Tatiana Ilyina

List of Publications by Year
in descending order

90 papers	15,307 citations	81839 39 h-index	53190 85 g-index
142 all docs	142 docs citations	142 times ranked	18377 citing authors

#	Article	IF	Citations
1	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	3.7	1,477
2	Climate and carbon cycle changes from 1850 to 2100 in MPIâ€ESM simulations for the Coupled Model Intercomparison Project phase 5. Journal of Advances in Modeling Earth Systems, 2013, 5, 572-597.	1.3	1,280
3	Multiple stressors of ocean ecosystems in the 21st century: projections with CMIP5 models. Biogeosciences, 2013, 10, 6225-6245.	1.3	1,191
4	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	3.7	1,167
5	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	3.7	1,159
6	Anthropogenic perturbation of the carbon fluxes from land to ocean. Nature Geoscience, 2013, 6, 597-607.	5.4	937
7	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	3.7	801
8	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	3.7	663
9	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
10	Developments in the MPIâ€M Earth System Model version 1.2 (MPIâ€ESM1.2) and Its Response to Increasing CO₂. Journal of Advances in Modeling Earth Systems, 2019, 11, 998-1038.	1.3	582
11	Carbonâ€“Concentration and Carbonâ€“Climate Feedbacks in CMIP5 Earth System Models. Journal of Climate, 2013, 26, 5289-5314.	1.2	576
12	Twenty-first century ocean warming, acidification, deoxygenation, and upper-ocean nutrient and primary production decline from CMIP6 model projections. Biogeosciences, 2020, 17, 3439-3470.	1.3	348
13	Global ocean biogeochemistry model HAMOCC: Model architecture and performance as component of the MPIâ€Earth system model in different CMIP5 experimental realizations. Journal of Advances in Modeling Earth Systems, 2013, 5, 287-315.	1.3	331
14	The Max Planck Institute Grand Ensemble: Enabling the Exploration of Climate System Variability. Journal of Advances in Modeling Earth Systems, 2019, 11, 2050-2069.	1.3	288
15	A Higherâ€resolution Version of the Max Planck Institute Earth System Model (MPIâ€ESM1.2â€HR). Journal of Advances in Modeling Earth Systems, 2018, 10, 1383-1413.	1.3	272
16	Carbonâ€“concentration and carbonâ€“climate feedbacks in CMIP6 models and their comparison to CMIP5 models. Biogeosciences, 2020, 17, 4173-4222.	1.3	255
17	OMIP contribution to CMIP6: experimental and diagnostic protocol for the physical component of the Ocean Model Intercomparison Project. Geoscientific Model Development, 2016, 9, 3231-3296.	1.3	223
18	Rapid emergence of climate change in environmental drivers of marine ecosystems. Nature Communications, 2017, 8, 14682.	5.8	216

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19	C4MIP â€“ The Coupled Climateâ€“Carbon Cycle Model Intercomparison Project: experimental protocol for CMIP6. Geoscientific Model Development, 2016, 9, 2853-2880.	1.3	186
20	Future Arctic Ocean primary productivity from CMIP5 simulations: Uncertain outcome, but consistent mechanisms. Global Biogeochemical Cycles, 2013, 27, 605-619.	1.9	185
21	Towards real-time verification of CO2 emissions. Nature Climate Change, 2017, 7, 848-850.	8.1	168
22	Tracking Improvement in Simulated Marine Biogeochemistry Between CMIP5 and CMIP6. Current Climate Change Reports, 2020, 6, 95-119.	2.8	155
23	Consistency and Challenges in the Ocean Carbon Sink Estimate for the Global Carbon Budget. Frontiers in Marine Science, 2020, 7, .	1.2	114
24	Global warming amplified by reduced sulphur fluxes as a result of ocean acidification. Nature Climate Change, 2013, 3, 975-978.	8.1	110
25	Decadal trends in the ocean carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11646-11651.	3.3	94
26	Detecting regional anthropogenic trends in ocean acidification against natural variability. Nature Climate Change, 2012, 2, 167-171.	8.1	83
27	Inconsistent strategies to spin up models in CMIP5: implications for ocean biogeochemical model performance assessment. Geoscientific Model Development, 2016, 9, 1827-1851.	1.3	68
28	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	5.4	68
29	Assessing the potential of calcium-based artificial ocean alkalinization to mitigate rising atmospheric CO₂and ocean acidification. Geophysical Research Letters, 2013, 40, 5909-5914.	1.5	63
30	Nonlinearity of Ocean Carbon Cycle Feedbacks in CMIP5 Earth System Models. Journal of Climate, 2014, 27, 3869-3888.	1.2	62
31	Early detection of ocean acidification effects on marine calcification. Global Biogeochemical Cycles, 2009, 23, .	1.9	60
32	Quantifying Errors in Observationally Based Estimates of Ocean Carbon Sink Variability. Global Biogeochemical Cycles, 2021, 35, e2020GB006788.	1.9	60
33	Incorporating a prognostic representation of marine nitrogen fixers into the global ocean biogeochemical model HAMOCC. Journal of Advances in Modeling Earth Systems, 2017, 9, 438-464.	1.3	59
34	A fate and transport ocean model for persistent organic pollutants and its application to the North Sea. Journal of Marine Systems, 2006, 63, 1-19.	0.9	58
35	The Zero Emissions Commitment Model Intercomparison Project (ZECMIP) contribution to C4MIP: quantifying committed climate changes following zero carbon emissions. Geoscientific Model Development, 2019, 12, 4375-4385.	1.3	56
36	Oceanic CO₂ outgassing and biological production hotspots induced by pre-industrial river loads of nutrients and carbon in a global modeling approach. Biogeosciences, 2020, 17, 55-88.	1.3	51

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37	Future ocean increasingly transparent to low-frequency sound owing to carbon dioxideÂemissions. Nature Geoscience, 2010, 3, 18-22.	5.4	47
38	Impacts of artificial ocean alkalinization on the carbon cycle and climate in Earth system simulations. Geophysical Research Letters, 2016, 43, 6493-6502.	1.5	46
39	The potential impact of ocean acidification upon eggs and larvae of yellowfin tuna (Thunnus) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T	0.6	44
40	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	1.5	43
41	Current and Future Decadal Trends in the Oceanic Carbon Uptake Are Dominated by Internal Variability. Geophysical Research Letters, 2018, 45, 916-925.	1.5	41
42	Detection and Attribution of Climate Change Signal in Ocean Wind Waves. Journal of Climate, 2015, 28, 1578-1591.	1.2	40
43	Decadal predictions of the North Atlantic CO2 uptake. Nature Communications, 2016, 7, 11076.	5.8	39
44	Increase in Arctic coastal erosion and its sensitivity to warming in the twenty-first century. Nature Climate Change, 2022, 12, 263-270.	8.1	37
45	Detecting an external influence on recent changes in oceanic oxygen using an optimal fingerprinting method. Biogeosciences, 2013, 10, 1799-1813.	1.3	36
46	Net primary productivity estimates and environmental variables in the Arctic Ocean: An assessment of coupled physical-biogeochemical models. Journal of Geophysical Research: Oceans, 2016, 121, 8635-8669.	1.0	34
47	Time of Emergence and Large Ensemble Intercomparison for Ocean Biogeochemical Trends. Global Biogeochemical Cycles, 2020, 34, e2019GB006453.	1.9	33
48	Predicting the variable ocean carbon sink. Science Advances, 2019, 5, eaav6471.	4.7	31
49	Detecting Regional Modes of Variability in Observationâ€Based Surface Ocean <i>p</i>CO₂. Geophysical Research Letters, 2019, 46, 2670-2679.	1.5	31
50	Detection and projection of carbonate dissolution in the water column and deepâ€sea sediments due to ocean acidification. Geophysical Research Letters, 2012, 39, .	1.5	30
51	Amplification of global warming through pH dependence of DMS production simulated with a fully coupled Earth system model. Biogeosciences, 2017, 14, 3633-3648.	1.3	29
52	Modelling the cycling of persistent organic pollutants (POPs) in the North Sea system: Fluxes, loading, seasonality, trends. Journal of Marine Systems, 2013, 111-112, 69-82.	0.9	28
53	Historical increases in landâ€derived nutrient inputs may alleviate effects of a changing physical climate on the oceanic carbon cycle. Global Change Biology, 2021, 27, 5491-5513.	4.2	28
54	Microstructure and composition of marine aggregates as co-determinants for vertical particulate organic carbon transfer in the global ocean. Biogeosciences, 2020, 17, 1765-1803.	1.3	26

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55	Reconstructing the Preindustrial Coastal Carbon Cycle Through a Global Ocean Circulation Model: Was the Global Continental Shelf Already Both Autotrophic and a CO₂ Sink?. Global Biogeochemical Cycles, 2021, 35, e2020GB006603.	1.9	25
56	What was the source of the atmospheric CO₂ increase during the Holocene?. Biogeosciences, 2019, 16, 2543-2555.	1.3	24
57	The global ocean biogeochemistry model HAMOCC: Model architecture and performance as component of the MPI-earth system model in different CMIP5 experimental realizations. Journal of Advances in Modeling Earth Systems, 2013, , n/a-n/a.	1.3	24
58	Impact of an extremely large magnitude volcanic eruption on the global climate and carbon cycle estimated from ensemble Earth System Model simulations. Biogeosciences, 2013, 10, 669-687.	1.3	22
59	Evaluating CMIP5 ocean biogeochemistry and Southern Ocean carbon uptake using atmospheric potential oxygen: Presentâ€day performance and future projection. Geophysical Research Letters, 2016, 43, 2077-2085.	1.5	22
60	The Sensitivity of the Marine Carbonate System to Regional Ocean Alkalinity Enhancement. Frontiers in Climate, 2021, 3, .	1.3	21
61	Ocean biogeochemistry in the warm climate of the late Paleocene. Climate of the Past, 2015, 11, 63-79.	1.3	20
62	Ten new insights in climate science 2020 â€“ a horizon scan. Global Sustainability, 2021, 4, .	1.6	17
63	Predictable Variations of the Carbon Sinks and Atmospheric CO₂Growth in a Multiâ€Model Framework. Geophysical Research Letters, 2021, 48, e2020GL090695.	1.5	17
64	Evaluating the ocean biogeochemical components of Earth system models using atmospheric potential oxygen and ocean color data. Biogeosciences, 2015, 12, 193-208.	1.3	16
65	The ICON Earth System Model Version 1.0. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	16
66	Quantifying and Comparing Effects of Climate Engineering Methods on the Earth System. Earth's Future, 2018, 6, 149-168.	2.4	15
67	Mass budgets and contribution of individual sources and sinks to the abundance of Î³-HCH, Î±-HCH and PCB 153 in the North Sea. Chemosphere, 2008, 72, 1132-1137.	4.2	13
68	Predictability Horizons in the Global Carbon Cycle Inferred From a Perfectâ€Model Framework. Geophysical Research Letters, 2020, 47, e2019GL085311.	1.5	12
69	Enhanced Rates of Regional Warming and Ocean Acidification After Termination of Largeâ€Scale Ocean Alkalinization. Geophysical Research Letters, 2018, 45, 7120-7129.	1.5	11
70	Incorporating the stable carbon isotope ¹³C in the ocean biogeochemical component of the Max Planck Institute Earth System Model. Biogeosciences, 2021, 18, 4389-4429.	1.3	11
71	Inherent uncertainty disguises attribution of reduced atmospheric CO2 growth to CO2 emission reductions for up to a decade. Environmental Research Letters, 2020, 15, 114058.	2.2	10
72	Modelling the fate of persistent organic pollutants (POPs) in the North Sea system. Procedia Environmental Sciences, 2011, 6, 169-179.	1.3	8

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73	Light absorption by marine cyanobacteria affects tropical climate mean state and variability. Earth System Dynamics, 2018, 9, 1283-1300.	2.7	8
74	Hidden trends in the ocean carbon sink. Nature, 2016, 530, 426-427.	13.7	6
75	Scenarios of Temporal and Spatial Evolution of Hexabromocyclododecane in the North Sea. Environmental Science & Technology, 2010, 44, 4622-4628.	4.6	5
76	The potential of ²³⁰Th for detection of ocean acidification impacts on pelagic carbonate production. Biogeosciences, 2018, 15, 3521-3539.	1.3	5
77	Carbonate Dissolution Enhanced by Ocean Stagnation and Respiration at the Onset of the Paleoceneâ€Eocene Thermal Maximum. Geophysical Research Letters, 2019, 46, 842-852.	1.5	5
78	A First Intercomparison of the Simulated LGM Carbon Results Within PMIPâ€Carbon: Role of the Ocean Boundary Conditions. Paleoceanography and Paleoclimatology, 2021, 36, e2021PA004302.	1.3	5
79	Detectability of Artificial Ocean Alkalinization and Stratospheric Aerosol Injection in MPIâ€ESM. Earth's Future, 2020, 8, e2020EF001634.	2.4	3
80	Oceanic Rossby waves drive inter-annual predictability of net primary production in the central tropical Pacific. Environmental Research Letters, 2022, 17, 014030.	2.2	3
81	Changes in underwater sound propagation caused by ocean acidification. IOP Conference Series: Earth and Environmental Science, 2009, 6, 462007.	0.2	2
82	Trivial improvements in predictive skill due to direct reconstruction of the global carbon cycle. Earth System Dynamics, 2021, 12, 1139-1167.	2.7	2
83	Local oceanic CO₂ outgassing triggered by terrestrial carbon fluxes during deglacial flooding. Climate of the Past, 2022, 18, 273-292.	1.3	2
84	Ocean systems. , 2022, , 427-452.		1
85	Detecting early signs of global-scale effects of ocean acidification on marine calcification. IOP Conference Series: Earth and Environmental Science, 2009, 6, 462003.	0.2	0
86	Corrigendum to "Evaluating the ocean biogeochemical components of Earth system models using atmospheric potential oxygen and ocean color data" published in Biogeosciences, 12, 193â€"208, 2015. Biogeosciences, 2015, 12, 2891-2891.	1.3	0
87	Appreciation of peer reviewers for 2015. Geophysical Research Letters, 2016, 43, 3593-3619.	1.5	0
88	Appreciation of 2017 GRL Peer Reviewers. Geophysical Research Letters, 2018, 45, 4494-4528.	1.5	0
89	Thank You to Our 2018 Peer Reviewers. Geophysical Research Letters, 2019, 46, 12608-12636.	1.5	0
90	New Geophysical Research Letters Editorial, Revisions Policies. Eos, 2016, 97, .	0.1	0