Ken Buesseler

List of Publications by Year
in descending order

125 papers	16,571 citations	19657 61 h-index	15732 125 g-index
132 all docs	132 docs citations	132 times ranked	8994 citing authors

#	Article	IF	Citations
1	Revisiting five decades of ²³⁴Th data: a comprehensive global oceanic compilation. Earth System Science Data, 2022, 14, 2639-2679.	9.9	9
2	Biogenic sinking particle fluxes and sediment trap collection efficiency at Ocean Station Papa. Elementa, 2021, 9, .	3.2	17
3	Concentrations, ratios, and sinking fluxes of major bioelements at Ocean Station Papa. Elementa, 2021, 9, .	3.2	10
4	An operational overview of the EXport Processes in the Ocean from RemoTe Sensing (EXPORTS) Northeast Pacific field deployment. Elementa, 2021, 9, .	3.2	28
5	Twilight Zone Observation Network: A Distributed Observation Network for Sustained, Real-Time Interrogation of the Ocean's Twilight Zone. Marine Technology Society Journal, 2021, 55, 92-93.	0.4	2
6	Review of the analysis of 234Th in small volume (2â€“4ÂL) seawater samples: improvements and recommendations. Journal of Radioanalytical and Nuclear Chemistry, 2021, 329, 1-13.	1.5	6
7	A Visual Tour of Carbon Export by Sinking Particles. Global Biogeochemical Cycles, 2021, 35, e2021GB006985.	4.9	32
8	Distribution and Evolution of Fukushima Dai-ichi derived ¹³⁷Cs, ⁹⁰Sr, and ¹²⁹I in Surface Seawater off the Coast of Japan. Environmental Science & Technology, 2020, 54, 15066-15075.	10.0	20
9	Opening the floodgates at Fukushima. Science, 2020, 369, 621-622.	12.6	68
10	The value of scientific research on the ocean's biological carbon pump. Science of the Total Environment, 2020, 749, 141357.	8.0	18
11	Ironing Out Fe Residence Time in the Dynamic Upper Ocean. Global Biogeochemical Cycles, 2020, 34, e2020GB006592.	4.9	19
12	A Fukushima tracer perspective on four years of North Pacific mode water evolution. Deep-Sea Research Part I: Oceanographic Research Papers, 2020, 166, 103379.	1.4	8
13	The Neutrally Buoyant Sediment Trap: Two Decades of Progress. Journal of Atmospheric and Oceanic Technology, 2020, 37, 957-973.	1.3	14
14	Are all sediment traps created equal? An intercomparison study of carbon export methodologies at the PAP-SO site. Progress in Oceanography, 2020, 184, 102317.	3.2	27
15	Metrics that matter for assessing the ocean biological carbon pump. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9679-9687.	7.1	145
16	Mercury Export Flux in the Arctic Ocean Estimated from ²³⁴Th/²³⁸U Disequilibria. ACS Earth and Space Chemistry, 2020, 4, 795-801.	2.7	22
17	High-resolution spatial and temporal measurements of particulate organic carbon flux using thorium-234 in the northeast Pacific Ocean during the EXport Processes in the Ocean from RemoTe Sensing field campaign. Elementa, 2020, 8, .	3.2	19
18	High-resolution spatial and temporal measurements of particulate organic carbon flux using thorium-234 in the northeast Pacific Ocean during the EXport Processes in the Ocean from RemoTe Sensing field campaign. Elementa, 2020, 8, .	3.2	10

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19	Results of an Ocean Trial of the Symbiotic Machine for Ocean uRanium Extraction. Environmental Science & Technology, 2019, 53, 2229-2237.	10.0	20
20	Insights From the ²³⁸Uâ€²³⁴Th Method Into the Coupling of Biological Export and the Cycling of Cadmium, Cobalt, and Manganese in the Southeast Pacific Ocean. Global Biogeochemical Cycles, 2019, 33, 15-36.	4.9	20
21	234Th as a tracer of particulate export and remineralization in the southeastern tropical Pacific. Marine Chemistry, 2018, 201, 35-50.	2.3	42
22	Lingering radioactivity at the Bikini and Enewetak Atolls. Science of the Total Environment, 2018, 621, 1185-1198.	8.0	39
23	Marine radioecology after the Fukushima Dai-ichi nuclear accident: Are we better positioned to understand the impact of radionuclides in marine ecosystems?. Science of the Total Environment, 2018, 618, 80-92.	8.0	39
24	Flux of Particulate Elements in the North Atlantic Ocean Constrained by Multiple Radionuclides. Global Biogeochemical Cycles, 2018, 32, 1738-1758.	4.9	39
25	Effects of Protective Shell Enclosures on Uranium Adsorbing Polymers. Industrial & Engineering Chemistry Research, 2018, , .	3.7	3
26	How Data Set Characteristics Influence Ocean Carbon Export Models. Global Biogeochemical Cycles, 2018, 32, 1312-1328.	4.9	33
27	Unexpected source of Fukushima-derived radiocesium to the coastal ocean of Japan. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11092-11096.	7.1	70
28	Recent Transport History of Fukushima Radioactivity in the Northeast Pacific Ocean. Environmental Science & Technology, 2017, 51, 10494-10502.	10.0	34
29	Potential Releases of ¹²⁹I, ²³⁶U, and Pu Isotopes from the Fukushima Dai-ichi Nuclear Power Plants to the Ocean from 2013 to 2015. Environmental Science & Technology, 2017, 51, 9826-9835.	10.0	35
30	Fukushima Daiichiâ€"Derived Radionuclides in the Ocean: Transport, Fate, and Impacts. Annual Review of Marine Science, 2017, 9, 173-203.	11.6	216
31	Prediction of the Export and Fate of Global Ocean Net Primary Production: The EXPORTS Science Plan. Frontiers in Marine Science, 2016, 3, .	2.5	179
32	Sinking phytoplankton associated with carbon flux in the Atlantic Ocean. Limnology and Oceanography, 2016, 61, 1172-1187.	3.1	53
33	New applications of KNiFC-PAN resin for broad scale monitoring of radiocesium following the Fukushima Dai-ichi nuclear disaster. Journal of Radioanalytical and Nuclear Chemistry, 2016, 307, 2193-2200.	1.5	15
34	Reassessment of ⁹⁰Sr, ¹³⁷Cs, and ¹³⁴Cs in the Coast off Japan Derived from the Fukushima Dai-ichi Nuclear Accident. Environmental Science & Technology, 2016, 50, 173-180.	10.0	106
35	Improved gamma-spectroscopy of marine samples via low background small anode germanium well detector with cosmic veto suppression. Journal of Radioanalytical and Nuclear Chemistry, 2016, 307, 2359-2364.	1.5	4
36	Observed eastward progression of the Fukushima ¹³⁴Cs signal across the North Pacific. Geophysical Research Letters, 2015, 42, 7139-7147.	4.0	29

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37	Decoupling of net community and export production on submesoscales in the Sargasso Sea. Global Biogeochemical Cycles, 2015, 29, 1266-1282.	4.9	56
38	Effects of sinking velocities and microbial respiration rates on the attenuation of particulate carbon fluxes through the mesopelagic zone. Global Biogeochemical Cycles, 2015, 29, 175-193.	4.9	66
39	Tracking the Fate of Particle Associated Fukushima Daiichi Cesium in the Ocean off Japan. Environmental Science & Technology, 2015, 49, 9807-9816.	10.0	29
40	Observations of carbon export by small sinking particles in the upper mesopelagic. Marine Chemistry, 2015, 175, 72-81.	2.3	112
41	The oceanographic toolbox for the collection of sinking and suspended marine particles. Progress in Oceanography, 2015, 133, 17-31.	3.2	61
42	Determination of particulate and dissolved 228Th in seawater using a delayed coincidence counter. Marine Chemistry, 2015, 177, 196-202.	2.3	9
43	Spatial variability and the fate of cesium in coastal sediments near Fukushima, Japan. Biogeosciences, 2014, 11, 5123-5137.	3.3	41
44	The 129-iodine content of subtropical Pacific waters: impact of Fukushima and other anthropogenic 129-iodine sources. Biogeosciences, 2014, 11, 4839-4852.	3.3	20
45	Fukushima and Ocean Radioactivity. Oceanography, 2014, 27, 92-105.	1.0	93
46	Global assessment of ocean carbon export by combining satellite observations and foodâ€web models. Global Biogeochemical Cycles, 2014, 28, 181-196.	4.9	368
47	Contrasting biogeochemical cycles of cobalt in the surface western Atlantic Ocean. Global Biogeochemical Cycles, 2014, 28, 1387-1412.	4.9	29
48	Input of 129I into the western Pacific Ocean resulting from the Fukushima nuclear event. Journal of Radioanalytical and Nuclear Chemistry, 2013, 296, 957-962.	1.5	25
49	Extraction of cesium in seawater off Japan using AMP-PAN resin and quantification via gamma spectroscopy and inductively coupled mass spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2013, 296, 369-374.	1.5	39
50	An inverse relationship between production and export efficiency in the Southern Ocean. Geophysical Research Letters, 2013, 40, 1557-1561.	4.0	100
51	Radium-based estimates of cesium isotope transport and total direct ocean discharges from the Fukushima Nuclear Power Plant accident. Biogeosciences, 2013, 10, 2159-2167.	3.3	66
52	Intercalibration studies of shortâ€lived thoriumâ€234 in the water column and marine particles. Limnology and Oceanography: Methods, 2012, 10, 631-644.	2.0	34
53	A new method for the estimation of sinking particle fluxes from measurements of the particle size distribution, average sinking velocity, and carbon content. Limnology and Oceanography: Methods, 2012, 10, 329-346.	2.0	43
54	Fukushima-derived radionuclides in the ocean and biota off Japan. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5984-5988.	7.1	387

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55	Fishing for Answers off Fukushima. Science, 2012, 338, 480-482.	12.6	122
56	The great iron dump. Nature, 2012, 487, 305-306.	27.8	10
57	Impacts of the Fukushima Nuclear Power Plants on Marine Radioactivity. Environmental Science & Technology, 2011, 45, 9931-9935.	10.0	430
58	High particle export over the continental shelf of the west Antarctic Peninsula. Geophysical Research Letters, 2010, 37, .	4.0	47
59	Variability in the average sinking velocity of marine particles. Limnology and Oceanography, 2010, 55, 2085-2096.	3.1	228
60	Insights into particle formation and remineralization using the shortâ€lived radionuclide, Thoruimâ€234. Geophysical Research Letters, 2010, 37, .	4.0	38
61	Assessing the apparent imbalance between geochemical and biochemical indicators of meso- and bathypelagic biological activity: What the @$â™¯! is wrong with present calculations of carbon budgets?. Deep-Sea Research Part II: Topical Studies in Oceanography, 2010, 57, 1557-1571.	1.4	268
62	Shedding light on processes that control particle export and flux attenuation in the twilight zone of the open ocean. Limnology and Oceanography, 2009, 54, 1210-1232.	3.1	384
63	Assessment of size-fractionated species of curium-244 via alpha spectrometry in groundwater. Journal of Radioanalytical and Nuclear Chemistry, 2009, 282, 1009-1012.	1.5	2
64	Source-Dependent and Source-Independent Controls on Plutonium Oxidation State and Colloid Associations in Groundwater. Environmental Science & Technology, 2009, 43, 1322-1328.	10.0	24
65	7Be analyses in seawater by low background gamma-spectroscopy. Journal of Radioanalytical and Nuclear Chemistry, 2008, 277, 253-259.	1.5	22
66	Changes in fecal pellet characteristics with depth as indicators of zooplankton repackaging of particles in the mesopelagic zone of the subtropical and subarctic North Pacific Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2008, 55, 1636-1647.	1.4	159
67	Ocean Iron Fertilization--Moving Forward in a Sea of Uncertainty. Science, 2008, 319, 162-162.	12.6	156
68	Bacterial vs. zooplankton control of sinking particle flux in the ocean's twilight zone. Limnology and Oceanography, 2008, 53, 1327-1338.	3.1	350
69	Revisiting Carbon Flux Through the Ocean's Twilight Zone. Science, 2007, 316, 567-570.	12.6	547
70	An assessment of the use of sediment traps for estimating upper ocean particle fluxes. Journal of Marine Research, 2007, 65, 345-416.	0.3	432
71	Mesoscale Iron Enrichment Experiments 1993-2005: Synthesis and Future Directions. Science, 2007, 315, 612-617.	12.6	1,250
72	Application of cross-flow ultrafiltration for the determination of colloidal abundances in suboxic ferrous-rich ground watersâ˜†. Science of the Total Environment, 2007, 372, 636-644.	8.0	26

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73	A review of present techniques and methodological advances in analyzing 234Th in aquatic systems. Marine Chemistry, 2006, 100, 190-212.	2.3	123
74	234Th sorption and export models in the water column: A review. Marine Chemistry, 2006, 100, 234-249.	2.3	174
75	Does essential trace elements influence the export production in oceans?. Diqiu Huaxue, 2006, 25, 276-276.	0.5	0
76	Plutonium in groundwater at the 100K-Area of the U.S. DOE Hanford Site. Journal of Contaminant Hydrology, 2005, 76, 167-189.	3.3	65
77	Quantification of <Superscript>234</Superscript><Superscript> </Superscript>Th recovery in small volume sea water samples by inductively coupled plasma-mass spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2005, 263, 355-360.	1.5	111
78	Particle export during the Southern Ocean Iron Experiment (SOFeX). Limnology and Oceanography, 2005, 50, 311-327.	3.1	86
79	Synthesis of iron fertilization experiments: From the Iron Age in the Age of Enlightenment. Journal of Geophysical Research, 2005, 110, .	3.3	596
80	Quantification of 234Th recovery in small volume sea water samples by inductively coupled plasma-mass spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2005, 263, 355-360.	1.5	8
81	Southern Ocean Iron Enrichment Experiment: Carbon Cycling in High- and Low-Si Waters. Science, 2004, 304, 408-414.	12.6	546
82	The Effects of Iron Fertilization on Carbon Sequestration in the Southern Ocean. Science, 2004, 304, 414-417.	12.6	225
83	234Th deficit and excess in the Southern Ocean during spring 2001: Particle export and remineralization. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	46
84	A comparison of major and minor elemental fluxes collected in neutrally buoyant and surface-tethered sediment traps. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 1387-1395.	1.4	43
85	Submarine groundwater discharge of nutrients and copper to an urban subestuary of Chesapeake Bay (Elizabeth River). Limnology and Oceanography, 2004, 49, 376-385.	3.1	152
86	Comment on â€œTrace Metal Levels in Uncontaminated Groundwater of a Coastal Watershed:Â Importance of Colloidal Formsâ€• Environmental Science & Technology, 2003, 37, 657-658.	10.0	8
87	Biogeochemical impacts due to mesoscale eddy activity in the Sargasso Sea as measured at the Bermuda Atlantic Time-series Study (BATS). Deep-Sea Research Part II: Topical Studies in Oceanography, 2003, 50, 3017-3039.	1.4	189
88	The effect of marginal ice-edge dynamics on production and export in the Southern Ocean along 170Â°W. Deep-Sea Research Part II: Topical Studies in Oceanography, 2003, 50, 579-603.	1.4	77
89	CLIMATE CHANGE: Will Ocean Fertilization Work?. Science, 2003, 300, 67-68.	12.6	107
90	Sources and Migration of Plutonium in Groundwater at the Savannah River Site. Environmental Science & Technology, 2002, 36, 3690-3699.	10.0	101

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91	Vertical budgets for organic carbon and biogenic silica in the Pacific sector of the Southern Ocean, 1996â€“1998. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 1645-1674.	1.4	140
92	Comparison of carbon and opal export rates between summer and spring bloom periods in the region of the Antarctic Polar Front, SE Atlantic. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 3849-3869.	1.4	57
93	Particle transformations and export flux during anin situiron-stimulated algal bloom in the Southern Ocean. Geophysical Research Letters, 2001, 28, 2409-2412.	4.0	37
94	A time-series study of particulate matter export in the North Pacific Subtropical Gyre based on 234Th:238U disequilibrium. Deep-Sea Research Part I: Oceanographic Research Papers, 2001, 48, 2595-2611.	1.4	159
95	Upper Ocean Carbon Export and the Biological Pump. Oceanography, 2001, 14, 50-58.	1.0	533
96	An intercomparison of small- and large-volume techniques for thorium-234 in seawater. Marine Chemistry, 2001, 74, 15-28.	2.3	102
97	Size-fractionated plutonium isotopes in a coastal environment. Journal of Environmental Radioactivity, 2001, 53, 9-25.	1.7	42
98	Testing a new small-volume technique for determining 234Th in seawater. Journal of Radioanalytical and Nuclear Chemistry, 2001, 248, 795-799.	1.5	105
99	Utility of radium isotopes for evaluating the input and transport of groundwaterâ€derived nitrogen to a Cape Cod estuary. Limnology and Oceanography, 2001, 46, 465-470.	3.1	259
100	A mesoscale phytoplankton bloom in the polar Southern Ocean stimulated by iron fertilization. Nature, 2000, 407, 695-702.	27.8	1,417
101	Upper ocean carbon export, horizontal transport, and vertical eddy diffusivity in the southwestern Gulf of Maine. Continental Shelf Research, 2000, 20, 707-736.	1.8	71
102	A comparison of the quantity and composition of material caught in a neutrally buoyant versus surface-tethered sediment trap. Deep-Sea Research Part I: Oceanographic Research Papers, 2000, 47, 277-294.	1.4	124
103	Commentary on: How accurate are the234Th based particulate residence times in the ocean? by G. Kim, N. Hussain, and T. Church. Geophysical Research Letters, 2000, 27, 1939-1940.	4.0	5
104	Does iron fertilization lead to rapid carbon export in the Southern Ocean?. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	2.5	52
105	Variability of inorganic and organic phosphorus turnover rates in the coastal ocean. Nature, 1999, 398, 502-505.	27.8	125
106	Iron-stimulated changes in13C fractionation and export by equatorial Pacific phytoplankton: Toward a paleogrowth rate proxy. Paleoceanography, 1999, 14, 589-595.	3.0	89
107	Evaluation of two cross-flow ultrafiltration membranes for isolating marine organic colloids. Marine Chemistry, 1998, 62, 117-136.	2.3	67
108	An assessment of the relative importance of horizontal and vertical transport of particle-reactive chemicals in the coastal ocean. Continental Shelf Research, 1998, 18, 805-829.	1.8	79

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109	The decoupling of production and particulate export in the surface ocean. Global Biogeochemical Cycles, 1998, 12, 297-310.	4.9	613
110	Upper ocean export of particulate organic carbon in the Arabian Sea derived from thorium-234. Deep-Sea Research Part II: Topical Studies in Oceanography, 1998, 45, 2461-2487.	1.4	197
111	Using 234Th disequilibria to estimate the vertical removal rates of polycyclic aromatic hydrocarbons from the surface ocean. Marine Chemistry, 1997, 57, 11-23.	2.3	89
112	The isotopic signature of fallout plutonium in the North Pacific. Journal of Environmental Radioactivity, 1997, 36, 69-83.	1.7	194
113	Regional estimates of the export flux of particulate organic carbon derived from thorium-234 during the JGOFS EqPac program. Deep-Sea Research Part II: Topical Studies in Oceanography, 1995, 42, 777-804.	1.4	212
114	High precision230Th and232Th in the Norwegian Sea and Denmark by thermal ionization mass spectrometry. Geophysical Research Letters, 1995, 22, 2589-2592.	4.0	45
115	Carbon-cycle imbalances in the Sargasso Sea. Nature, 1994, 372, 537-540.	27.8	246
116	A three dimensional time-dependent approach to calibrating sediment trap fluxes. Global Biogeochemical Cycles, 1994, 8, 179-193.	4.9	106
117	Determination of thorium isotopes in seawater by nondestructive and radiochemical procedures. Deep-sea Research Part A, Oceanographic Research Papers, 1992, 39, 1103-1114.	1.5	120
118	Carbon and nitrogen export during the JGOFS North Atlantic Bloom experiment estimated from 234Th: 238U disequilibria. Deep-sea Research Part A, Oceanographic Research Papers, 1992, 39, 1115-1137.	1.5	402
119	Mixing between oxic and anoxic waters of the Black Sea as traced by Chernobyl cesium isotopes. Deep-sea Research Part A, Oceanographic Research Papers, 1991, 38, S725-S745.	1.5	83
120	Do upper-ocean sediment traps provide an accurate record of particle flux?. Nature, 1991, 353, 420-423.	27.8	291
121	Determination of fission-products and actinides in the Black Sea following the Cherynobyl accident. Journal of Radioanalytical and Nuclear Chemistry, 1990, 138, 33-47.	1.5	42
122	The geochemistry of fallout plutonium in the North Atlantic: I. A pore water study in shelf, slope and deep-sea sediments. Geochimica Et Cosmochimica Acta, 1987, 51, 2605-2622.	3.9	27
123	The geochemistry of fallout plutonium in the North Atlantic: II. ratios and their significance. Geochimica Et Cosmochimica Acta, 1987, 51, 2623-2637.	3.9	84
124	The mass spectrometric determination of fallout 239Pu and 240Pu in marine samples. Journal of Environmental Radioactivity, 1987, 5, 425-444.	1.7	60
125	Chernobyl radionuclides in a Black Sea sediment trap. Nature, 1987, 329, 825-828.	27.8	75