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(a) Professional Preparation

Oregon State University	Oceanography	Ph.D., 1979
University of Washington	Oceanography	B.S., 1975
University of Washington	Chemistry	B.S., 1975

(b) Appointments

Senior Scientist, Monterey Bay Aquarium Research Institute, 1999-present
Science Department Chair, Monterey Bay Aquarium Research Institute, 2002-2005
Professor of Chemical Oceanography, Moss Landing Marine Laboratories, San Jose State University, 1988-1999
Chair, University-National Oceanographic Laboratory System, 1994-1998
Assistant Director, Moss Landing Marine Laboratories, 1994-1997
Assistant & Associate Research Oceanographer, University of California, Santa Barbara, 1979-1988

(c) Publications

Five publications most closely related to the proposed project

- Johnson, K. S. and L. J. Coletti. 2002. In situ ultraviolet spectrophotometry for high resolution and long term monitoring of nitrate, bromide and bisulfide in the ocean. *Deep-Sea Research I*, 49, 1291-1305, [http://dx.doi.org/10.1016/S0967-0637\(02\)00020-1](http://dx.doi.org/10.1016/S0967-0637(02)00020-1).
- Riser, S. C. and K. S. Johnson. 2008. Net production of oxygen in the subtropical ocean. *Nature*, 451, 323-325, <http://dx.doi.org/10.1038/nature06441>.
- Martz, T. R., K. S. Johnson and S. C. Riser. 2008. Ocean metabolism observed with oxygen sensors on profiling floats in the Pacific. *Limnology and Oceanography*, 53, 2094-2111, http://dx.doi.org/10.4319/lo.2008.53.5_part_2.2094.
- Johnson, K. S., S. C. Riser and D. M. Karl. 2010. Nitrate supply from deep to near-surface waters of the North Pacific subtropical gyre. *Nature*. 465, 1062-1065, <http://dx.doi.org/10.1038/nature09170>
- Martz, T. R., J. G. Connery and K. S. Johnson. 2010. Testing the Honeywell Durafet® for seawater pH applications. *Limnology and Oceanography: Methods*, 8, 172-184, <http://dx.doi.org/10.4319/lom.2010.8.172>

Five other significant publications

- Sakamoto, C. M., D. M. Karl, H. W. Jannasch, R. R. Bidigare, R. M. Letelier, P. M. Walz, J. P. Ryan, P. S. Polito, and K. S. Johnson. 2004. Influence of Rossby waves on nutrient dynamics and the plankton community structure in the North Pacific subtropical gyre. *Journal of Geophysical Research*, 109, <http://dx.doi.org/10.1029/2003JC001976>.

Johnson, K. S., L. J. Coletti and F. P. Chavez. 2006. Diel nitrate cycles observed with in situ sensors predict monthly and annual new production. *Deep-Sea Research I* 53, 561-573, <http://dx.doi.org/10.1016/j.dsr.2005.12.004>.

Johnson, K. S., J. A. Needoba, S. C. Riser, and W. J. Showers. 2007. Chemical sensor networks for the aquatic environment. *Chemical Reviews*, 107, 623-640, <http://dx.doi.org/10.1021/cr050354e>.

Johnson, K. S. and J. A. Needoba. 2008. Mapping the spatial variability of plankton metabolism using nitrate and oxygen sensors on an autonomous underwater vehicle. *Limnology and Oceanography*, 53, 2237-2250, http://dx.doi.org/10.4319/lo.2008.53.5_part_2.2237.

Johnson, K. S. 2010. Simultaneous measurements of nitrate, oxygen and carbon dioxide on oceanographic moorings: Observing the Redfield ratio in real-time. *Limnology and Oceanography*, 55, 615-627, <http://dx.doi.org/10.4319/lo.2010.55.2.0615>.

(d) Synergistic Activities

- NSF Geoscience Advisory Committee
- US Ocean Carbon and Biogeochemistry Program, Steering Committee
- Member of several relevant National Research Council Committees, including for the Assessment of Marine Pollution Monitoring, New Technologies for the Ocean, Oceanographic Standard Reference Materials, and Ocean Infrastructure in 2030
- Former Board Member of the Monterey Academy of Oceanographic Sciences – a science academy at Monterey High School.
- Developed the Periodic Table of Elements in the Ocean (<http://www.mbari.org/chemsensor/pteo.htm>) as an educational resource

(e) Collaborators and other affiliations

Collaborators and Co-Editors, last 4 years

M. Church (UH), R. Davis (SIO), M. DeGrandpre (U. Mont.), N. Gruber (ETH), G. Hofmann (UCSB), D. Karl (UH), Z. Kolber (UCSC), M. Lomas (BIOS), P. Moisander (UCSC), S. Monismith (Stanford), A. Paytan (UCSC), S. Riser (UW), J. Sarmiento (Princeton), J. Zehr (UCSC).

Graduate Advisors & Postdoctoral Sponsors:

Ph.D. Advisor - R. M. Pytkowicz (deceased)

Primary Thesis Advisor (Total=10):

T. Chapin (USGS), C. Chin (Oregon State Univ.), D. Colbert (Oregon Water Resources Dept.), T. Coley (South Florida Water Management District), R. Fairey (California Dept. of Fish and Game), L. Ferioli (Oracle Computer), E. Kingsley (Monterey Bay Aquarium), J. Nowicki (Moss Landing Marine Laboratory), P. von Langen (California Regional Water Quality Control Board), H. Zamzow, (Community Hospital Monterey Peninsula)

Postgraduate-Scholar Sponsor (Total = 9), Past 5 years:

T. Chapin (USGS), Z. Chase (University of Tasmania), J. Needoba (Oregon Health & Science University), T. Martz (Scripps Institution of Oceanography); P. Gibson (current)