Stanford



Kevin Arrigo

Donald and Donald M. Steel Professor of Earth Sciences and Senior Fellow at the Woods Institute for the Environment

Earth System Science

Bio

BIO

Kevin Arrigo received his B.S in Natural Resources from the University of Michigan in 1983. After working for the Michigan Department of Natural Resources, he attended the University of Southern California where he earned his Ph.D. in Biological Sciences in 1992. He went on to a postdoctoral position at the NASA Goddard Space Flight Center and became a civil servant there in 1995. In 1999, he joined the Stanford University faculty as an Assistant Professor in the Department of Geophysics, where he stayed until 2007 when he joined the Department of Environmental Earth System Science. Arrigo served as director of the interdisciplinary Graduate Program in Earth, Energy, and Environmental Sciences from 2005-2013. In 2012, he became co-director of the Earth Systems Program within the School of Earth Sciences. He has served on a number of university committees, including the Committee on Academic Computing and Information Services (2010-2012), Committee for the Review of Undergraduate Majors (2010-2013), and the Bing Overseas Studies Faculty Oversight Committee (2011-present). As a biological oceanographer, his principal interest has been in the role marine microalgae play in modulating the cycling of carbon and nitrogen, with particular emphasis on the scales of temporal and spatial variability of biological productivity in polar oceans. This knowledge is essential to understanding how anthropogenic and atmospheric forcing controls the biogenic flux of carbon dioxide into the oceans, and ultimately, to the sediments. His research is highly interdisciplinary and incorporates three fundamental approaches, (1) satellite remote sensing, (2) ecophysiological modeling, and (3) laboratory and field studies. By combining these techniques, it is possible to address many complex aspects of ocean biogeochemistry at spatial and temporal scales that would not be possible using a single approach

ACADEMIC APPOINTMENTS

- Professor, Earth System Science
- Senior Fellow, Stanford Woods Institute for the Environment
- Member, Bio-X
- Affiliate, Stanford Woods Institute for the Environment

ADMINISTRATIVE APPOINTMENTS

- Fisheries Biologist, Department of Natural Resources, State of Michigan, (1984-1986)
- Teaching Assistant, Department of Biological Sciences, University of Southern California, (1986-1991)
- Research Assistant, Department of Biological Sciences, University of Southern California, (1987-1992)
- Resident Research Assistant, NASA Goddard Space Flight Center, (1992-1994)
- Adjunct Assistant Professor MEES, Horn Point Environmental Laboratory, University of Maryland, (1993-1999)
- Assistant Research Professor Dept. of Meteorology, University of Maryland, (1994-1995)
- Adjunct Assistant Professor Dept. of Meteorology, University of Maryland, (1994-1999)

- Oceanographer, NASA Goddard Space Flight Center, (1995-1999)
- Assistant Professor of Geophysics, Stanford University, (1999-2004)
- Associate Professor of Geophysics, Stanford University, (2004-2007)
- Director, Graduate Program in Earth, Energy, and Environmental Sciences, School of Earth Sciences, Stanford University, (2005-2010)
- Associate Chair, Department of Environmental Earth System Science, Stanford University, (2007- present)
- Associate Professor, Department of Environmental Earth System Science, Stanford University, (2007-2009)
- Professor, Department of Environmental Earth System Science, Stanford University, (2009- present)

HONORS AND AWARDS

- Competitive Scholarship, Oakland University (1977 - 1979)
- Competitive Scholarship, State of Michigan (1980 - 1983)
- Cum Laude, University of Michigan (1983)
- Outstanding Teaching Assistant Award, University of Southern California (1987 - 1991)
- Antarctic Service Medal, National Science Foundation (1988 - 1989)
- ARCS Fellowship, University of Southern California (1990 - 1992)
- Global Change Distinguished Postdoctoral Fellowship, United States Department of Energy (1992 - 1994)
- Peer Award for Outstanding Publication, NASA GSFC, Laboratory for Hydrospheric Processes (1995)
- Performance Award, NASA Goddard Space Flight Center (1995)
- Special Act Award, NASA Goddard Space Flight Center (1995)
- Quality Increase Award, NASA Goddard Space Flight Center (1996)
- Special Act Award, NASA Goddard Space Flight Center (1997)
- Frederick E. Terman Fellowship Award, School of Earth Sciences, Stanford University (1999-2002)
- Chair, Gordon Research Conference on Polar Marine Science, Gordon Research Conference (2007)
- School of Earth Sciences Excellence in Teaching Award, Stanford University (2008)
- Aldo Leopold Leadership Fellowship, Woods Institute for the Environment, Stanford University (2009)
- Gerhard Caspar University Fellow in Undergraduate Education, Stanford University (2011-2016)
- Group Achievement Award for ICESCAPE, NASA (2012)
- Donald & Donald M. Steel Professor in Earth Sciences, Stanford University (2013-present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Director, Earth Systems Program, Stanford University (2015 - present)
- Associate Editor, Journal of Geophysical Research - Biogeochemistry (2012 - present)
- Co-Director, Earth Systems Program, School of Earth Sciences, Stanford University (2012 - 2015)
- Aldo Leopold Leadership Program Committee, Stanford University (2011 - present)
- Bing Overseas Studies Program, Faculty Oversight Committee, Stanford University (2011 - present)
- Advisory Board, Alliance for Climate Education (2010 - present)
- Committee for the Review of Undergraduate majors (C-RUM), Stanford University (2010 - 2013)
- Faculty of 1000, Contributing Member, Ecosystem Ecology (2010 - 2013)
- Committee on Academic Computing and Information Services (C-ACIS), Stanford University (2010 - 2011)
- E-IPER Reauthorization Review Committee, Stanford University (2010 - 2010)

- Environmental Ventures Project, Woods Institute for the Environment, Review Committee, Stanford University (2009 - 2012)
- Invited Speaker, Recent changes in Arctic Ocean Primary Production. Gordon Research Conference on Polar Marine Science, Lucca (Barga), Italy, March 15-20, Gordon Research Conference (2009 - 2009)
- Invited Speaker, University of California Santa Cruz, 19 January 2009, University of California Santa Cruz (2009 - 2009)
- Invited Speaker, Using remote sensing to monitor oceans and ice. Southern Ocean Sentinel program, Hobart, Tasmania (Australia), April 20-25, Southern Ocean Sentinel program (2009 - 2009)
- Board of Governors, Alternate, Ocean Leadership (2008 - present)
- Center for Ocean Solutions Early Career Fellowship, Selection Committee, Stanford University (2008 - present)
- Review Editor, Aquatic Biology (2008 - present)
- Earth Systems Undergraduate Curriculum Committee, Stanford University (2008 - 2012)
- Library Committee, School of Earth Sciences, Stanford University (2008 - 2012)
- Advisory Committee for Educational Outreach, School of Earth Sciences, Stanford University (2008 - 2011)
- Branner Library Space Committee, School of Earth Sciences, Stanford University (2008 - 2010)
- Chair, School of Earth Sciences Faculty Search Committee, Marine Chemist/Geochemist, Stanford University (2008 - 2010)
- School of Earth Sciences Faculty Search Committee, Climate scientist, Stanford University (2008 - 2009)
- Invited Speaker, Changes in Arctic Ocean primary production, 1998-2008, Arctic Change 2008, Quebec City, Quebec, Canada, December 9-12, Arctic Change 2008 (2008 - 2008)
- Associate Chair, Department of Environmental Earth System Science, Stanford University (2007 - present)
- Oceans Working Group, Canadian Institute for Advanced Research (CIFAR) (2007 - 2009)
- Chair, Gordon Research Conference on Polar Marine Science, Ventura, CA, March 25-30, Gordon Research Conference (2007 - 2007)
- Invited Speaker, C.B. van Niel Lecture, Hopkins Marine Station, Stanford University, April 6, Hopkins Marine Station, Stanford University (2007 - 2007)
- Invited Speaker, Duke University, 12 January, Duke University (2007 - 2007)
- Invited Speaker, Nicholas School Marine Laboratory, Duke University, 1 May, Duke University (2007 - 2007)
- Editorial Board, Annual Reviews of Marine Science (2006 - 2012)
- Chair, School of Earth Sciences Faculty Search Committee, Physical Oceanographer, Stanford University (2006 - 2007)
- Committee for School of Earth Sciences Reorganization, Stanford University (2006 - 2007)
- Invited Participant, SCOR Workshop on Anthropogenic Nitrogen Impacts on the Open Ocean, Norwich, UK, 16-20 November, Scientific Committee on Oceanic Research (2006 - 2006)
- Working Group for Carbon Research, IMBER/SOLAS (2005 - 2011)
- Director, Graduate Program in Earth, Energy, and Environmental Sciences, Stanford University (2005 - 2010)
- CEES Faculty Advisory Board, Stanford University (2005 - 2009)
- Understanding Change Panel (UCP), Study of Environmental Arctic Change (SEARCH) (2005 - 2008)
- School of Earth Sciences Faculty Search Committee, Climate scientist, Stanford University (2005 - 2007)
- Appointment Committee, Suki Hoagland-Senior Lecturer in IPER, Stanford University (2005 - 2005)
- Geological and Environmental Sciences Faculty Search Committee, Paleobiology, Stanford University (2005 - 2005)
- Invited Speaker, Oregon State University, 7 December, Oregon State University (2005 - 2005)
- Vice-Chair, Gordon Research Conference on Polar Marine Science, Gordon Research Conference (2005 - 2005)
- School of Earth Sciences Council, Stanford University (2004 - 2010)
- Board of Governors, Alternate, Ocean Leadership (2004 - 2008)
- Chair, School of Earth Sciences Ph.D/M.S. Academic Programs Committee, Stanford University (2004 - 2005)
- Geophysics Faculty Search Committee, Computational Global Seismology, Stanford University (2004 - 2005)

- Invited Speaker, Oregon State University, December 2, Oregon State University (2004 - 2004)
- Member, The Bering Sea Ecological Study (BEST) Committee, National Science Foundation (2003 - 2006)
- Carnegie Institute of Washington, Global Ecology/Oceanographer Search Committee, Stanford University (2003 - 2005)
- Committee on A Science Plan for the North Pacific Research Board, National Research Council of the National Academies (2003 - 2005)
- Member, Committee on A Science Plan for the North Pacific Research Board, National Research Council of the National Academies (2003 - 2005)
- Planning committee for the Bering Sea Ecological Study (BEST), National Science Foundation (2003 - 2005)
- Geophysics Faculty Pre-Search Committee, Stanford University (2003 - 2004)
- School of Earth Sciences Academic Programs Committee, Stanford University (2003 - 2004)
- Invited Speaker, Aquatic Sciences Meeting, Salt Lake City, American Society of Limnology and Oceanography (2003 - 2003)
- Invited Speaker, EGS-AGU-EUG Joint Assembly, Nice, France, EGS-AGU-EUG (2003 - 2003)
- Invited Speaker, Gordon Research Conference on Polar Marine Science, Ventura, California, Gordon Research Conference (2003 - 2003)
- Invited Speaker, The Bering Sea Ecological Study (BEST) Workshop, Seattle, Washington, The Bering Sea Ecological Study (BEST) (2003 - 2003)
- Invited Speaker, The Royal Society (The Role of the Southern Ocean in Global Processes: An Earth System Science Approach), London, The Royal Society (2003 - 2003)
- Invited Speaker, University of Southern California, Los Angeles, CA, January 28, University of Southern California (2003 - 2003)
- Faculty Liaison, The Australia Program, Overseas Studies Program, Stanford University (2002 - present)
- Earth Systems Executive Committee, Stanford University (2002 - 2012)
- Academic Advisor for Sophomores, Stanford University (2002 - 2009)
- Editor, Oceanography of the Ross Sea, Antarctic Science (2002 - 2002)
- Invited Speaker, Hopkins Marine Station, Stanford University, January 25, Hopkins Marine Station, Stanford University (2002 - 2002)
- Invited Speaker, United States Geological Survey, Menlo Park, CA, December, United States Geological Survey (2002 - 2002)
- Invited Speaker, University of California, Irvine, April 19, University of California, Irvine (2002 - 2002)
- Invited Speaker, University of California, Santa Barbara, March 12, University of California, Santa Barbara (2002 - 2002)
- Academic Advisor for Freshmen, Stanford University (2001 - 2008)
- Interdisciplinary Graduate Program In Environment and Resource (IPER) Advisory Council, Stanford University (2001 - 2008)
- Stanford's Environmental Initiative, Stanford University (2001 - 2004)
- Invited Speaker, International Polynya Symposium 2001, Polynyas in Changing Polar Seas, International Polynya Symposium 2001 (2001 - 2001)
- Invited Speaker, Romberg Tiburon Center, San Francisco State University (2001 - 2001)
- Panel on Biocomplexity in the Environment/Instrumentation Development for Environmental Activities, National Science Foundation (2001 - 2001)
- Chair, Department of Geophysics Teaching & Technology Committee, Stanford University (2000 - 2007)
- Ad-hoc Committee for Interdisciplinary Environmental Studies, Stanford University (2000 - 2005)
- Curriculum Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Strategic Planning Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Technology and Teaching Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Faculty/Staff Development Committee, Geophysics Dept., Stanford University (2000 - 2003)
- Member, AGU Committee on Statues and Bylaws, American Geophysical Union (2000 - 2003)
- Invited speaker, UC Santa Cruz (2000 - 2000)
- Member, DOE Panel on Ocean Carbon Sequentration Research, Department of Energy (2000 - 2000)
- Invited speaker, Gordon Research Conference (1998 - 1998)
- Council of Fellows, Joint Center for Earth System Science, Dept. of Meteorology, University of Maryland (1997 - 1997)

- Editor, Vol. 73, Antarctic Research Series (1997 - 1997)
- Invited speaker, NASA Goddard Space Flight Center (1997 - 1997)
- NASA Earth Science Vision team, NASA (1997 - 1997)
- Visiting Senior Scientist Search Committee, Laboratory for Hydrospheric Processes, NASA (1997 - 1997)

PROFESSIONAL EDUCATION

- Ph.D., University of Southern California , Biology (1992)
- B.S., University of Michigan , Natural Resources (1983)

LINKS

- Ocean Biogeochemistry Group: http://ocean.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Research

My students and I use a combination of laboratory and field studies, remote sensing, and computer modeling techniques to understand phytoplankton dynamics in regions ranging from the Southern Ocean to the Red Sea. In particular, we are interested in the role these organisms play in regulating the uptake of atmospheric carbon dioxide by the ocean, as well as in how they help structure marine ecosystems. We work with colleagues in fields as diverse as molecular biology, glaciology, and physical oceanography to develop a comprehensive understanding of how these ecosystems operate and how they may respond to environmental changes--past, present, and future.

Teaching

I teach courses for graduate and undergraduate students on ocean biogeochemistry, global environmental change, satellite remote sensing, numerical ecosystem modeling, and biological oceanography. I also co-teach a field course on coral reef ecology as part of Stanford's Overseas Studies Program in Australia.

Professional Activities

Chair, Gordon Research Conference on Polar Marine Science, 2007; Editorial Board, Annual Reviews, 2006-present; IMBER/SOLAS Working Group for Carbon Research, 2005-present; Board of Governors, Alternate, Joint Oceanographic Institutions, 2004-present; Vice-Chair, Gordon Research Conference on Polar Marine Science, 2005; Member, Bering Sea Ecological Study (BEST) Committee, National Science Foundation, March 2003-present; Member, Committee on A Science Plan for the North Pacific Research Board, National Research Council of the National Academies, 2003-2005; Editor, Ross Sea Oceanography, Antarctic Science, Volume 15, 2003

PROJECTS

- Research Project - Stanford University
- Research Project - Stanford University

Teaching

COURSES

2026-27

- Biological Oceanography: EARTHSYS 151, EARTHSYS 251, ESS 151, ESS 251 (Aut)
- Remote Sensing of the Oceans: EARTHSYS 141, EARTHSYS 241, ESS 141, ESS 241 (Win)

2025-26

- Biological Oceanography: EARTHSYS 151, EARTHSYS 251, ESS 151, ESS 251 (Aut)
- Remote Sensing of the Oceans: EARTHSYS 141, EARTHSYS 241, ESS 141, ESS 241, GEOPHYS 141 (Win)

2024-25

- Introduction to Earth Systems: EARTHSYS 10 (Aut)

2023-24

- Biological Oceanography: EARTHSYS 151, EARTHSYS 251, ESS 151, ESS 251 (Spr)
- Introduction to Earth Systems: EARTHSYS 10 (Aut)
- Remote Sensing of the Oceans: EARTHSYS 141, EARTHSYS 241, ESS 141, ESS 241 (Win)
- The Oceans: An Introduction to the Marine Environment: EARTHSYS 8, ESS 8 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Hanif Sulaiman

Doctoral Dissertation Advisor (AC)

Claudette Proctor

Doctoral (Program)

James Lauer, Claudette Proctor

Publications

PUBLICATIONS

- **Urea dominates summer nitrogen uptake in the Pacific Arctic Ocean during a harmful dinoflagellate bloom.** *Harmful algae*
  Lim, S. M., Mills, M. M., Payne, C. M., Fachon, E., Anderson, D. M., Pickart, R. S., Lago, L. S., Arrigo, K. R.
  2026; 160: 103230
- **Urea dominates summer nitrogen uptake in the Pacific Arctic Ocean during a harmful dinoflagellate bloom** *HARMFUL ALGAE*
  Lim, S. M., Mills, M. M., Payne, C. M., Fachon, E., Anderson, D. M., Pickart, R. S., Lago, L. S., Arrigo, K. R.
  2026; 160
- **Particle Interceptor Trap Deployments Demonstrate Enhanced Export Driven by Frontal Dynamics in the Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Lauer, J. A., van Dijken, G. L., Mills, M. M., Pickart, R. S., Arlen, L., Lim, S. M., Li, E., Payne, C. M., Proctor, C., Zhong, G., Prakash, M., Michel, C., Arrigo, et al
  2026; 131 (9)
- **Evolution of an Extensive Under-Ice Phytoplankton Bloom in the Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Proctor, C., Mills, M. M., van Dijken, G. L., Lauer, J. A., Lim, S. M., Palm, A., Payne, C. M., Pickart, R. S., Mordy, C. W., Li, E., Prakash, M., Arrigo, K. R.
  2026; 131 (9)
- **Southern Ocean net primary production influenced by seismically modulated hydrothermal iron** *NATURE GEOSCIENCE*
  Schine, C. M. S., Lund Snee, J., Lyford, A., Van Dijken, G., Arrigo, K. R.
  2025
- **Monitoring Harmful Algal Blooms in the Southern California Current Using Satellite Ocean Color and In Situ Data** *JOURNAL OF MARINE SCIENCE AND ENGINEERING*
  Lee, M., Arrigo, K., Smith, A., Woodson, C., Lee, J., Micheli, F.
  2025; 13 (11)

- **Genome-resolved biogeography of Phaeocystales, cosmopolitan bloom-forming algae.** *Nature communications*
  Füssy, Z., Lampe, R. H., Arrigo, K. R., Barry, K., Brisbin, M. M., Brussaard, C. P., Decelle, J., de Vargas, C., DiTullio, G. R., Elbourne, L. D., Frischer, M. E., Goodstein, D. M., Grigoriev, et al
  2025; 16 (1): 8559

- **Ice gliding diatoms establish record-low temperature limits for motility in a eukaryotic cell.** *Proceedings of the National Academy of Sciences of the United States of America*
  Zhang, Q., Leng, H. T., Li, H., Arrigo, K. R., Prakash, M.
  2025; 122 (37): e2423725122

- **Observation-Based Estimate of Net Community Production in Antarctic Sea Ice** *GEOPHYSICAL RESEARCH LETTERS*
  Dalman, L. A., Meiners, K. M., Thomas, D. N., Deman, F., Bestley, S., Moreau, S., Arrigo, K. R., Campbell, K., Corkill, M., Cozzi, S., Delille, B., Fransson, A., Fraser, et al
  2025; 52 (7)

- **Unveiling the contribution of particle-associated non-cyanobacterial diazotrophs to N2 fixation in the upper mesopelagic North Pacific Gyre.** *Communications biology*
  Reeder, C. F., Filella, A., Voznyuk, A., Coët, A., James, R. C., Rohrer, T., White, A. E., Berline, L., Grosso, O., van Dijken, G., Arrigo, K. R., Mills, M. M., Turk-Kubo, et al
  2025; 8 (1): 287

- **Vertical Carbon Export During a Phytoplankton Bloom in the Chukchi Sea: Physical Setting and Frontal Subduction** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Pickart, R. S., Spall, M. A., Bahr, F., Lago, L., Lin, P., Pacini, A., Mills, M., Huang, J., Arrigo, K. R., van Dijken, G., Mcraven, L. T., Roberts, S.
  2024; 129 (11)

- **Response of indicator species to changes in food web and ocean dynamics of the Ross Sea, Antarctica** *ANTARCTIC SCIENCE*
  Ainley, D. G., Morandini, V., Salas, L., Nur, N., Rotella, J., Barton, K., Lyver, P., Goetz, K. T., Larue, M., Foster-Dyer, R., Parkinson, C. L., Arrigo, K. R., Van Dijken, et al
  2024

- **The role of biota in the Southern Ocean carbon cycle (vol 5, pg 390, 2024)** *NATURE REVIEWS EARTH & ENVIRONMENT*
  Boyd, P. W., Arrigo, K. R., Ardyna, M., Halfter, S., Huckstadt, L., Kuhn, A. M., Lannuzel, D., Neukermans, G., Novaglio, C., Shadwick, E. H., Swart, S., Thomalla, S. J.
  2024

- **The Arctic Ocean Nitrogen Cycle** *JOURNAL OF GEOPHYSICAL RESEARCH-BIOGEOSCIENCES*
  Arrigo, K. R., Mills, M. M., Juranek, L. W.
  2024; 129 (7)

- **The role of biota in the Southern Ocean carbon cycle** *NATURE REVIEWS EARTH & ENVIRONMENT*
  Boyd, P. W., Arrigo, K. R., Ardyna, M., Halfter, S., Huckstadt, L., Kuhn, A. M., Lannuzel, D., Neukermans, G., Novaglio, C., Shadwick, E. H., Swart, S., Thomalla, S. J.
  2024

- **Pan-Arctic analysis of the frequency of under-ice and marginal ice zone phytoplankton blooms, 2003-2021** *ELEMENTA-SCIENCE OF THE ANTHROPOCENE*
  Payne, C. M., van Dijken, G. L., Arrigo, K. R.
  2024; 12 (1)

- **The Pacific water flow branches in the eastern Chukchi Sea** *PROGRESS IN OCEANOGRAPHY*
  Pickart, R. S., Lin, P., Bahr, F., Mcraven, L. T., Huang, J., Pacini, A., Arrigo, K. R., Ashjian, C. J., Berchok, C., Baumgartner, M. F., Cho, K., Cooper, L. W., Danielson, et al
  2023; 219

- **Macronutrient biogeochemistry in Antarctic land-fast sea ice: Insights from a circumpolar data compilation** *MARINE CHEMISTRY*
  Henley, S. F., Cozzi, S., Fripiat, F., Lannuzel, D., Nomura, D., Thomas, D. N., Meinersg, K. M., Vancoppenollej, M., Arrigo, K., Stefels, J., van Leeuwe, M., Moreau, S., Jones, et al
  2023; 257

- **Rapid climate change alters the environment and biological production of the Indian Ocean.** *The Science of the total environment*

Dalpadado, P., Roxy, M. K., Arrigo, K. R., van Dijken, G. L., Chierici, M., Ostrowski, M., Skern-Mauritzen, R., Bakke, G., Richardson, A. J., Sperfeld, E.

2023: 167342

- **Spatial and Interannual Variability of Antarctic Sea Ice Bottom Algal Habitat, 2004-2019** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Lim, S. M., van Dijken, G. L., Arrigo, K. R.
  2023; 128 (9)
- **Similarity in phytoplankton photophysiology among under-ice, marginal ice, and open water environments of Baffin Bay (Arctic Ocean)** *ELEMENTA-SCIENCE OF THE ANTHROPOCENE*
  Joy-Warren, H. L., Lewis, K. M., Ardyna, M., Tremblay, J., Babin, M., Arrigo, K. R.
  2023; 11 (1)
- **Light, ammonium, pH, and phytoplankton competition as environmental factors controlling nitrification** *LIMNOLOGY AND OCEANOGRAPHY*
  Proctor, C., Coupel, P., Casciotti, K., Tremblay, J., Zakem, E., Arrigo, K. R., Mills, M. M.
  2023
- **Sensitivity of the Relationship Between Antarctic Ice Shelves and Iron Supply to Projected Changes in the Atmospheric Forcing** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Dinniman, M. S., St-Laurent, P., Arrigo, K. R., Hofmann, E. E., van Dijken, G. L.
  2023; 128 (2)
- **Wildfire aerosol deposition likely amplified a summertime Arctic phytoplankton bloom** *COMMUNICATIONS EARTH & ENVIRONMENT*
  Ardyna, M., Hamilton, D. S., Harmel, T., Lacour, L., Bernstein, D. N., Laliberte, J., Horvat, C., Laxenaire, R., Mills, M. M., van Dijken, G., Polyakov, I., Claustre, H., Mahowald, et al
  2022; 3 (1)
- **Seasonal Water Mass Evolution and Non-Redfield Dynamics Enhance CO2 Uptake in the Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Zhangxian, O., Collins, A., Li, Y., Qi, D., Arrigo, K. R., Zhuang, Y., Nishino, S., Humphreys, M. P., Kosugi, N., Murata, A., Kirchman, D. L., Chen, L., Chen, et al
  2022; 127 (8)
- **Seasonal Water Mass Evolution and Non-Redfield Dynamics Enhance CO2 Uptake in the Chukchi Sea.** *Journal of geophysical research. Oceans*
  Ouyang, Z., Collins, A., Li, Y., Qi, D., Arrigo, K. R., Zhuang, Y., Nishino, S., Humphreys, M. P., Kosugi, N., Murata, A., Kirchman, D. L., Chen, L., Chen, et al
  2022; 127 (8): e2021JC018326
- **North-South Differences in Under-Ice Primary Production in the Chukchi Sea From 1988 to 2018** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Payne, C. M., van Dijken, G. L., Arrigo, K. R.
  2022; 127 (7)
- **Springtime phytoplankton responses to light and iron availability along the western Antarctic Peninsula** *LIMNOLOGY AND OCEANOGRAPHY*
  Joy-Warren, H. L., Alderkamp, A., van Dijken, G. L., Jabre, L., Bertrand, E. M., Baldonado, E. N., Glickman, M. W., Lewis, K. M., Middag, R., Seyitmuhammedov, K., Lowry, K. E., van de Poll, W., Arrigo, et al
  2022
- **The distribution of Fe across the shelf of the Western Antarctic Peninsula at the start of the phytoplankton growing season** *MARINE CHEMISTRY*
  Seyitmuhammedov, K., Stirling, C. H., Reid, M. R., van Hale, R., Laan, P., Arrigo, K. R., van Dijken, G., Alderkamp, A., Middag, R.
  2022; 238
- **Increases in Arctic sea ice algal habitat, 1985-2018** *Elementa: Science of the Anthropocene*
  Lim, S. M., Payne, C. M., van Dijken, G. L., Arrigo, K. R.
  2022; 10 (1)
- **Warming of the Indian Ocean and its impact on temporal and spatial dynamics of primary production** *PROGRESS IN OCEANOGRAPHY*
  Dalpadado, P., Arrigo, K. R., van Dijken, G. L., Gunasekara, S. S., Ostrowski, M., Bianchi, G., Sperfeld, E.

2021; 198

- **UCYN-A/haptophyte symbioses dominate N2 fixation in the Southern California Current System.** *ISME communications*
  Turk-Kubo, K. A., Mills, M. M., Arrigo, K. R., van Dijken, G., Henke, B. A., Stewart, B., Wilson, S. T., Zehr, J. P.
  2021; 1 (1): 42
- **Fe-binding organic ligands in coastal and frontal regions of the western Antarctic Peninsula** *BIOGEOSCIENCES*
  Ardiningsih, I., Seyitmuhammedov, K., Sander, S. G., Stirling, C. H., Reichart, G., Arrigo, K. R., Gerringa, L. J. A., Middag, R.
  2021; 18 (15): 4587-4601
- **Physical Controls on the Macrofaunal Benthic Biomass in Barrow Canyon, Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Pickart, R. S., Spall, M. A., Lin, P., Bahr, F., McRaven, L. T., Arrigo, K. R., Grebmeier, J. M.
  2021; 126 (5)
- **Massive Southern Ocean phytoplankton bloom fed by iron of possible hydrothermal origin.** *Nature communications*
  Schine, C. M., Alderkamp, A., van Dijken, G., Gerringa, L. J., Sergi, S., Laan, P., van Haren, H., van de Poll, W. H., Arrigo, K. R.
  2021; 12 (1): 1211
- **Response of Lower Sacramento River phytoplankton to high-ammonium wastewater effluent** *Elementa: Science of the Anthropocene*
  Strong, A. L., Mills, M. M., Huang, I. B., van Dijken, G. L., Driscoll, S. E., Berg, G. M., Kudela, R. M., Monismith, S. G., Francis, C. A., Arrigo, K. R.
  2021; 9(1)
- **Under-Ice Phytoplankton Blooms: Shedding Light on the "Invisible" Part of Arctic Primary Production** *FRONTIERS IN MARINE SCIENCE*
  Ardyna, M., Mundy, C. J., Mayot, N., Matthes, L. C., Oziel, L., Horvat, C., Leu, E., Assmy, P., Hill, V., Matrai, P. A., Gale, M., Melnikov, I. A., Arrigo, et al
  2020; 7
- **Dissolved Trace Metals in the Ross Sea** *FRONTIERS IN MARINE SCIENCE*
  Gerringa, L. J. A., Alderkamp, A., van Dijken, G., Laan, P., Middag, R., Arrigo, K. R.
  2020; 7
- **Comparison of Cloud-Filling Algorithms for Marine Satellite Data** *REMOTE SENSING*
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