JAHNKE, RICHARD A.
Professor Emeritus
Skidaway Institute of Oceanography
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Date of Birth: March 30, 1953
Place of Birth: Milwaukee, Wisconsin

Education:
1974 B. S. Chemistry, University of Wisconsin-Milwaukee
1977 M. S. Oceanography, University of Washington
1981 Ph.D. Oceanography, University of Washington

Experience:
1974-1981 Graduate Research Assistant, Department of Oceanography, University of Washington
1981-1983 Post-Graduate Research Geochemist, Scripps Institution of Oceanography
1983-1993 Assistant Research Geochemist, Scripps Institution of Oceanography
1987-1991 Associate Professor, Skidaway Institute of Oceanography
1991 Associate Research Oceanographer, University of Georgia
1991-2008 Professor, Skidaway Institute of Oceanography
1992-2008 Adjunct Professor, Georgia Institute of Technology
1992-2008 Adjunct Professor, University of Georgia
1997-2008 Associate Director, Skidaway Institute of Oceanography
2001 Acting Director, Skidaway Institute of Oceanography
2009 - Present Professor Emeritus, Skidaway Institute of Oceanography

Professional Societies:
The American Society of Limnology and Oceanography
The American Geophysical Union
The Oceanographic Society

Professional Activities:
1974-present; Participated in 62 oceanographic expeditions accumulating 886 days at sea
1982-present; Served as Chief Scientist on 23 oceanographic expeditions
1985-87; Member, Scripps Institution of Oceanography Radioisotopic Usage Committee
1986-87; Member, Scripps Institution of Oceanography Marine Operations Committee
1986-87; Member, US-JGOFS Benthic Working Group
1987-1990; Member, US-JGOFS Steering Committee
1988-2003; Member, NSF Advisory Panel for Ocean Sciences Research (April 1988; September 1988; January 1989; July, 02; September, 02; May 03; September 03)
1988; Instructor, Animal-Sediment-Microbe Relations, Friday Harbor Laboratories
1990 Member, NOAA Advisory Panel for Research for Climate and Global Change Program
1990 JGOFS Task Team on Benthic Processes
1990-1993 Associate Editor, Limnology and Oceanography

1991-1994 Member, The Oceanographic Society Council
1991 Member, NSF Advisory Panel - Polar Programs Division
1992-1995 Member, UNOLS Council
1993-1997 Member, DOE Ocean Margins Program Steering Committee
1994-1997 Member, NSF Coastal Ocean Processes Program Steering Committee
1997 Member, Canadian JGOFS Science Advisory Committee
1997 Chair, UNOLS Ship Scheduling Procedures Review Committee
1997 Member, NSF Chemical Oceanography Review Steering Committee
1997 Award: 1996 Editor's Citation: Excellence in Reviewing, AGU
1997 Member, UNOLS Charter Review Committee
1999 - 2002 Associate Member, SCOR Working Group 114
1999 - Chair, Coastal Ocean Processes (CoOP) Program Scientific Steering Committee
1999 - 2001 Member, IGBP PAGES – JGOFS Task Team
2000 - 2001 Member, CE-COOS Steering Committee
2000 - 2001 Member, Southeastern Universities Research Association Advisory Cmte.
2001 - 2009 Editorial Board, Continental Shelf Research
2001 - 2003 Member, NSF Ocean Carbon Cycle Research Advisory Committee
2001 - 2004 Member, JGOFS Global Synthesis Working Group
2002 Member, OCEANS.US Observatories Workshop Steering Committee
2002 - 2004 Member, Dynamics of Earth and Oceans Systems Steering Committee
2002 - 2004 Member, IOC/IGBP OCEANS Transition and Writing Team
2002 - 2004 Member, Carbon Cycle Science Plan - Oceans Implementation Committee
2003 Inaugural Chair, Gordon Research Conference on Permeable Sediments
2004 - 2008 Member, OOI/ORION Executive Steering Committee
2005 Director, ORION Project
2006 - 2008 Member, NOAA's Global Carbon Science Panel
2006 - 2007 Member, US Carbon Cycle Science Advisory Committee
2007 - 2008 Associate Editor, Continental Shelf Research
2008 - 2009 Member, EuroSITES Advisory Committee

Graduate Student Committees:

1. T. Shaw - Scripps Institution of Oceanography; Ph.D. 1989
2. R. Marinelli - University of South Carolina; Ph.D. 1991
3. J. Schuffert - Scripps Institution of Oceanography; Co-Chair; Ph.D. 1992
4. J. McMahon - Georgia Institute of Technology; M.S. 1997
5. B. Gray - Georgia Institute of Technology; M.S. 1998
6. B. McCraith - University of South Carolina; Ph.D. 1998
7. J. King - Georgia Insitute of Technology; Co-Chair; Ph.D. 1999
8. R. Booker - Georgia Institute of Technology; Ph.D. 1999
9. J. Santos - Georgia Institute of Technology; Co-Chair, MS.
10. A. Rao - Georgia Institute of Technology; Co-Chair, PhD, Dec. 2006.
11. S. Noakes - University of Georgia; MS 2000, PhD, 2003
12. A. Zwang - University of Georgia; PhD - Jan. 2003
13. F. Chen - University of Georgia; PhD, 2008

14. B. Darrow - University of South Florida; PhD, 2008
15. B. Porubsky - University of Georgia; PhD, 2008
16. G. Waldbusser - University of Maryland; PhD, 2008
17. J. Dai - University of Georgia, PhD. Nov. 2006.

Teaching:

1. Contaminated Sediment Geochemistry - Graduate Course, Course Coordinator, Environmental Engineering, Georgia Institute of Technology (EAS/CEE 6761)
2. Coastal Oceanography and Marine Techniques - Skidaway Institute of Oceanography, Team Taught Summer Course
3. Marine Sediment Diagenesis – Graduate Course, Univ. of Georgia (MAR8110)
4. Marine Environmental Chemistry and Analysis (sea floor module with labs), Savannah State Univ. (MBIO 3301)
5. Coastal Oceanography - Graduate Course, Savannah State University (MSCI 5205) Team Taught Course.

D. Synergistic Activities:

1. Developed a Distance Learning/Video - based graduate course on contaminated sediment geochemistry at Georgia Institute of Technology (CEE 6761).
2. Participated in the CIRE (Collaboration in Research and Education) Program with Savannah State University (a designated minority institution).
3. Developed an in situ benthic flux chamber instrument for use in the deep sea.
4. Developed a corer that mains the retrieved sediments at in situ temperature and pressure.
5. Developed a simple, portable pore water extraction system.
6. Developed corer for sampling pore waters in permeable sediments
7. Advise(d) 14 Ph.D. and 3 MS students (Chair/Co-Chair:3 PhD, 1 MS)
8. Developed and team-taught graduate courses - Marine Sediment Diagenesis (MAR8110 - UGA) and Contaminated Sediment Geochemistry (CEE6761 - GT)
9. Developed a light/dark benthic chamber instrument for measuring benthic primary production.

Refereed Publications:

1. Carpenter, R., M.L. Peterson and R.A Jahnke (1978) Sources, sinks and cycling of arsenic in the Puget Sound region. *Estuarine Interactions* (Wiley, M.L., ed.).
2. Bothner, M.H., R.A Jahnke, M.L Peterson and R.Carpenter (1980) The rate of mercury loss from contaminated sediments. *Geochim. Cosmochim. Acta* 44: 273-285.
3. Emerson, S., R.A. Jahnke, M. Bender, P. Froelich, G. Klinkhammer, C. Bowser and G. Setlock (1980) Early diagenesis in sediments from the eastern equatorial Pacific: I. Pore water, nutrient and carbonate results. *Earth Planet. Sci. Lett.* 49:57-80.
4. Murray, J.W., S. Emerson and R.A. Jahnke (1980) Carbonate saturation and the effect of pressure on the alkalinity in interstitial waters from the Guatemala Basin. *Geochim. Cosmochim. Acta* 44:963-972.

5. Jahnke, R.A. (1981) Current phosphorite formation and the solubility of synthetic carbonate fluorapatite, Ph.D. Thesis, University of Washington, 210 pp.
6. Jahnke, R.A., S. Emerson and J.W. Murray (1982) A model of oxygen reduction, denitrification and organic matter mineralization in marine sediments. *Limnol. Oceanogr.* 27:610-623.
7. Jahnke, R.A., D. Heggie, S. Emerson and V. Grundmanis (1982) Pore waters of the central Pacific Ocean: Nutrient results. *Earth Planet. Sci. Lett.* 61:233-256.
8. Weiss, R.F., R.A. Jahnke and C.D. Keeling (1982) Seasonal effects of temperature and salinity on the partial pressure of carbon dioxide in seawater. *Nature* 300:511-513.
9. Jahnke, R.A., S.R. Emerson, K.K. Roe and W.C. Burnett (1983) The present day formation of apatite in marine sediments. *Geochim. Cosmochim. Acta.* 47:259-266.
10. Froelich, P., K.-H. Kim, R. Jahnke, W. Burnett, A. Soutar and M. Deakin (1983) Pore water fluoride in Peru continental margin sediments: Uptake from seawater. *Geochim. Cosmochim. Acta*.47:1605-1612.
11. Jahnke, R.A. (1984) The synthesis and solubility of carbonate fluorapatite. *Am. J.Sci.* 284:58-78.
12. Emerson, S., R. Jahnke and D. Heggie (1984) Sediment-water exchange in shallow water estuarine sediments. *J. Mar. Res*. 42:709-730.
13. Jahnke, R.A. (1985) A model for microenvironments in deep sea sediments: formation and their effects on pore water profiles. *Limnol. Oceanogr.* 30:956-965.
14. Kirsten, O.H. and R.A. Jahnke (1985) The Lander: Recent developments in free vehicle platform design. In: *Oceans 85 Conference Record*, Marine Technology Society and Institute of Electrical and Electronics Engineers.
15. Jahnke, R.A., S.R. Emerson, K. Cochran and D.J. Hirschberg (1986) Fine scale distributions of porosity and particulate excess ^{210}Pb, organic carbon and $CaCO_3$ in surface sediments of the deep equatorial Pacific. *Earth Planet. Sci. Lett.* 77:59-69.
16. Craven, D.B., R.A. Jahnke and A.F. Carlucci (1986) Fine scale vertical distribution of microbial biomass and activity in California Borderland sediments. *Deep-Sea Res.* 33:379-390.
17. Reimers, C.E., K. Fischer, R. Merewether, K.L. Smith, Jr. and R.A. Jahnke (1986) Oxygen microprofiles measured in situ in deep ocean sediments. *Nature* 320:741-744.
18. Smith, K.L., Jr., A.F. Carlucci, R.A. Jahnke and D.B. Craven (1987) Organic carbon mineralization in the Santa Catalina Basin: benthic boundary layer metabolism. *Deep-Sea Res.* 34:185-211.
19. Berelson, W.M., D.E. Hammond, K.L Smith, Jr., R.A. Jahnke, A.H. Devol, K.R. Hinga, G.T. Rowe and F. Sayles (1987) In situ benthic flux measurement devices: Bottom Lander Technology. *Marine Technology Society Journal* 21:26-32.
20. Jahnke, R.A. and G.A. Jackson (1987) Role of sea floor organisms in oxygen consumption in the deep North Pacific Ocean. *Nature* 329:621-623.
21. Jahnke, R.A. (1988) A simple, reliable and inexpensive pore water sampler. *Limnol. Oceanogr.* 33:483-487.

22. Froelich, P.N., Jr., M.A. Arthur, W.C. Burnett, M. Deakin, V. Hensley, R.A. Jahnke, L. Kaul, K.-H. Kim, K. Roe, A. Soutar and C. Vathakanon (1988) Early diagenesis of organic matter in Peru continental margin sediments: Phosphorite precipitation. *Mar. Geol.* 80:309-343.
23. Jackson, G. A., F. Azam, A. F. Carlucci, R. W. Eppley, B. Finney, D.S. Gorsline, B. Hickey, C. Huh, R.A. Jahnke, I.R. Kaplan, M. R. Landry, L. F. Small, M. I. Venkatesan, P. M. Williams, and K. Wong (1989) Elemental cycling and fluxes off the coast of Southern California. *Trans. Am. Geophys. Union* 70:146-155.
24. Bender, M.L., R.A. Jahnke, R.F. Weiss, W. Martin, D. Heggie, J. Orchardo and T. Sowers (1989) Organic carbon oxidation and benthic nitrogen and silica dynamics in San Clemente Basin, a continental borderland site. *Geochim. Cosmochim. Acta* 53:685-698.
25. Jahnke, R.A. and M.B. Christiansen (1989) An in situ benthic experimental chamber instrument for seafloor studies. *Deep-Sea Res.* 36:625-637.
26. Jahnke, R.A., S.R. Emerson, C.E. Reimers, D. Archer, J. Schuffert, K. Ruttenberg and T. Brown (1989) Benthic recycling of biogenic debris in the eastern tropical Atlantic Ocean. *Geochim. Cosmochim. Acta* 53:2947-2960.
27. Jahnke, R.A. (1990) Early diagenesis and recycling of biogenic debris at the sea floor, Santa Monica Basin, California. *J. Mar. Res.* 48:413-436.
28. Schuffert, J.D., M. Kastner, G. Emanuel and R.A. Jahnke (1990) A new equation to determine carbonate ion substitution in francolite by X-ray diffraction. *Geochim. Cosmochim. Acta* 54:2323-2329.
29. Shaw, T., J.M. Gieskes and R.A. Jahnke (1990) Early diagenesis in differing depositional environments: The response of pore water transition metals. *Geochim. Cosmochim. Acta* 54:1233-1246.
30. Jahnke, R.A. (1990) Ocean Flux Studies: A Status Report. *Reviews of Geophysics* 28:381-398.
31. Jahnke, R.A., C.E. Reimers, and D.B. Craven (1990) Organic matter recycling at the seafloor: Intensification near ocean margins. *Nature* 348:50-54.
32. Craven, D.B. and Jahnke, R.A. (1992) Microbial utilization and turnover of organic carbon in Santa Monica Basin sediments. *Prog. Oceanogr. Ser.* 30:313-333.
33. Jahnke, R.A. (1992) The Biogeochemical Cycle of Phosphorus. In*: Biogeochemical Cycles* (S. Butcher, R. Charlson, G. Orians, and G. Wolfe, eds.). Academic Press, pp. 301-313.
34. Reimers, C. E., R. A. Jahnke and D. C. McCorkle (1992) Carbon fluxes and burial rates over the continental slope and rise off central California with implications for the global C cycle. *Global Biogeochem. Cycles*. 6:199-224.
35. Jahnke, R. A. and G. A. Jackson (1992) The spatial distribution of sea floor oxygen consumption in the Atlantic and Pacific Oceans. In*: Deep-Sea Food Chains and the Global Carbon Cycle* (G. T. Rowe and V. Pariente, eds.), NATO Workshop Report, Kluwer Academic Publishers, pp.295-308.
36. Smith, C. R., I. D. Walsh, and R. A. Jahnke (1992) Adding biology to one-dimensional models of sediment-carbon degradation: The multi-B approach. In: *Deep-Sea Food Chains and the Global Carbon Cycle* (G. T. Rowe and V. Pariente, eds.), NATO Workshop Report, Kluwer Academic Publishers, pp.395-400.

37. Glenn, C. R., M. A. Arthur, J. M. Resig, W. C. Burnett, W. E. Dean and R. A. Jahnke (1993) Are modern and ancient phosphorites really so different*?* In: *Siliceous, Phosphatic and Glauconitic Sediments of the Tertiary and Mesozoic* (A. Iijima and R.E. Garrison, eds.), Zeist Publishing, pp. 159-188.
38. Rabouille, C., J-F. Gaillard, M. Sibuet, C. Beaucaire, P. Bonte, P. Crassous, R. Jahnke, A. Khripounoff, F. Legleux, J. Laureillard, C. Pierre, J-C. Relexans, J-L. Reyss (1993) Sediment geochemistry in the three EUMELI sites in the tropical north-east Atlantic: General presentation and first results. *Ann. Inst. Oceanogr.* 69:35-42.
39. Windom, H. L., J. O. Blanton, P. G. Verity and R. Jahnke (1993) Oceanographic response to environmental change, pp. 75-91. In*: Ocean Processes: U. S. Southeastern Continental Shelf.* (D. W. Menzel, ed.) Oak Ridge, Tenn.: Office of Scientific and Technical Information, U. S. Department of Energy (DOE/OSTI-11674).
40. Jahnke, R. A., D. B. Craven and J-F. Gaillard (1994) The influence of organic matter diagenesis on $CaCO_3$ dissolution at the deep sea floor. *Geochim. Cosmochim. Acta* 58:2799-2809.
41. Schuffert, J. D., R. A. Jahnke, M. Kastner, J. Leather, A. Sturz, and M. R. Wing (1994) Rates of formation of modern phosphorite off western Mexico*. Geochim. Cosmochim. Acta* 58:5001-5010.
42. Ingall, E. and R. Jahnke (1994) Evidence for enhanced phosphorus regeneration from sediments overlain by oxygen depleted waters. *Geochim. Cosmochim. Acta* 58:2571-2575.
43. Jahnke, R. A. and G. Shimmield (1995) Particle flux and its conversion to the sediment record: coastal ocean upwelling systems. *Dahlem Conference Report.* John Wiley & Sons, pp.83-102.
44. Shimmield, G. and R. A. Jahnke (1995) Particle flux and its conversion to the sediment record: open ocean upwelling systems. *Dahlem Conference Report.* John Wiley & Sons, pp. 171-192.
45. Jahnke, R. A. and D. B. Craven (1995) Quantifying the role of heterotrophic bacteria in the carbon cycle: a need for respiration rate measurements. *Limnol. Oceanogr.* 40:436-441.
46. Tenberg, A., R. De Bovee, P. Hall, W. Berelson, G. Ciceri, P. Crassous, A. Devol, S. Emerson, J. Gage, R. Glud, F. Graziottin, J. Gundersen, D. Hammond, W. Helder, K. Hinga, O. Holby, R. Jahnke, A. Khripounoff, V. Nuppenau, O. Pfannkuche, C. Reimers, G. Rowe, A. Sahami, F. Sayles, M. Schurter, S. Smallman, B. Wehrli, and P. De Wilde (1995) Benthic chamber and profiling landers in oceanography – a review of design, technical solutions, and functioning. *Prog. Oceanogr.* 35:253-294.
47. Jahnke, R. A. (1996) The global ocean flux of particulate organic carbon: areal distribution and magnitude. *Global Biogeochem. Cycles* 10:71-88.
48. Nixon, S. W., J. W. Ammerman, L. P. Atkinson, V. M. Berounsky, G. Billen, W. C. Boicourt, W. R. Boynton, T. M. Church, D. M. DiToro, R. Elmgren, J. H. Garber, A. E. Giblin, R. A. Jahnke, N. J. P. Owens, M. E. Q. Pilson, and S. P. Seitzinger (1996) The fate of nitrogen and phosphorus at the land-sea margin of the North Atlantic Ocean. *Biogeochem.* 35:141-180.

49. Michaels, A. F., D. Olson, J. L. Sarmiento, J. W. Ammerman, K. Fanning, R. A. Jahnke, A. H. Knap, F. Lipschultz and J. M. Prospero (1996) Inputs, losses and transformations of nitrogen and phosphorus in the pelagic North Atlantic Ocean. *Biogeochem.* 35:181-226.
50. Jahnke, R. A., D. B. Craven, D. C. McCorkle and C. E. Reimers (1997) $CaCO_3$ dissolution in California continental margin sediments: the influence of organic matter remineralization. *Geochim. Cosmochim. Acta* 61:3587-3604.
51. Ingall, E. and R. Jahnke (1997) Influence of water column anoxia on the elemental fractionation of carbon and phosphorus during sediment diagenesis. *Marine Geology* 139:219-230.
52. Jahnke, R. A. and L. H. Knight (1997) A gravity-driven, hydrodynamically-damped multiple piston corer for sampling fine-grained sediments. *Deep-Sea Res.* 44: 713-718.
53. Jahnke, R. A. (1998) Geochemical impacts of waste disposal on the abyssal seafloor. *J. Mar. Sys.* 14:355-375.
54. Schuffert, J. D., M. Kastner and R. A. Jahnke (1998) Carbon and phosphorus burial associated with modern phosphorite formation. *Mar. Geol.* 146:21-31.
55. Marinelli, R. L., R. A. Jahnke, D. B. Craven, J. R. Nelson, and J. E. Eckman (1998) Sediment nutrient dynamics on the South Atlantic Bight continental shelf. *Limnol. Oceanogr.* 43: 1305-1320.
56. Nelson, J. R., J. E. Eckman, C. Y. Robertson, R. L. Marinelli, and R. A. Jahnke (1999) Variability in biomasses of benthic and planktonic microalgae on the continental shelf on the South Atlantic Bight. *Cont. Shelf Res.* 19: 477-505.
57. Alperin, M. J., C. S. Martens, D. B. Albert, I. B. Suayah, L. K. Benninger, N. E. Blair and R. A. Jahnke (1999) Benthic fluxes and porewater concentration profiles of dissolved organic carbon in sediments from the North Carolina continental slope. *Geochim. Cosmochim. Acta* 63: 427-448.
58. King, J. K., F. M. Saunders, R. F. Lee and R. A. Jahnke (1999) Coupling mercury methylation rates to sulfate reduction rates in marine sediments. *Environ. Toxicol. Chem.* 18: 1362-1369.
59. Jahnke, R. A., J. R. Nelson, R. L. Marinelli, and J. E. Eckman (2000) Benthic flux of biogenic elements on the southeastern U. S. continental shelf: Influence of pore water advective transport and benthic microalgae. Cont. Shelf Res. 20: 109-127.
60. Jahnke, R. A. (2000) The Phosphorus Cycle, In: *Earth System Science: From biogeochemical cycles to global change*, M. C. Jacobson, R. J. Charlson, H. Rodhe and G. H. Orians, eds. Academic Press, pp. 360-374.
61. King, S. L., P. N. Froelich and R. A. Jahnke (2000) Early diagenesis of germanium in sediments of the Antarctic South Atlantic. *Geochim. Cosmochim. Acta* 64: 1375-1390.
62. Jahnke, R. A. and D. B. Jahnke (2000) Rates of C, N, P and Si recycling and denitrification at the US mid-Atlantic continental slope depocenter. *Deep-Sea Res.* 47: 1405-1428.
63. Jahnke, R. A. (2001) Constraining biogeochemical cycling by benthic flux studies, In: *The Benthic Boundary Layer* (B. P. Boudreau and B. B. Jorgensen, eds.), Oxford Press. pp. 302-319.

64. Reimers, C. E., R. A. Jahnke, and L. Thomsen (2001) In situ boundary layer measurements. In: *The Benthic Boundary Layer* (B. P. Boudreau and B. B. Jorgensen, eds.), Oxford Press. pp. 245-268.
65. Jahnke, R. A. (2001) Platforms: Bottom Landers, In: *Encyclopedia of Ocean Sciences* (Steele, J, S. Thorpe and K. Turekian, eds.), Academic Press.
66. Lochte, K., R. Anderson, R. Francois, R. Jahnke, G. Shimmield, and A. Vetrov (2003) Benthic processes and the burial of carbon. In: *Ocean Biogeochemistry: The role of the ocean carbon cycle in global change.* M. Fasham, ed. Springer, 297 pp.
67. Thomas, C. J., N. E. Blair, M. J. Alperin, D. J. DeMaster, R. A. Jahnke C. S. Martens and L. Mayer (2002) Organic carbon deposition on the North Carolina continental slope off Cape Hatteras (USA) *Deep Sea Res.*49: 4687-4709.
68. King, J. K., J. E. Kostka, M. E. Frischer, F. M. Saunders and R. A. Jahnke (2001) A quantitative relationship that demonstrates mercury methylation rates in marine sediments are based on the community composition and activity of sulfate-reducing bacteria. *Environ. Sci. Tech.* 35: 2491-2496.
69. Boudreau, B. P., M. Huettel, S. Forster, R. A. Jahnke, A. McLachlan, J. J. Middleburg, P. Nielsen, F. Sansone, G. Taghon, W. Van Raaphorst, I. Webster, J. M. Weslawski, P. Wiberg, and B. Sundby (2001) Permeable marine sediments: Overturning an old paradigm. EOS, Trans., Am. Geophys. Union 82: 133 - 136.
70. Niencheski, L. F. and R. A. Jahnke (2002) Benthic respiration and inorganic nutrient release across the sediment water interface in the estuarine region of the Patos Lagoon (Brazil), *Aquatic Geochemistry* 8: 135-152.
71. Jahnke, R. A. and D. B. Jahnke (2004) Calcium carbonate dissolution in deep sea sediments: Reconciling microelectrode, pore water and benthic flux chamber results. *Geochim. Cosmochim. Acta,* 68, 47 - 59.
72. Jahnke, R. A., C. R. Alexander and J. E. Kostka (2003) Advective pore water input of nutrients to the Satilla River Estuary, Georgia, USA. *Estuarine, Coastal & Shelf Science* 56: 641-653.
73. Jahnke, R. A. and J. O. Blanton (2010) Western Boundary Currents - The Gulf Stream in /Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis/, K. K. Liu, L. Atkinson, R. Quinones and L. Talaue-McManus, eds. Global Change: The IGBP Series, Springer-Verlag, pp. 146 - 153.
74. Seim, H., R. Bacon, C. Barans, M. Fletcher, K. Gates, R. Jahnke, E. Kearns, R. Lea, M. Luther, C. Mooers, J. Nelson, D. Porter, L. Shay, M. Spranger, J. Thigpen, R. Weisberg, and F. Werner (2003) SEA-COOS - A model for a multi-state, multi-institutional regional observation system. *MTS Journal*, vol. 37, No. 3.
75. Rao, A. M. F. and R. A. Jahnke (2004) Quantifying pore water exchange across the sediment-water interface in the deep sea with in situ tracer studies. *Limnology and Oceanography Methods*, 2: 75 - 90.
76. Rubin, S. I., S. L. King, R. A. Jahnke and P. N. Froelich (2003) Benthic barium and alkalinity fluxes: Is Ba an oceanic paleo-alkalinity proxy for glacial atmospheric CO_2? *Geophys. Res. Let.* 30, No. 17, 1885, 2-1 - 2-4.
77. Jahnke, R. A. (2005) Transport Processes and Organic Matter Cycling in Coastal Sediments, *The Sea*, A. R. Robinson and K. H. Brink, eds., Harvard University Press, 163 - 192.

78. Robinson, A. R., K. H. Brink, H. Ducklow, R. A. Jahnke, and B. Rothschild (2005) Overview and Synthesis of Dynamical Processes and Physical-Biological-Chemical-Sedimentological Interactions, *The Sea*, A. R. Robinson and K. H. Brink, eds. Harvard University Press, 1033pp.
79. Jahnke, R. A., M. Richards, J. R. Nelson, C. Robertson, A. Rao and D. B. Jahnke (2005) Organic matter remineralization and porewater exchange rates in permeable South Atlantic Bight continental shelf sediments. *Cont. Shelf Res.* 25, 1433-1452.
80. Jahnke, R. A., J. R. Nelson, M. E. Richards, C. Y. Robertson, A. M.F. Rao, and D. B. Jahnke (2008) Benthic Primary Production on the Georgia midcontinental shelf: Benthic flux measurements and high-resolution, continuous in situ PAR records. *J. Geophys. Res.* vol. 113: doi:10.1029/2008JC004745.
81. Jahnke, R. A. (2010) A Global Synthesis in Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis, K. K. Liu, L. Atkinson, R. Quinones and L. Talaue-McManus, eds. Global Change: The IGBP Series, Springer-Verlag, pp. 597 - 615.
82. Rao, A. M. F., M. J. McCarthy, W. S. Gardner and R. A. Jahnke (2007) Respiration and denitrification in permeable continental shelf deposits on the South Atlantic Bight: Rates of carbon and nitrogen cycling from sediment column experiments. *Cont. Shelf Res.* 27, 1801 - 1819.
83. Windom, H., W.S. Moore, L.F. Niencheski and R. Jahnke (2006) Submarine groundwater discharge: a large, previously unrecognized source of dissolved iron to the South Atlantic Ocean. Mar. Chem. 102, 252 - 266.
84. Niencheski, L. F. H., H. L. Windom, W. S. Moore and R. A. Jahnke (2007) Submarine groundwater discharge of nutrients to the ocean along a coastal lagoon barrier, Southern Brazil. Mar. Chem. doi:10.1016/j.marchem.2007.06.004
85. Rao, A. M. F., M. J. McCarthy, W. S. Gardner and R. A. Jahnke (2008) Respiration and denitrification in permeable continental shelf sediments on the South Atlantic Bight: Mechanisms of N cycling from N2:Ar and isotope pairing measurements in sediment column experiments. Cont. Shelf Res. 28: 602 - 613.
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