

CURRICULUM VITAE

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Personal Information

Sex: Male

Nationality: Swedish

Date of Birth: January 25, 1965

Short Resume

Feb. 2009 – present	GEOMAR, Senior Scientist
Sept. 2002 – Jan 2009	IfM-GEOMAR, University Kiel, Germany, Postdoc.
April .2002 – August 2002	North Pacific sailing expedition.
March 1999 – April 2002	SIO-UCSD, San Diego, CA, Postdoc.
July .1998 – Feb. 1999	Sailing from Göteborg to San Diego.
July 1997 – July 1998	Göteborg University, Sweden, Postdoc.
Sept. 1992 – July 1997	Göteborg University, Sweden, graduate studies.
Aug. 1990 – June 1992	Göteborg University, Sweden, chemistry studies.
Oct. 1989 – July 1990	Africa Overland Expedition.
August 1987 – June 1989	

01.03.1999 – 31.03.2002

Scripps Institution of Oceanography, University of San Diego, California. Postgraduate advisor: Prof. Dr. Ray F. Weiss. Post-doctorate fellowship funded by The Swedish Foundation for International Co-operation in Research and Higher Education (STINT).

01.06.1997 – 30.06.1998

Analytical and Marine Chemistry, Department of Chemistry Göteborg University, Göteborg, Sweden. Postgraduate advisor; Prof. Dr. Elisabet Fogelqvist. Position funded by the VEINS (Variability and Exchanges in the Northern Seas) programme.

Graduate studies

01.09.1992 – 31.05.1997

Analytical and Marine Chemistry, Department of Chemistry, Göteborg University, Göteborg, Sweden. Graduate advisor; Prof. Dr. Elisabet Fogelqvist.

Other experiences

01.06.2005 – 30.09.2005

Sailing cruise in British Columbia and Southeast Alaska. Participation in the 2005 Transpolar expedition onboard IB Oden.

01.04.2002 – 01.08.2002

Carried out a sailing cruise with my own yacht from California, via Hawaii and Alaska, to British Columbia. I prepared for, planned, and led the expedition myself.

01.07.1998 – 28.02.1999

Carried out a sailing cruise with my own yacht from Sweden, via Canary Islands and Panama Canal, to California. I prepared for, planned, and led the expedition myself.

21.10.1991 – 29.11.1991

Chemical work at Svensk Kärnbränslehantering AB, 572 38 Oskarshamn, Sweden. Responsible for chemical laboratory at Äspö Hard Rock Laboratory, a research institute responsible for development of a safe storage for nuclear waste.

01.10.1989 – 30.06.1990

Carried out an overland expedition with a land-rover from Sweden to Zimbabwe. The planning and preparation of the expedition was done together with the two other participants.

1987 – 1994

Worked for a few months every summer as professional diver in Sweden. Mainly on commission from the timber industry.

06.01.1986 - 30.11.1986

Swedish Navy. Diver at a mine-searching division. Mandatory civil service.

04.06.1984 – 24.08.1984 15.10.1994 – 15.12.1984 15.12.1986 – 28.02.1987

Work at the chemical laboratory in a nuclear power plant in Oskarshamn, Sweden.

Education

25.04.1997

PhD, Analytical and Marine Chemistry, Göteborg University.

Thesis: Halogenated substances as marine tracers.

Principal advisor: Prof. Dr. Elisabet Fogelqvist, Analytical and Marine Chemistry, Department of Chemistry, Göteborg University, Göteborg, Sweden.

15.02.1995

Filosofie Licentiat, Analytical and Marine Chemistry, Department of Chemistry, Göteborg University, Göteborg, Sweden.

Thesis: Halocarbons in seawater; their sources, sinks and distributions.

Principal advisor: Prof. Dr. Elisabet Fogelqvist, Analytical and Marine Chemistry, Department of Chemistry, Göteborg University, Göteborg, Sweden.

01.06.1992

MSc in Analytical Chemistry, Göteborg University, Göteborg, Sweden.

Thesis: Bestämning av halogenerade kolväten i havsvatten med purge and trap gaskromatografi.

08.06.1984

Exam from Technical Gymnasium (high school), Chemistry, Teknikum, Växjö, Sweden.

Chris L'Esperance, Dalhousie University, Halifax, Canada current
Lorenza Raimundi, Dalhousie University, Halifax, Canada current

Fellowships awarded

01.09.2002 – 31.08.2004

Marie Curie individual fellowship: European Community as part of the Fifth Framework Programme for research, technological development and demonstration, contract # HPMF-CT-2002-01697.

Postdoctoral fellowship to conduct marine geo-chemical scientific work at the Institute for Marine Research, Marine Biogeochemistry, University of Kiel, Germany

01.03.1999 – 31.03.2001

The Swedish Foundation for International Co-operation in Research and Higher Education (STINT).

Postdoctoral fellowship to conduct postgraduate research at the Geosciences Research Division, Scripps Institution of Oceanography, University of San Diego, California during 1999 and 2000.

01.10.1993 – 31.01.1994

Swedish Institute (SI).

To conduct marine chemistry scientific research at the Institute of Marine Research, Middle East Technical University, Erdemli, Turkey.

Languish skills

Swedish	Mother tongue
English	Fluent
German	Excellent

Memberships / Panels

Current:

- **GOOS** (Global Ocean Observing System): Co-Chair, 2017 – present
- **Joint WMO-IOC Collaborative Board**: 2019 – present
- **Eurofleets+ Scientific Liaison Panel**, 2019 - present

Past:

- **Kiel Data Management Advisory Board**: member as representative of SFB754, 2008 – 2019
- **SFB-754** (Collaborative research Project 754): Member 2008 – 2019; as of 2012 WP lead
- **CIESM, Chair for the Committee for Physics and Climate**, Chair 2016 – 2019.

Funded Ship time proposals:

- Oxygen Supply Tracer Release Experiment (OSTRE-I), 10_04 Tanhua: Proposal for ship-time on RV Meteor or RV Merian, Funded in March 2010
- Oxygen Supply Tracer Release Experiment (OSTRE-II), 11_02_Visbeck: Proposal for ship-time on RV Meteor or RV Merian, Funded in September 2011
- Repeat hydrography in the Mediterranean, 46-11: Proposal for ship-time on the Poseidon. Funded for 25 days on the Meteor, and 74.920 € funded for the cruise.
- Oxygen Supply Tracer Release Experiment (OSTRE-III), MerMet 2-10 Tanhua/Visbeck: Proposal for ship-time on RV Meteor or RV Merian, Funded in March 2012
- Oxygen Supply Tracer Release Experiment (OSTRE-IV), MerMet 13-109 Tanhua: Proposal for ship-time on RV Meteor or RV Merian, Funded in March 2013
- Cretan Sea and Levantine Basin Med-SHIP Investigations in 2016 (CRELEV-2016): EUROFLEETS15-010 proposal for ship time on RV Aegeo; funded in 2015.
- A Tyrrhenian Sea & Algero-Provencal component of the MedSHIP programme: EUROFLEETS15-014 proposal for ship time on RV Ramon Margalef; funded in 2015
- Evolution and spreading of Adriatic Waters (ESAW): EUROFLEETS15-018 proposal for two cruises on the RV Bios-Dva; funded in 2015
- Benthic-Pelagic Exchanges in the Peruvian OMZ System: A Tracer Release Experiment (POSTRE), Mer-Met 16-40 Tanhua: 35 working days on Merian or Meteor, funded in 2016

Review activities

Scientific journals:

Deep-Sea Research, Journal of Geophysical Research, Geophysical Research Letters, Nature, Biogeosciences, Global Biogeochemical Cycles, Earth System Science Data, Bulletin of the American Meteorological Society, Journal of Marine Systems, Tellus, Marine Chemistry, Advances in Atmospheric Sciences

Funding agencies:

NSF, Mittelgroßen Forschungsschiffe (Germany), Programma Nazionale di Ricerche in Antartide (Italy), Polish-

Participating in seagoing expeditions

Mediterranean Sea, MSM72 (co-chief scientist) RV Maria S. Merian (Germany)	2018-03-01 – 2018-04-03
Tropical South East Pacific, M135 (co-chief scientist) RV Meteor (Germany)	2017-03-01 – 2017-04-08
Western Mediterranean Sea, TaiPro RV Angeles Alvarino (Spain)	2016-08-18 – 2016-08-29
Tropical Pacific, SO243 RV Sonne (Germany)	2015-10-05 – 2015-10-22
Tropical Atlantic, M116 (co-chief scientist) RV Meteor (Germany)	2015-05-01 – 2015-06-03
Tropical Atlantic, M105 (co-chief scientist) RV Meteor (Germany)	2014-03-17 – 2014-04-16
Tropical Atlantic, M97 (chief scientist) RV Meteor (Germany)	2013-05-25 – 2013-06-28
Tropical Atlantic, MSM23 (co-chief scientist) RV Maris S. Merian (Germany)	2012-11-26 – 2012-12-20
Mediterranean Sea, M84/3(chief scientist) RV Meteor (Germany)	2011-04-05 – 2011-05-28
Tropical Atlantic, M83/1 (co-chief scientist) RV Meteor (Germany)	2010-10-13 – 2010-11-13
Tropical Atlantic, M80/2 (co-chief scientist) RV Meteor (Germany)	2009-11-26 – 2009-12-22
Tropical Atlantic, MSM10/1 (co-chief scientist) RV Maria S. Merian (Germany)	2008-11-01 – 2008-12-06
Tropical Atlantic, MSM08/1 (co-chief scientist) RV Maria S. Merian (Germany)	2008-04-20 – 2008-05-03
Baltic Sea, AL312 RV Alkor (Germany)	2008-01-26 – 2008-02-07
Baltic Sea, P357B RV Poseidon (Germany)	2007-09-20 – 2007-09-26
Baltic Sea, P357A RV Poseidon (Germany)	2007-09-06 – 2007-09-16
Mauritanian upwelling area, P347 RV Poseidon (Germany)	2007-01-18 – 2007-02-05
Tropical Atlantic, M68/2 RV Meteor (Germany)	2006-06-06 – 2006-07-09

Toste Tanhua, curriculum vitae

Integrated All-Atlantic Ocean Observing System in 2030. *Frontiers in Marine Science*
6.10.3389/fmars.2019.00428

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20. Rusiecka, D., Gledhill, M., Milne, A., Achterberg, E. P., Annett, A. L., Atkinson, S., Birchill, A., Karstensen, J., Lohan, M., Mariez, C., Middag, R., Rolison, J. M., **Tanhua, T.**, Ussher, S., and Connelly, D.: 2018, Anthropogenic Signatures of Lead in the Northeast Atlantic, *Geophys. Res. Letters*, doi:10.1002/2017GL076825.
21. Achterberg, E. P., Steigenberger, S., Marsay, C. M., LeMoigne, F. A. C., Painter, S. C., Baker, A. R., Connelly, D. P., Moore, C. M., Tagliabue, A., and **Tanhua, T.**, 2018 Iron Biogeochemistry in the High Latitude North Atlantic Ocean, *Scientific Reports*, 8, 1283, doi:10.1038/s41598-018-19472-1.
22. Jullion, L., Jacquet, S. H. M., and **Tanhua, T.**: Untangling biogeochemical processes from the impact of ocean circulation: First insight on the Mediterranean dissolved barium dynamics, *Global Biogeochem Cycles*, 31, doi:10.1002/2016GB005489, 2017.
23. Orr, J. C., Najjar, R. G., Aumont, O., Bopp, L., Bullister, J. L., Danabasoglu, G., Doney, S. C., Dunne, J. P., Dutay, J. C., Graven, H., Griffies, S. M., John, J. G., Joos, F., Levin, I., Lindsay, K., Matear, R. J., McKinley, G. A., Mouchet, A., Oschlies, A., Romanou, A., Schlitzer, R., Tagliabue, A., **Tanhua, T.**, and Yool, A.: Biogeochemical protocols and diagnostics for the CMIP6 Ocean Model Intercomparison Project (OMIP), *Geosci. Model Dev.*, 10, 2169-2199, doi:10.5194/gmd-10-2169-2017, 2017.
24. Anderson, L. G., Björk, G., Holby, O., Jutterström, S., Mörth, C. M., O'Regan, M., Pearce, C., Semiletov, I., Stranne, C., Stöven, **T.**, **Tanhua, T.**, Ulfsbo, A., and Jakobsson, M.: Shelf–Basin interaction along the East Siberian Sea, *Ocean Sci.*, 13, 349-363, doi:10.5194/os-13-349-2017, 2017.
25. Ayache, M., J. C. Dutay, A. Mouchet, N. Tisnérat-Laborde, P. Montagna, **T. Tanhua**, G. Siani, and P. Jean-Baptiste (2017), High-resolution regional modelling of natural and anthropogenic radiocarbon in the Mediterranean Sea, *Biogeosciences*, 14(5), 1197-1213, doi:10.5194/bg-14-1197-2017.
26. Huang, P., and **T. Tanhua**, 2017. Ventilation and anthropogenic CO₂ in the Sulu Sea, *J. Mar. Systems*, 170, 1-9, doi:org/10.1016/j.jmarsys.2017.01.014.
27. Becker, M., Andersen, N., Erlenkeuser, H., Humphreys, M. P., **Tanhua, T.**

31. Olsen, A., Key, R. M., van Heuven, S., Lauvset, S. K., Velo, A., Lin, X., Schirnick, C., Kozyr, A., **Tanhua, T.**, Hoppema, M., Jutterström, S., Steinfeldt, R., Jeansson, E., Ishii, M., Pérez, F. F., and Suzuki, T.: The Global Ocean Data Analysis Project version 2 (GLODAPv2) – an internally consistent data product for the world ocean, *Earth Syst. Sci. Data*, 8, 297-323, doi:10.5194/essd-8-297-2016, 2016.
32. Ji-Young Moon, Kitack Lee, **Toste Tanhua**, Nurit Kress, Il-Nam Kim, 2016. Temporal nutrient dynamics in the Mediterranean Sea in response to anthropogenic inputs. *Geophysical Research Letters*, 2016GL068788, doi:10.1002/2016GL068788.
33. Köllner, M., Visbeck, M., **Tanhua, T.**, Fischer, T., 2016. Diapycnal diffusivity in the core and oxycline of the tropical North Atlantic oxygen minimum zone. *Journal of Marine Systems*, doi:10.1016/j.jmarsys.2016.03.012.
34. Stöven, T., **T. Tanhua**, M. Hoppema, W.J. von Appen, 2016. Transient tracer distributions in the Fram Strait in 2012 and inferred anthropogenic carbon content and transport, *Ocean Science.*, 12, 319-333, doi:10.5194/os-12-319-2016.
35. Stramma, L., Czeschel, R., **Tanhua, T**

42. Lauvset, S., **T. Tanhua**, 2015. A Toolbox for Secondary Quality Control on Ocean Chemistry and Hydrographic Data, *Limnology and Oceanography Methods*, 11601-608, doi: 10.1002/lom3.10050.
43. Brandt, P., Banyte, D., Dengler, M., Didwischus, S.-H., Fischer, T., Greatbatch, R.J., Hahn, J., Kanzow, T., Karstensen, J., Körtzinger, A., Krahnemann, G., Schmidtke, S., Stramma, L., **Tanhua**, T., Visbeck, M., 2015. On the role of circulation and mixing in the ventilation of oxygen minimum zones with a focus on the eastern tropical North Atlantic, *Biogosciences*, 12, 489-2 (10.1(c3e12 (n)]T Tc (e))-z)-1 (on1 s)-1 (2 (10.1(:gu(box f)3 (or)-2 ((

63. McGrath, T., Kivimae, C., **Tanhua, T.**, Cave, R., McGovern, E., 2012. Inorganic carbon and pH levels in the Rockall Trough 1991 - 2010, *Deep-Sea Research*, 68, 79-91, doi.org/10.1016/j.dsr.2012.05.011.
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65. Álvarez, M., **Tanhua, T.**, Brix, H., Lo Monaco, C., Metzl, N., McDonagh, E., Bryden, H.L., 2011. Decadal biogeochemical changes in the western Indian Ocean associated with Subantarctic Mode Water, *Journal of Geophysical Research*, 116, C09016, doi:10.1029/2010JC006475.
66. Lee, K., Sabine, C.L., **Tanhua, T.**, Kim, T-W., Feely, R.A., 2011. Roles of marginal seas in absorbing fossil fuel CO₂. *Energy and environmental science*, 4, 1133, doi:10.1039/C0EE00663G
67. **Tanhua, T.**, Key, R.M., Hoppema, M., Olsen, A., Ishii, M., Sabine, C.L., 2010. Expanding Carbon Data Collection from the Ocean's Interior. *EOS*, 91(48), pp 457-458.
68. Schneider, A., **Tanhua, T.**, Körtzinger, A., Wallace, D.W.R., 2010. High anthropogenic carbon content in the eastern Mediterranean, *Journal of Geophysical Research*, C12050, doi:10.1029/2010JC006171.
69. **Tanhua, T.**, 2010. On the importance of accurate nutrient data on oceanic anthropogenic carbon calculations. In: Comparability of nutrients in the world's ocean: INSS international workshop 10-12 Feb, 2009, Paris. pp 81-90. Editors: M. Aoyama, A. Dickson, D. Hydes, A. Murata, P. Roose and M. Woodward, Mother Tank, Tsukuba, Japan.
70. Pierrot, D., P. Brown, S. van Heuven, **T. Tanhua**, U. Schuster, R. Wanninkhof, R.M. Key, 2010. CARINA TCO₂ data in the Atlantic Ocean, *Earth System Science Data*, 2, 177-187, doi:10.5194/essd-2-177-2010.
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73. Key, R. M., **Tanhua, T.**, Olsen, A., Hoppema, M., Jutterström, S., Schirnack, C., van Heuven, S., Lin, X., Wallace, D. W. R., and Mintrop, L., 2010. The CARINA data synthesis project: introduction and overview, *Earth System Science Data*, 2, 105-121, doi:10.5194/essd-2-105-2010.

74. Jeansson, E., Olsson, K. A., **Tanhua, T.**, and Bullister, J. L., 2010. Nordic Seas and Arctic Ocean CFC Data in CARINA, *Earth System Science Data*, 2, 79-97, doi:10.5194/essd-2-79-2010.
75. Lo Monaco, M., Álvarez, M., Key, R. M., Lin, X., **Tanhua, T.**, Tilbrook, B., Bakker, D. C., van Heuven, S., Hoppema, M., Metzl, N., Ríos, A. F., Sabine, C. L., and Velo, A., 2010. Assessing internal consistency of the CARINA database in the Indian sector of the Southern Ocean, *Earth System Science Data*, 2, 51-70, doi:10.5194/essd-2-51-2010.
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83. Olsen, A., Key, R. M., Jeansson, E., Falck, E., Olafsson, J., van Heuven, S., Skjelvan, I., Omar, A. M., Olsson, K.a., Anderson, L. G., Jutterström, S., Rey, F., Johannessen, T., Bellerby, R.G.J., Blindheim, J., Bullister, J., Pfeil, B., Lin, X., Schirnick, C., **Tanhua, T.**, and Wallace, D. W. R., 2009. Overview of the Nordic Seas CARINA Data and Salinity, *Earth System Science Data*, 1, 25-34, doi:10.5194/essd-1-25-2009.
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- B.L., Porter, L.W. and Prinn, R.G., 2005. Improved continuous *in situ* measurements of C₁-C₃ PFCs, HFCs, HCFCs, CFCs and SF₆ in Europe and Australia. *Environmental Science*, 2(2-3), 253-261.
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103. Fogelqvist, E., Blindheim, J., **Tanhua, T.**, Buch, E., Österhus, S., 2003. Greenland-Scotland Overflow studied by hydro-chemical multivariate analysis. *Deep Sea Research I*, 50, 1, pp. 73-102.
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Ocean Storage of anthropogenic carbon, *Biogeosciences Discussions*, 9, 8931-8988, doi:10.5194/bgd-9-8931-2012.

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