David K Woolf

List of Publications by Year
in descending order

56 papers	2,766 citations	147801 31 h-index	189892 50 g-index
58 all docs	58 docs citations	58 times ranked	2649 citing authors

#	Article	IF	Citations
1	Satellites will address critical science priorities for quantifying ocean carbon. Frontiers in Ecology and the Environment, 2020, 18, 27-35.	4.0	22
2	Revised estimates of ocean-atmosphere CO2 flux are consistent with ocean carbon inventory. Nature Communications, 2020, 11, 4422.	12.8	129
3	Future policy implications of tidal energy array interactions. Marine Policy, 2019, 108, 103611.	3.2	5
4	Key Uncertainties in the Recent Airâ€Sea Flux of CO₂. Global Biogeochemical Cycles, 2019, 33, 1548-1563.	4.9	54
5	The FluxEngine airâ€"sea gas flux toolbox: simplified interface and extensions for in situ analyses and multiple sparingly soluble gases. Ocean Science, 2019, 15, 1707-1728.	3.4	10
6	Bubbles. , 2019, , 26-31.		0
7	Asymmetric transfer of CO2 across a broken sea surface. Scientific Reports, 2018, 8, 8301.	3.3	17
8	The wave and tidal resource of Scotland. Renewable Energy, 2017, 114, 3-17.	8.9	71
9	Tidal resource and interactions between multiple channels in the Goto Islands, Japan. International Journal of Marine Energy, 2017, 19, 332-344.	1.8	16
10	A Sensitivity Analysis of the Impact of Rain on Regional and Global Sea-Air Fluxes of CO2. PLoS ONE, 2016, 11, e0161105.	2.5	17
11	A reconciliation of empirical and mechanistic models of the airâ€sea gas transfer velocity. Journal of Geophysical Research: Oceans, 2016, 121, 818-835.	2.6	38
12	Progress in satellite remote sensing for studying physical processes at the ocean surface and its borders with the atmosphere and sea ice. Progress in Physical Geography, 2016, 40, 215-246.	3.2	19
13	On the calculation of airâ€sea fluxes of CO₂ in the presence of temperature and salinity gradients. Journal of Geophysical Research: Oceans, 2016, 121, 1229-1248.	2.6	60
14	FluxEngine: A Flexible Processing System for Calculating Atmosphereâ€"Ocean Carbon Dioxide Gas Fluxes and Climatologies. Journal of Atmospheric and Oceanic Technology, 2016, 33, 741-756.	1.3	36
15	The OceanFlux Greenhouse Gases methodology for deriving a sea surface climatology of CO₂ fugacity in support of airâ€"sea gas flux studies. Ocean Science, 2015, 11, 519-541.	3.4	35
16	Climate change and adaptation in the coastal areas of Europe's Northern Periphery Region. Ocean and Coastal Management, 2014, 94, 9-21.	4.4	10
17	Transfer Across the Air-Sea Interface. Springer Earth System Sciences, 2014, , 55-112.	0.2	69
18	The Physics and Hydrodynamic Setting of Marine Renewable Energy. Humanity and the Sea, 2014, , 5-20.	0.5	0

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19	Current Patterns in the Inner Sound (Pentland Firth) from Underway ADCP Data*. Journal of Atmospheric and Oceanic Technology, 2013, 30, 96-111.	1.3	57
20	Improvements to estimating the airâ€“sea gas transfer velocity by using dual-frequency, altimeter backscatter. Remote Sensing of Environment, 2013, 139, 1-5.	11.0	14
21	Sensitivity of Ferry Services to the Western Isles of Scotland to Changes in Wave and Wind Climate. Journal of Applied Meteorology and Climatology, 2013, 52, 1069-1084.	1.5	8
22	Climate change impacts on seaâ€“air fluxes of CO₂ in three Arctic seas: a sensitivity study using Earth observation. Biogeosciences, 2013, 10, 8109-8128.	3.3	22
23	Spaceâ€based retrievals of airâ€sea gas transfer velocities using altimeters: Calibration for dimethyl sulfide. Journal of Geophysical Research, 2012, 117, .	3.3	32
24	The dynamics of an energetic tidal channel, the Pentland Firth, Scotland. Continental Shelf Research, 2012, 48, 50-60.	1.8	49
25	Marine renewable energy: The ecological implications of altering the hydrodynamics of the marine environment. Ocean and Coastal Management, 2011, 54, 2-9.	4.4	171
26	Parameterizations and Algorithms for Oceanic Whitecap Coverage. Journal of Physical Oceanography, 2011, 41, 742-756.	1.7	62
27	Tuning a physically-based model of the airâ€“sea gas transfer velocity. Ocean Modelling, 2010, 31, 28-35.	2.4	35
28	Physical Exchanges at the Airâ€“Sea Interface: UKâ€“SOLAS Field Measurements. Bulletin of the American Meteorological Society, 2009, 90, 629-644.	3.3	52
29	Strategic priorities for assessing ecological impacts of marine renewable energy devices in the Pentland Firth (Scotland, UK). Marine Policy, 2009, 33, 635-642.	3.2	69
30	Supplement to Physical Exchanges at the Airâ€“Sea Interface: UKâ€“SOLAS Field Measurements. Bulletin of the American Meteorological Society, 2009, 90, ES9-ES16.	3.3	5
31	Calculating longâ€term global airâ€sea flux of carbon dioxide using scatterometer, passive microwave, and model reanalysis wind data. Journal of Geophysical Research, 2008, 113, .	3.3	11
32	The response to phase-dependent wind stress and cloud fraction of the diurnal cycle of SST and airâ€“sea CO2 exchange. Ocean Modelling, 2008, 23, 33-48.	2.4	14
33	A study of gas exchange during the transition from deep winter mixing to spring bloom in the Bay of Biscay measured by continuous observation from a ship of opportunity. Journal of Operational Oceanography, 2008, 1, 41-50.	1.2	4
34	One-dimensional modelling of convective CO2 exchange in the Tropical Atlantic. Ocean Modelling, 2007, 19, 161-182.	2.4	46
35	Application of new parameterizations of gas transfer velocity and their impact on regional and global marine CO2 budgets. Journal of Marine Systems, 2007, 66, 195-203.	2.1	32
36	Modelling of bubble-mediated gas transfer: Fundamental principles and a laboratory test. Journal of Marine Systems, 2007, 66, 71-91.	2.1	65

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37	Waves and climate change in the north-east Atlantic. Geophysical Research Letters, 2006, 33, .	4.0	83
38	The influence of the North Atlantic Oscillation on the sea-level around the northern European coasts reconsidered: the thermosteric effects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 845-856.	3.4	40
39	A regional analysis of new production on the northwest European shelf using oxygen fluxes and a ship-of-opportunity. Estuarine, Coastal and Shelf Science, 2006, 69, 478-490.	2.1	15
40	Parametrization of gas transfer velocities and sea-state-dependent wave breaking. Tellus, Series B: Chemical and Physical Meteorology, 2005, 57, 87-94.	1.6	116
41	Parametrization of gas transfer velocities and sea-state-dependent wave breaking. Tellus, Series B: Chemical and Physical Meteorology, 2005, 57, 87-94.	1.6	58
42	Towards a vulnerability assessment of the UK and northern European coasts: the role of regional climate variability. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 1329-1358.	3.4	64
43	Gas Exchange and Bubble-Induced Supersaturation in a Wind-Wave Tank. Journal of Atmospheric and Oceanic Technology, 2004, 21, 1925-1935.	1.3	9
44	Aeration Due to Breaking Waves. Part I: Bubble Populations. Journal of Physical Oceanography, 2004, 34, 989-1007.	1.7	87
45	Sensitivity of Ferry Services to the Western Isles of Scotland to Changes in Wave Climate. , 2004, , .		1
46	The influence of the North Atlantic Oscillation on sea-level variability in the North Atlantic region. Vital, 2003, 9, 145-167.	0.0	107
47	Measurements of the offshore wave climate around the British Isles by satellite altimeter. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 27-31.	3.4	35
48	Bubbles and their role in gas exchange. , 1997, , 173-206.		162
49	Bubbles and the airâ€sea transfer velocity of gases. Atmosphere - Ocean, 1993, 31, 517-540.	1.6	123
50	Some Factors Affecting the Size Distributions of Oceanic Bubbles. Journal of Physical Oceanography, 1992, 22, 382-389.	1.7	50
51	Bubbles and the air-sea exchange of gases in near-saturation conditions. Journal of Marine Research, 1991, 49, 435-466.	0.3	251
52	Comment on an article by J. Wu. Tellus, Series B: Chemical and Physical Meteorology, 1990, 42, 385-386.	1.6	0
53	Comments on â€œVariations of Whitecap Coverage with Wind stress and Water Temperature. Journal of Physical Oceanography, 1989, 19, 706-709.	1.7	72
54	Discriminating between the film drops and jet drops produced by a simulated whitecap. Journal of Geophysical Research, 1987, 92, 5142-5150.	3.3	88

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55	Marine condensation nucleus generation inferred from whitecap simulation tank results. Journal of Geophysical Research, 1987, 92, 6569-6576.	3.3	40
56	LUMINY - An Overview. Geophysical Monograph Series, 0, , 291-294.	0.1	8