

Curriculum vitae

Dr. Bärbel Hönisch

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EDUCATION AND PROFESSIONAL EXPERIENCE

- 2012-present Associate Professor in the Department of Earth and Environmental Sciences, Columbia University, NY.
- 2007-2012 Assistant Professor in the Department of Earth and Environmental Sciences, Columbia University, NY.
- 2005-2006 Research Scientist at the Center for Marine Environmental Studies (Marum), Bremen University; Adjunct Associate Research Scientist at the Lamont-Doherty Earth Observatory, Palisades, NY, and Visiting Scientist at SUNY Stony Brook, Stony Brook, NY.
- 2003-2005 Associate Research Scientist at the School of Earth and Environmental Sciences, Queens College, Flushing, NY; Adjunct Associate Research Scientist at the Lamont-Doherty Earth Observatory, Palisades, NY, and Visiting Scientist at SUNY Stony Brook, Stony Brook, NY.
- 2002-2003 Postdoctoral Research Scientist at the Lamont-Doherty Earth Observatory, Palisades, NY, and Visiting Scientist at SUNY Stony Brook, Stony Brook, NY.
- 2002 Dr. rer. nat. (Ph.D. in Natural Sciences). Thesis title: Stable isotope and trace element composition of foraminiferal calcite - from incorporation to dissolution, Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany. Advisors: Dr. J. Bijma, Prof. D.A. Wolf-Gladrow.
- 1999 Diplom (masters) in Marine Biology (secondary subjects: Geology, Ecology). Thesis title: Occurrence and isotopic composition of otoliths from Walvis Ridge sediments, University of Bremen, Germany. Advisors: Prof. V. Smetacek, Prof. G. Wefer.
- 1995 Vordiplom (BA) in Biology, University of Bielefeld, Germany.

Teaching and Mentoring Activities

Courses taught

- EESC W4926 Chemical Oceanography, Spring 2007, 2009, 2011, 2013
- EESC V1030 Introduction to Oceanography, Fall 2007, 2008, 2009, 2010, 2011, 2012
- EESC V4920 Paleoceanography, Fall 2009, Spring 2012, Spring 2014
- EESC G9802 Seminar in Geochemistry, Spring 2008
- EESC G9600 Seminar in Paleoclimatology (The Mid-Pleistocene Transition), Spring 2014
- Summer school: Experimental Methods in Culturing Planktic Foraminifers, Catalina Island, CA, July 23-August 3, 2007.

Supervised Students

- Carina Fish, Bridge-to-PhD student, 2014-present
- Jan Kluk, Yorktown High School, 2013-present
- Sam Kim, Nyack High School, 2014-present
- Laura Haynes, graduate student, mentor, Department of Earth and Environmental Sciences, 2013-present.
- Caroline Baptist, Bridge-to-PhD student, 2012-2014
- Kyle Monahan, summer intern, undergraduate student at Rensselaer Polytechnic Institute, July-December 2011.
- Jesse Farmer, graduate student, mentor, Department of Earth and Environmental Sciences, Columbia University, 2011-present.
- Sarah Hale, Master's student, mentor, Department of Earth and Environmental Sciences, Columbia University, 2009-2010.
- Katherine Allen, graduate student, mentor, Department of Earth and Environmental Sciences, Columbia University, 2007-2012.
- Don Penman, lab assistant, Department of Earth and Environmental Sciences, Columbia University, 2008-2009.
- Diya Chacko, Masters student, thesis advisor, Department of Earth and Environmental Sciences, Earth and Environmental Science Journalism program, Columbia University, 2009.
- Ashley Ellenson, work study student, School of Engineering and Applied Science, Columbia University, 2008-2009.
- Lida Teneva, graduate student, thesis committee, Department of Earth and Environmental Sciences, Columbia University, 2007-2008.
- Lucy Chen, summer assistant, undergraduate student at Columbia University, July-October 2007.
- Steven Wang, FOSTOR intern, Columbia University, June/July 2007.
- Jessica Leber, Masters student, thesis committee, Department of Earth and Environmental Sciences, Earth and Environmental Science Journalism program, Columbia University, 2007.

- Gemma Kirkwood, Masters student, thesis committee, Department of Earth and Environmental Sciences, Columbia University, 2006 – 2007.
- Lucy Liu, Highschool Summer Intern, Lamont-Doherty Earth Observatory, Palisades, NY, June/July 2005.

Postdocs

- Kelsey Dyez, Lamont-Doherty Earth Observatory, August 2014-present
- Martin Ziegler, Lamont-Doherty Earth Observatory, February-July 2010
- Markus Raitzsch, Lamont-Doherty Earth Observatory, March 2009-August 2010
- Barbara Balestra, Lamont-Doherty Earth Observatory, June-August 2007

PROFESSIONAL SERVICE

- Proposal reviewer
American Chemical Society Petroleum Research Fund, National Science Foundation (NSF), U.S.-Israel Binational Science Foundation, California Sea Grant College Program, Natural Environment Research Council (NERC), U.S. Science Support Program
- Review panel member
NSF P2C2 2013
- Manuscript Reviewer
Applied Geochemistry, Biogeosciences, Chemical Geology, Climate of the Past, Deep-Sea Research, Earth and Planetary Science Letters, Geochimica et Cosmochimica Acta, Geology, G-cubed, Geophysical Research Letters, Journal of Foraminiferal Research, Nature, Nature Communications, Nature Geoscience, Paleoceanography, Science, Trends in Ecology & Evolution
- e-Lecture Reviewer
Limnology and Oceanography, Nature Education, Nature Knowledge, ASLO
- Expert reviewer, Working Group I, IPCC Fifth Assessment Report (AR5) Climate Change 2013: The Physical Science Basis
- External graduate student committee member
Juan Pablo d'Olivo Cordero (ANU, 2012/2013); Tali Babila (Rutgers, 2013)
- Associate Editor: *Paleoceanography*, 2014 - present
- Member AGU Scheduling Committee, 2009-2012 and Secretary of the AGU *Paleoceanography/Paleoclimatology* focus group, 2011- 2012.
- *Session convener, Organizing Committees*

- *Goldschmidt Conference 2014, Sacramento: 09e - Geological Constraints on Perturbations to the Global Carbon Cycle*
 - *AGU Fall Meeting 2013, San Francisco: Reconstructing past carbon cycle perturbations: Novel Developments and Applications.*
 - *AGU Fall Meeting 2012, San Francisco: Paleoceanography and Paleoclimatology General Contributions; Emiliani Lecture.*
 - *Goldschmidt Conference 2012, Montreal: 13g-Insights into recent and Cenozoic carbon cycle perturbations using boron-based proxies; 10a-Proxy development for paleoclimate and paleocean chemistry; Co-organizer of a pre-conference Boron user meeting.*
 - *AGU Fall Meeting 2011, San Francisco: Paleoceanography and Paleoclimatology General Contributions; Emiliani Lecture.*
 - *AGU Fall Meeting 2010, San Francisco: Paleoceanography and Paleoclimatology General Contributions; Emiliani Lecture.*
 - *Organizer of a workshop on Paleocean-acidification and Carbon Cycle Perturbation events, funded by NSF and PAGES, August 25-29 2010, Catalina Island, California.*
 - *Ocean Science Meeting 2010, Portland: PA02: Calcification and Ocean Acidification - From Laboratory to Geological Time Scales.*
 - *AGU Fall Meeting 2009, San Francisco: PP31C: Paleoceanography and Paleoclimatology General Contributions.*
 - *Co-organizer of an Ocean Acidification Workshop supported by the United States Advisory Committee for the Integrated Ocean Drilling Program, Meeting January 7-9, 2009, Rosenstiel School of Marine and Atmospheric Science, Miami, Florida.*
 - *Goldschmidt Conference 2006, Melbourne: S11-02 Marine biogeochemical forcing of Earth's atmosphere on short and long time scales.*
- Member of the selection committee for the AGU Paleoceanography and Paleoclimatology Focus Group - Dansgaard Award Mid-Career Award.

PROFESSIONAL ORGANIZATION MEMBERSHIP

- American Geophysical Union
- The Geochemical Society
- European Geosciences Union, complimentary membership 2010
- SCOR/IGBP Working Group 38 on Modern Planktic Foraminifera and Ocean Changes", Associate Member

LDEO COMMITTEES

- Postdoc fellowship committee, 2010-2012
- search committees: Biogeosciences Faculty (2010, 2011), Biological Oceanography DARS/DRS (2008), PDRS (PI: Hönisch, 2008), Cosmogenic Nuclide Science PDRS (PI: Schäfer, 2010)

DEES COMMITTEES

- Graduate Student Guide Revision, 2012-present
- Undergraduate awards, 2011-present
- Biogeosciences Search, 2010-2011
- Faculty-student relations, 2008-present
- Dept Gen Stud/Cont Ed Special Program Advisor, 2007-2008

OTHER PROFESSIONAL ACTIVITIES

Field work

- 2013 Culture experiments with living planktic foraminifers at the Wrigley's Institute for Environmental Studies, Validating trace metal proxies under early Cenozoic seawater conditions, Santa Catalina Island, California.
- 2010 Culture experiments with living planktic foraminifers at the Department of Marine Sciences, Isla Magueyes Laboratories, Puerto Rico.
- 2008 Culture experiments with living planktic foraminifers at the Wrigley's Institute for Environmental Studies, Validating the B/Ca and Mg/Ca proxy, Santa Catalina Island, California.
- 2006 Culture experiments with living planktic foraminifers at the Department of Marine Sciences, Isla Magueyes Laboratories, Puerto Rico.
- 2004 Culture experiments with living planktic foraminifers at the Wrigley's Institute for Environmental Studies, Validating the $\delta^{11}\text{B}$ and U/Ca proxy, Santa Catalina Island, California.
- 2000 Foraminifer collection and culturing at Wrigley's Institute for Environmental Studies, Validating the $\delta^{11}\text{B}$ and U/Ca proxy, Santa Catalina Island, California.
- 1997 Sampling and analysis of benthic floral and faunal species composition, Strait of Magellan, Universidad de Magallanes, Punta Arenas, Chile.

Research cruise experience

- 2000 PELAGIA expeditions 153P, 154P and 157P to the South Atlantic and Indian Ocean: seawater carbonate chemistry and plankton tow collection. The task included supervision of a graduate student.
- 1998 METEOR expedition 41/1 to the South Atlantic: light attenuation measurements, dinoflagellate isolation and sediment sampling.
- 1997 VICTOR HENSEN expedition UV IV to the North Sea: water chemistry and UV-experiments with the sunshine simulator.
- 1996 VICTOR HENSEN expedition UV III to the North Sea: water chemistry sampling.

Research Diving

certified AAUS research diver since 2000

SCHOLARSHIPS AND EXTERNAL FUNDING

OCE 14-36079, "Thermohaline circulation and deep ocean carbonate chemistry across the mid-Pleistocene transition", L. Pena (PI), B. Hönisch (co-PI), M. Raymo, S. Goldstein, \$696,199, 9/1/2014-8/31/2017

LDEO Climate Center grant "Isotopic characterization of Dead Sea water sources for paleoclimate reconstruction", Y. Kiro, S. Goldstein, B. Hönisch (co-PI), \$8,000; 2014-2015.

USGS Technical Liaison, "Boron isotope measurements on Arctic ocean benthic foraminifers", B. Hönisch (PI) & J. Farmer (co-PI), \$13,770; 9/9/2013-9/30/2014.

OCE-12-32987, "Testing geochemical proxy relationships under variable paleo-seawater chemical compositions", B. Hönisch (PI), \$418,862; 9/1/2012-8/31/2015.

OCE-12-20554, "Ocean Acidification: Collaborative Research: Establishing The Magnitude Of Sea-Surface Acidification During the Paleocene-Eocene Thermal Maximum", B. Hönisch (PI), \$111,935; 9/1/2012-8/31/2015.

LDEO Climate Center grant "What is the Source of Tropical Marine Foraminifera in the Hudson River?", D. Abbott (PI), B. Hönisch (co-PI), \$8,000; 2012-2013.

LDEO Climate Center grant "Experimental Evaluation of the pH-Dependence of Boron-Adsorption onto Clay Minerals and Implications for the secular evolution of seawater $\delta^{11}\text{B}$ and [B]", J. Ruprecht (PI), B. Hönisch (co-PI), \$8,000, 2011-2012.

LDEO Climate Center grant "Using Boron Isotopes in Benthic Foraminifers to Evaluate Intermediate Water PCO_2 Changes in the Western Pacific Ocean over the past 30,000 Years", L. Lo (PI), B. Hönisch (co-PI), \$7,800, 2011-2012.

SCOR working group 138, "Modern planktic foraminifera and ocean changes", Associate member, 2/2011-present.

ARC-DP110103158, "Calcification and shell chemistry response of Southern Ocean planktic foraminifers to ocean acidification and changing climates", S.M. Eggins, W. Howard, B. Hönisch, H.J. Spero, G. Dunbar, 2010-2014, A\$360,000

OCE-10-41133, "Ocean Acidification - Category 1: Calibration and application of the boron isotope seawater-pH indicator in deep-water corals", B. Hönisch (PI), \$439,526; 9/15/2010-8/31/2014.

LDEO Climate Center grant "Calibrating past changes in coccolithophore calcification", Marie Tharp research support for Debora Iglesias-Rodriguez, B. Hönisch (PI), \$6,850; 2010-2011.

PAGES workshop support, "Workshop on Paleo-ocean Acidification and Carbon Cycle Perturbation Events", B. Hönisch (PI), \$5,000; 6/1/2010-9/31/2010.

OCE-10-32374, "Workshop on Paleo-ocean Acidification and Carbon Cycle Perturbation Events", B. Hönisch (PI), \$33,376, 6/1/2010-5/31/2013.

LDEO Climate Center grant "Ground-truthing the B/Ca proxy in tropical planktic foraminifer shells: Investigating the effects of pH, temperature, salinity and carbonate ion". K. Allen (PI), B. Hönisch (co-PI), \$8,000; 2010-2011.

Royal Society of England International travel grant to M. Siddall (PI) and B. Hönisch (co-PI) for Hönisch to visit Bristol University for 1 month. Purpose: Cenozoic sea

- level estimates and boron isotope method comparison, GBP 600.-; 2009-2010.
- OCE-09-03014 "Collaborative Research: Reconstructing deep-sea acidification during the Paleocene-Eocene Thermal Maximum", B. Hönisch (PI), \$68,185; 7/1/2009-6/30/2011.
- LDEO Climate Center grant "Corals as recorders of ocean acidity: Seasonal variation and ocean acidification from the Industrial Revolution to the present". D. Chacko (PI), B. Hönisch (co-PI), B. Linsley (co-PI), \$8,000; 2009-2010.
- LDEO Climate Center grant "Evaluating the potential of boron isotopic composition of brachiopod calcite as a proxy for Phanerozoic seawater pH and secular variation in $\delta^{11}\text{B}_{\text{seawater}}$ ". B. Hönisch (PI), N.G. Hemming (co-PI), S. Hemming (co-PI), T. Rasbury (co-PI), D. Penman (co-PI), \$8,000.-; 2009-2010.
- OCE-0751764: "Validation of the B/Ca proxy for surface seawater pH and application to measure anthropogenic ocean acidification". B. Hönisch (PI), \$337,724.-, 3/5/2008-2/28/2014.
- OCE-0623621 "Reconstructing the role of CO₂ in climate change throughout the Cenozoic Step 1: The mid-Pleistocene transition". B. Hönisch (PI), N.G. Hemming (co-PI), W.S. Broecker (co-PI), \$196,581.-; 9/1/2006-8/30/2010.
- Helmholtz Young Investigator Group "pAGE: paleo Acidity and CO₂-reconstructions from marine GEOchemical archives". B. Hönisch (PI), €1,832,595.-; 2006-2011. Declined in favor of faculty position at Columbia University.
- DFG Ho 3285/1-1 "Validating the boron isotope/paleo-pH proxy in benthic foraminifera". B. Hönisch (PI), €154,190.-; 1/1/2005-12/31/2006.
- LDEO Climate Center grant (funded by the Vetlesen Foundation) for foraminifera culturing on Santa Catalina Island, California, USA. B. Hönisch (PI) and N. G. Hemming (co-PI), \$8,000.-; 2004.
- Socfac grant for $\delta^{11}\text{B}$ analysis and method comparison at Southampton Oceanography Centre. B. Hönisch (PI); 2002.
- DAAD graduate student travel award for foraminifera culturing at Santa Catalina Island, California, USA. B. Hönisch (PI); 2000.
- DAAD undergraduate student travel award for practical training at the Instituto de la Patagonia, Universidad da Magallanes, Punta Arenas, Chile. B. Hönisch (PI). DM 1,500.-; 1997.

AWARDS AND RECOGNITIONS

- | | |
|-----------|---|
| 2013 | LDEO Best Mentor Award |
| 2012 | Women in Science and Engineering (WISE) Distinguished Lecturer, University of Southern California |
| 2011-2012 | Ocean Leadership Distinguished Lecturer |

PUBLICATIONS: [HTTP://WWW.RESEARCHERID.COM/RID/C-7530-2013](http://www.researcherid.com/rid/C-7530-2013)

* indicates my students

§ indicates my postdocs

- in preparation -

Past Interglacial Working Group of PAGES, “Interglacials of the last 800,000 years”, to be submitted to *Reviews of Geophysics*

*Farmer, J.R., L.F. Robinson, **B. Hönisch**, “Growth rate determinations from radiocarbon in bamboo corals (genus *Keratoisis*)”

Hönisch, B., S.M. Eggins, “Boron proxies, seawater-pH and paleo-CO₂”, to be published in Blackwell-Wiley’s *Analytical Methods in Earth and Environmental Science* series

- in press -

*Farmer, J.R., **B. Hönisch**, L.F. Robinson, T.M. Hill, “Investigating the effects of seawater-pH and biomineralization on the boron isotopic composition of deep-sea bamboo corals”, *Geochimica et Cosmochimica Acta*.

- submitted -

Hönisch, B., S.M. Eggins and K. Holland, “Cenozoic changes in stable isotope fractionation in response to the evolution of seawater Mg/Ca and pH”, submitted to *GCA*.

Allen, K.A., E. Sikes, **B. Hönisch**, A.C. Elmore, T.P. Guilderson, Y. Rosenthal, R. F. Anderson, “Southwest Pacific deep water carbonate chemistry linked to high southern latitude climate during the last glacial termination”, submitted to *Quaternary Science Reviews*

- 2015 –

Spero, H.J., S.M. Eggins, A.D. Russell, L. Vetter, M.R. Kilburn, **B. Hönisch**, “Timing and Mechanism for intratest Mg/Ca variability in living planktic foraminifera”, *Earth and Planetary Science Letters* 409, doi: 10.1016/j.epsl.2014.10.030

- 2014 –

Penman, D.E., **B. Hönisch**, R.E. Zeebe, J.C. Zachos, “Rapid and sustained surface ocean acidification during the Paleocene-Eocene Thermal Maximum”, *Paleoceanography* 29, doi: 10.1002/2014pa002621.

- 2013 –

Foster, G., **B. Hönisch**, G. Paris, G.S. Dwyer, J.W.B. Rae, T. Elliott, J. Gaillardet, N.G. Hemming, P. Louvat, A. Vengosh, “Interlaboratory comparison of Boron isotope analyses of boric acid, seawater and marine CaCO₃ by MC-ICP-MS and NTIMS”, *Chemical Geology* 358, p. 1-14, <http://dx.doi.org/10.1016/j.chemgeo.2013.08.027>.

Hönisch, B., K.A. Allen*, D.W. Lea, H.J. Spero, S.M. Eggins, J. Arbuszewski, P. deMenocal, Y. Rosenthal, A.D. Russell, “The influence of salinity on Mg/Ca ratios of cultured and core-top planktic foraminifers”, *Geochimica et Cosmochimica Acta* 121, p. 196-213, <http://dx.doi.org/10.1016/j.gca.2013.07.028>.

- ^SRaitzsch, M., **B. Hönisch**, “Cenozoic boron isotope variations in benthic foraminifers”, *Geology* 40, 5, 591-594, doi: 10.1130/g34031.1.
- Vetter, L., R. Kozdon, C.I. Mora, S.M. Eggins, J.W. Valley, **B. Hönisch**, H.J. Spero, “Micron-scale intrashell oxygen isotope variation in cultured planktic foraminifers”, *Geochimica et Cosmochimica Acta* 107, p. 267-278, doi: 10.1016/j.gca.2012.12.046.
- *Penman, D., **B. Hönisch**, E.T. Rasbury, N.G. Hemming, S.A. Hemming, “Boron, carbon, and oxygen isotopic composition of brachiopod shells: intra-shell variability, controls, and potential as a paleo-pH recorder”, *Chemical Geology* 340, p. 32-39. doi:10.1016/j.chemgeo.2012.11.016.

- 2012 -

- Paleosens Project Members: Rohling, E., A. Sluijs, H.A. Dijkstra, P. Köhler, R.S.W. van de Wal, A.S. von der Heydt, *with* D. Beerling, A. Berger, P.K. Bijl, M. Crucifix, R. deConto, S.S. Drijfhout, A. Fedorov, G. Foster, A. Ganopolski, J. Hansen, **B. Hönisch**, H. Hooghiemstra, M. Huber, P. Huybers, R. Knutti, D.W. Lea, L.J. Lourens, D. Lunt, V. Masson-Demotte, M. Medina-Elizalde, B. Otto-Bliesner, M. Pagani, H. Pälike, H. Renssen, D.L. Royer, M. Siddall, P. Valdes, J.C. Zachos, R.E. Zeebe, “Making sense of palaeoclimate sensitivity”, *Nature* 491, 683-691 doi:10.1038/nature11574.
- *Allen, K.A., **B. Hönisch**, S.M. Eggins, Y. Rosenthal, “Environmental controls on B/Ca in tests of the tropical planktic foraminifer species *Globigerinoides ruber* and *G. sacculifer*”, *EPSL* 351-352 (2012) 270–280, doi: 10.1016/j.epsl.2012.07.004.
- *Allen, K.A., **B. Hönisch**, “The planktic foraminiferal B/Ca proxy for seawater carbonate chemistry: A critical evaluation”, *EPSL* 345-348, p. 203-211, doi: 10.1016/j.epsl.2012.06.012.
- Hönisch, B.**, A. Ridgwell, D.N. Schmidt, E. Thomas, S.J. Gibbs, A. Sluijs, R.E. Zeebe, L. Kump, R.C. Martindale, S.E. Greene, W. Kiessling, J. Ries, J. Zachos, D.L. Royer, S. Barker, T.M. Marchitto Jr., R. Moyer, C. Pelejero, P. Ziveri, G.L. Foster, and B. Williams, “The Geological Record of Ocean Acidification”, invited review, *Science* 335, 1058 (2012); DOI: 10.1126/science.1208277.

- 2011 -

- Bartoli, G., **B. Hönisch**, and R.E. Zeebe, Pliocene atmospheric CO₂ decline during the intensification of northern hemisphere glaciations”, *Paleoceanography* 26, PA4213, doi:10.1029/2010PA002055, 2011. Article highlighted in *Nature Geoscience Research Highlight*, Vol. 4, p. 734 (2011), doi:10.1038/ngeo1315.
- *Allen, K.A., **B. Hönisch**, J. Yu, S. Eggins, H. Spero, H. Elderfield, “Controls on boron incorporation in cultured tests of the planktic foraminifer *Orbulina universa*”, *Earth and Planetary Science Letters* 309, p. 291-301.
- Hönisch, B.**, K.A. Allen*, A.D. Russell, S.M. Eggins, J. Bijma, H. J. Spero, D.W. Lea, and J. Yu, “Planktic foraminifers as recorders of seawater Ba/Ca”, *Marine Micropaleontology* 79, p. 52-57.

- 2010 -

- Katz, M.E., Cramer, B.S., **Hönisch, B.**, Miller, K.G., Rosenthal, Y., and Wright, J.D., „Traditional and Emerging Geochemical Proxies in Foraminifera“. *J. Foram. Res.*, V. 40, No. 2, p. 165-192.
- Siddall, M., **Hönisch, B.**, Waelbroeck, C., Huybers, P., 2010. Changes in the deep Pacific temperature during the mid-Pleistocene transition. *Quaternary Science Reviews*, Venice November 2009 EPICA meeting special issue: Climate of the Last Million Years: New Insights from EPICA and Other Records, V. 29, 1-2, p. 170-181. doi: 10.1016/j.quascirev.2009.05.011

- 2009 -

- Gussone, N., **Hönisch, B.**, Heuser, A., Hemleben, C., Spindler, M., and Eisenhauer, A., 2009. Controls of calcium isotope ratios in planktonic foraminifera. *Geochimica et Cosmochimica Acta* 73, 7241–7255.
- Hönisch, B.**, Hemming, N.G., Archer, D., Siddall, M., McManus, J.F., 2009, Atmospheric Carbon Dioxide Concentration over the Mid Pleistocene Transition, *Science* 324, p. 1551-1554.
- Aggarwal, J., Böhm, F., Foster, G., Halas, S., **Hönisch, B.**, Jiang, S.-Y., Kosler, J., Liba, A., Rodushkin, I., Sheehan, T., Shen, J. J.-S., Tonarini, S., Xie, Q., You, C.-F., Zhao, Z.-Q., Zuleger, E., 2009. How well do non-traditional stable isotope results compare between different laboratories: results from the interlaboratory comparison of boron isotope measurements. *J. Anal. At. Spectrom.*, DOI: 10.1039/b815240c

- 2008 -

- Hönisch, B.**, Bickert, T., and Hemming, N. G., 2008. Modern and Pleistocene Boron Isotope Composition of the Benthic Foraminifer *Cibicides wuellerstorfi*. *Earth and Planetary Science Letters* 272, 1-2, 309-318.
- Zeebe, R. E., Bijma, J., **Hönisch, B.**, Sanyal, A., Spero, H. J., and Wolf-Gladrow, D. A., 2008. Vital effects and beyond: A modelling perspective on developing paleoceanographic proxy relationships in foraminifera. In: *Biogeochemical controls on palaeoceanographic proxies*. Volume 303, 45-58. James, R., Austin, W. E. N., Clarke, L., and Rickaby, R. E. M. (Eds.), The Geological Society, London.

- 2007 -

- Yu, J., Elderfield, H., and **Hönisch, B.**, 2007. B/Ca in planktonic foraminifera as a proxy for surface seawater pH. *Paleoceanography* 22.
- Hönisch, B.**, Hemming, N. G., and Loose, B., 2007. Comment on "A critical evaluation of the boron isotope-pH proxy: The accuracy of ancient ocean pH estimates" by M. Pagani, D. Lemarchand, A. Spivack and J. Gaillardet. *Geochimica et Cosmochimica Acta* 71, 1636-1641.
- Hemming, N. G. and **Hönisch, B.**, 2007. Boron Isotopes in Marine Carbonate Sediments and the pH of the Ocean. In: Vernal, C. H.-M. a. A. D. (Ed.), *Proxies in Late Cenozoic Paleoceanography*. Elsevier.

- 2005 -

Hönisch, B. and Hemming, N. G., 2005. Surface ocean pH response to variations in pCO₂ through two full glacial cycles. *Earth and Planetary Science Letters* 236, 305-314.

- 2004 -

Hönisch, B. and Hemming, N. G., 2004. Ground-truthing the boron isotope paleo-pH proxy in planktonic foraminifera shells: Partial dissolution and shell size effects. *Paleoceanography* 19, doi:10.1029/2004PA001026.

Hönisch, B., Hemming, N. G., Grottoli, A. G., Amat, A., Hanson, G. N., and Bijma, J., 2004. Assessing scleractinian corals as recorders for paleo-pH: Empirical calibration and vital effects. *Geochim. Cosmochim. Acta* 68, 3675-3685.

Russell, A. D., **Hönisch, B.**, Spero, H. J., and Lea, D. W., 2004. Effects of changes in seawater carbonate ion concentration and temperature on shell U/Ca, Mg/Ca, and Sr/Ca of planktonic foraminifera. *Geochim. Cosmochim. Acta* 68, 4347-4361.

- 2003 -

Hönisch, B., Bijma, J., Russell, A. D., Spero, H. J., Palmer, M. R., Zeebe, R. E., and Eisenhauer, A., 2003. The influence of symbiont photosynthesis on the boron isotopic composition of foraminifera shells. *Mar. Micropaleontol.* 49, 87-96.

Zeebe, R. E., Wolf-Gladrow, D. A., Bijma, J., and **Hönisch, B.**, 2003. Vital effects in foraminifera do not compromise the use of $\delta^{11}\text{B}$ as a paleo-pH indicator: Evidence from modeling. *Paleoceanography* 18.

- 2002 -

Hönisch, B., 2002. Stable isotope and trace element composition of foraminiferal calcite - from incorporation to dissolution. Dissertation.

Bijma, J., **Hönisch, B.**, and Zeebe, R. E., 2002. Impact of the ocean carbonate chemistry on living foraminiferal shell weight: Comment on "Carbonate ion concentration in glacial-age deep waters of the Caribbean Sea" by W.S. Broecker and E. Clark. *Geochemistry Geophysics Geosystems* 3, 10.1029/2002GC000388.

Crone, C., Vering, G., **Hönisch, B.**, Bijma, J., and Arlinghaus, H. F., 2002. Investigation of planktonic foraminifera with ToF-SIMS. *Surf. Interface Anal.* 34, p. 298-301.

SCIENTIFIC WHITE PAPERS

Cooley, S.R., Mathis, J.T., Yates, K.K., Turley, C. (eds.). "Frequently asked questions about ocean acidification", U.S. Ocean Carbon and Biogeochemistry Program and the UK Ocean Acidification Research Programme. Version 2. www.whoi.edu/OCB-OA/FAQs.

Lowenstein, T. and **B. Hönisch**. "The use of Mg/Ca as a seawater temperature proxy" in Linda C. Ivany and Brian Huber (eds.), *Reconstructing Earth's Deep-Time Climate – The State of the Art in 2012*. Paleontological Society Papers, v. 18.

- Hönisch, B.** and *Allen, K.A., 2013. "Carbon Cycle Proxies ($\delta^{11}\text{B}$, $\delta^{13}\text{C}_{\text{calcite}}$, $\delta^{13}\text{C}_{\text{organic}}$, Shell Weights, B/Ca, U/Ca, Zn/Ca, Ba/Ca)". In: Elias S.A. (ed.) *The Encyclopedia of Quaternary Science*, vol. 2, pp. 849-858. Amsterdam: Elsevier.
- Hönisch, B.**, Schmidt, D., Barker, S., and Zachos, J., 2011. "Paleo-ocean acidification and carbon cycle perturbation events", NSF-PAGES workshop, Santa Catalina Island, California, August 25-29, 2010. *PAGES news* Vol. 19, No. 1, p. 35
- Anderson, D., W. Berelson, R. Feely, **B. Hönisch**, D. Iglesias-Rodriguez, J. Kleypas, L. Kump, C. Langdon, L. Peterson, A. Ridgwell, P. Swart, S. Tudhope, and R. Zeebe, 2009, The role of scientific ocean drilling in understanding ocean acidification. In Summary of the Thematic Working Group Meeting, <http://www.us-ocb.org/publications/index.html>, Miami, FL, 7-9 January 2009, 9 pp.
- Hönisch, B.**, Yu, J., and Hemming, N.G., 2008. Pleistocene records of marine carbonate chemistry. *PAGES news* 16, 11-12.
- Hönisch, B.** and Hall, J., 2007. Carbon cycle proxies, *Encyclopedia of Quaternary Sciences*. p. 1700-1710, Editor-in-Chief: S.A. Elias, Elsevier, ISBN (Set): 0 444 51919 X / 978 0 444 51919 1.

CONTRIBUTIONS PRESENTED AT SCIENTIFIC MEETINGS

- Holland, K., S. Eggins, **B. Hönisch**, *L.L. Haynes, A. Russell, J. Fehrenbacher, "Controls on B/Ca incorporation in tests of cultured *O. universa*", AGU, San Francisco, 2014.
- *Haynes, L.L., **B. Hönisch**, S. Eggins, K. Holland, Y. Rosenthal, "Calibration of the B/Ca proxy in cultured *O. universa* tests under Paleogene seawater conditions", AGU, San Francisco, 2014.
- Hönisch, B.**, *L.L. Haynes, D.E. Penman, A. Ridgwell, J. Uchikawa, J.C. Zachos, R.E. Zeebe, "Estimating Ocean Acidification in the Geological Record, KEYNOTE LECTURE, Geo Frankfurt, Frankfurt, 2014.
- *Farmer, J., **B. Hönisch**, L. Robinson, "Transfer of Bomb Radiocarbon to the Intermediate Ocean: Reconstructions from North Atlantic Bamboo Corals", Radiocarbon in the Environment Conference, Belfast, 2014.
- Hönisch, B.** "Challenges and opportunities to decipher the geological record of ocean acidification", INVITED PRESENTATION, Gordon Conference on Ocean Global Change Biology, New Hampshire, 2014.
- *Haynes, L.L., **B. Hönisch**, S. Eggins, K. Holland, Y. Rosenthal, *C. Baptist, "Calibration of the B/Ca proxy in cultured *O. universa* tests during simulated Paleocene-Eocene ocean acidification", Gordon Conference on Ocean Global Change Biology, New Hampshire, 2014.

- Hönisch, B.**, *C. Baptist, S.M. Eggins, K. Holland, H.J. Spero, P. Swart, "Effect of Seawater Mg/Ca Ratio on Planktic Foraminifera Stable Isotope and Mg/Ca Composition", Goldschmidt, Sacramento, 2014.
- Bonnin, E.A., M.B. Kogut, Z. Zhu, **B. Hönisch**, A.D. Russell, H.J. Spero, A.C. Gagnon, "Systematic Sub-Micron Na/Ca Banding in Cultured Planktic Foraminifera", Goldschmidt, Sacramento, 2014.
- Gutjahr, M., L. Bordier, E. Douville, *J. Farmer, G.L. Foster, E. Hathorne, **B. Hönisch**, D. Lemarchand, M. McCulloch, J. Noireaux, N. Pallavicini, I. Rodushkin, P. Roux, J. Stewart, F. Thil, C.-F. You, "Boron Isotope Intercomparison Project (BIIP): Development of a new carbonate standard for stable isotope analyses, EGU, Vienna, 2014.
- Hönisch, B.**, D. Penman, R. Zeebe, J. Zachos, E. Thomas, "Boron proxy evidence for ocean acidification during the Paleocene-Eocene Thermal Maximum", AGU, San Francisco, 2013.
- Harper D.T., D.E. Penman, **B. Hönisch**, J.C. Zachos, "Long- and short-term trends in seawater B/Ca and pH across the Paleocene-Eocene boundary", AGU, San Francisco, 2013.
- Eggins, S., K. Holland, **B. Hönisch**, H. Spero, K. Allen*, "What is the right temperature sensitivity for foraminiferal Mg/Ca paleothermometry in ancient oceans?" AGU, San Francisco, 2013.
- *Allen, K.A, E.L. Sikes, A. Elmore, **B. Hönisch**, P. deMenocal, "Deep-water carbonate chemistry in the Southwest Pacific Ocean since the LGM", AGU, San Francisco, 2013.
- *Farmer, J.R., **B. Hönisch**, L. Robinson, "Radiocarbon age reversals in modern deep-sea bamboo corals from the North Atlantic", AGU, San Francisco, 2013.
- Penman, D.E., **B. Hönisch**, J.C. Zachos, R.E. Zeebe, "Boron proxy evidence for ocean acidification during the Paleocene-Eocene Thermal Maximum", ICP 11, Barcelona, 2013.
- *Farmer, J.R., **B. Hönisch**, L. Robinson, T. Hill, "What controls the boron isotopic composition of deep-sea bamboo corals? Seawater pH versus biomineralization", ICP 11, Barcelona, 2013.
- *Allen, K.A, **B. Hönisch**, S.M. Eggins, Y. Rosenthal, H.J. Spero, "What controls boron incorporation in foraminiferal calcite?", AGU, San Francisco, 2012.
- Hönisch, B.**, *K.A. Allen, S.M. Eggins, H.J. Spero, D.W. Lea, A.D. Russell, Y. Rosenthal, J. Yu, H. Elderfield, "The effect of salinity on the Mg/Ca ratio in cultured and natural planktic foraminifers", AGU, San Francisco, 2012.
- Vetter, L., R. Kozdon, C.I. Mora, S.M. Eggins, J.W. Valley, **B. Hönisch**, and H.J. Spero, "Micron-scale intrashell $\delta^{18}\text{O}$ variation in cultured planktic foraminifers", Goldschmidt, Montreal, 2012.

- [§]Raitzsch, M., **B. Hönisch**, "Cenozoic boron isotope variations in benthic foraminifers", Goldschmidt, Montreal, 2012.
- Spero, H.J., S.M. Eggins, A.D. Russell, L. Vetter, **B. Hönisch**, "Timing and Mechanism for Intratest Mg/Ca Variability in Living Planktic Foraminifera", Goldschmidt, Montreal, 2012.
- *Allen, K.A., **B. Hönisch**, S.M. Eggins and Y. Rosenthal, "Influence of seawater carbonate chemistry on B/Ca in cultured planktic foraminifera", Goldschmidt, Montreal, 2012.
- *Farmer, J.R., **B. Hönisch**, L. Robinson, T. Hill and M. Lavigne, "Boron isotopes in deep-sea bamboo corals: A tracer for anthropogenic deep ocean acidification?", Goldschmidt, Montreal, 2012.
- [§]Raitzsch, M., **B. Hönisch**, "Cenozoic boron isotope variations in benthic foraminifers", Goldschmidt, Montreal, 2012.
- Hönisch, B.**, A. Ridgwell, E. Thomas, J.C. Zachos, S. Gibbs, "The geological record of ocean acidification", INVITED PRESENTATION, AGU, San Francisco, 2011.
- *Farmer, J., **B. Hönisch**, T. Hill, M. Lavigne, L. Robinson, "Boron isotopes in deep-sea bamboo corals: pH, vital effects and environmental factors", AGU, San Francisco, 2011.
- *Allen, K. A., **B. Hönisch**, S.M. Eggins, Y. Rosenthal, "Carbonate system and salinity controls on B/Ca of tropical and subtropical planktic foraminifera: Insight from culture experiments", AGU, San Francisco, 2011.
- *Monahan, K.M., D.H. Abbott, **B. Hönisch**, D. Breeger, "Low latitude pelagic foraminifera found in the Hudson River: Are they Hurricane deposits?", AGU, San Francisco, 2011
- Penman, D.E., J.C. Zachos, R.E. Zeebe, **B. Hönisch**, S. Bohaty, "B/Ca of planktic foraminifera documents elevated pCO₂ and ocean acidification during the Paleocene-Eocene Thermal Maximum", AGU, San Francisco, 2011.
- Eggins, S.M., W. Howard, H.J. Spero, **B. Hönisch**, G. Dunbar, "Does calcification in Southern Ocean planktic foraminifers respond to Ω_{calcite} , temperature, or nutrient availability?", Symposium: Ocean acidification and implications for living marine resources in the Southern Hemisphere, Canberra, Australia, 2011.
- Penman, D., J. Zachos, **B. Hönisch**, S.M. Eggins, R.E. Zeebe, "Boron proxy evidence for surface ocean acidification & elevated pCO₂ during the PETM", Goldschmidt Conference, Prague, 2011.
- Hönisch, B.**, *K.A. Allen, [§]O. Hyams, D. Penman, [§]M. Raitzsch, [§]J. Ruprecht, E. Thomas, J. Zachos, "Ocean acidification during the Cenozoic", INVITED PRESENTATION, Geochemistry of the Earth's surface meeting, Boulder, Colorado, June 3-7, 2011.
- Penman, D., J. Zachos, **B. Hönisch**, S.M. Eggins, R.E. Zeebe, "Boron proxy evidence for surface ocean acidification & higher pCO₂ during the PETM", Climate and Biota of the Early Paleogene, Salzburg, June 5-8, 2011.
- Hönisch, B.**, [§]O. Hyams, [§]M. Raitzsch, E. Thomas, J.C. Zachos, R.E. Zeebe "Reconstructing deep-sea acidification during the early Cenozoic", INVITED PRESENTATION, AGU, San Francisco, 2010.

- Zachos, J.C., L.D. Anderson, R.E. Brown, **B. Hönlisch**, C. Kelly, D. Penman, E. Thomas, R.E. Zeebe, "Ocean Acidification during the Paleocene-Eocene Thermal Maximum: Constraints from Multiple Proxies", AGU, San Francisco, 2010.
- Eggins, S.M., H. J. Spero; L. Vetter; **B. Hönlisch**, "Resolving ontogenetic from gametogenic and outer crust calcification in planktic foraminifers", AGU, San Francisco, 2010.
- Vetter, L., H.J. Spero, C.I. Mora, S.M. Eggins, R. Kozdon, J.W. Valley, **B. Hönlisch**, "Intrashell isotopic and trace element variation at the micron-scale in cultured planktonic foraminifera", AGU, San Francisco, 2010.
- Hönlisch, B.**, S.O. Hyams, E. Thomas, "Reconstructing deep-sea acidification during the PETM", ICP10, San Diego, 2010.
- Robinson, L.F., **B. Hönlisch**, D.H. Case, M. Auro, B.E. Rosenheim, *S. Hale, "New geochemical proxies for temperature and pH in deep-sea corals", ICP10, San Diego, 2010.
- Eggins, S.M., H.J. Spero, A.D. Russell, L. Vetter, **B. Hönlisch**, *K.A. Allen, "Probing the basis for the Mg/Ca sensitivity and trace metal proxies in planktic foraminifers", ICP10, San Diego, 2010.
- Bartoli, G., **B. Hönlisch**, R.E. Zeebe, "Atmospheric CO₂ decline during the Pliocene intensification of Northern Hemisphere Glaciations", ICP10, San Diego, 2010.
- *Allen, K.A., **B. Hönlisch**, S.M. Eggins, Y. Rosenthal, J. Yu, H.J. Spero, J.N. Richey, "B/Ca in planktic foraminifers: Comparison of culture and sediment core material", ICP10, San Diego, BEST STUDENT POSTER AWARD, 2010.
- Vetter, L., H.J. Spero, C.I. Mora, S.M. Eggins, R. Kozdon, J.W. Valley, **B. Hönlisch**, "Intrashell isotopic and trace element variation at the micron-scale in cultured planktonic foraminifera", ICP10, San Diego, 2010.
- Spero, H.J., S.M. Eggins, L. Vetter, A.D. Russell, **B. Hönlisch**, "Experimental Perspectives on Planktonic Foraminifera Intrashell Mg/Ca Variability", ICP10, San Diego, 2010.
- Grelaud, M., G. Marino, P. Ziveri, **B. Hönlisch**, E. Rohling, "Impacts of the last interglacial sapropel S5 on the eastern Mediterranean marine carbonate system and calcifying organisms", ICP10, San Diego, 2010.
- Hönlisch, B.**, "Comparison of surface ocean carbonate chemistry proxies", Workshop on Palaeo-CO₂, Bristol, 7-8 July 2010.
- Robinson, L.F., **B. Hönlisch**, M.E. Auro, "Boron isotopes in Southern Ocean deep corals", Goldschmidt Conference, Knoxville, 2010.
- Hönlisch, B.**, Cenozoic variations in atmospheric CO₂ and ocean carbonate chemistry, EGU, Vienna, 2010, INVITED.
- Moyer, R.P., K.P. Helmle, **B. Hönlisch**, *D. Chacko, B. Linsley, "Historical records of coral geochemistry and growth and their relationship to anthropogenic ocean acidification", Ocean Sciences Meeting, Portland, 2010.
- Eggins, S., **B. Hönlisch**, S. Doo, L. Vetter, *K. Allen, H. Spero, A. Russell, "Reduced temperature sensitivity of foraminiferal Mg/Ca seawater thermometry in ancient oceans", Ocean Sciences Meeting, Portland, 2010.

- *Allen, K., **B. Hönisch**, “Comparing planktic foraminiferal B/Ca and boron isotopes as paleo-CO₂ proxies”, Ocean Sciences Meeting, Portland, 2010.
- *Allen, K., **B. Hönisch**, J. Yu, S. Eggins, H. Spero, H. Elderfield, “Validating the B/Ca proxy for seawater carbonate chemistry – evidence from culture experiments, AGU, San Francisco, 2009.
- Raitzsch, M. & **B. Hönisch**, “Cenozoic evolution of the boron isotopic composition of seawater”, AGU, San Francisco, 2009.
- Hönisch, B.** & J. Bijma, “Partial shell dissolution and geochemical proxies in planktic foraminifers”, AGU, San Francisco, 2009.
- Bartoli, G., **B. Hönisch**, R.E. Zeebe, “Pliocene atmospheric CO₂ changes”, AGU, San Francisco, 2009, INVITED.
- Hönisch, B.**, G. Bartoli, R.E. Zeebe, N. G. Hemming, D. Archer, M. Siddall, J.F. McManus, “Boron isotope perspective on the CO₂ history beyond ice cores”, INVITED presentation at PAGES Past Interglacials Meeting, Mytilene, 2009.
- Hönisch, B.**, G. Bartoli, R.E. Zeebe, N. G. Hemming, D. Archer, M. Siddall, J.F. McManus, “Boron isotope perspective on the CO₂ history beyond ice cores”, INVITED presentation at PAGES Open Science Meeting, Corvallis, 2009.
- Hönisch, B.**, “Estimating past carbonate chemistry from Marine archives”, Thematic Working Group on Ocean Acidification and Ocean Carbon Cycle, Meeting January 7-9, 2009, Rosenstiel School of Marine and Atmospheric Science, Miami, Florida.
- *Allen, K., **B. Hönisch**, S. Eggins, H. Spero, Effects of pH and Temperature on Calcification of the Planktic Foraminifer *O. universa*: Insights from Culture Experiments, AGU, San Francisco, 2008.
- Bartoli, G., **B. Hönisch**, R.E. Zeebe, Atmospheric CO₂ Changes During the Pliocene Epoch Revealed by Foraminiferal Boron Isotope Ratio, AGU, San Francisco, 2008.
- Benthien, A., B. Balestra, **B. Hönisch**, G. Mollenhauer, Reconstruction of surface water pCO₂ in the eastern equatorial Atlantic based on alkenone and boron isotopes, AGU, San Francisco, 2008.
- *Penman, D., E.T. Rasbury, N.G. Hemming, **B. Hönisch**, P. Abejar, S. Butts, Heavy boron isotopic composition of Pennsylvanian brachiopod calcite: implications for pH, CO₂ and secular variation of seawater d¹¹B, AGU, San Francisco, 2008.
- Spero, H.J., S.M. Eggins, L. Vetter, A.D. Russell, **B. Hönisch**, Experimental Perspective on Cause and Impact of Planktonic Foraminifera Intrashell Mg/Ca variability on Paleoceanographic Applications, AGU, San Francisco, 2008.
- Fabry, V.J., K. Allen, S.M. Eggins, **B. Hönisch**, F. Lombard, H. Spero, Impacts of ocean acidification on zooplankton, The Second Symposium on The Ocean in a High-CO₂ World, Monaco, 2008.
- Hemming, N.G., **B. Hönisch**, C. Bouman, In-run Corrections for Instrumental Fractionation of Boron Isotopes by NTIMS: Filament Material and Loading Matrix Controls, Goldschmidt Conference, Vancouver, 2008.
- Köhler, P., **B. Hönisch**, R. Bintanja, H. Fischer, The Carbon Cycle during the Mid Pleistocene Transition: The Southern Ocean Decoupling Hypothesis, EGU, Vienna, 2008.

- Köhler, P., **B. Hönisch**, R. Bintanja, H. Fischer, The Carbon Cycle during the Mid Pleistocene Transition: The Southern Ocean Decoupling Hypothesis, Climate change : from the geologic past to the uncertain future : A tribute to André Berger - 26 to 29 May 2008 - Louvain-la-Neuve University - Belgium, 2008.
- Hönisch, B.**, Barbara Balestra, Torsten Bickert, N. Gary Hemming, Mark Siddall, "Quaternary records of marine carbonate chemistry and atmospheric CO₂", INVITED presentation at the International Conference on Paleoceanography 9, Shanghai.
- M. Siddall, **B. Hönisch**, C. Lear, D. McGee, H. Pälike, P. Parekh, E.J. Rohling, W. Thompson, G. Winckler, "Long-term consistencies in the benthic oxygen-isotope record between ocean basins", invited presentation at the International Conference on Paleoceanography 9, Shanghai.
- Hönisch, B.**, "Empirical systematics of the boron isotope proxy and application to the mid-Pleistocene transition", INVITED presentation at the Gordon Conference on Chemical Oceanography, Tilton, New Hampshire, 2007.
- Hönisch, B.**, N.G. Hemming, Overview and Brief History of the Boron Isotope Proxy for Past Seawater pH, INVITED presentation at the AGU Spring Meeting, Acapulco, Mexico, 2007.
- Köhler, P., **B. Hönisch**, H. Fischer, The Carbon Cycle during the Mid Pleistocene Transition, poster at EGU, Vienna, 2007.
- Hönisch, B.**, N.G. Hemming, Quantitative PCO₂ reconstructions across the mid-Pleistocene transition based on boron isotopes in planktic foraminifers, INVITED presentation at the Goldschmidt Conference, Melbourne, 2006.
- Hönisch, B.**, N.G. Hemming and T. Bickert, Paleo-Validation of the Boron Isotope Proxy in Benthic and Planktic Foraminifers, oral presentation at the Ocean Sciences Meeting, Honolulu, Hawaii, 2006.
- Hönisch, B.**, N.G. Hemming, "Challenges of and for the boron isotope proxy for past seawater-pH", INVITED presentation at NSF workshop, San Francisco, USA, 2005.
- Hönisch, B.**, T. Bickert, and N.G. Hemming, Boron Isotopes in Benthic Foraminifers – Monospecific Coretop Calibration and Paleo-Reconstruction Through Two Glacial Cycles, oral presentation at AGU Fall Meeting, San Francisco, USA, 2005.
- Russell, A.D., **B. Hönisch**, H.J. Spero, D.W. Lea, The influence of light on U, Sr, and Mg incorporation into planktic foraminifera, and other culture results, poster at AGU Fall Meeting, San Francisco, USA, 2005.
- Yu, J., H. Elderfield and **B. Hönisch**, B/Ca in foraminiferal calcium carbonate and its potential as a paleo-pH proxy, poster at AGU Fall Meeting, San Francisco, USA, 2005.
- Hemming, N.G. and **B. Hönisch**, A critical review and recent advances in the boron isotope paleo-pH proxy, invited talk at Goldschmidt Conference, Moscow, Idaho, USA, 2005.
- Russell, A.D., **B. Hönisch**, H. Spero, and D. Lea, Influence of Environmental Factors over the Incorporation of U, Cd, and Minor Metals into Foraminiferal Calcite: Results of Summer 2004 Culture Experiments, poster presented at AGU, San Francisco, USA, 2004.

- Hönisch, B.**, N.G. Hemming, A 140,000 year record of surface seawater *pH* in the eastern equatorial Atlantic, poster presented at ICP VIII, Biarritz, France, 2004.
- Hönisch, B.**, N.G. Hemming, Ground-truthing the boron isotope paleo-*pH* proxy in planktonic foraminifera shells: Partial dissolution and shell size effects, poster presented at AGU, San Francisco, USA, 2003.
- Gussone, N., A. Eisenhauer, **B. Hönisch**, M. Dietzel, J. Bijma, A. Heuser, B. Bock, F. Böhm, H. J. Spero, D. W. Lea, and T. F. Nägler, Temperature control on Ca isotope fractionation in carbonates and its application in marine geochemistry, poster presented at Earth Sciences into the 3. Millenium: Methods, Materials, Mechanisms, Bochum, Germany, 2003.
- Hönisch, B.**, N.G. Hemming, A.G. Grottoli, A. Amat, G.N. Hanson, J. Bijma, The effect of light, respiration and $p\text{CO}_2$ on $\delta^{11}\text{B}$ in coral skeletons: results from culture and field experiments, oral presentation given at EGS-AGU Joint Assembly, Nice, France, 2003.
- Hönisch, B.**, J. Bijma, N. Gussone, H. J. Spero, D. W. Lea, D. Nürnberg, and A. Eisenhauer, Post- depositional effects on stable isotopes and trace metals in foraminiferal calcite - evidence from dissolution experiments, poster presented at EGS, Nice, France, 2002.
- Bijma, J., **B. Hönisch**, R. E. Zeebe, A. Sanyal, H. J. Spero, D. W. Lea, A. Amat, D. Ruiz-Pino, A. Juillet-Leclerc, Y. Suzuki, and A. Eisenhauer, Towards a mechanistic understanding of boron isotope ratios in biogenic carbonates as recorders of seawater *pH*, poster presented at AGU Fall Meeting, San Francisco, USA, 2001.
- Russell, A. D., **B. Hönisch**, H. Spero, D. W. Lea, D. Pak, and M. Schmidt, Effects of changes in carbonate ion concentration in the incorporation of uranium into foraminiferal calcite, poster presented at AGU, San Francisco, USA, 2001.
- Zondervan, I., B. Rost, R. Zeebe, **B. Hönisch** and U. Riebesell, Rising atmospheric CO_2 slows down marine planktonic calcification, SOLAS meeting, Damp, Germany, 2000.

OTHER INVITED TALKS

- September 2014, "Challenges and opportunities to decipher the geological record of ocean acidification", Penn State, USA
- September 2014, "Introduction to Ocean Acidification", 2nd CliMates International Summit, Columbia University
- June 2014, "Opportunities and Challenges of deciphering the geological record of ocean acidification", Gordon Conference on Ocean Global Change Biology, New Hampshire, USA
- March 2014, "Ocean acidification and climate change", LDEO Public Lecture Series, watch the video here: <http://www.ldeo.columbia.edu/news-events/events/public-lectures/public-lectures>
- September 2013, "The geological record of ocean acidification", NASA GISS.
- May 2013, "The geological record of ocean acidification", Massachusetts Institute of Technology.

- February 2013, "The geological record of ocean acidification", USC Women in Science and Engineering (WiSE) Distinguished Lecturer, University of Southern California, USA.
- January 2013, "The geological record of carbon dioxide in the atmosphere and ocean acidification", Packer Collegiate Institute, K-12 School in Brooklyn NY.
- 2011/2012, "Estimating Cenozoic atmospheric CO₂ from ocean carbonate chemistry", Ocean Leadership Distinguished Lecturer: Case Western University, San Diego State University, University of South Florida, Rice University, University of Houston, Binghamton University, University of New England, USA.
- March 2011, "Paleocean acidification inferred from marine carbonates", Rutgers University, USA.
- February 2011, "Proxy calibration and reconstructions of ocean carbonate chemistry over the past 55 million years", Dalhousie University, Halifax, Canada.
- October 2010, "Proxy calibration and reconstructions of Cenozoic ocean carbonate chemistry", Smith Lecture Series, University of Michigan, USA.
- May 2010, "Cenozoic variations in atmospheric CO₂ and ocean carbonate chemistry", Cambridge University, UK.
- November 2009, "Comparing boron isotopes and B/Ca ratios for reconstructing paleo-pCO₂ - Who is K_D?" Boston University, USA.
- September 2009, "Plio-Pleistocene estimates of CO₂ from boron isotopes in planktonic foraminifers", Princeton, USA.
- June 2009 "Boron isotope perspective on the CO₂ history beyond ice cores", Canberra, RSES, ANU, Australia.
- December 2008, Motivating high school students to spread the word about anthropogenic climate change, NYCiSchool, New York.
- November 2008, "Estimating atmospheric CO₂ from marine archives: The mid-Pleistocene Transition", Texas A&M, College Station.
- November 2007 "The boron isotope proxy for past seawater-pH", Georgia Institute of Technology.
- April 2007 "Pleistocene records of marine carbonate chemistry and atmospheric CO₂", Crafoord Prize-Winner Ceremony, Lund, Sweden.
- April 2007 "Pleistocene records of marine carbonate chemistry", Rutgers University.
- March 2007 "Alaska and the Polar Regions", Metuchen Elementary School, New Jersey.
- January 2006 "Reconstructing carbonate chemistry from marine geochemical archives", Massachusetts Institute of Technology.
- May 2005 "Reconstructing aqueous PCO₂ and seawater pH: The boron isotope/paleo pH proxy", International University Bremen.
- April 2005 "Reconstructing aqueous PCO₂ and seawater pH – Boron isotopes in ancient foraminifera shells record marine carbonate chemistry", Alfred Wegener Institute.
- March 2005 "Reconstructing aqueous PCO₂ and seawater pH – Boron isotopes in ancient foraminifera shells record marine carbonate chemistry", Yale University.

- March 2005 “Reconstructing aqueous PCO₂ and seawater pH – Boron isotopes in ancient foraminifera shells record marine carbonate chemistry”, Rutgers University.
- January 2004 “Validating the boron isotope proxy: What have we learned and which questions remain to be solved?”, Woods Hole Oceanographic Institution.

PRESS COVERAGE

- August 2014, Columbia Magazine, <http://magazine.columbia.edu/explorations/summer-2014/underwater-another-carbon-problem>
- June 6, 2014, The Daily Catch, <http://theterramarproject.org/thedailycatch/?p=17632>
- June 6, 2014, A.M. Costa Rica’s Fourth News Page, <http://www.amcostarica.com/060614.htm#32>
- June 3, 2014, The Weather Network, <http://www.theweathernetwork.com/insider-insights/articles/study-shows-modern-ocean-acidification-is-fast-outpacing-changes-in-the-past/28813/>
- June 3, 2014, Nature World News, <http://www.natureworldnews.com/articles/7379/20140603/ocean-acidification-rate-10-times-faster-than-ancient-upheaval.htm>
- June 3, 2014: Motherboard @ Vice, <http://motherboard.vice.com/read/earths-oceans-are-on-track-to-be-100-percent-more-acidic>
- July 25, 2013: PolitiFact Rhode Island, <http://www.politifact.com/rhode-island/statements/2013/jul/22/al-gore/al-gore-says-ocean-acidity-levels-havent-been-high/>
- July 23, 2013: NSF science highlights, <http://go.usa.gov/jKNC>
- June 5, 2013: North Carolina Coastal Federation blog, <http://www.nccoast.org/Article.aspx?k=bb5dd4e6-18f6-463f-aa41-f4645785349f>
- June 5, 2013: J Farmer’s Almanac, <http://thefarmersalmanac.blogspot.com/2013/06/why-should-we-care-about-co2-part-1.html>
- October 29, 2012: The Age we made, BBC, <http://www.bbc.co.uk/programmes/p0104hcj>
- October 4, 2012: The Oceans Are Acidifying, WAMC public radio – Audio essay <http://wamc.org/post/dr-b-rbel-h-nisch-columbia-university-ocean-acidification>
- April 13, 2012: *Electric Politics* interview by George Kenney, http://www.electricpolitics.com/podcast/2012/04/ocean_acidification.html
- April 3, 2012: Ocean acidification: high as never before, <https://www.cmcc.it/blog-en/ocean-acidification-moves-faster-and-faster>, Centro Euro-Mediterraneo per I Cambiamenti Climatici
- March 23, 2012: Making the Ocean hostile to life, The Week.
- March 2012: [Ocean Acidification: Another Problem With CO₂](#), Japan Times
- March 2012: [Changing the Chemistry of Earth’s Oceans](#), New York Times Editorial
- March 2012: Celebrating women in science by Kelly Strzepek, <http://oncirculation.com/2012/03/08/celebrating-women-in-science/>

March 2012: Oceaanzuring: geheimen uit het verleden ontrafelen,
<http://www.kennislink.nl/publicaties/oceaanzuring-geheimen-uit-het-verleden-ontrafelen>

March 2012: [Carbon Emissions May Pave Way for Mass Extinctions in Oceans](#), Mongabay.com

March 2012: [Ocean Acidification Fastest in 300 Million Years](#), Press TV

March 2012: [Study: Climate Change Threatens Life in Oceans](#), TU Print Edition

March 2012: [Concern Over Acidifying Oceans](#), UK Press Association

March 2012: [Oceans Acidifying Faster Today Than in Past 300 Million Years](#), Earth & Sky

March 2012: [Ocean Acidifying Faster Than Any Time in 300 Million Years, Study Says](#), E360

March 2012: [Study: Oceans Acidifying Fastest in 300 Million Years](#), CBS News

March 2012: [Study: Human activity affecting oceans](#), UPI

March 2012: [Study: Human activity affecting oceans](#), UPI

March 2012: [Oceans acidifying at an accelerated rate due to emissions](#), The State Column

March 2012: [Manmade CO2 Pushes World's Oceans Into Acidic Unknown Territory](#), ClimateWire

March 2012: [Oceans Turning Acidic Faster Than Past 300 Million Years](#), LiveScience

March 2012: Xinhua News Channell (TV),
<http://www.youtube.com/watch?v=H3E8Fv8KyoM>

March 2012: Major Study: Oceans Acidifying at "Unprecedented" Rate, KGED
<http://blogs.kqed.org/climatewatch/2012/03/02/major-study-oceans-acidifying-at-unprecedented-rate/>

March 2012: Unprecedented Ocean Acidification Underway, Mother Jones
<http://motherjones.com/blue-marble/2012/03/ocean-acidification-unprecedented>

March 2012: Study: Oceans Acidifying Faster Than They Have in Past 300 Million Years, On Earth Blog, <http://www.onearth.org/blog/oceans-acidifying-faster-than-300-million-years>

March 2012: [Ocean Acidification Rate Unprecedented](#), Xinhua

March 2012: Learning about the future from the past, University of Bristol,
<http://bristol.ac.uk/news/2012/8275.html>

March 2012: BEST ACID OCEAN ANALOG STILL TOO ALKALINE, Discovery News
<http://news.discovery.com/earth/-acidic-oceans-from-earths-past-120301.html>

March 2012: Ocean acidification rate may be unprecedented, study says, e! Science News
<http://esciencenews.com/articles/2012/03/01/ocean.acidification.rate.may.be.unprecedented.study.says>

March 2012: Study: Human activity affecting oceans, Dalje
<http://dalje.com/en-world/study--human-activity-affecting-oceans/421094>

March 2012: Oceans acidifying at 'unparalleled' rate, Telegraph,
<http://www.telegraph.co.uk/earth/environment/climatechange/9115699/Oceans-acidifying-at-unparalleled-rate.html>

March 2012: Oceans Acidifying Fastest in 300 Million Years Due to Emissions, Bloomberg
<http://www.bloomberg.com/news/2012-03-01/oceans-acidifying-fastest-in-300-million-years-due-to-emissions.html>

- March 2012: Oceans' acidic shift may be fastest in 300 million years, Reuters
http://www.moneycontrol.com/news/wire-news/oceans-acidic-shift-may-be-fastest300-million-years_675710.html
- March 2012: Ocean acidification may be worst in 300 million years: study, Bangkok Post
<http://www.bangkokpost.com/news/world/282497/ocean-acidification-may-be-worst-in-300-million-years-study>
- March 2012: Oceans acidifying at unprecedented speed, New Scientist,
<http://www.newscientist.com/article/dn21534-oceans-acidifying-at-unprecedented-speed.html>
- March 2012: Ocean acidification on track to be among the worst of the last 300 million years, Ars Technica, http://arstechnica.com/science/news/2012/03/ocean-acidification-could-become-worst-in-at-least-300-million-years.ars?clicked=related_right
- March 2012: Pace of Ocean Acidification Has No Parallel in 300 Million Years, Paper Says, NY Times, <http://green.blogs.nytimes.com/2012/03/02/pace-of-ocean-acidification-has-no-parallel-in-300-million-years-paper-finds/?ref=science>
- March 2012: Rising carbon emissions could wipeout marine species with oceans acidifying at fastest rate, Daily Mail Reporter,
<http://www.dailymail.co.uk/sciencetech/article-2108844/Rising-carbon-emissions-wipeout-marine-species.html>
- March 2012: Ocean acidification may be worst in 300 million years: study, AFP
http://www.google.com/hostednews/afp/article/ALeqM5i_Z1zrB_r470qEJTpTvNGCLIZOew?docId=CNG.972672bf2c229393667b758b16f9bd6a.491
- March 2012: Fossil Fuel emissions taking oceans into "unknown territory" going back at least 300 million years, <http://blog.timesunion.com/green/fossil-fuel-emissions-taking-oceans-into-unknown-territory-going-back-at-least-300-million-years/3768/>
- March 2012: A CO2 Warning Etched in Stone and Sediment, Andrew Revkin, Dot Earth Blog
<http://dotearth.blogs.nytimes.com/2012/03/01/a-co2-warning-etched-in-stone-and-sedimen/?src=tp>
- March 2012: [Fossil Fuel Emissions Taking Oceans into Unknown Territory](#), Albany Times Union
- March 2012: [Humans Acidifying Oceans at Unprecedented Rate](#), Earth magazine
- March 2012: [Ocean Acidification Worst of Last 300 Million Years](#), TG Daily
- March 2012: [Oceans Gaining Acid Faster Than Last 300 Million Years](#), The Register
- March 2012: NSF Press Release 12-041 Oceans Acidifying Faster Today Than in Past 300 Million Years - Few parallels for today's rapid ocean changes in geologic record
http://www.nsf.gov/news/news_summ.jsp?cntn_id=123324
- June 2011: Warming, overfishing, Plastic Pollution Destroying Ocean Life: Scientists, Solve Climate News
<http://www.reuters.com/article/2011/06/29/idUS237599325020110629>
- October 2010: Concern Over Ocean Acidification Ramps Up Research Dollars, Solve Climate News

<http://solveclimateneeds.com/news/20101029/concern-over-ocean-acidification-ramps-research-dollars>

October 2010: NSF Awards Grants to Study Effects of Ocean Acidification, NSF news
http://www.nsf.gov/news/news_summ.jsp?cntn_id=117823&WT.mc_id=USNSF_51&WT.mc_ev=click

January 2009: Top 100 Stories of 2009, Discover Magazine
<http://discovermagazine.com/2010/jan-feb/085>

Fall 2009: "CO₂ shell game", Columbia Magazine:

<http://www.columbia.edu/cu/alumni/Magazine/Fall2009/science.html#science3>

June 19, 2009: Interview with the Colombian National Public Radio

June 18, 2009: CO₂ Levels Highest in Two Million Years, National Geographic News:
<http://news.nationalgeographic.com/news/2009/06/090618-co2-highest-carbon-dioxide.html>

June 18, 2009: Carbon dioxide Not to Blame in Ice Age Mystery, Science News:

http://www.sciencenews.org/view/generic/id/44821/title/Carbon_dioxide_not_to_blame_in_ice_age_mystery

June 18, 2009: 2.1 million Year High Measured for CO₂ in Atmosphere, Bloomberg:

<http://www.chron.com/disp/story.mpl/front/6486567.html>

June 18, 2009: Stable Ancient Atmosphere Underscores Current Greenhouse Spike, Scientific American.com:
<http://www.scientificamerican.com/blog/60-second-science/post.cfm?id=stable-ancient-atmosphere-underscor-2009-06-18>

June 18, 2009: Plankton afslører rekordhøjt CO₂-niveau, Videnskab DK:

http://videnskab.dk/content/dk/naturvidenskab/plankton_afslorer_rekordhojt_co2-niveau

2006: Exploring Time, A co-production of Twin Cities Public Television, Red Hill Studios and NHK, for The Science Channel, shows Hönisch culturing planktic foraminifers in Puerto Rico: <http://exploringtime.org/?page=segment5>