CURRICULUM VITAE

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EDUCATION:

A.B., Brown University, 1973.
B.S., Chemistry, University of Washington, 1979.
B.S., Oceanography, University of Washington, 1979.
Ph.D., Oceanography, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program, 1985.

AWARDS AND FELLOWSHIPS:

J. Seward Johnson Chair and Education Coordinator in Marine Chemistry and Geochemistry, 1998 - 2004.

PROFESSIONAL EXPERIENCE:

Undergraduate Research Assistant, University of Washington, Department of Oceanography (May 1977--September 1978).
Graduate Research Assistant, Woods Hole Oceanographic Institution (June 1979 to May 1985).
Postdoctoral Research Associate, Graduate School of Oceanography, University of Rhode Island (May 1985 to September 1987).
Assistant Scientist, Woods Hole Oceanographic Institution (September 1987 to September 1991).
Associate Scientist, Woods Hole Oceanographic Institution (September 1991 to 2010; granted tenure, 1996).
Senior Scientist, 2010 - present

PROFESSIONAL AFFILIATIONS:

Member, American Geophysical Union.

RESEARCH INTERESTS:

Sediment-sea water exchange of bioactive and trace elements.
Early diagenesis of marine sediments.
Physical and biological mixing processes and their effects on early diagenesis.
Mathematical modeling of sedimentary processes.

PUBLICATIONS:

Martin, W.R. and F.L. Sayles (1987). Seasonal cycles of particle and solute transport processes in nearshore sediments: $^{222}Rn/^{226}Ra$ and $^{234}Th/^{238}U$ disequilibrium at a site in Buzzards Bay, MA. *Geochimica et Cosmochimica Acta*, **51**, 927-943.

Bender, M., W. Martin, J. Hess, F. Sayles, L. Ball and C. Lambert (1987). A whole core squeezer for interfacial pore water sampling. *Limnology and Oceanography*, **32(6)**, 1214-1225.

Martin, W.R. and M.L. Bender (1988). The variability of benthic fluxes and sedimentary remineralization rates in response to seasonally variable organic carbon rain rates in the deep sea: a modeling study. *American Journal of Science*, **288**, 561-574.

Martin, W.R., S.R. Emerson, and C. Lochmuller (1988). Chemrawn IV: Modern Chemistry and Chemical Technology Applied to the Ocean and its Resources: Panel 5: Chemical processes at the ocean bottom. *Applied Geochemisty*, **3**, 49-58.

Bender, M.L., R. Jahnke, R. Weiss, W. Martin, D. Heggie, J. Orchardo, and T. Sowers (1989). Organic carbon oxidation and benthic nitrogen and silica diagenesis in San Clemente Basin. *Geochimica et Cosmochimica Acta*, **53**, 685-697.

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

Martin, W.R. and G. Banta (1992). The measurement of sediment irrigation rates: a comparison of the Br^- tracer and $^{222}Rn/^{226}Ra$ disequilibrium techniques. *Journal of Marine Research*, **50**, 125-154.

Martin, W.R. and D.C. McCorkle (1993). Dissolved organic carbon concentrations in marine pore waters determined by high-temperature oxidation. *Limnology and Oceanography*, **38(7)**, 1464-1479.

Martin, W.R. and F.L. Sayles (1994). Seafloor diagenetic fluxes. In: *Material Fluxes on the Surface of the Earth*, Board on Earth Sciences and Resources Commission on Geosciences, Environment, and Resources: National Resource Council, National Academy Press, 143-163.

Sayles, F.L., W.R. Martin, and W.G. Deuser (1994). Response of benthic oxygen demand to particulate organic carbon supply in the deep sea near Bermuda. *Nature (Lond)*, **371**, 686-689.

Sayles, F.L. and W.R. Martin (1995). Solute transport across the sediments-water interface in the deep sea based on *in-situ* tracer studies at the Bermuda Time Series Site. *Deep-Sea Research*, **42**, 31-52.

Martin, W.R. and F.L. Sayles (1996). $CaCO_3$ dissolution in sediments of the Ceara Rise, western equatorial Atlantic. *Geochimica Cosmochimica Acta*, **60**, 243-263.

Wheatcroft, R.A. and W.R. Martin (1996). Spatial variation in short-term (234Th) sediment bioturbation intensity along an organic carbon gradient. *Journal of Marine Research*, **54**, 763-792.

Sigman, D.M., D.C. McCorkle and W.R. Martin (1998). The calcite lysocline as a constraint in glacial/interglacial low latitude production changes. *Global Biogeochemical Cycles,* **12**, 408-428.

Martin, W.R., A.P. McNichol, and D.C. McCorkle (2000). The radiocarbon age of calcite dissolving at the sea floor: Estimates from pore water data. *Geochimica et Cosmochimica Acta*, **64**, 1391-1404.

Sayles, F., W.R. Martin, Z. Chase, and R.F. Anderson (2001). Benthic remineralization and burial of biogenic SiO_2, $CaCO_3$, organic carbon, and detrital material in the Southern Ocean along a transect at 170° West. *Deep-Sea Research II*, **48**, 4323-4383.

Nelson, D.M., R.F. Anderson, R.T. Barber, M.A. Brzezinski, K.O. Buesseler, Z. Chase, R.W. Collier, M.-L. Dickson, R. François, M. Hiscock, S. Honjo, J. Mara, W.R. Martin, R.N. Sambrotto, F.L. Sayles and D.E. Sigman (2002). Vertical budgets for organic carbon and biogenic silica in the Pacific sector of the Southern Ocean, 1996-1998. *Deep-Sea Research Part II*, **49 (9-10),** 1,645-1,673.

Xie, H., S.S. Andrews, W.R. Martin, J. Miller, L. Ziolkowski, C.D. Taylor and O.C. Zafiriou (2002) Validated methods or sampling and headspace analysis of carbon monoxide in seawater. *Mar. Chem*., **77(2-3)**, 93-108.

Matsumoto, Katsumi, Wallace S. Broecker, Elizabeth Clark, William Martin, Daniel C. McCorkle, and Irka Hajdas (2001). Can deep ocean carbonate preservation history as inferred from atmospheric pCO_2 record account for the new ^{14}C and $\%CaCO_3$ data from Ontong-Java Plateau? *Earth and Planetary Science Letters*, **192**, 319-329.

Morford, J., L. Kalnejais, W. Martin, R. Francois and I.-M. Karle (2003) Sampling marine pore waters for Mn, Fe, U, Re, and Mo: Modifications on DET (Diffusional Equilibration Thin Film) gel probes. *Journal of Experimental Marine Biology and Ecology* **285-286**, 85-103

Martin W.R. and F.L. Sayles (2003) The recycling of biogenic material at the sea floor. Treatise on Geochemistry, Vol. 7, chapter 2, pp 37-65, F. Mackenzie, editor.

Martin, W.R. and F.L. Sayles (2004) Organic matter cycling in sediments of the continental margin in the northwest Atlantic. *Deep-Sea Research I* **51**, 457-489.

Martin, W.R. and F. L. Sayles (2006) Organic matter oxidation in deep-sea sediments: Distribution in the sediment column and implications for calcite dissolution. *Deep-Sea Research II* 53, 771-792.

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Morford, J.L., W.R. Martin, L.H. Kalnejais, R. François, M. Bothner, and I.-M. Karle (2007) Insights on geochemical cycling of U, Re, and Mo from seasonal sampling in Boston Harbor, Massachusetts, USA. *Geochimica et Cosmochimica Acta* 71, 895-917.

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Martin, W.R. and L.H. Kalnejais (2007) The cycling of silver, copper, and lead in the coastal sediments of Boston Harbor and Massachusetts Bay. Section 10. in M.H. Bothner and B. Butman, eds., Processes Influencing the Transport and Fate of Contaminated Sediments in the Coastal Ocean – Boston Harbor and Massachusetts Bay. U.S. Geological Survey Circular 1302. U.S. Department of the Interior / U.S. Geological Survey.

Martin, W.R. (2008) Chemical Processes in Estuarine Sediments. The Encyclopedia of Ocean Sciences Online, Elsevier Press.

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Griffith, D.R., W.R. Martin, and T.I. Eglinton (2010) The radiocarbon age of organic carbon in marine surface sediments. *Geochimica et Cosmochimica Acta*, 74,,6788-6800.

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