

Curriculum vitae of Michael Bender

Born December 31, 1943

Married to Yvette Mintzer, two children.

B.S. in Chemistry, Carnegie Institute of Technology, 1965.

Ph.D. in Geology, Columbia University, 1970. Major Professor: Wallace S. Broecker

Research Associate, Lamont-Doherty Geological Observatory of Columbia University, 1971-1972.

Lecturer part time, State University of New York at Stony Brook, 1971.

Assistant Professor of Oceanography, University of Rhode Island, 1972-1977.

Associate Professor, 1977-1982.

Professor, 1982-1997.

Professor of Geosciences, Princeton University, 1997-.

Visiting Researcher, Centre des Faibles Radioactivities, CNRS-CEA, Gif sur Yvette, France, 1983-1984 and 1992-1993.

Committees:

DSDP Hydraulic piston coring working group, 1979-1980.

National Science Foundation oceanography advisory panel, 1979-1981.

Manganese Nodule Program Scientific Advisory Committee, 1978-1984; Executive Committee, 1979-1983; director, 1980-1982.

Global Ocean Flux Program Steering Committee, 1985-1987; Steering Committee corresponding member (1987-present); Benthic Working Group Chairman, 1986-1987; member of Upper Water Column working group and Atlantic and Pacific Planning Groups (1985-1990).

Associate Editor, Global Biogeochemical Cycles, 1986-1990, 1993-2004.

NSF Ice Core Working Group, 1990-1997.

FOCUS Steering Committee, 1997-1998.

National Institute of Global Environmental Change, New England Region, Management Committee. 1996-2001.

Visiting Committee, Earth, Atmospheric and Planetary Sciences Department, Massachusetts Institute of Technology, 1999-present.

OCTET Steering Committee, 1999-2002.

NOAA CO₂ Observations Advisory Group (Chair), 1999-2001.

NRC Board on Atmospheric Science and Climate, 2004-2007.

Editorial Board member, Proceedings of the National Academy of Sciences, 2002-2006.

Member, American Geophysical Union

Lectureships:

H. Burr Steinbach lecturer, Woods Hole Oceanographic Institution (1982 and 1992)

Starr Lecture, MIT (2000)

Distinguished Atmospheric Sciences Lecture, U. c. Berkeley (2001)

CIRES Distinguished Lecture Series, University of Colorado (2002)

Honors:

Fellow, American Geophysical Union (1995)

Fellow of the Geochemical Society and the European Association of Geochemistry (1998)

Patterson Medal of the Geochemical Society (1998)

Member, National Academy of Sciences (2001)

Publications of Michael Bender

Bender, Michael L. and R. S. Sprague (1965) The preparation and structure of magnesium carbonate trihydrate, *Journal of Inorganic and Nuclear Chemistry*, *27*, 1872-1873.

Sackett, William M., W. R. Eckelmann, M. L. Bender, and A. W. H. Be (1965) Temperature dependence of carbon isotope composition in marine plankton and sediments, *Science*, *148*, 235-237.

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Bender, Michael L. (1971) Does upward diffusion supply the excess manganese in pelagic sediments, *J. Geophys. Res.*, *76*, 4212-4215.

Bender, Michael L. and A. Kaufman (1971) Th²³⁰/U dating studies on fossils from the Ubeidiya Formation, Northern Jordan Valley, Israel, *Israeli Journal of Earth Sciences*, *20*, 113-118.

Bender, Michael L., W. Broecker, V. Gornitz, U. Middel, R. Kay, S.-S. Sun, and P. Biscaye (1971) Geochemistry of three cores from the East Pacific Rise, *Earth and Planetary Science Letters*, *12*, 425-433.

Bender, Michael L., T. Snead, L. Chan, M. Bacon and J. Edmond (1972) Barium intercalibration at GEOSECS I and III, *Earth and Planetary Science Letters*, *16*, 81-83.

Broecker, Wallace S. and Michael L. Bender (1972) Age determinations on marine strandlines, 19-35, in Calibration of Hominoid Evolution (W.S. Bishop and J.A. Miller, eds.), The Wenner Gren Foundation for Anthropological Research, New York.

Anderson, Thomas F., M. L. Bender and W. S. Broecker (1973) Surface areas of biogenic carbonates and their relation to fossil ultrastructure and diagenesis, *Journal of Sedimentary Petrology*, 471-477.

Bender, Michael L. (1973) Helium-uranium dating of corals, *Geochimica et Cosmochimica Acta*, *37*, 1229-1247.

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Bender, Michael L. (1974) Reliability of amino acid racemization dating and paleotemperature analysis of bones, *Nature*, *252*, 378-379.

Bender, Michael L., R. Lorens and D. F. Williams (1975) Sodium, magnesium and strontium in foraminiferal calcite, *Micropaleontology*, *21*, 448-459.

Bender, Michael L. and Christine Gagner (1976) Dissolved copper, nickel and cadmium in the Sargasso Sea, *Journal of Marine Research*, *34*, 327-339.

Graham, William F., M.L. Bender and G.P. Klinkhammer (1976) Manganese in Narragansett Bay, *Limnology and Oceanography*, *21*, 665-673.

Bender, Michael L., G.P. Klinkhammer and D.W. Spencer (1977) Manganese in sea water and the marine manganese balance, *Deep Sea Research*, *24*, 799-812.

Froelich, Philip, M.L. Bender and G.R. Heath (1977) Phosphorus acculation rates in metalliferous sediments on the East Pacific Rise, *Earth and Planetary Science Letters*, *34*, 351-359.

Lorens, Robert B., and M.L. Bender (1977) The physiological exclusion of magnesium by *Mytilus edulis* calcite, *Nature*, *269*, 793-794.

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Williams, Douglas F., M.A. Sommer II and M.L. Bender (1977) Carbon isotopic composition of Recent planktonic foraminifera of the Indian Ocean, *Earth and Planetary Science Letters*, *36*, 391-403.

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Bender, M. L. (1990) $\delta^{18}\text{O}$ of dissolved O₂ in seawater: a unique tracer of circulation and respiration in the deep sea, *Journal of Geophysical Research*, 95, 22,243-22,252.

Grande, K. D., M. Bender, B. Irwin and T. Platt (1991) A comparison of net and gross rates of oxygen production as a function of light intensity in some natural plankton populations and in a *Synechococcus* culture, *Journal of Plankton Research*, 13, 1-16.

Hess, J., M. Bender, and J.-G. Schilling (1991) Assessing seawater-basalt exchange of strontium isotopes in hydrothermal processes on the flanks of mid-ocean ridges, *Earth and Planetary Science Letters*, 103, 133-142.

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Martin, W. R., M. Bender, M. Leinen and J. Orchardo (1991) Benthic organic carbon degradation and biogenic silica dissolution in the central equatorial Pacific, *Deep Sea Research*, 38, 1481-1516.

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Kiddon, J., M. Bender, J. Orchardo, D. Caron, J. Goldman, and M. Dennett (1993) Isotopic fractionation of oxygen by respiring marine organisms, *Global Biogeochemical Cycles*, 7, 679-694.

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Jouzel, J., N. Barkov, J.-M. Barnola, M. Bender, J. Chappellaz, C. Genthon, V. Kotlyakov, V. Lipenkov, C. Lorius, J.-R. Petit, D. Raynaud, G. Raisbeck, C. Ritz, T. Sowers, M. Stievenard, F. Yiou and P. Yiou (1993) Extending the Vostok ice-core record of palaeoclimate to the penultimate glacial period, *Nature*, 364, 407-412.

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