Jorge L Sarmiento

List of Publications by Year
in descending order

58 papers	14,789 citations	71102 41 h-index	138484 58 g-index
60 all docs	60 docs citations	60 times ranked	14108 citing authors

#	Article	IF	Citations
1	Climate-driven trends in contemporary ocean productivity. Nature, 2006, 444, 752-755.	27.8	1,873
2	Trends in the sources and sinks of carbon dioxide. Nature Geoscience, 2009, 2, 831-836.	12.9	1,746
3	High-latitude controls of thermocline nutrients and low latitude biological productivity. Nature, 2004, 427, 56-60.	27.8	1,090
4	Redfield ratios of remineralization determined by nutrient data analysis. Global Biogeochemical Cycles, 1994, 8, 65-80.	4.9	1,036
5	Marine Taxa Track Local Climate Velocities. Science, 2013, 341, 1239-1242.	12.6	1,025
6	Simulated response of the ocean carbon cycle to anthropogenic climate warming. Nature, 1998, 393, 245-249.	27.8	814
7	Response of ocean ecosystems to climate warming. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	4.9	694
8	A synthesis of global particle export from the surface ocean and cycling through the ocean interior and on the seafloor. Global Biogeochemical Cycles, 2007, 21, .	4.9	464
9	Oceanic sources, sinks, and transport of atmospheric CO₂. Global Biogeochemical Cycles, 2009, 23, .	4.9	455
10	Dominance of the Southern Ocean in Anthropogenic Carbon and Heat Uptake in CMIP5 Models. Journal of Climate, 2015, 28, 862-886.	3.2	432
11	An improved method for detecting anthropogenic CO2in the oceans. Global Biogeochemical Cycles, 1996, 10, 809-837.	4.9	415
12	Detection of anthropogenic climate change in satellite records of ocean chlorophyll and productivity. Biogeosciences, 2010, 7, 621-640.	3.3	360
13	Empirical and mechanistic models for the particle export ratio. Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	4.9	353
14	The Southern Ocean biogeochemical divide. Nature, 2006, 441, 964-967.	27.8	268
15	Three-dimensional simulations of the impact of Southern Ocean nutrient depletion on atmospheric CO2 and ocean chemistry. Limnology and Oceanography, 1991, 36, 1928-1950.	3.1	237
16	Rapid emergence of climate change in environmental drivers of marine ecosystems. Nature Communications, 2017, 8, 14682.	12.8	216
17	Impact of circulation on export production, dissolved organic matter, and dissolved oxygen in the ocean: Results from Phase II of the Ocean Carbonâ€cycle Model Intercomparison Project (OCMIPâ€2). Global Biogeochemical Cycles, 2007, 21, .	4.9	211
18	Diagnosing the contribution of phytoplankton functional groups to the production and export of particulate organic carbon, CaCO3, and opal from global nutrient and alkalinity distributions. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	4.9	199

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19	Reconciling fisheries catch and ocean productivity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1441-E1449.	7.1	195
20	Biogeochemical sensor performance in the SOCCOM profiling float array. Journal of Geophysical Research: Oceans, 2017, 122, 6416-6436.	2.6	190
21	Dataâ€based estimates of suboxia, denitrification, and N₂O production in the ocean and their sensitivities to dissolved O₂. Global Biogeochemical Cycles, 2012, 26, .	4.9	183
22	Inverse estimates of the oceanic sources and sinks of natural CO2 and the implied oceanic carbon transport. Global Biogeochemical Cycles, 2007, 21, .	4.9	156
23	Connecting Changing Ocean Circulation with Changing Climate. Journal of Climate, 2013, 26, 2268-2278.	3.2	152
24	Annual boomâ€“bust cycles of polar phytoplankton biomass revealed by space-based lidar. Nature Geoscience, 2017, 10, 118-122.	12.9	150
25	Spiraling pathways of global deep waters to the surface of the Southern Ocean. Nature Communications, 2017, 8, 172.	12.8	144
26	Autonomous Biogeochemical Floats Detect Significant Carbon Dioxide Outgassing in the Highâ€Latitude Southern Ocean. Geophysical Research Letters, 2018, 45, 9049-9057.	4.0	138
27	Impact of oceanic circulation on biological carbon storage in the ocean and atmospheric pCO₂. Global Biogeochemical Cycles, 2008, 22, .	4.9	118
28	Calculating surface ocean pCO₂ from biogeochemical Argo floats equipped with pH: An uncertainty analysis. Global Biogeochemical Cycles, 2017, 31, 591-604.	4.9	104
29	Reassessing Southern Ocean Airâ€Sea CO₂ Flux Estimates With the Addition of Biogeochemical Float Observations. Global Biogeochemical Cycles, 2019, 33, 1370-1388.	4.9	95
30	Role of Mesoscale Eddies in Cross-Frontal Transport of Heat and Biogeochemical Tracers in the Southern Ocean. Journal of Physical Oceanography, 2015, 45, 3057-3081.	1.7	94
31	Climate change impacts on mismatches between phytoplankton blooms and fish spawning phenology. Global Change Biology, 2019, 25, 2544-2559.	9.5	93
32	Air-sea flux of oxygen estimated from bulk data: Implications For the marine and atmospheric oxygen cycles. Global Biogeochemical Cycles, 2001, 15, 783-803.	4.9	86
33	Carbon biogeochemistry and climate change. Photosynthesis Research, 1994, 39, 209-234.	2.9	70
34	Upwelling in the Southern Ocean. Physics Today, 2015, 68, 27-32.	0.3	70
35	Efficiency of small scale carbon mitigation by patch iron fertilization. Biogeosciences, 2010, 7, 3593-3624.	3.3	64
36	Global Nitrous Oxide Production Determined by Oxygen Sensitivity of Nitrification and Denitrification. Global Biogeochemical Cycles, 2018, 32, 1790-1802.	4.9	63

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37	Mechanisms of Southern Ocean Heat Uptake and Transport in a Global Eddying Climate Model. Journal of Climate, 2016, 29, 2059-2075.	3.2	56
38	Annual nitrate drawdown observed by <scp>SOCCOM</scp> profiling floats and the relationship to annual net community production. Journal of Geophysical Research: Oceans, 2017, 122, 6668-6683.	2.6	54
39	Emergence of anthropogenic signals in the ocean carbon cycle. Nature Climate Change, 2019, 9, 719-725.	18.8	54
40	Seasonal modulation of phytoplankton biomass in the Southern Ocean. Nature Communications, 2020, 11, 5364.	12.8	51
41	Complex functionality with minimal computation: Promise and pitfalls of reducedâ€tracer ocean biogeochemistry models. Journal of Advances in Modeling Earth Systems, 2015, 7, 2012-2028.	3.8	49
42	Empirical algorithms to estimate water column pH in the Southern Ocean. Geophysical Research Letters, 2016, 43, 3415-3422.	4.0	48
43	Importance of wind and meltwater for observed chemical and physical changes in the Southern Ocean. Nature Geoscience, 2020, 13, 35-42.	12.9	42
44	An observing system simulation for Southern Ocean carbon dioxide uptake. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130046.	3.4	41
45	Impact of Weddell Sea deep convection on natural and anthropogenic carbon in a climate model. Geophysical Research Letters, 2014, 41, 7262-7269.	4.0	39
46	Oxygen in the Southern Ocean From Argo Floats: Determination of Processes Driving Airâ€Sea Fluxes. Journal of Geophysical Research: Oceans, 2017, 122, 8661-8682.	2.6	38
47	Assessment of Export Efficiency Equations in the Southern Ocean Applied to Satelliteâ€Based Net Primary Production. Journal of Geophysical Research: Oceans, 2018, 123, 2945-2964.	2.6	35
48	Time of Emergence and Large Ensemble Intercomparison for Ocean Biogeochemical Trends. Global Biogeochemical Cycles, 2020, 34, e2019GB006453.	4.9	33
49	Nutrient Controls on Export Production in the Southern Ocean. Global Biogeochemical Cycles, 2019, 33, 942-956.	4.9	30
50	Metrics for the Evaluation of the Southern Ocean in Coupled Climate Models and Earth System Models. Journal of Geophysical Research: Oceans, 2018, 123, 3120-3143.	2.6	29
51	Southern Ocean Biogeochemical Float Deployment Strategy, With Example From the Greenwich Meridian Line (GOâ€SHIP A12). Journal of Geophysical Research: Oceans, 2019, 124, 403-431.	2.6	25
52	Assessment of Autonomous pH Measurements for Determining Surface Seawater Partial Pressure of CO 2. Journal of Geophysical Research: Oceans, 2018, 123, 4003-4013.	2.6	22
53	Supercooled Southern Ocean Waters. Geophysical Research Letters, 2020, 47, e2020GL090242.	4.0	21
54	Lagrangian Timescales of Southern Ocean Upwelling in a Hierarchy of Model Resolutions. Geophysical Research Letters, 2018, 45, 891-898.	4.0	16

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55	Deciphering Patterns and Drivers of Heat and Carbon Storage in the Southern Ocean. Geophysical Research Letters, 2019, 46, 3359-3367.	4.0	16
56	Indoâ€Pacific Sector Dominates Southern Ocean Carbon Outgassing. Global Biogeochemical Cycles, 2022, 36, .	4.9	14
57	The Deep Ocean's Carbon Exhaust. Global Biogeochemical Cycles, 2022, 36, .	4.9	12
58	Mechanistic Drivers of Reemergence of Anthropogenic Carbon in the Equatorial Pacific. Geophysical Research Letters, 2017, 44, 9433-9439.	4.0	10