

## Address

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**Current position**, since January 2000: Professor, University of Gothenburg

## Academic degrees

1985: Docent (Associate Professor), University of Gothenburg

1981: PhD-degree, in Chemistry, University of Gothenburg: *Some novel photometric techniques. Application to the study of the seawater carbonate system.* Supervisor, Prof. David Dyrssen

## Previous positions

1995 – 2002: Professor II, Geophysical Institute, University of Bergen, Norway

1993 – 1999: University Lecturer, Department of Analytical and Marine Chemistry, University of Gothenburg

1987 – 1993: Associate professor in Chemical Oceanography, Department of Analytical and Marine Chemistry, University of Gothenburg

1983 – 1987: Research assistant, Department of Analytical and Marine Chemistry, University of Gothenburg

1982 – 1983: Post Doctoral Fellowship at Bedford Institute of Oceanography, Canada

## Research interest

Much of my research interests involve the oceanic carbon cycle; the transformation of carbon, the fluxes within the ocean, the air-sea fluxes and the oceanic sequestering of anthropogenic carbon dioxide as well as its impact on Ocean Acidification. During these studies I have to a large degree worked in high latitude oceans, at both hemispheres, but also investigations of coastal areas as the Baltic Sea have been included

## Ongoing projects, funding records and cruise expeditions

### Ongoing projects:

2011 – 2015: Swedish Arctic Ocean Investigation of Climate-Cryosphere-Carbon Interactions – The SWERUS-C3 Program, Knut and Alice Wallenberg Foundation

2014 – 2016: Sources and sinks of carbon dioxide in a changing Arctic Ocean and its impact on ocean acidification, The Swedish Research Council

2014 - 2017: Development of a spectrophotometric pH-measurement system for monitoring in the Baltic Sea, EU, Bonus Innovation

Field experience: Participated in more than 20 major oceanographic expeditions, adding in total to more than 2 years. On several occasions have I acted as chief scientists or expedition leader.

## Supervision of PhD-students

Awarded doctorates: Adam Ulfsbo, 2014, Irené Wählström 2012, Sofia Hjalmarsson 2009, Sara Jutterström 2006, Emil Jeanson 2005, Staffan Kaltin 2003, Agneta Fransson 2000, Melissa Chierici 1998, Kristina Olsson 1997, Roger Lindegren 1993, Mats Ohlson 1991, Deputy supervisor for Moa Edman 2013.

Co-supervisor of graduate students at the Geophysical Institute, University of Bergen: Eva Falck, awarded 1999, Ingunn Skjelvann 1999, Are Olsen 2002

## Supervision of Post-Docs

2015: Tim Stöven, visiting from GEOMAR, Kiel, Germany

2004 – 2005: Miroslav Nitishinsky, visiting from Arctic and Antarctic Research Institute, St. Petersburg, Russia

2000 – 2001: Eva Falck, visiting from Geophysical Institute, University of Bergen, Norway

## Distinctions, honours and awards

2013: The 2012 Editors' Citation for Excellence in Refereeing for Journal of Geophysical Research-Oceans.

2013: IASC medal award

2009: Elected fellow of the Royal Society of Arts and Sciences in Göteborg

2004: Elected fellow of the Royal Swedish Academy of Sciences

2000: King Carl Gustaf's Environmental Grant, for the study of the Carbon Cycle in Polar Seas

1993: Alfred Wallin price, given by the Royal Society of Arts and Sciences in Göteborg, Sweden

### **National and international assignments of importance** (selected)

- 2013 - 2016: Elected 1:st Vice President of the Royal Swedish Academy of Sciences
- 2013 - 2016: Chairmen of the Swedish National Committee for Global Environmental Change
- 2012: Chairmen of the evaluation panel of the Mistra program Arctic Futures in a Global Context
- 2011 – 2013: Member of the lead writing team of the Arctic Ocean Acidification assessment, organized by AMAP
- 2009 – 2013: Swedish delegate in the Marine Working group of International Arctic Science Committee
- 2008 – 2015: Member of the Scientific Advisory Board of the Alfred Wegener Institute for Polar and Marine Research, Germany
- 2006 – 2009: Head of the Department of Chemistry, University of Gothenburg; deputy head 2003-2006
- 2006 – 2016: Chairmen of the Environmental Committee of the Royal Swedish Academy of Sciences
- 2004 – 2010: Chairmen of the Stockholm Water Prize Nominating Committee of the Stockholm International Water Institute
- 2004 – 2006: Chair of the interim science planning group of the International Study of Arctic Change (ISAC); member of the ISAC SSG 2006-2009
- 2001 – 2003: Chair of the working committee 'Processes in soil, air and water' of the Swedish Research Council
- 2000 – 2005: Member of the SCOR-IOC Ocean CO<sub>2</sub> Advisory Panel
- 1999 – 2004: Swedish delegate to the Marine Board of the European Science Foundation (ESF)
- 1994 – 2009: Member of the Arctic Ocean Science Board; vice chair 1997-1999, chair 1999-2001 and past chair 2001-2003

### **Invited oral presentations at international conferences** (selected from a total of about 30 invitations the last ten years)

- 2015: 'Transformation and fluxes of carbon in a changing Arctic Ocean and its impact on ocean acidification', Dalhousie University, Halifax, Canada
- 2013: 'Changes in observed Arctic Ocean Acidification during the last decades', Arctic Ocean Acidification Conference, Bergen, Norway
- 2013: 'Utilizing chemical signatures to study the Arctic Ocean', Arctic Science Summit Week, Krakow, Poland
- 2013: 'Biochemical Responses and Feedbacks to the Climate System', introduction and discussion leader at the Gordon Research Conference in Polar Marine Sciences, Ventura, USA
- 2012: 'Transformation and fluxes of carbon in a changing Arctic Ocean and its impact on ocean acidification, the Atlantic view', Ocean Carbon & Biogeochemistry Summer Workshop WHOI, USA
- 2011: 'The role of the biological pump as a driver for air-sea CO<sub>2</sub> flux in a changing Arctic Ocean', Science Symposium of the Arctic Science Summit Week, Seoul, South Korea
- 2010: 'How to plan (and implement) international collaboration in Arctic Ocean sciences, based on multiple platforms'. Keynote presentation at the ART Implementation Workshop, Winnipeg, Canada

### **Five selected publications**

- Anderson, L.G., E. Falck, E.P. Jones, S. Jutterström, and J.H. Swift, Enhanced uptake of atmospheric CO<sub>2</sub> during freezing of seawater: a field study in Storfjorden, Svalbard, *J. Geophys. Res.*, **109**, C06004, doi:10.1029/2003JC002120, 2004.
- Anderson L.G., S. Jutterström, S. Hjalmarsson, I. Wählström and I.P. Semiletov, Out-gassing of CO<sub>2</sub> from Siberian Shelf Seas by terrestrial organic matter decomposition, *Geophys. Res. Lett.*, **36**, L20601, doi:10.1029/2009GL040046, 2009.
- Anderson L.G., T. Tanhua, G. Björk, S. Hjalmarsson, E. P. Jones, S. Jutterström, B. Rudels, J. H. Swift, I. Wählström, Arctic Ocean shelf – basin interaction, an active continental shelf CO<sub>2</sub> pump and its impact on the degree of calcium carbonate dissolution, *Deep Sea Res.*, **157**, 869–879 doi:10.1016/j.dsr.2010.03.012, 2010.
- Jutterström, S., and L.G. Anderson. Uptake of CO<sub>2</sub> by the Arctic Ocean in a changing climate, *Mar. Chem.*, **122**, 96-104, 2010.
- Anderson, L.G., and R.M.W. Amon, DOC in the Arctic Ocean, in *Biogeochemistry of Marine Dissolved Organic Matter, 2nd edition*, Ed. Dennis A. Hansell and Craig A. Carlson. pp. 609-633, Burlington, Academic Press, 2015.

### **Bibliometric data** (per January 15, 2016)

Peer reviewed publications: 109 in journals and 24 book chapters  
H-index 45 with a total of 6556 citations (Google Scholar)