

Toste Tanhua

List of Publications by Year in descending order

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104
papers

8,506
citations

71102

41
h-index

51608

86
g-index

155
all docs

155
docs citations

155
times ranked

8543
citing authors

#	ARTICLE	IF	CITATIONS
1	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	9.9	1,477
2	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	9.9	663
3	The oceanic sink for anthropogenic CO ₂ from 1994 to 2007. Science, 2019, 363, 1193-1199.	12.6	505
4	The Global Ocean Data Analysis Project version 2 (GLODAPv2) – an internally consistent data product for the world ocean. Earth System Science Data, 2016, 8, 297-323.	9.9	424
5	Global ocean storage of anthropogenic carbon. Biogeosciences, 2013, 10, 2169-2191.	3.3	348
6	A new global interior ocean mapped climatology: the 1°-1° GLODAP version 2. Earth System Science Data, 2016, 8, 325-340.	9.9	284
7	Medusa: A Sample Preconcentration and GC/MS Detector System for in Situ Measurements of Atmospheric Trace Halocarbons, Hydrocarbons, and Sulfur Compounds. Analytical Chemistry, 2008, 80, 1536-1545.	6.5	260
8	On the Future of Argo: A Global, Full-Depth, Multi-Disciplinary Array. Frontiers in Marine Science, 2019, 6, .	2.5	235
9	Estimation of Anthropogenic CO ₂ Inventories in the Ocean. Annual Review of Marine Science, 2010, 2, 175-198.	11.6	191
10	Changes in Ocean Heat, Carbon Content, and Ventilation: A Review of the First Decade of GO-SHIP Global Repeat Hydrography. Annual Review of Marine Science, 2016, 8, 185-215.	11.6	183
11	Physical forcing and physical/biochemical variability of the Mediterranean Sea: a review of unresolved issues and directions for future research. Ocean Science, 2014, 10, 281-322.	3.4	154
12	The Mediterranean Sea system: a review and an introduction to the special issue. Ocean Science, 2013, 9, 789-803.	3.4	147
13	Biogeochemical protocols and diagnostics for the CMIP6 Ocean Model Intercomparison Project (OMIP). Geoscientific Model Development, 2017, 10, 2169-2199.	3.6	137
14	Global sea-to-air flux climatology for bromoform, dibromomethane and methyl iodide. Atmospheric Chemistry and Physics, 2013, 13, 8915-8934.	4.9	131
15	Tracer applications of noble gas radionuclides in the geosciences. Earth-Science Reviews, 2014, 138, 196-214.	9.1	119
16	Ocean FAIR Data Services. Frontiers in Marine Science, 2019, 6, .	2.5	116
17	The CARINA data synthesis project: introduction and overview. Earth System Science Data, 2010, 2, 105-121.	9.9	116
18	On the role of circulation and mixing in the ventilation of oxygen minimum zones with a focus on the eastern tropical North Atlantic. Biogeosciences, 2015, 12, 489-512.	3.3	109

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19	Ventilation of the Arctic Ocean: Mean ages and inventories of anthropogenic CO ₂ and CFC-11. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	102
20	GLODAPv2.2019 – an update of GLODAPv2. <i>Earth System Science Data</i> , 2019, 11, 1437-1461.	9.9	102
21	An estimate of anthropogenic CO ₂ inventory from decadal changes in oceanic carbon content. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 3037-3042.	7.1	92
22	Quality control procedures and methods of the CARINA database. <i>Earth System Science Data</i> , 2010, 2, 35-49.	9.9	89
23	The CO ₂ system in the Mediterranean Sea: a basin wide perspective. <i>Ocean Science</i> , 2014, 10, 69-92.	3.4	87
24	Greenland–Scotland overflow studied by hydro-chemical multivariate analysis. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2003, 50, 73-102.	1.4	82
25	High anthropogenic carbon content in the eastern Mediterranean. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	82
26	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2020. <i>Earth System Science Data</i> , 2020, 12, 3653-3678.	9.9	76
27	Inventory changes in anthropogenic carbon from 1997–2003 in the Atlantic Ocean between 20°S and 65°N. <i>Global Biogeochemical Cycles</i> , 2009, 23, .	4.9	69
28	Arctic ocean shelf–basin interaction: An active continental shelf CO ₂ pump and its impact on the degree of calcium carbonate solubility. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2010, 57, 869-879.	1.4	67
29	Roles of marginal seas in absorbing and storing fossil fuel CO ₂ . <i>Energy and Environmental Science</i> , 2011, 4, 1133.	30.8	65
30	Use of SF ₆ to estimate anthropogenic CO ₂ in the upper ocean. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	63
31	Mixing and convection in the Greenland Sea from a tracer-release experiment. <i>Nature</i> , 1999, 401, 902-904.	27.8	61
32	The Global Ocean Ship-Based Hydrographic Investigations Program (GO-SHIP): A Platform for Integrated Multidisciplinary Ocean Science. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	60
33	Formation of Denmark Strait overflow water and its hydro-chemical composition. <i>Journal of Marine Systems</i> , 2005, 57, 264-288.	2.1	59
34	Changes in ventilation of the Mediterranean Sea during the past 25 year. <i>Ocean Science</i> , 2014, 10, 1-16.	3.4	57
35	Deoxygenation in the oxygen minimum zone of the eastern tropical North Atlantic. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	56
36	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2021. <i>Earth System Science Data</i> , 2021, 13, 5565-5589.	9.9	54

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37	GO-SHIP Repeat Hydrography Nutrient Manual: The Precise and Accurate Determination of Dissolved Inorganic Nutrients in Seawater, Using Continuous Flow Analysis Methods. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	52
38	Ventilation of the Mediterranean Sea constrained by multiple transient tracer measurements. <i>Ocean Science</i> , 2014, 10, 439-457.	3.4	51
39	Is coccolithophore distribution in the Mediterranean Sea related to seawater carbonate chemistry?. <i>Ocean Science</i> , 2015, 11, 13-32.	3.4	49
40	Iron Biogeochemistry in the High Latitude North Atlantic Ocean. <i>Scientific Reports</i> , 2018, 8, 1283.	3.3	47
41	Challenges for Sustained Observing and Forecasting Systems in the Mediterranean Sea. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	47
42	Water masses in the Atlantic Ocean: characteristics and distributions. <i>Ocean Science</i> , 2021, 17, 463-486.	3.4	40
43	How Well Do We Understand the Land-Ocean-Atmosphere Carbon Cycle?. <i>Reviews of Geophysics</i> , 2022, 60, .	23.0	38
44	A first study of SF6 as a transient tracer in the Southern Ocean. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2004, 51, 2683-2699.	1.4	37
45	Diapycnal oxygen supply to the tropical North Atlantic oxygen minimum zone. <i>Biogeosciences</i> , 2013, 10, 5079-5093.	3.3	35
46	Repeat hydrography in the Mediterranean Sea, data from the <i>Meteor&/i> cruise 84/3 in 2011. <i>Earth System Science Data</i> , 2013, 5, 289-294.	9.9	34
47	Shelf-Basin interaction along the East Siberian Sea. <i>Ocean Science</i> , 2017, 13, 349-363.	3.4	34
48	Apparent removal of the transient tracer carbon tetrachloride from anoxic seawater. <i>Geophysical Research Letters</i> , 1994, 21, 2511-2514.	4.0	33
49	Temporal nutrient dynamics in the Mediterranean Sea in response to anthropogenic inputs. <i>Geophysical Research Letters</i> , 2016, 43, 5243-5251.	4.0	33
50	The East Greenland Current studied with CFCs and released sulphur hexafluoride. <i>Journal of Marine Systems</i> , 2005, 55, 77-95.	2.1	31
51	A global monthly climatology of total alkalinity: a neural network approach. <i>Earth System Science Data</i> , 2019, 11, 1109-1127.	9.9	31
52	Oxygen utilization and downward carbon flux in an oxygen-depleted eddy in the eastern tropical North Atlantic. <i>Biogeosciences</i> , 2016, 13, 5633-5647.	3.3	29
53	³⁹ Ar dating with small samples provides new key constraints on ocean ventilation. <i>Nature Communications</i> , 2018, 9, 5046.	12.8	29
54	Diapycnal diffusivity at the upper boundary of the tropical North Atlantic oxygen minimum zone. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	28

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55	Estimating changes in ocean ventilation from early 1990s CFC-12 and late 2000s SF ₆ measurements. <i>Geophysical Research Letters</i> , 2013, 40, 927-932.	4.0	28
56	Transient tracer distributions in the Fram Strait in 2012 and inferred anthropogenic carbon content and transport. <i>Ocean Science</i> , 2016, 12, 319-333.	3.4	28
57	Perspectives of transient tracer applications and limiting cases. <i>Ocean Science</i> , 2015, 11, 699-718.	3.4	28
58	Anthropogenic Signatures of Lead in the Northeast Atlantic. <i>Geophysical Research Letters</i> , 2018, 45, 2734-2743.	4.0	26
59	A Global Ocean Oxygen Database and Atlas for Assessing and Predicting Deoxygenation and Ocean Health in the Open and Coastal Ocean. <i>Frontiers in Marine Science</i> , 2021, 8, .	2.5	26
60	Consistency of TTO-NAS inorganic carbon data with modern measurements. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	25
61	Lateral diffusivity from tracer release experiments in the tropical North Atlantic thermocline. <i>Journal of Geophysical Research: Oceans</i> , 2013, 118, 2719-2733.	2.6	24
62	A toolbox for secondary quality control on ocean chemistry and hydrographic data. <i>Limnology and Oceanography: Methods</i> , 2015, 13, 601-608.	2.0	24
63	Hydrographic situation during cruise M84/3 and P414 (spring 2011) in the Mediterranean Sea. <i>Ocean Science</i> , 2014, 10, 669-682.	3.4	24
64	An evaluation of tracer fields and anthropogenic carbon in the equatorial and the tropical North Atlantic. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2012, 67, 85-97.	1.4	23
65	Recent Changes in Deep Ventilation of the Mediterranean Sea; Evidence From Long-Term Transient Tracer Observations. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	22
66	CARINA alkalinity data in the Atlantic Ocean. <i>Earth System Science Data</i> , 2009, 1, 45-61.	9.9	22
67	A global monthly climatology of oceanic total dissolved inorganic carbon: a neural network approach. <i>Earth System Science Data</i> , 2020, 12, 1725-1743.	9.9	22
68	Spreading of overflow water from the Greenland to the Labrador Sea. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	20
69	Atlantic Ocean CARINA data: overview and salinity adjustments. <i>Earth System Science Data</i> , 2010, 2, 17-34.	9.9	20
70	An internally consistent dataset of ¹³ C-DIC in the North Atlantic Ocean – NAC13v1. <i>Earth System Science Data</i> , 2016, 8, 559-570.	9.9	19
71	Vertical distribution of perfluoroalkyl substances in water columns around the Japan sea and the Mediterranean Sea. <i>Chemosphere</i> , 2019, 231, 487-494.	8.2	18
72	Untangling biogeochemical processes from the impact of ocean circulation: First insight on the Mediterranean dissolved barium dynamics. <i>Global Biogeochemical Cycles</i> , 2017, 31, 1256-1270.	4.9	17

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73	A near-synoptic survey of ocean microplastic concentration along an around-the-world sailing race. PLoS ONE, 2020, 15, e0243203.	2.5	17
74	CARINA data synthesis project: pH data scale unification and cruise adjustments. Earth System Science Data, 2010, 2, 133-155.	9.9	16
75	Best Practice Data Standards for Discrete Chemical Oceanographic Observations. Frontiers in Marine Science, 2022, 8, .	2.5	16
76	Overview of the Nordic Seas CARINA data and salinity measurements. Earth System Science Data, 2009, 1, 25-34.	9.9	15
77	A high resolution and quasi-zonal transect of dissolved Ba in the Mediterranean Sea. Marine Chemistry, 2016, 178, 1-7.	2.3	14
78	Tracer Evidence of the Origin and Variability of Denmark Strait Overflow Water. , 2008, , 475-503.		14
79	Nordic Seas and Arctic Ocean CFC data in CARINA. Earth System Science Data, 2010, 2, 79-97.	9.9	14
80	Mediterranean Sea Ship-based Hydrographic Investigations Program (Med-SHIP). Oceanography, 2015, 28, 12-15.	1.0	13
81	Temporal changes in ventilation and the carbonate system in the Atlantic sector of the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 26-38.	1.4	13
82	Trace Element Biogeochemistry in the High-Latitude North Atlantic Ocean: Seasonal Variations and Volcanic Inputs. Global Biogeochemical Cycles, 2021, 35, e2020GB006674.	4.9	13
83	CARINA TCO<sub>2</sub> data in the Atlantic Ocean. Earth System Science Data, 2010, 2, 177-187.	9.9	12
84	Changes in column inventories of carbon and oxygen in the Atlantic Ocean. Biogeosciences, 2012, 9, 4819-4833.	3.3	12
85	Isotopic evidence for biogenic molecular hydrogen production in the Atlantic Ocean. Biogeosciences, 2016, 13, 323-340.	3.3	12
86	Atmospheric histories, growth rates and solubilities in seawater and other natural waters of the potential transient tracers HCFC-22, HCFC-141b, HCFC-142b, HFC-134a, HFC-125, HFC-23, PFC-14 and PFC-116. Ocean Science, 2019, 15, 33-60.	3.4	12
87	The South Atlantic Meridional Overturning Circulation and Mesoscale Eddies in the First GO<sup>S</sup>SHIP Section at 34.5<sup>S</sup>. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016962.	2.6	12
88	CARINA: nutrient data in the Atlantic Ocean. Earth System Science Data, 2009, 1, 7-24.	9.9	12
89	Atlantic CFC data in CARINA. Earth System Science Data, 2010, 2, 1-15.	9.9	12
90	The Marine Carbon Cycle and Ocean Carbon Inventories. International Geophysics, 2013, 103, 787-815.	0.6	11

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91	A vision for FAIR ocean data products. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	11
92	Trends in anthropogenic carbon in the Arctic Ocean. <i>Progress in Oceanography</i> , 2019, 178, 102177.	3.2	10
93	Evaluation of Data-Based Estimates of Anthropogenic Carbon in the Arctic Ocean. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2020JC016124.	2.6	10
94	Upwelling velocity and ventilation in the Mauritanian upwelling system estimated by CFC-12 and SF6 observations. <i>Journal of Marine Systems</i> , 2015, 151, 57-70.	2.1	9
95	High-resolution regional modelling of natural and anthropogenic radiocarbon in the Mediterranean Sea. <i>Biogeosciences</i> , 2017, 14, 1197-1213.	3.3	6
96	A 30-Year Time Series of Transient Tracer-Based Estimates of Anthropogenic Carbon in the Central Labrador Sea. <i>Journal of Geophysical Research: Oceans</i> , 2021, 126, e2020JC017092.	2.6	6
97	Diapycnal diffusivity in the core and oxycline of the tropical North Atlantic oxygen minimum zone. <i>Journal of Marine Systems</i> , 2016, 160, 54-63.	2.1	5
98	Observations of the Intermediate Water Exchange Between the South China Sea and the Pacific Ocean Deduced From Transient Tracer Measurements. <i>Journal of Geophysical Research: Oceans</i> , 2018, 123, 7495-7510.	2.6	5
99	The flow field of the upper hypoxic eastern tropical North Atlantic oxygen minimum zone. <i>Ocean Science</i> , 2016, 12, 153-167.	3.4	4
100	Ventilation and anthropogenic CO ₂ in the Sulu Sea. <i>Journal of Marine Systems</i> , 2017, 170, 1-9.	2.1	4
101	Physical and biogeochemical parameters of the Mediterranean Sea during a cruise with RV <i>Maria S. Merian</i> in March 2018. <i>Earth System Science Data</i> , 2020, 12, 2747-2763.	9.9	4
102	Dissolved neodymium isotopes in the Mediterranean Sea. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 322, 143-169.	3.9	4
103	Optical Properties and Biochemical Indices of Marine Particles in the Open Mediterranean Sea: The R/V <i>Maria S. Merian</i> Cruise, March 2018. <i>Frontiers in Earth Science</i> , 2021, 9, .	1.8	3
104	Medusa "Aqua" system: simultaneous measurement and evaluation of novel potential halogenated transient tracers HCFCs, HFCs, and PFCs in the ocean. <i>Ocean Science</i> , 2021, 17, 509-525.	3.4	2