

Curriculum Vitae

Craig A. Carlson

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Education

1994: Ph.D. University of Maryland, College Park, MD
1986: B.A. Colby College, Waterville, ME 1986

Professional Background

2003- present Associate Professor, University of California, Santa Barbara, CA
2000 - 2003 Assistant Professor, University of California, Santa Barbara, CA
2000 – present Adjunct Faculty, Bermuda Biological Station for Research Inc. Bermuda
1999 – 2000 Associate Research Scientist, Bermuda Biological Station for Research Inc., Bermuda.
1997- 1999 Assistant Research Scientist, Bermuda Biological Station for Research Inc., Bermuda.
1994- 1996 Postgraduate researcher, Bermuda Biological Station for Research Inc., Bermuda
(October, 1994 – December, 1996).
1988-1994 Graduate Research Assistant, University of Maryland's Horn Point Environmental Laboratory,
Cambridge, MD.
1987 Research technician, Bermuda Biological Station for Research Inc., Bermuda

Honors and Awards

1988 Horn Point Fellowship, University of Maryland, 1988-1990
1994 Phi Kappa Phi, National Honor Society
1995 NSF Antarctic Service Medal
2002 AGU Ocean Sciences Early Career Award

Academic Contributions (Since 1995)

2006: EEMB 243, “Biological Oceanography” with Mark Brzezinski
2006: EEMB 3, “Introductory Biology III” with S. Hodges and G. Hofmann
2006: EEMB 144, 144L, 244 and 244L, “Marine Microbiology”
2006: EEMB 185 and 285 “Oceanographic Field Work”
2005: EEMB 595MS “Topics in Marine Science” with T. Dickey
2005: BBSR Summer course “ Marine Microbial and Molecular Ecology” with B. Morris and S. Giovannoni
2005: EEMB 3 “Introductory Biology III” with B. Mahall and G. Hofmann
2005: EEMB 595MM “Marine Microbial Ecology”
2005: EEMB 185 and 285 “Oceanographic Field Work”
2004: EEMB 595 MS “ Topics in Marine Science” with T. Dickey
2004: EEMB 243 “Biological Oceanography” with Mark Brzezinski
2004: BBSR Summer course “ Marine Microbial and Molecular Ecology” with B. Morris and S. Giovannoni
2004: EEMB 3, “Introductory Biology III” with S. Hodges and G. Hofmann
2004: EEMB 144, 144L, 244 and 244L, “Marine Microbiology”
2003: EEMB 595MS “Topics in Marine Science” with T. Dickey
2003: EEMB 243 “Biological Oceanography” with Mark Brzezinski
2003: EEMB 3, “Introductory Biology III” with S. Hodges and A. Alldredge
2002: EEMB 595MS “Topics in Marine Science” with T. Dickey
2002: BBSR Summer Course “ Marine Microbial Ecology” with S. Giovannoni
2002: EEMB 3, “Introductory Biology III” with S. Hodges and A. Alldredge
2002: EEMB 244 “Marine Microbiology”

2001: EEMB 595MS "Topics in Marine Science" with T. Dickey
 2001: EEMB 3 "Introductory Biology III" with S. Hodges and A. Alldredge
 1999 - 2000 (annual Spring semester course). Instructor for an undergraduate course in Marine Microbial Ecology offered as a course in the Beaufort to Bermuda program sponsored by Duke University and the Bermuda Biological Station for Research. Laboratory included. Instructors C.A. Carlson and N.R. Bates
 1997 (Spring semester) Instructor for an undergraduate course entitled "Marine Biogeochemistry" offered as a course in the Beaufort to Bermuda program sponsored by Duke University and the Bermuda Biological Station for Research Inc. Laboratory included. Instructors N.R. Bates and C.A. Carlson
 1995-2000. Guest lecturer for Elder Hostel program; Bermuda Biological Station for Research

Students Mentored

Name	Started	Graduated	Degree	Topic
<i>Stuart Goldberg</i>	2002	<i>in progress</i>	<i>Ph.D</i>	<i>DOM characterization</i>
<i>Aubrey Cano</i>	2003	<i>in progress</i>	<i>Ph.D</i>	<i>Microbial Community Structure</i>
<i>Courtney Ewart</i>	2003	<i>in progress</i>	<i>Ph.D</i>	<i>Eddies and Microbial processes</i>

Post Doctoral Mentorship

Name	Started	Topic
<i>Robert Morris</i>	2006	<i>Microbial Oceanography</i>

Student Committee Service at UCSB

Name	Started	Graduated	Degree	Advisor
<i>De De Toole</i>	19??	2003	<i>Ph. D.</i>	<i>Siegel</i>
<i>Sarah Goldthwait</i>	1998	2004	<i>Ph..D</i>	<i>Alldredge</i>
<i>Mark Demarest</i>	2001		<i>Ph.D</i>	<i>Brzezinski</i>
<i>Chantal Swan</i>	2002		<i>Ph.D</i>	<i>Siegel</i>
<i>Jon Klamberg</i>	2002	2005	<i>MSc</i>	<i>Siegel</i>
<i>Craig Nelson</i>	2002		<i>Ph.D.</i>	<i>Melack and Cooper</i>
<i>Ben Coleman</i>	2003		<i>Ph. D</i>	<i>Schimel</i>
<i>Monica Heinz</i>	2005		<i>Ph.D.</i>	<i>Haymon and Valentine</i>
<i>Brandon Swan</i>	2003		<i>Ph.D</i>	<i>Valentine</i>

Student Committee External Member

<i>Peter Countway</i>	<i>MSc. Virginia Institute of Marine Science (H. Ducklow 1999)</i>
<i>Howard Bluck</i>	<i>MSc. University of Newcastle-upon-Tyne (I. Head, 2000)</i>
<i>Jacques Oliver</i>	<i>Ph.D. Virginia Institute of Marine Science (H. Ducklow, 2005)</i>

Undergraduate Research Mentor

<i>Trevor Tredennick</i>	<i>BBSR REU, 1995</i>
<i>Mark Otero</i>	<i>BBSR Volunteer Intern, 1997- 1998</i>
<i>Benjamin Wheeler</i>	<i>BBSR Volunteer Intern, 1998</i>
<i>Stuart Goldberg</i>	<i>BBSR REU, 1998</i>
<i>Lei Young</i>	<i>BBSR REU, 1999</i>
<i>Elizbeth Varughese</i>	<i>BBSR Volunteer Intern 2000</i>
<i>Holly Biggs</i>	<i>BBSR REU, 2000</i>
<i>Kurt Gray</i>	<i>BBSR Volunteer Intern, 2000</i>
<i>Milton Bergson</i>	<i>BBSR REU, 2005</i>

Research Grants (active or awarded since arriving at UCSB in 2001)

- Bermuda Atlantic Time-series Study, years 11-13. Period: 1998- 2001. Awarded by NSF Chem. OCE to A.H. Knap, D.K. Steinberg, C.A. Carlson, N.R. Bates and A.F. Michaels. (\$2,099,992)
- Comparative dynamics of CDOM in open ocean systems. Period: 1999 – 2003. Awarded by NSF Chem. OCE to N.B. Nelson, C.A. Carlson, and D.K. Steinberg (\$445,832)
- Collaborative Research on bacterioplankton biology and biogeochemistry at the Bermuda Atlantic Time-series Study station: An Oceanic Microbial Observatory. Period: 1999 – 2003. Awarded by NSF Microbial Observatories program to C.A. Carlson (BBSR component: \$298,318) and S.J. Giovannoni (OSU component).
- Quantification and modeling of DOC and DON release in marine systems: A study of increasing trophic complexity. Period: 2002 –2007. Awarded by NSF Biocomplexity. C.A. Carlson \$253,000 UCSB component; Bronk of VIMS is lead PI.
- Collaborative Research Linking Microbial Discovery to Biogeochemical Processes: An Oligotrophic Oceanic Microbial Observatory. Period: 2003 – 2008. Awarded by NSF Microbial Observatories program to C.A. Carlson (UCSB component: \$592,198) and S.J. Giovannoni (OSU component).
- Collaborative Research: Global Ocean Repeat Hydrography, Carbon and Tracer Measurements. Period 2003-2005 Awarded as a subcontract from University of Miami from NSF award (\$246,537).
- Chromophoric DOM: An ignored Photoactive Tracer of Geochemical Processes. Period 2003 – 2005. Awarded by NSF chemical oceanography and NASA to D. Siegel, C. Carlson and N. Nelson (\$800,000).
- The Effect of Mesoscale Eddy Perturbations on Microbial Processes and Community Structure in the Sargasso Sea. Period 2004 – 2007. Awarded by NSF Biological Oceanography to C.A. Carlson (\$342,038).
- SGER: DOM on U.S. Global Repeat Hydrography Survey: Line 16S. Period 2005. Awarded by NSF Chemical Oceanography to C.A. Carlson (\$25,901).
- UCSB Instruction Improvement Grant. Period 2005. (\$6,300)
- U.S. Global Repeat Hydrographic/CO₂/Tracer Surveys: DOM Distribution and Dynamics" Period 2008 Awarded as a subcontract from University of Miami from NSF award (\$73.795).

Journal Publications

1. Fuhrman, J.A., T.D. Sleeter, C.A. Carlson and L.M. Proctor. 1989. Dominance of bacterial biomass in the Sargasso Sea and its ecological implications. *Marine Ecology Progress Series*, 57:207-217
2. Ducklow, H.W., D.L. Kirchman, H.L. Quinby, C.A. Carlson and H.G. Dam. 1993. Stocks and dynamics of bacterioplankton carbon during the spring bloom in the eastern North Atlantic Ocean. *Deep-Sea Research II*, 40: 245-263.
3. Sambrotto, R.N., J.H. Martin, W.W. Broenkow, C.A. Carlson and S.E. Fitzwater, 1993. Nitrate utilization in surface waters of the Iceland Basin during spring summer 1989. *Deep-Sea Research II*, 40:441-457.
4. Sharp, J.H., E.T. Peltzer, M.J. Alperin, G. Cauwet, J.W. Farrington, B. Fry, D.M. Karl, J.H. Martin, A. Spitz, S. Turgid and C.A. Carlson. 1993. DOC Procedures subgroup report. *Marine Chemistry*, 41: 37-49.
5. Sharp, J.H., R. Benner, L. Bennett, C.A. Carlson, R. Dow and S.E. Fitzwater. 1993. A re-evaluation of high temperature combustion and chemical oxidation measurements of dissolved organic carbon in seawater. *Limnology and Oceanography*, 38: 1774-1782.
6. Carlson C.A., H.W. Ducklow and A.F. Michaels. 1994. Annual flux of dissolved organic carbon from the euphotic zone in the northwestern Sargasso Sea. *Nature*, 371: 405-408.
7. Michaels, A.F., N.R. Bates, K.O. Buesseler, C.A. Carlson, A.H. Knap. 1994. Carbon-cycle imbalances in the Sargasso Sea. *Nature*, 372: 537-540.
8. Sharp, J.H., R. Benner, L. Bennett, C.A. Carlson, S.E. Fitzwater, E.T. Peltzer and L. Tupas. 1994. Analyses of dissolved organic carbon in seawater: The JGOFS EqPac methods comparison. *Marine Chemistry*, 48: 91-108.
9. Carlson C.A., H.W. Ducklow. 1995. Dissolved organic carbon in the upper ocean of the central Equatorial Pacific, 1992: Daily and finescale vertical variations. *Deep Sea Research II*, 42: 639-656.
10. Ducklow, H.W., H.L. Quinby, C.A. Carlson. 1995. Bacterioplankton in the equatorial Pacific Ocean during the 1992 El Niño. *Deep-Sea Research II*, 42: 621-638.

11. Ducklow, H.W., C.A. Carlson, N.R. Bates, A.H. Knap and A.F. Michaels. 1995. Dissolved organic carbon as a component of the biological pump in the North Atlantic Ocean. *Philosophical Transactions of the Royal Society*, series B 348: 161-167.
12. Carlson C.A., H.W. Ducklow, T. D. Sleeter. 1996. Stocks and dynamics of bacterioplankton in the northwestern Sargasso Sea. *Deep Sea Research II*, 43: 491-516.
13. Carlson C.A., H.W. Ducklow. 1996. Growth of bacterioplankton and consumption of dissolved organic carbon in the Sargasso Sea. *Aquatic Microbial Ecology*, 10: 68-85.
14. Carlson C.A., D. Hansell, R. Parsons, B. Cullen. 1997. Distribution patterns of dissolved organic carbon in the Ross Sea Polynya: November-December, 1994. *Antarctic Journal of the U.S.*, 30: 203-204.
15. Hansell, D.A., N. R. Bates, C.A. Carlson. 1997. Predominance of vertical loss of carbon from surface waters of the equatorial Pacific Ocean. *Nature*, 386: 59-61.
16. Hansell, D.A., C. A. Carlson, N.R. Bates, A. Poisson, 1997. Horizontal and vertical removal of organic carbon in the equatorial Pacific Ocean: A mass balance assessment. *Deep-Sea Research II*, 44: 2115 - 2130
17. Carlson C.A., H.W. Ducklow, D.A. Hansell and W.O. Smith Jr. 1998. Organic carbon partitioning during spring phytoplankton blooms in the Ross Sea Polynya and the Sargasso Sea. *Limnology and Oceanography*, 43: 375-386.
18. Hansell, D.A., C.A. Carlson, 1998a. Net community production of dissolved organic carbon. *Global Biogeochemical Cycles*, 12: 443-453.
19. Hansell, D.A. and C.A. Carlson 1998b. Deep ocean gradients in the concentration of dissolved organic carbon. *Nature*, 395: 263-266.
20. Bates, N.R., D.A. Hansell, C.A. Carlson, and L.I. Gordon, 1998. Distribution of CO₂ species, estimates of net community production and air-sea CO₂ exchange in the Ross Sea polynya. *Journal of Geophysical Research*, 103: 2883-2896.
21. Smith, W.O., C.A. Carlson, H.W. Ducklow, and D.A. Hansell. 1998. Growth dynamics of *Phaeocystis antarctica* dominated plankton assemblages from the Ross Sea. *Marine Ecology Progress Series*, 168: 229-244.
22. Carlson, C.A., N.R. Bates, H.W. Ducklow and D.A. Hansell. 1999. Estimation of bacterial respiration and growth efficiency in the Ross Sea, Antarctica. *Aquatic Microbial Ecology*, 19: 229-244
23. Ducklow, H.W., C.A. Carlson and W.O. Smith 1999. Bacterial growth in experimental plankton assemblages and seawater cultures from the *Phaeocystis antarctica* bloom in the Ross Sea, Antarctica. *Aquatic Microbial Ecology*, 19: 215-227.
24. Lanol B.D., C.A. Carlson, S.J. Giovannoni. 2000. Bacterial chromosomal painting for in situ monitoring of cultured marine bacteria. *Environmental Microbiology*, 2 (6), 654-665.
25. Carlson C.A., D.A. Hansell, E.T. Peltzer and W.O. Smith. 2000. Stocks and dynamics of dissolved and particulate organic matter in the southern Ross Sea, Antarctica. *Deep-Sea Research II*, 47: 3201-3226.
26. Mathot, S., W.O. Smith, Jr., C.A. Carlson, D.L. Garrison, M.M. Gowing, and C.L. Vickers. 2000. Carbon partitioning within *Phaeocystis antarctica* (Prymnesiophyceae) colonies in the Ross Sea, Antarctica. *Journal of Phycology*. 36: 1049-1056.
27. Steinberg, D.K., C.A. Carlson, N.R. Bates, S.A. Goldthwait, L.P. Madin and A.F. Michaels. 2000. Zooplankton vertical migration and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea. *Deep Sea Research I*, 47: 137-158.
28. Steinberg, D.K., C.A. Carlson, N.R. Bates, R.J. Johnson, A.F. Michaels, and A.H. Knap. Overview of the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS): A decade-scale look at ocean biology and biogeochemistry. 2001 *Deep-Sea Research II*, 48: 1405-1447.
29. Sweeney, C., D.A. Hansell, C. A. Carlson, L. Codispoti, L. Gordon, J. Marra, F. Millero, W.O. Smith and T. Takahashi. 2000 Biogeochemical regimes, net community production and carbon export in the Ross Sea, Antarctica. *Deep-Sea Research II*, 47: 3369 - 3394.
30. Sweeney, C., W.O. Smith, B. Hales, R.R. Bidigare, C.A. Carlson, L.A. Codispoti, L.I. Gordon, D.A. Hansell, F.J. Millero, M. Park and T. Takahashi. 2000. Nutrient and carbon removal ratios and fluxes in the Ross Sea, Antarctica. *Deep-Sea Research II* 47: 3395 - 3422
31. Hansell, D.A. and C.A. Carlson. 2001a. Biogeochemistry of total organic carbon and nitrogen in the Sargasso Sea: Control by convective overturn. *Deep Sea Research II* 48 (8-9): 1649-1667.
32. Carlson, C.A., D.A. Hansell and W.O. Smith. Filtration volume and retention of carbon-14 labeled particulate organic carbon on GF/F filters during a *Phaeocystis antarctica* bloom in the Ross Sea, Antarctica. *Antarctic Journal of the U.S.* (in press)

33. Ducklow, H.W., C.A. Carlson, D.L. Kirchman, W.O. Smith, F. Azam, A. Sanford, M. Church, G. Steward, R. Long, D. Smith. 2001. The Seasonal Development of Bacterioplankton in the Ross Sea, Antarctica, 1994-97. *Deep Sea Research II* 48: 4199-4221.
34. Fasham, M.J.R.; Balino, B.M.; Bowles, M.C.; Anderson, R.; Archer, D.; Bathmann, U.; Boyd, P.; Buesseler, K.; Burkill, P.; Bychkov, A.; Carlson, C.; Chen, C.T.A.; Doney, S.; Ducklow, H.; Emerson, S.; Feely, R.; Feldman, G.; Garçon, V.; Hansell, D.; Hanson, R.; Harrison, P.; Honjo, S.; Jeandel, C.; Karl, D.; Le Borgne, R.; Liu, K.K.; Lochte, K.; Louanchi, F.; Lowry, R.; Michaels, A.; Monfray, P.; Murray, J.; Oschlies, A.; Platt, T.; Priddle, J.; Quinones, R.; Ruiz-Pino, D.; Saino, T.; Sakshaug, E.; Shimmield, G.; Smith, S.; Smith, W.; Takahashi, T.; Treguer, P.; Wallace, D.; Wanninkhof, R.; Watson, A.; Willebrand, J.; Wong, C.S. A new vision of ocean biogeochemistry after a decade of the Joint Global Ocean Flux Study (JGOFS). *AMBIO*. 10: 4-31.
35. Hansell, D.A. and C.A. Carlson. 2001b. Marine dissolved organic matter and the carbon cycle. *Oceanography*. 14: 41-49.
36. Kirchman, D.L., B. Meon, H.W. Ducklow, C.A. Carlson, D.A. Hansell, and G. Steward. 2001. Glucose fluxes and concentrations of dissolved combined sugars (polysaccharides) in the Ross Sea and Polar Front Zone, Antarctica. *Deep Sea Research II*, 48:4179-4197.
37. Hansell, D.A., C.A. Carlson and S. Suzuki. 2002. Dissolved organic carbon export with North Pacific Intermediate Water formation. *Global Biogeochemical Cycles* 16: 77-84.
38. Lipschultz, F., N.R. Bates, C.A. Carlson, and D.A. Hansell. 2002. New production in the Sargasso Sea: history and current status. *Global Biogeochemical Cycles* 16: 1-16.
39. Sharp, J., C.A. Carlson, E.T. Peltzer, D.M. Castle-Ward, K.B. Savidge, K.R. Rinker 2002. Final dissolved organic carbon broad community intercalibration and preliminary use of DOC reference materials. *Marine Chemistry*. 77: 239-253.
40. Carlson, C.A., S.J. Giovannoni, D.A. Hansell, S.J. Goldberg, R. Parsons, M.P. Otero, K. Vergin, and B.R. Wheeler. 2002. The effect of nutrient amendments on bacterioplankton production, community structure and DOC utilization in the northwestern Sargasso Sea. *Aquatic Microbial Ecolog.* 30: 19 - 36
41. Lomas, M.W., N.R. Bates, A.H. Knap, D.M. Karl, R. Lukas, M.R. Landry, R.R. Bidigare, D.K. Steinberg, C.A. Carlson. 2002. Modernization of our understanding of oceanographic biogeochemistry and ecosystem functioning. *EOS* 48:559-566
42. Morris, R.M., M. Rappé, S.A. Connon, K.L. Vergin, W.A. Siebold, C.A. Carlson, S.J. Giovannoni. 2002. SAR11 clade dominates ocean surface bacterioplankton. *Nature*. 420: 806-810.
43. Gardner, W.D., M.J. Richardson, C.A. Carlson, D.A. Hansell. 2003. Determining True particulate organic carbon: bottles, Pumps and Methodologies. *Deep Sea Research II*. 50:655-674.
44. Steinberg, D.S., N. B. Nelson, C. A. Carlson, and A. Prusak 2004. Production of Chromophoric Dissolved Organic Matter (CDOM) in the Open Ocean by Zooplankton and the Colonial Cyanobacterium *Trichodesmium* spp. *Mar. Ecol. Prog. Series* 267:45-56.
45. Carlson, C.A., S.J. Giovannoni, D.A. Hansell, S.J. Goldberg, R. Parsons, and K. Vergin. 2004. Interactions between DOC, microbial processes, and community structure in the mesopelagic zone of the northwestern Sargasso Sea. *Limnology and Oceanography* 49: 1073-1083.
46. Nelson, N.B., C.A. Carlson and D.K. Steinberg. 2004. Production of chromophoric dissolved organic matter by Sargasso Sea microbes. *Marine Chemistry* 89: 273-287.
47. Goldthwait, S.A., C.A. Carlson, G.K. Henderson, A.L. Alldredge. 2005. Does Fragmentation Affect Marine Snow Remineralization? *Mar. Ecol. Progr. Ser.* 305: 59-65.
48. Morris, R.M., J.C. Cho, M.S. Rappé, K.L. Vergin, C.A. Carlson, and S.J. Giovannoni. 2005. Temporal and spatial response of bacterioplankton lineages to annual convective overturn at BATS. *Limnology and Oceanography* (50):1687-1696).
49. Nelson C., and C.A. Carlson. 2005. A non-radioactive assay of bacterial productivity optimized for oligotrophic pelagic environments. *Limnology and Oceanography Methods* 3: 211-220
50. Hood, R.R., E.A. Laws, R. Armstrong, N. Bates, C.W. Brown, C.A. Carlson, F. Chai, S. Doney, P. Falkowski, R.A. Feely, M. Friedrichs, M. Landry, J.K. Moore, D. Nelson, T. Richardson, B. Salihoglu, M. Schartau, D. Toole, and J.D. Wiggert. 2006. Functional group modeling: Progress, challenges and prospects. *Deep Sea Research II* 53:459-512.
51. Angly, F.E., B. Felts, M. Breitbart, P. Salamon, R.A. Edwards, C.A. Carlson, A.M. Chen, M. Haynes, S. Kelly, H. Liu, J. Mahaffy, J.E. Mueller, J. Nulton, R. Olson, R. Parsons, S. Rayhawk, C.A. Suttle, F. Rohwer. 2006. The Marine Viromes of Four Oceanic Regions. *Public Library of Science Biology* 4:2121-2131)
52. Hewson, I., P.H. Moisander, K.M. Achilles, C.A. Carlson, B.D. Jenkins, E.A. Modragon, A.E. Morrison, J.P. Zehr. 2007. Characteristics of diazotrophs in surface to abyssopelagic waters of the Sargasso Sea. *Aquatic Microbial Ecology* 46: 15-30.

53. Nelson, N.B., D.A. Siegel, C.A. Carlson, C. Swan, W.M. Smethie, S. Khatiwala. 2007 Hydrography of Chromophoric Dissolved Organic Matter in the North Atlantic. *Deep Sea Research I* 54:710-731.
54. D.J. McGillicuddy, L.A. Anderson, N.R. Bates, T. Bibby, K.O. Buesseler, C.A. Carlson, C.S. Davis, C. Ewart, P.G. Falkowski, S. Goldthwait, D.A. Hansell, W.J. Jenkins, R. Johnson, V.K. Kosnyrev, J.P. Ledwell, Q.P. Li, D.A. Siegel, D.K. Steinberg. 2007. Eddy/wind interaction stimulate extraordinary mid-ocean plankton blooms *Science* 316: 1021-1026.
55. Claudia R. Benitez-Nelson, Robert R. Bidigare, Tommy D. Dickey, Michael R. Landry, Carrie L. Leonard, Susan L. Brown, Francesco Nencioli, Yoshimi M. Rii, Kanchan Maiti, Jamie W. Becker, Thomas S. Bibby, Wil Black, Wei-Jun Cai, Craig Carlson, Fei Rhou Chen, Victor S. Kuwahara, Claire Mahaffey, Patricia M. McAndrew, Paul D. Quay, Michael S. Rappe, Karen E. Selph, Melinda P. Simmons, and Eun Jin Yang. 2007. Mesoscale eddies drive increased silica export in the subtropical Pacific Ocean *Science* 316: 1017-1021
56. Ewart C.S., M.K. Meyers, E. Wallner, D.J. McGillicuddy, C.A. Carlson. Spatial and temporal dynamics of bacterioplankton in a cyclonic and anticyclonic mode-water eddy in the northwestern Sargasso Sea. *Deep Sea Research II (in revision)*
57. Carlson, C.A., P.A. del Giorgio, G.J. Herndl. Microbes and the Dissipation of Energy and Respiration: From Cells to Ecosystems. *Oceanography (in press)*

Thesis, Book Chapters and Books

1. Ducklow, H.W. and C.A. Carlson. 1992. Oceanic bacterial production. Advances in Microbial Ecology. (K.C. Marshall, ed.) Plenum Press, New York 12: 113-181.
2. Carlson, C.A. 1994. Stocks and Dynamics of Bacterioplankton and Dissolved Organic Carbon in the Open Ocean. University of Maryland and Horn Point Environmental Laboratory. 212 pages
3. Carlson C.A., N.R. Bates, D.A. Hansell and D.K. Steinberg. 2001. Nutrient Cycling: The Carbon Cycle. Encyclopedia of Ocean Science. (J. Steele, S. Thorpe, and K. Turekian, eds.) Academic Press, London. 390-400.
4. Carlson C.A. (2002) Production and Consumption Processes. In Biogeochemistry of Marine Dissolved Organic Matter (D.A. Hansell and C.A. Carlson, eds). Academic Press, San Diego. Pg. 91-151
5. Hansell D.A. and C.A. Carlson (2002) editors of Biogeochemistry of Marine Dissolved Organic Matter. Academic Press, San Diego. Pp 774.
6. Carlson C.A. and D.A. Hansell. 2003. The Contribution of dissolved organic carbon and nitrogen to biogeochemistry of the Ross Sea. Biogeochemistry of the Ross Sea. (G. DiTullio and R. Dunbar, eds.) Antarctic Research Series 78: 123-142.

Technical Reports and News Articles

1. Sleeter, T.D., A.H. Knap, C.A. Carlson, and R. Sherriff-Dow. 1987. Marine Environmental Survey for the East Broadway Development. Bermuda Biological Station for Research Inc.
2. Carlson C.A., N.R. Bates and D.K. Steinberg. 1997. Time-Series Data Sets Provide a Valuable Resource for Synthesis and Modeling Phase of U.S. JGOFS. *U.S. JGOFS News* 8: 7-8.
3. Carlson C.A. 1998. Community Structure and its effect on export and remineralization rates. Synthesis and Modeling Project: Time-Series Stations and Modeling. *U.S. JGOFS Planning Report* 21: 15-20.
4. Carlson C.A., N.R. Bates and D.K. Steinberg 1998. BATS Time-series celebrates a decade of ocean research: Providing insight toward long-term changes in upper ocean biogeochemistry. *U.S. JGOFS News* 9: 10-11.
5. Carlson C.A., N.R. Bates and D.K. Steinberg 1999. Ten years of BATS data: A unique opportunity to observe the variability of biogeochemical phenomena. *Earth System Monitor* June 1999: 9-10.
6. Bates N.R. and C.A. Carlson, 2000. Linkages between ocean biogeochemistry at BATS and modes of climate variability (e.g. NAO, ENSO). *U.S. JGOFS News* 10: 5-6.
7. Carlson C.A. 2002. The Microbial Observatory: Taking a closer look at the ocean. *BBSR Currents*, Summer 2002, pp. 6-7.
8. S.C. Doney, R. Anderson, J. Bishop, K. Caldeira, C. Carlson, M.E. Carr, R. Feely, M. Hood, C. Hopkins, R. Janke, D. Karl, J. Kleypas, C. Lee, R. Letelier, C. McClain, C. Sabine, J. Sarmiento, B. Stephens., R. Weller. 2004. Ocean Carbon and Climate Change (OCCC): An Implementation Strategy for U.S. Ocean Carbon Research. A white paper prepared fro the U.S. Carbon Cycle Science Scientific Steering group and Interagency Working Group. Pp 108.

