Boris Koch

List of Publications by Year
in descending order

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89	9,014	76326 40	49909 87
papers	citations	h-index	g-index

108	108	108	7285
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A simple and efficient method for the solidâ€phase extraction of dissolved organic matter (SPEâ€DOM) from seawater. Limnology and Oceanography: Methods, 2008, 6, 230-235.	2.0	1,329
2	From mass to structure: an aromaticity index for high-resolution mass data of natural organic matter. Rapid Communications in Mass Spectrometry, 2006, 20, 926-932.	1.5	1,058
3	Molecular formulae of marine and terrigenous dissolved organic matter detected by electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. Geochimica Et Cosmochimica Acta, 2005, 69, 3299-3308.	3.9	445
4	Fundamentals of Molecular Formula Assignment to Ultrahigh Resolution Mass Data of Natural Organic Matter. Analytical Chemistry, 2007, 79, 1758-1763.	6.5	414
5	Natural Organic Matter and the Event Horizon of Mass Spectrometry. Analytical Chemistry, 2008, 80, 8908-8919.	6.5	394
6	Selective preservation of organic matter in marine environments; processes and impact on the sedimentary record. Biogeosciences, 2010, 7, 483-511.	3.3	331
7	High-field NMR spectroscopy and FTICR mass spectrometry: powerful discovery tools for the molecular level characterization of marine dissolved organic matter. Biogeosciences, 2013, 10, 1583-1624.	3.3	276
8	Leads in Arctic pack ice enable early phytoplankton blooms below snow-covered sea ice. Scientific Reports, 2017, 7, 40850.	3.3	259
9	Molecular transformation and degradation of refractory dissolved organic matter in the Atlantic and Southern Ocean. Geochimica Et Cosmochimica Acta, 2014, 126, 321-337.	3.9	247
10	A molecular perspective on the ageing of marine dissolved organic matter. Biogeosciences, 2012, 9, 1935-1955.	3.3	200
11	Thermogenic organic matter dissolved in the abyssal ocean. Marine Chemistry, 2006, 102, 208-217.	2.3	196
12	Molecular characterization of dissolved organic matter in pore water of continental shelf sediments. Geochimica Et Cosmochimica Acta, 2009, 73, 3337-3358.	3.9	184
13	Mechanisms of microbial carbon sequestration in the ocean â€“ future research directions. Biogeosciences, 2014, 11, 5285-5306.	3.3	177
14	Advanced characterization of marine dissolved organic matter by combining reversed-phase liquid chromatography and FT-ICR-MS. Marine Chemistry, 2008, 111, 233-241.	2.3	154
15	Dissolved organic sulfur in the ocean: Biogeochemistry of a petagram inventory. Science, 2016, 354, 456-459.	12.6	152
16	Molecular insights into the microbial formation of marine dissolved organic matter: recalcitrant or labile?. Biogeosciences, 2014, 11, 4173-4190.	3.3	128
17	Proposed Guidelines for Solid Phase Extraction of Suwannee River Dissolved Organic Matter. Analytical Chemistry, 2016, 88, 6680-6688.	6.5	118
18	Dissolved organic matter in sea spray: a transfer study from marine surface water to aerosols. Biogeosciences, 2012, 9, 1571-1582.	3.3	117

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19	Fragmentation Studies of Fulvic Acids Using Collision Induced Dissociation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Analytical Chemistry, 2009, 81, 2688-2694.	6.5	114
20	Diagenetic Transformation of Dissolved Organic Nitrogen Compounds under Contrasting Sedimentary Redox Conditions in the Black Sea. Environmental Science & Technology, 2011, 45, 5223-5229.	10.0	106
21	The Weddell Gyre, Southern Ocean: Present Knowledge and Future Challenges. Reviews of Geophysics, 2019, 57, 623-708.	23.0	105
22	Comprehensive characterization of marine dissolved organic matter by Fourier transform ion cyclotron resonance mass spectrometry with electrospray and atmospheric pressure photoionization. Rapid Communications in Mass Spectrometry, 2010, 24, 643-650.	1.5	104
23	Unraveling signatures of biogeochemical processes and the depositional setting in the molecular composition of pore water DOM across different marine environments. Geochimica Et Cosmochimica Acta, 2017, 207, 57-80.	3.9	103
24	How representative are dissolved organic matter (DOM) extracts? A comprehensive study of sorbent selectivity for DOM isolation. Water Research, 2017, 116, 316-323.	11.3	98
25	Tracing suspended organic nitrogen from the Yangtze River catchment into the East China Sea. Marine Chemistry, 2007, 107, 367-377.	2.3	97
26	New azaspiracids in Amphidomataceae (Dinophyceae). Toxicon, 2012, 60, 830-839.	1.6	97
27	Particulate Organic Carbon Deconstructed: Molecular and Chemical Composition of Particulate Organic Carbon in the Ocean. Frontiers in Marine Science, 2020, 7, .	2.5	72
28	Rapid biotic molecular transformation of fulvic acids in a karst aquifer. Geochimica Et Cosmochimica Acta, 2007, 71, 5474-5482.	3.9	66
29	Title is missing!. Wetlands Ecology and Management, 2003, 11, 257-263.	1.5	65
30	Tracing terrigenous dissolved organic matter and its photochemical decay in the ocean by using liquid chromatography/mass spectrometry. Marine Chemistry, 2007, 107, 378-387.	2.3	63
31	Depth-dependent photodegradation of marine dissolved organic matter. Frontiers in Marine Science, 2015, 2, .	2.5	59
32	The effect of selective microbial degradation on the composition of mangrove derived pentacyclic triterpenols in surface sediments. Organic Geochemistry, 2005, 36, 273-285.	1.8	51
33	Quantifying the impact of solid-phase extraction on chromophoric dissolved organic matter composition. Marine Chemistry, 2018, 207, 33-41.	2.3	48
34	Organic matter from Arctic sea-ice loss alters bacterial community structure and function. Nature Climate Change, 2019, 9, 170-176.	18.8	48
35	Molecular level investigation of reactions between dissolved organic matter and extraction solvents using FT-ICR MS. Marine Chemistry, 2011, 124, 100-107.	2.3	47
36	Analysis of the hydrographic conditions and cyst beds in the San Jorge Gulf, Argentina, that favor dinoflagellate population development including toxigenic species and their toxins. Journal of Marine Systems, 2015, 148, 86-100.	2.1	47

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37	Triterpenols in mangrove sediments as a proxy for organic matter derived from the red mangrove (Rhizophora mangle). Organic Geochemistry, 2011, 42, 62-73.	1.8	45
38	The Molecular Fingerprint of Fluorescent Natural Organic Matter Offers Insight into Biogeochemical Sources and Diagenetic State. Analytical Chemistry, 2018, 90, 14188-14197.	6.5	45
39	The influence of salinity on the molecular and optical properties of surface microlayers in a karstic estuary. Marine Chemistry, 2013, 150, 25-38.	2.3	43
40	Release of fixed N2 and C as dissolved compounds by Trichodesmium erythreum and Nodularia spumigena under the influence of high light and high nutrient (P). Aquatic Microbial Ecology, 2009, 57, 175-189.	1.8	42
41	Extending the analytical window for water-soluble organic matter in sediments by aqueous Soxhlet extraction. Geochimica Et Cosmochimica Acta, 2014, 141, 83-96.	3.9	41
42	UltraMassExplorer: a browserâ€based application for the evaluation of highâ€resolution mass spectrometric data. Rapid Communications in Mass Spectrometry, 2019, 33, 193-202.	1.5	41
43	Transport and fate of hexachlorocyclohexanes in the oceanic air and surface seawater. Biogeosciences, 2011, 8, 2621-2633.	3.3	38
44	Origin-specific molecular signatures of dissolved organic matter in the Lena Delta. Biogeochemistry, 2015, 123, 1-14.	3.5	38
45	Near-surface Heating of Young Rift Sediment Causes Mass Production and Discharge of Reactive Dissolved Organic Matter. Scientific Reports, 2017, 7, 44864.	3.3	36
46	Spectroscopic characterization of fulvic acids extracted from the rock exudate Shilajit. Organic Geochemistry, 2008, 39, 1719-1724.	1.8	35
47	Spectroscopic detection of a ubiquitous dissolved pigment degradation product in subsurface waters of the global ocean. Biogeosciences, 2012, 9, 2585-2596.	3.3	35
48	Biogeochemical and hydrological drivers of the dynamics of Vibrio species in two Patagonian estuaries. Science of the Total Environment, 2017, 579, 646-656.	8.0	35
49	Vibrio and Bacterial Communities Across a Pollution Gradient in the Bay of Bengal: Unraveling Their Biogeochemical Drivers. Frontiers in Microbiology, 2020, 11, 594.	3.5	31
50	Molecular diversity patterns among various phytoplankton size-fractions in West Greenland in late summer. Deep-Sea Research Part I: Oceanographic Research Papers, 2017, 121, 54-69.	1.4	30
51	The Pacific-Atlantic connection: Biogeochemical signals in the southern end of the Argentine shelf. Journal of Marine Systems, 2016, 163, 95-101.	2.1	28
52	Inorganics in Organics: Quantification of Organic Phosphorus and Sulfur and Trace Element Speciation in Natural Organic Matter Using HPLC-ICPMS. Analytical Chemistry, 2011, 83, 8968-8974.	6.5	27
53	An integrated approach to mangrove dynamics and management. Journal of Coastal Conservation, 1999, 5, 125-134.	1.6	26
54	Factors influencing particulate lipid production in the East Atlantic Ocean. Deep-Sea Research Part I: Oceanographic Research Papers, 2014, 89, 56-67.	1.4	25

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55	Comprehensive structure-selective characterization of dissolved organic matter by reducing molecular complexity and increasing analytical dimensions. Water Research, 2016, 106, 477-487.	11.3	24
56	Analytical and Computational Advances, Opportunities, and Challenges in Marine Organic Biogeochemistry in an Era of â€œOmicsâ€. Frontiers in Marine Science, 2020, 7, .	2.5	24
57	Nutrient pulse induces dynamic changes in cellular C:N:P, amino acids, and paralytic shellfish poisoning toxins in Alexandrium tamarense. Marine Ecology - Progress Series, 2013, 493, 57-69.	1.9	24
58	Interactions of trace elements and organic ligands in seawater and implications for quantifying biogeochemical dynamics: A review. Earth-Science Reviews, 2019, 192, 631-649.	9.1	23
59	Factors influencing the characteristics and distribution or surface organic matter in the Pacific-Atlantic connection. Journal of Marine Systems, 2017, 175, 36-45.	2.1	22
60	Biogeochemical controls on the bacterial populations in the eastern Atlantic Ocean. Biogeosciences, 2011, 8, 3747-3759.	3.3	21
61	The influence of dissolved organic matter on the marine production of carbonyl sulfide (OCS) and carbon disulfide (CS₂) in the Peruvian upwelling. Ocean Science, 2019, 15, 1071-1090.	3.4	21
62	Permafrost Carbon and CO2 Pathways Differ at Contrasting Coastal Erosion Sites in the Canadian Arctic. Frontiers in Earth Science, 2021, 9, .	1.8	21
63	Influence of Glacial Meltwater on Summer Biogeochemical Cycles in Scoresby Sund, East Greenland. Frontiers in Marine Science, 2019, 6, .	2.5	19
64	Dynamics of dissolved organic matter in fjord ecosystems: Contributions of terrestrial dissolved organic matter in the deep layer. Estuarine, Coastal and Shelf Science, 2015, 159, 37-49.	2.1	18
65	Mercury and methylmercury in the Atlantic sector of the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 52-62.	1.4	18
66	Reef communities associated with â€˜deadâ€™ cold-water coral framework drive resource retention and recycling in the deep sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2021, 175, 103574.	1.4	18
67	Aging and Molecular Changes of Dissolved Organic Matter Between Two Deep Oceanic Endâ€Members. Global Biogeochemical Cycles, 2018, 32, 1449-1456.	4.9	15
68	Interlaboratory comparison of humic substances compositional space as measured by Fourier transform ion cyclotron resonance mass spectrometry (IUPAC Technical Report). Pure and Applied Chemistry, 2020, 92, 1447-1467.	1.9	15
69	Solid-Phase Extraction of Aquatic Organic Matter: Loading-Dependent Chemical Fractionation and Self-Assembly. Environmental Science & Technology, 2021, 55, 15495-15504.	10.0	15
70	Stratification and the distribution of phytoplankton, nutrients, inorganic carbon, and sulfur in the surface waters of Weddell Sea leads. Deep-Sea Research Part II: Topical Studies in Oceanography, 2008, 55, 988-999.	1.4	14
71	Preface "Sources and rapid biogeochemical transformation of dissolved organic matter in the Atlantic surface ocean". Biogeosciences, 2012, 9, 2597-2602.	3.3	13
72	Identification of organic compounds in ocean basement fluids. Organic Geochemistry, 2017, 113, 124-127.	1.8	13

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73	Quantification, extractability and stability of dissolved domoic acid within marine dissolved organic matter. Marine Chemistry, 2019, 215, 103669.	2.3	13
74	Meteorology and oceanography of the Atlantic sector of the Southern Oceanâ€”a review of German achievements from the last decade. Ocean Dynamics, 2016, 66, 1379-1413.	2.2	12
75	Stoichiometry, polarity, and organometallics in solid-phase extracted dissolved organic matter of the Elbe-Weser estuary. PLoS ONE, 2018, 13, e0203260.	2.5	12
76	Response to Comment on â€œDissolved organic sulfur in the ocean: Biogeochemistry of a petagram inventoryâ€. Science, 2017, 356, 813-813.	12.6	10
77	Linking optical and chemical signatures of dissolved organic matter in the southern Argentine shelf: Distribution and bioavailability. Journal of Marine Systems, 2019, 195, 74-82.	2.1	10
78	Dissolved organic matter characterization in soils and streams in a small coastal low-Arctic catchment. Biogeosciences, 2022, 19, 3073-3097.	3.3	9
79	Bacterioplankton drawdown of coral mass-spawned organic matter. ISME Journal, 2018, 12, 2238-2251.	9.8	8
80	Siderophore purification with titanium dioxide nanoparticle solid phase extraction. Analyst, The, 2020, 145, 7303-7311.	3.5	5
81	Dissolved Domoic Acid Does Not Improve Growth Rates and Iron Content in Iron-Stressed Pseudo-Nitzschia subcurvata. Frontiers in Marine Science, 2020, 7, .	2.5	4
82	The impact of the freezeâ€“melt cycle of land-fast ice on the distribution of dissolved organic matter in the Laptev and East Siberian seas (Siberian Arctic). Biogeosciences, 2021, 18, 3637-3655.	3.3	4
83	Tools for Studying Biogeochemical Connectivity Among Tropical Coastal Ecosystems. , 2009, , 425-455.		3
84	In contrast to diatoms, cryptophytes are susceptible to iron limitation, but not to ocean acidification. Physiologia Plantarum, 2022, 174, e13614.	5.2	3
85	The Biogeochemistry of the CaetÃ© Mangrove-Shelf System. Ecological Studies, 2010, , 45-67.	1.2	1
86	Elucidating the Biogeochemical Memory of the Oceans by Means of High-Resolution Organic Structural Spectroscopy. , 2013, , 13-17.		1
87	Corrigendum to "Mechanisms of microbial carbon sequestration in the ocean â€“ future research directions" published in Biogeosciences, 11, 5285â€“5306, 2014. Biogeosciences, 2014, 11, 5565-5565.	3.3	1
88	The 13th International Estuarine Biogeochemistry Symposium: â€˜Estuaries and bays under anthropogenic pressure: past-present-futureâ€™. Marine Chemistry, 2016, 185, 1-2.	2.3	1
89	The Mangrove Information System MAIS: Managing and Integrating Interdisciplinary Research Data. Ecological Studies, 2010, , 355-364.	1.2	1