtime/2014/12/18/volcanoes-in-india-may-have-helped-wipe-out-the-dinosaurs/)
And many, many more (listed here: http://www.princeton.edu/geosciences/people/schoene/)

Following publication of Keller and Schoene (2012) in Nature:

Princeton University press release (http://www.princeton.edu/main/news/archive/S33/70/23K92/)
Nature News and Views (http://www.nature.com/nature/journal/v485/n7399/full/485452a.html?WT.ec_id=NATURE-20120524)
National Geographic (http://news.nationalgeographic.com/news/2012/05/120523-oxygen-life-earth-atmosphere-magma-volcanoes-science/)
RedOrbit.com (http://www.redorbit.com/news/science/1112542448/melting-mantle-linked-to-great-oxygenation-event-2-5-billion-years-ago/)
ScienceDaily (http://www.sciencedaily.com/releases/2012/05/120523133240.htm)
Futurity (http://www.futurity.org/earth-environment/earth-owes-its-oxygen-to-a-cooler-mantle/)

Invited articles / textbooks / reports

Schoene B, *in prep.,* U-Pb petrochronology by ID-TIMS, Reviews in Mineralogy and Geochemistry: Petrochronology. Eds., Kohn, M and Engi, M.

Reiners P, Renne P, Carlson R, Cooper K, Grainger D, McLean N and **Schoene B**, *in prep.,* Geochronology and Thermochronology, Wiley-Blackwell.

Schoene B, Condon DJ, Morgan L, Mclean NM, 2013, Precision and Accuracy in Geochronology, *Elements* v. 9 number 1, p. 19-24

Schoene B, 2014, U-Th-Pb Geochronology, *in Treatise on Geochemistry 2nd Edition,* ch. 3.10, Rudnick R, ed. Elsevier, Oxford, UK.

Harrison TM, Baldwin SL, Caffee M, Gehrels GE, **Schoene B**, Shuster DL, Singer BS, *in revision*, It's About Time. *Submitted to EOS*

Harrison TM, Baldwin SL, Caffee M, Gehrels GE, **Schoene B**, Shuster DL, Singer BS, 2015, It's About Time: Opportunities and Challenges for U.S. Geochronology, Institute of Geophysics and Planetary Phsyics Publication 6539, Univ. of California Los Angeles, 56 pp.

Journal Publications

Google Scholar publication page:
https://scholar.google.com/citations?user=mO3Q4AwAAAAJ&hl=en

Thomson-Reuters ResearcherID page:
http://www.researcherid.com/rid/C-3281-2014

---

‡after a name indicates a Princeton student author

37) Keller CB‡, **Schoene B**, Barboni M, Samperton KM‡, Husson JM‡, 2015, The volcanic plutonic connection and the evolution of the continental crust, *Nature* 523, 301-307

36) Condon DJ, **Schoene B**, McLean NM, Bowring SA, Parrish RR, 2015, Metrology and traceability of U-Pb isotope dilution geochronology (EARTHTIME tracer calibration part I), *Geochim. Cosmochim. Acta* 164, 464-480.

35) McLean NM, Condon DC, **Schoene B**, Bowring SA, 2015, Evaluating uncertainties in the calibration of isotopic reference materials and multi-element isotopic tracers (EARTHTIME tracer calibration part II), *Geochim. Cosmochim. Acta* 164, 481-501.

34) Husson JM‡, Higgins JA, Maloof AC, **Schoene B**, 2015, Ca and Mg isotope constraints on the origin of the Earth's deepest $\delta^{13}C$ excursion, *Geochim. Cosmochim. Acta* 160, 243-256; doi: 10.1016/j.gca.2015.03.012

33) Gothman AM‡, Stolarski J, Adkins JF, **Schoene B**, Dennis KJ, Schrag DP, Mazur M, Bender ML, 2015, Fossil corals as an archive of secular variations in seawater chemistry, *Geochim. Cosmochim. Acta* 160, 188-210; doi:10.1016/j.gca.2015.03.018

32) Husson JM‡, Maloof AC, **Schoene B**, Chen CY‡, Higgins JA, 2015, Stratigraphic expression of Earth's deepest $d^{13}C$ excursion in the Wonoka Formation of South Australia, *American Journal of Science* 315, 1-45, doi:10.2475/01.2015.01

31) **Schoene B**, Samperton KM‡, Eddy MP, Keller G, Adatte T, Bowring SA, Khadri SFR, Gertsch B, 2015, U-Pb geochronology of the Deccan traps and relation to the end-Cretaceous mass extinction, *Science* 347, 182-184; doi: 10.1126/science.aaa0118

30) Wotzlaw J-F, Guex J, Bartolini A, Gallet Y, Krystyn L, McRoberts CA, Taylor D, **Schoene B**, Schaltegger U, 2014, Towards accurate numerical calibration of the Late Triassic: High-precision U-Pb geochronology constraints on the duration of the Rhaetian, *Geology* 42, 571-574; doi: 10.1130/G35612.1

29) Barboni M, **Schoene B**, 2014, Short eruption window revealed by absolute crystal growth rates in a granitic magma, *Nature Geoscience* 7, 524-528, doi: 10.1038/ngeo2185

28) **Schoene B**, 2014, U-Th-Pb Geochronology, *in Treatise on Geochemistry 2nd Edition,* ch. 3.10, Rudnick R, ed. Elsevier, Oxford, UK.

27) Rose CV‡, Maloof AC, **Schoene B**, Ewing RC, Linneman U, Hofmann M, Cottle JM, 2013, The end-Cryogenian glaciation of South Australia, *Geoscience Canada* 40, 256-293; doi: 10.12789/geocanj.2013.40.019.

26) **Schoene B**, Condon DJ, Morgan L, Mclean NM, 2013, Precision and Accuracy in Geochronology, *Elements* v. 9 number 1, p. 19-24

25) Barboni M, **Schoene B,** Ovtcharova M, Bussy F, Schaltegger U, Gerdes A, 2013, Timing of incremental pluton construction and magmatic activity in a back-arc setting revealed by ID-TIMS U/Pb and Hf isotopes on complex zircon grains, *Chem. Geol.* 340, 76-93; doi: 10.1016/j.chemgeo.2012.12.011

24) **Schoene B**, Schaltegger U, Brack P, Latkoczy C, Stracke A, Günther D, 2012*,* Rates of magma differentiation and emplacement in a ballooning pluton recorded by U-Pb TIMS-TEA, Adamello batholith, Italy, *Earth Planet. Sci. Lett.* 355-356, p. 162-173

23) Guex J, **Schoene B,** Bartolini A, Spangenberg J, Schaltegger U, O'Dogherty L, Taylor D, Atudorei V, Bucher H, 2012, Post-extinction recovery of the ammonoids and carbon isotope cycle during the Early Jurassic: Geochronological constraints, *Paleo*^{3} 346-347, 1-11; doi:10.1016/j.palaeo.2012.04.030

22) Keller B‡, **Schoene B**, 2012, Statistical geochemistry reveals disruption in secular lithospheric evolution about 2.5 Gyr ago, *Nature* 485*,* 490-493 doi:10.1038/nature11024

21) Husson JM‡, Maloof AC, **Schoene B**, 2012, A syn-depositional age for Earth's deepest $\delta^{13}C$ excursion required by isotope conglomerate tests, *Terra Nova* 24, 318-325; doi: 10.1111/j.1365-3121.2012.01067.x

20) Rose CV‡, Swanson-Hysell NL‡, Husson JM‡, Poppick LN, Cottle JM, **Schoene B**, Maloof AC, 2012, Constraints on the origin and relative timing of the Trezona $\delta^{13}C$ anomaly below the end-Cryogenian glaciation, *Earth Planet. Sci. Lett.* 319-320, 241-250; doi: 10.1016/j.epsl.2011.12.027

19) Bartolini A, Guex J, Spangenberg J, **Schoene B**, Taylor D, Schaltegger U, Atudorei V, 2012, Disentangling the Hettangian carbon isotope record: implications for the aftermath of the end-Triassic mass extinction, *Geochem. Geophys. Geosyst. 13*, doi:10.1029/2011GC003807

18) Blackburn TJ, Shimizu N, Bowring SA, **Schoene B**, Mahan K, 2012, Zirconium in rutile speedometry: New constraints on lower crustal cooling rates and residence temperatures, Earth Planet. Sci. Lett. 317-318, 231-240; doi: 10.1016/j.epsl.2011.11.012

17) Blackburn TJ, Bowring SA, **Schoene B**, Mahan K, Dudás FÖ, 2011, U-Pb thermochronology: creating a temporal record of lithosphere thermal evolution, *Contrib. Mineral. Petrol.*, v. 162, p. 479-500. DOI: 10.1007/s00410-011-0607-6

16) **Schoene B**, Latkoczy C, Schaltegger U, Günther D, 2010, A new method integrating high-

precision U-Pb geochronology with zircon trace element analysis (U-Pb TIMS-TEA), *Geochim. Cosmochim. Acta v. 74*, p. 7144

15) Flowers RM, **Schoene B**, 2010, Mesozoic relief development and uplift of the eastern Kaapvaal craton, southern African Plateau from (U-Th)/He thermochronometry, *Geology, v. 38; no. 9; p. 827-830*; doi: 10.1130/G30980.1

14) Bachmann O, **Schoene B**, Schnyder C, Spikings R, 2010, $^{40}Ar/^{39}Ar$ and U/Pb dating of young rhyolites in the Kos-Nosyros volcanic complex, Eastern Aegean Arc (Greece): age discordance from excess ^{40}Ar in biotite, *Geochem., Geophys., Geosyst.,* doi:10.1029/2010GC003073

13) **Schoene B**, Guex J, Bartolini A, Schaltegger U, Blackburn T, 2010, Correlating the end-Triassic mass extinction and flood basalt volcanism at the 100,000-year level, *Geology* 38; p. 387–390; doi: 10.1130/G30683.1

12) **Schoene B**, Bowring S.A., 2010, Rates and mechanisms of Mesoarchean magmatic arc construction, eatern Kaapvaal craton, Swaziland, *GSA Bulletin* 122, p. 408-429; doi: 10.1130/B26501.1.

11) Schaltegger U, Brack P, Ovtcharova M, Peytcheva I, **Schoene B**, Stracke A, Marocchi M, Bargossi G, 2009, 700,000 years of magma accretion, crystallization and initial cooling in a composite pluton recorded by zircon and titanite (Adamello batholith, northern Italy), *Earth Planet. Sci. Lett.* 286, pp. 208-218

10) **Schoene B**, Dudäs F.O.L., Bowring S.A., de Wit M.J., 2009, Sm-Nd isotopic mapping of lithospheric growth and stabilization in the eastern Kaapvaal craton, *Terra Nova* 21, pp. 219-228, doi:10.1111/j.1365-3121.2009.00877.x

9) **Schoene B**, de Wit M. J., Bowring S. A., 2008, Mesoarochean assembly and stabilization of the eastern Kaapvaal craton: A structural-thermochronological perspective: *Tectonics* 27, TC5010, doi:10.1029/2008TC002267

8) Slama J, Kosler J, Condon D.J., Crowley J.L., Gerdes A, Hanchar J.M., Horstwood M.S.A., Morris G.A., Nasdala L, Norberg N, Schaltegger U, **Schoene B**, Tubrett M.N., Whitehouse M.J., 2008, Plesovice zircon – a new natural reference material for U-Pb and Hf isotopic microanalysis, *Chemical Geology* 249, pp. 1-35, doi:10.1016/j.chemgeo.2007.11.005

7) Schaltegger U, Guex J, **Schoene B**, Bartolini A, Ovtcharova M, 2008, Precise U-Pb age constraints for end-Triassic mass extinction, its correlation to volcanism and Hettangian post-extinction recovery, *Earth Planet. Sci. Lett.* 267, pp. 266-275, doi:10.1016/j.epsl.2007.11.031

6) Crowley J.L., **Schoene B**, Bowring S.A., 2007, U-Pb dating of zircon in the Bishop Tuff at the millennial scale, *Geology* 35, pp. 1123-1126, doi: 10.1130/G24017A.1.

5) Schmitz M.D., **Schoene B**, 2007, Derivation of isotope ratios, errors and error correlations for U-Pb geochronology using 205Pb-235U-(233U)-spike isotope dilution thermal ionization mass spectrometric data, *Geochem., Geophys., Geosyst.* 8, Q08006, doi: 10.1029/2006GC001492

4) **Schoene B**, Bowring S.A., 2007, Determining accurate temperature-time paths from U-Pb

thermochronology: an example from the SE Kaapvaal Craton, Southern Africa, *Geochimica et Cosmochimica Acta* 71: 165-185.

3) Bowring S.A., **Schoene B**, Crowley J.L., Ramezani J, Condon D.J., 2006, High-precision zircon U-Pb geochronology and the stratigraphic record: Progress and promise, in Olszewski (ed.), *Geochronology: Emerging Opportunities, Paleontological Society Short Course*, v. 12.

2) **Schoene B**, Bowring S.A., 2006, A U-Pb age for the $^{40}Ar/^{39}Ar$ standard MMhb: implications for accurate comparative geochronology and U-Pb thermochronology. *Contributions to Mineralogy and Petrology* 151 (5): 315-330

1) **Schoene B**, Crowley J.L., Condon D.C., Schmitz M.D., Bowring S.A., 2006, Reassessing the uranium decay constants for geochronology using ID-TIMS U-Pb data. *Geochim. et Cosmochim. Acta* 70: 426-445

Meeting Abstracts

Schoene B, 2014, INVITED: Weapons for mass extinctions: U-Pb geochronology applied to constraining catastrophes annual GSA meeting, Vancouver, BC, abstract 63-5

Husson JM, Higgins JA, Maloof AC, **Schoene B**, 2014, Ca isotope constraints on the origin of Earth's deepest $\delta^{13}C$ excursion, annual GSA meeting, Vancouver, BC, abstract 158-14

Schoene B, Barboni M, Samperton KM, 2014, KEYNOTE: Crystal growth rates in plutonic systems via ID-TIMS U-Pb geochronology, Goldschmidt meeting, Sacramento, CA, abstract 3771

Samperton KM, **Schoene B**, Cottle J, 2014, Temporal and compositional heterogeneity in accessory minerals: Implications for magmatic differentiation and pluton emplacement processes, Goldschmidt meeting, Sacramento, CA, abstract 4768

Keller CB, **Schoene B**, 2014, Insights into the formation of Archean crust from statistical geochemistry of the Archean-Proterozoic transition, Goldschmidt meeting, Sacramento, CA, abstract 4617

Schoene B, Keller CB (presenter), Samperton KM, Barboni M, Husson J, 2013, A statistical approach to the volcanic-plutonic connection, AGU Fall meeting, San Francisco, CA, abstract 1819810

Barboni M, **Schoene B**, 2013, Growth grates of K-Feldspar megacrysts and the liquid-mush lockup in shallow felsic reservoirs given by U/Pb TIMS-TEA on zircon, GSA meeting Denver, abst # 119-8

Schoene B, Samperton KM, Barboni M, Keller CB, 2013, INVITED: Advances in understanding the timescales of magmatic processes from high-precision U-Pb geochronology, GSA meeting Denver, abstract 87-5

Samperton KM, **Schoene B**, Cottle JM, Crowley JL, Schmitz MD, 2013, Composite plutons, composite zircons: geochronological and geochemical perspectives on zircon stratigraphy and magma evolution from U-Pb TIMS-TEA, GSA meeting Denver, abst # 26-10

Keller CB, **Schoene B**, Barboni M, Samperton K, Husson J, 2013, A statistical approach to the volcanic-plutonic connection, Goldschmidt Conference, Florence, Italy

Schoene B, 2013, MEDAL: Understanding geochemical change on very short and very long timescales, Goldschmidt Conference, Florence, Italy

Schoene B, 2013, INVITED: Weapons for mass extinction: U-Pb geochronology applied to constraining catastrophes, The Geological Society William Smith meeting, London, England

Husson J, **Schoene B**, Maloof A, Bluher S, 2013, Absolute time constraints on the Silurian-Devonian boundary d13C excursion (invited), The Geological Society William Smith meeting, London, England

Schoene B, Samperton K, Cottle J, Crowley JL, 2012, INVITED: Progress integrating ID-TIMS U-Pb geochronology with accessory mineral geochemistry: towards better accuracy and higher precision time, AGU Fall Meeting, abstract V14B-02.

Bowring SA, Bauer A, Dudas FOL, **Schoene B**, McLean NM, 2012, Steady State Growth of Continental Crust? AGU Fall Meeting, abstract T14B-07.

Barboni M, **Schoene B**, 2012, K-feldspar megacrysts growth and their link to the granitic mush: insight from high precision U-Pb dates (ID-TIMS) and trace elements (TIMS-TEA) on zircon, AGU Fall Meeting, abstract V43D-2882

Samperton K, **Schoene B**, Cottle J, Crowley JL, 2012, Integrated TIMS-TEA/LA-ICPMS constraints on pluton emplacement, Goldschmidt conference, Montreal, Canada, abstract 2248

Keller CB**, Schoene B,** 2012, Secular geochemical evolution linked to atmospheric oxidation, Goldschmidt conference, Montreal, Canada, abstract 2789

Schoene B, Keller CB, 2012, KEYNOTE: Multi-scale geochemical time series constraints on Archean lithosphere formation, Goldschmidt conference, Montreal, Canada, abstract 3069

Schoene B, Samperton K, Schaltegger U, Cottle J, Crowley JL, Brack P, 2012, KEYNOTE: Constraints on pluton assembly through combined accessory mineral geochronology and geochemistry, Adamello 4D meeting, Bagolino, Italy

Schaltegger U, **Schoene B**, Ovtcharova M, Sell B.K., Broderick C.A., Wotzlaw J., 2011, Finding the "true" age: ways to read high-precision U-Pb zircon dates. AGU Fall Meeting, 5.9.12. 2011, San Francisco

Schoene B, Schaltegger U, Samperton K, 2011, U-Pb TIMS-TEA: A new tool for understanding zircon crystallization histories in magmatic systems and interpreting ashbed geochronology, GSA Fall meeting, #43-7

Schoene B, Schaltegger U, Guex J, Bartolini A, 2010, INVITED: Application of U-Pb ID-TIMS dating to the end-Triassic global crisis: testing the limits on precision and accuracy in a multidisciplinary whodunnit. AGU fall meeting, abstract V23C-08.

Blackburn T, Bowring SA, Mahan KH, Perron T, **Schoene B**; Dudas FO, 2010, U-Pb thermochronology of the lower crust: producing a long-term record of craton thermal evolution. AGU fall meeting, abstract T42C-04

Condon D, McLean NM, **Schoene B**, Bowring S, Mattinson J, Hiess J, Noble SR, Schmitz MD, Crowley JL, Parrish R, 2010, Accuracy of the U-Pb system: tracer calibration, decay constants and other parameters, GSA Fall meeting, #282-2

McLean NM, Condon D, **Schoene B**, Bowring SA, 2010, The fundamental limits of U-Pb ID-TIMS precision: Propagating underlying systematic uncertainties, GSA Fall meeting, #282-3

Husson J, Maloof A, **Schoene B**, 2010, Stratigraphic tests for the origin of the deepest carbon-isotope anomaly in Earth history – the Wonoka Formation of South Australia, GSA Fall meeting, #161-9

Jiang S-Y, Pi D-H, **Schoene B**, 2010, Ages of the key boundaries during the Precambrian-Cambrian interval in South China, GSA Fall Meeting, #144-2

Schoene B, Guex J, Bartolini A, Schaltegger U, Blackburn T, 2010, Correlating the end-Triassic mass extinction and flood basalt volcanism at the 100,000-year level by high-precision U-Pb age determinations: Geophysical Research Abstracts, Abstract EGU2010-3701, EGU General Assembly 2010

Schoene B, Schaltegger U, Latkoczy C, Günther D, 2009, A new method fingerprinting magmatic processes using combined U/Pb ID-TIMS geochronology and accessory mineral geochemistry: Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V42A-02

Barboni M, Bussy F, Ovtcharova M, **Schoene B**, 2009, Thermal evolution of magma reservoirs in the shallow crust and incidence on magma differentiation: the St-Jean-du-Doigt layered intrusion (Brittany, France):, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V51A-1631

Blackburn T, Bowring SA, **Schoene B**, Dudas FO, Mahan KH, 2009, Thermochronology of lower crustal xenoliths: creating a temporal record of lithosphere thermal evolution:, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V52C-03

Schaltegger U, Ovtcharova M, **Schoene B**, 2009, Developments in U-Pb ID-TIMS geochronology - more precision, more accuracy, more fun: Microanalysis, Processes, Time; Edinburgh, UK

Blackburn T, Bowring SA, **Schoene B**, Mahan K, Dudas FOL, 2009, U-Pb thermocrhonology of lower crustal xenoliths: creating a temporal record of lithosphere thermal evolution: Microanalysis, Processes, Time; Edinburgh, UK

Schaltegger U, **Schoene B**, Brack P, 2009, Invited: Taking the Pulse of Magma Emplacement: 19th annual Goldschmidt conference, Abstract 18e/14:30/Fr

Barboni M, **Schoene B**, Bussy F, Schaltegger U, Gerdes A, 2009, Timing of Injection and of Thermal Maturation in a Mid-Crustal Variscan Bimodal Intrusion: 19th annual Goldschmidt conference, Abstract 18e/14:45/Fr

Schoene B, Schaltegger U, Latkoczy C, Günter D, 2009, A New Method Integrating ID-TIMS U-Pb Geochronology with Zircon Trace Element Analysis: 19th annual Goldschmidt conference, Abstract 18e/15:00/Fr

Bowring S, Bowring J, Condon D, Heizler M, Johnson KR, McLean NM, Parrish R, Ramezani J, **Schoene B**, 2008, The EARTHTIME Initiative: A Review of Progress and Prospects: GSA Joint Annual Meeting, Abstract 141-31

McLean N, Bowring J, Bowring SA, **Schoene B**, 2008, More Than Just An Age: Quantitative

Analysis of Geochronological Data and Uncertainty: GSA Joint Annual Meeting, Abstract 141-28

Condon D, McLean N, **Schoene B**, Bowring S, Parrish R & Noble S, 2008, Synthetic U-Pb 'standard' Solutions for ID-TIMS Geochronology: 18th annual Goldschmidt conference, Abstract 20d/322/2

Schaltegger U, Brack P, Ovtcharova M, Peytcheva I, **Schoene B**, Stracke A & Bargossi G, 2008, The Growth of Plutons: How Precisely and Accurately can we Date Incremental Melt Emplacement with U-Pb Zircon (Adamello Intrusion, Northern Italy)?: 18th annual Goldschmidt conference, Abstract 10c/14:45/5

Schoene B, Schaltegger U, 2008, Interpreting High-Precision U-Pb Zircon Dates: New Insights from Volcanic and Plutonic Rocks: 18th annual Goldschmidt conference, Abstract A88410c/15:00/5

Schaltegger U, **Schoene B**, Peytcheva I, 2008, INVITED: Tracking the growth of plutons: the contribution of high-precision U-Pb zircon dating: Geophysical Research Abstracts, Vol. 10, EGU2008-A-01909, SRef-ID: 1607-7962/gra/EGU2008-A-01909, EGU General Assembly 2008

Bowring SA, Bowring JF, Heizler M, Johnson KR, McLean NM, Parrish R, Ramezani J, **Schoene B**, 2008, The EARTHTIME initiative: A review of progress and prospects, GSA fall meeting 2008.

Barboni M, Bussy F, **Schoene B,** Schaltegger, U, 2008, Architecture and emplacement mechanisms of the Saint Jean du Doigt bimodal intrusion, Brittany, France: Geophysical Research Abstracts, Vol. 10, SRef-ID: 1607-7962/gra/EGU2008-A-05182, EGU General Assembly 2008

Schoene B, Schaltegger U, Ovtcharova M, 2007, Applications of high-precision U-Pb geochronology to the stratigraphic record, 5th annual Swiss Geoscience meeting

Schaltegger U, **Schoene B**, Bartolini A, Guex J & Ovtcharova M, 2007, Precise Ages for the Triassic/Jurassic Boundary and Hettangian Recovery from Northern Peru, 17th annual Goldschmidt conference, Abstract A884

Bowring S, Crowley J, Ramezani J, McLean N, Condon D & **Schoene B**, 2007, KEYNOTE: High-Precision U-Pb Zircon Geochronology: Progress and Potential, 17th annual Goldschmidt conference, Abstract A117

Schoene B & Bowring S, 2007, Recent Developments in U-Pb Thermochronology, 17th annual Goldschmidt conference, Abstract A901

Parrish R.R., Noble S.R., Condon D.J., Horstwood M.S., Bowring S., **Schoene B.**, Crowley Q., 2006, Advances in ID-TIMS and LA-MC-ICP-MS U-Pb mass spectrometry with applications to geochronology and environmental U analysis, *EOS Trans. AGU,* 87(52), Fall Meet. Suppl., Abstract V11E-03 Invited

Parrish R., Bowring S., Condon D., **Schoene B.,** Crowley J., Ramezani J., 2006, EARTHTIME U-Pb tracer for community use: 16th annual Goldschmidt conference, Abstract S1-04

Schoene B., Crowley J., Condon D., Schmitz M., Bowring, S., 2006, Reassessing decay constants through U-Pb ID-TIMS geochronology: Geophysical Research Abstracts, V. 8, SRef-ID: 1607-7962/gra/EGU06-A-04914

Condon D.J., Bowring S.A., **Schoene B.**, Parrish R., Crowley J.L., Ramezani J., 2006, High-precision U-Pb geochronology and the EARTHTIME initiative: progress and potential: Geophysical Research Abstracts, V. 8, SRef-ID: 1607-7962/gra/EGU06-A-05052

Condon DJ, **Schoene B**, Bowring SA, Parrish R, Crowley JL, Ramezani J, 2006, Towrads the effective eleimination of interlaboratory bias in U-Pb ID-TIMS geochronology: Geophysical Research Abstracts, V. 8, SRef-ID: 1607-7962/gra/EGU06-A-06266

Bowring S.A., Crowley J.L., Flowers R.M., Macphee D., and **Schoene B.**, 2005, High to moderate temperature thermochronology and the maturation of continental lithosphere. *Geological Society of America Abstracts with Programs,* Vol. 37, No. 7, p. 344.

Schoene B., Bowring S.A., 2004, Rates and mechanisms of magma emplacement in the Usutu intrusive suite: implications for ca. 3.2 Ga assembly of the Kaapvaal craton. *Geological Society of America Abstracts with Programs,* Vol. 36, No. 5, p. 406.

Bowring S.A., Flowers R.M., Crowley J.L., **Schoene B.**, Karlstrom K., Williams M.L., 2004, Geochronological and thermochronological constraints on Proterozoic lithospheric evolution, southwestern U.S. *Geological Society of America Abstracts with Programs,* Vol. 36, No. 5, p. 117.

Schoene B., Bowring S.A., 2003, U-Pb apatite and sphene thermochronology documenting mid-crustal temperature gradients during Archean lithospheric stabilization, Kaapvaal craton, southern Africa. *Geological Society of America Abstracts with Programs*, Vol. 35, No. 6, p. 594.

Schmitz M.D., Bowring S.A., **Schoene B.,** 2003, High-precision U-Pb zircon dates as benchmarks in absolute time. *EOS Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract V22E-05.

Bowring S.A., Matzel J.P., Karlstron K.E., Hawkins D.P., **Schoene, B.**, 2001, Geochronological and thermochronological constraints on the Proterozoic lithospheric evolution of the Southwest U.S. *Rocky Mountain (53rd) and South-Central (35th) Sections, GSA, Joint Annual Meeting Abstracts with Programs*.

Schoene B., Hawkins D.P., Wiebe R.A., 1999, Field, petrographic, and geochemical characterization of stratigraphy at the base of the Vinalhaven pluton, Vinalhaven Island, ME: Twelfth Keck Research Symposium in Geology Proceedings, April 1999.