

ANDREW G. DICKSON – BIOGRAPHICAL SKETCH

A. PROFESSIONAL PREPARATION

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|----------------------------------|---------------------------------|-------------|
| University of Liverpool, UK | Chemical Oceanography, | B.S., 1974 |
| University of Liverpool, UK | Chemical Oceanography, | Ph.D., 1978 |
| Postdoc at MBA, Plymouth, UK | Chemical Modeling of Estuaries, | 1978–1980 |
| Postdoc at University of Florida | Acid-base Chemistry in Seawater | 1980–1982 |

B. APPOINTMENTS

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| 2010– | <i>Professor of Marine Chemistry</i> , Scripps Institution of Oceanography, University of California, San Diego. |
| 2006– 2009 | <i>Professor-in-Residence of Marine Chemistry</i> , Scripps Institution of Oceanography, University of California, San Diego. |
| 1995–2006 | <i>Assoc. Professor-in-Residence of Marine Chemistry</i> , Scripps Institution of Oceanography, University of California, San Diego. |
| 1991–1995 | <i>Assoc. Research Chemist</i> , Scripps Institution of Oceanography, University of California, San Diego. |
| 1988-90 | <i>Lecturer</i> , Department of Chemistry, University of California, San Diego |
| 1987–1995 | <i>Lecturer</i> , Scripps Institution of Oceanography, University of California, San Diego |
| 1985 | <i>Adjunct Lecturer</i> , Scripps Institution of Oceanography, University of California, San Diego |
| 1983–1991 | <i>Assistant Research Chemist</i> , Scripps Institution of Oceanography, University of California, San Diego. |
| 1983 | <i>Visiting Assistant Research Scientist</i> , Department of Chemistry, University of Florida. |
| 1982–1983 | <i>Visiting Assistant Research Chemist</i> , Scripps Institution of Oceanography, University of California, San Diego. |

C. PUBLICATIONS

Relevant to proposed work

- Dickson, A.G., 2010. The carbon dioxide system in seawater: equilibrium chemistry and measurements. In *Guide to best practices for ocean acidification research and data reporting*. Riebesell, U., Fabry, V. J., Hansson, L., & Gattuso, J.-P. (Eds), Chapter 1, pp. 17–40, EUR 24328 EN, European Commission, Brussels, Belgium.
- Checkley, D. M., Dickson, A. G., Takahashi, M., Radich, J. A., Eisenkolb, N., & Asch, R., 2009. Elevated CO₂ enhances otolith growth in young fish. *Science* **324**, 1683, <http://dx.doi.org/10.1126/science.1169806>.
- Sabine, C. L., Feely, R. F., Millero, F. J., Dickson, A. G., Langdon, C., Mecking, S., & Greeley, D., 2008. Decadal Changes in Pacific Carbon. *Journal of Geophysical Research* **113**, C07021, <http://dx.doi.org/2007JC004577>.
- Dickson, A. G., Sabine, C. L., & Christian, J. R. (Eds.) 2007. Guide to best practices for ocean CO₂ measurements. PICES Special Publication 3, 191 pp. <http://www.pices.int/outgoing/Julia/PICES-2011%20USB/Special%20Reports/Special%20Report%203%20-%20CO2.pdf>
- Dickson, A. G., Afghan, J. D. & Anderson, G. C., 2003. Reference materials for oceanic CO₂ analysis: A method for the certification of total alkalinity. *Marine Chemistry* **80**, 185–197, [http://dx.doi.org/10.1016/S0304-4203\(02\)00133-0](http://dx.doi.org/10.1016/S0304-4203(02)00133-0).

Other publications

- Feely, R.A. & Dickson, A.G., 2009. Evidence for ocean acidification in coastal waters of North America. [in *State of the Climate in 2008*] *Bull. of the American Meteorological Soc.* **90**(8), S69.
- Seidel, M. P., DeGrandpre, M. D., & Dickson, A. G., 2008. A sensor for in situ indicator-based measurements of seawater pH. *Marine Chemistry* **109**, 18–28.

<http://dx.doi.org/10.1016/j.marchem.2007.11.013>

- Wolf-Gladrow, D. A., Zeebe, R. E., Klaas, C., Körtzinger, A. & Dickson, A. G., 2007. Total alkalinity: the explicit conservative expression and its application to biogeochemical processes. *Marine Chemistry* **106**, 287–300, <http://dx.doi.org/10.1016/j.marchem.2007.01.006>.
- Hernández-Ayón, J. M., Zirino, A., Dickson, A. G., Camiro-Vargas, T., & Valenzuela, E., 2007. Estimating the contribution of organic bases from microalgae to the titration alkalinity in coastal seawaters. *Limnology & Oceanography, Methods* **5**, 225–232, <http://dx.doi.org/10.4319/lom.2007.5.225>.
- Lee, K., Tong, L. T., Millero, F. J., Sabine, C. L., Dickson, A. G., Goyet, C., Park, G.-H., Wanninkhof, R., Feely, R. A., & Key, R. M., 2006. Global relationships of total alkalinity with salinity and temperature in surface waters of the major oceans. *Geophysical Research Letters* **33**, L19605, <http://dx.doi.org/10.1029/2006GL027207>.

D. SYNERGISTIC ACTIVITIES

- Work on quality control of oceanic CO₂ measurements that has had a broad impact on the world-wide community of scientists measuring CO₂ in sea water, ensuring substantially improved measurement quality.
- Chair of the PICES WG-17 *Biogeochemical data integration and synthesis* (2002– 2005).
- Member of OceanSITES Data Management Team (2006–)
- Member of Working Group on International Nutrient Scale System (2007–).
- Chair of C-CAN (California Current Acidification Network) Steering Committee (2010–).

E. COLLABORATORS AND CO-EDITORS

Collaborators within past 5 years

R. H. Byrne, U South Florida

R. A. Feely, NOAA/PMEL

V. Fabry, California State University, San Marcos

M. DeGrandpre, University of Montana

G. Hofmann, UC Santa Barbara

K. Lee, Pohang U., Korea

F. J. Millero, University of Miami

C. Sabine, NOAA / PMEL

J. Schijf, University of Maryland

D. Wolf-Gladrow, AWI, Germany

Graduate Advisor: J. P. Riley, University of Liverpool (retired)

Postdoctoral Advisors: M. Whitfield, MBA, Plymouth (retired); R. G. Bates, U. Florida (deceased)

Thesis Advisor to (7 students in all):

Joellen L. Russell (Ph. D. 1999), now at U. Arizona

Jennifer Cragan (UCSD, 1998–2003; M.S. in prep.)

Kate A. Boyle (UCSD, 2002–2007; M.S. in prep.)

Brendan R. Carter (UCSD, 2004–2011), now at Princeton University

J. Adam Radich (UCSD, 2006–)

Emily Bockmon (UCSD, 2008–)

Kristin Jackson (2010–)

Postgraduate Scholar Sponsor to (4 postgraduate scholars in all):

Boris Nemzer (2000–2003) Now working in industry

J. Martin Hernandez Ayon (2002–2005) U. Autonome de Baja Calif.