Anja Engel

List of Publications by Year
in descending order

110 papers	5,281 citations	101543 36 h-index	106344 65 g-index
172 all docs	172 docs citations	172 times ranked	5157 citing authors

#	Article	IF	Citations
1	Polysaccharide aggregation as a potential sink of marine dissolved organic carbon. Nature, 2004, 428, 929-932.	27.8	336
2	Sea surface microlayers: A unified physicochemical and biological perspective of the airâ€“ocean interface. Progress in Oceanography, 2013, 109, 104-116.	3.2	336
3	Testing the direct effect of CO₂ concentration on a bloom of the coccolithophorid Emiliania huxleyi in mesocosm experiments. Limnology and Oceanography, 2005, 50, 493-507.	3.1	244
4	Changes in biogenic carbon flow in response to sea surface warming. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7067-7072.	7.1	235
5	Rapid aggregation of biofilm-covered microplastics with marine biogenic particles. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20181203.	2.6	193
6	Nutrient co-limitation at the boundary of an oceanic gyre. Nature, 2017, 551, 242-246.	27.8	169
7	Temporal biomass dynamics of an Arctic plankton bloom in response to increasing levels of atmospheric carbon dioxide. Biogeosciences, 2013, 10, 161-180.	3.3	144
8	The Ocean's Vital Skin: Toward an Integrated Understanding of the Sea Surface Microlayer. Frontiers in Marine Science, 2017, 4, .	2.5	137
9	Temporal decoupling of carbon and nitrogen dynamics in a mesocosm diatom bloom. Limnology and Oceanography, 2002, 47, 753-761.	3.1	135
10	Summertime plankton ecology in Fram Straitâ€”a compilation of long- and short-term observations. Polar Research, 2015, 34, 23349.	1.6	122
11	CO₂ increases ¹⁴C primary production in an Arctic plankton community. Biogeosciences, 2013, 10, 1291-1308.	3.3	116
12	Distribution of transparent exopolymer particles (TEP) in the northeast Atlantic Ocean and their potential significance for aggregation processes. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 83-92.	1.4	112
13	Floating Ice-Algal Aggregates below Melting Arctic Sea Ice. PLoS ONE, 2013, 8, e76599.	2.5	109
14	A novel protocol for determining the concentration and composition of sugars in particulate and in high molecular weight dissolved organic matter (HMW-DOM) in seawater. Marine Chemistry, 2011, 127, 180-191.	2.3	104
15	An indoor mesocosm system to study the effect of climate change on the late winter and spring succession of Baltic Sea phyto- and zooplankton. Oecologia, 2006, 150, 655-667.	2.0	101
16	The organic sea-surface microlayer in the upwelling region off the coast of Peru and potential implications for airâ€“sea exchange processes. Biogeosciences, 2016, 13, 989-1007.	3.3	92
17	Impact of CO2 enrichment on organic matter dynamics during nutrient induced coastal phytoplankton blooms. Journal of Plankton Research, 2014, 36, 641-657.	1.8	83
18	Response of bacterioplankton activity in an Arctic fjord system to elevated <i>p</i>CO₂: results from a mesocosm perturbation study. Biogeosciences, 2013, 10, 297-314.	3.3	80

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19	Investigating the effect of ballasting by CaCO3 in Emiliania huxleyi: I. Formation, settling velocities and physical properties of aggregates. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 1396-1407.	1.4	76
20	Transparent exopolymer particles (TEP) and Coomassie stainable particles (CSP): Differences between their origin and vertical distributions in the ocean. Marine Chemistry, 2015, 175, 56-71.	2.3	73
21	Stimulated Bacterial Growth under Elevated pCO2: Results from an Off-Shore Mesocosm Study. PLoS ONE, 2014, 9, e99228.	2.5	64
22	Contrasting responses of DMS and DMSP to ocean acidification in Arctic waters. Biogeosciences, 2013, 10, 1893-1908.	3.3	60
23	Bacterial Colonization and Vertical Distribution of Marine Gel Particles (TEP and CSP) in the Arctic Fram Strait. Frontiers in Marine Science, 2017, 4, .	2.5	60
24	System controls of coastal and open ocean oxygen depletion. Progress in Oceanography, 2021, 197, 102613.	3.2	59
25	Polystyrene microplastics increase microbial release of marine Chromophoric Dissolved Organic Matter in microcosm experiments. Scientific Reports, 2018, 8, 14635.	3.3	58
26	Biogeochemical response of Emiliania huxleyi (PML B92/11) to elevated CO2 and temperature under phosphorous limitation: A chemostat study. Journal of Experimental Marine Biology and Ecology, 2011, 410, 61-71.	1.5	55
27	Determination of Marine Gel Particles. , 2009, , .		54
28	Microbial Communities in the East and West Fram Strait During Sea Ice Melting Season. Frontiers in Marine Science, 2018, 5, .	2.5	53
29	Regulation of bacterioplankton activity in Fram Strait (Arctic Ocean) during early summer: The role of organic matter supply and temperature. Journal of Marine Systems, 2014, 132, 83-94.	2.1	50
30	Acidification and warming affect prominent bacteria in two seasonal phytoplankton bloom mesocosms. Environmental Microbiology, 2016, 18, 4579-4595.	3.8	49
31	Effects of depth- and CO2-dependent C:N ratios of particulate organic matter (POM) on the marine carbon cycle. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	4.9	46
32	Chromophoric and fluorescent dissolved organic matter in and above the oxygen minimum zone off Peru. Journal of Geophysical Research: Oceans, 2016, 121, 7973-7990.	2.6	46
33	New guidelines for the application of Stokes' models to the sinking velocity of marine aggregates. Limnology and Oceanography, 2020, 65, 1264-1285.	3.1	46
34	Carbon isotopic fractionation during a mesocosm bloom experiment dominated by Emiliania huxleyi: Effects of CO2 concentration and primary production. Geochimica Et Cosmochimica Acta, 2007, 71, 1528-1541.	3.9	45
35	Soothsaying DOM: A Current Perspective on the Future of Oceanic Dissolved Organic Carbon. Frontiers in Marine Science, 2020, 7, .	2.5	44
36	Inter-annual variability of transparent exopolymer particles in the Arctic Ocean reveals high sensitivity to ecosystem changes. Scientific Reports, 2017, 7, 4129.	3.3	42

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37	The role of aggregation for the dissolution of diatom frustules. FEMS Microbiology Ecology, 2003, 46, 247-255.	2.7	41
38	Operationalizing Ocean Health: Toward Integrated Research on Ocean Health and Recovery to Achieve Ocean Sustainability. One Earth, 2020, 2, 557-565.	6.8	40
39	Abundance and size distribution of transparent exopolymer particles (TEP) in a coccolithophorid bloom in the northern Bay of Biscay. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 1251-1265.	1.4	38
40	Investigating the effect of ballasting by CaCO3 in Emiliania huxleyi, II: Decomposition of particulate organic matter. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 1408-1419.	1.4	38
41	The influence of extracellular polysaccharides, growth rate, and free coccoliths on the coagulation efficiency of Emiliania huxleyi. Marine Chemistry, 2015, 175, 5-17.	2.3	37
42	Variations of the Organic Matter Composition in the Sea Surface Microlayer: A Comparison between Open Ocean, Coastal, and Upwelling Sites Off the Peruvian Coast. Frontiers in Microbiology, 2017, 8, 2369.	3.5	37
43	Contribution of combined carbohydrates to dissolved and particulate organic carbon after the spring bloom in the northern Bay of Biscay (North-Eastern Atlantic Ocean). Continental Shelf Research, 2012, 45, 42-53.	1.8	36
44	Implications of elevated CO₂ on pelagic carbon fluxes in an Arctic mesocosm study â€“ an elemental mass balance approach. Biogeosciences, 2013, 10, 3109-3125.	3.3	33
45	MedFlux: Investigations of particle flux in the Twilight Zone. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 1363-1368.	1.4	31
46	Biopolymers form a gelatinous microlayer at the air-sea interface when Arctic sea ice melts. Scientific Reports, 2016, 6, 29465.	3.3	31
47	Particle export fluxes to the oxygen minimum zone of the eastern tropical North Atlantic. Biogeosciences, 2017, 14, 1825-1838.	3.3	31
48	Inter-Annual Variability of Organic Carbon Concentration in the Eastern Fram Strait During Summer (2009â€“2017). Frontiers in Marine Science, 2019, 6, .	2.5	31
49	Deep maxima of phytoplankton biomass, primary production and bacterial production in the Mediterranean Sea. Biogeosciences, 2021, 18, 1749-1767.	3.3	30
50	Marine CDOM accumulation during a coastal Arctic mesocosm experiment: No response to elevated pCO₂ levels. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1216-1230.	3.0	29
51	Effects of ocean acidification on the biogenic composition of the sea-surface microlayer: Results from a mesocosm study. Journal of Geophysical Research: Oceans, 2014, 119, 7911-7924.	2.6	28
52	Combined Carbohydrates Support Rich Communities of Particle-Associated Marine Bacterioplankton. Frontiers in Microbiology, 2017, 08, 65.	3.5	28
53	A semiâ€quantitative spectrophotometric, dyeâ€binding assay for determination of Coomassie Blue stainable particles. Limnology and Oceanography: Methods, 2014, 12, 604-616.	2.0	27
54	Changes in optical characteristics of surface microlayers hint to photochemically and microbially mediated DOM turnover in the upwelling region off the coast of Peru. Biogeosciences, 2016, 13, 2453-2473.	3.3	27

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55	Water column biogeochemistry of oxygen minimum zones in the eastern tropical North Atlantic and eastern tropical South Pacific oceans. Biogeosciences, 2016, 13, 3585-3606.	3.3	27
56	Bacterial communities associated with individual transparent exopolymer particles (TEP). Journal of Plankton Research, 2019, 41, 561-565.	1.8	27
57	Effect of elevated CO₂ on the dynamics of particle-attached and free-living bacterioplankton communities in an Arctic fjord. Biogeosciences, 2013, 10, 181-191.	3.3	26
58	Size-fractionated dissolved primary production and carbohydrate composition of the coccolithophore <i>Emiliania huxleyi</i>. Biogeosciences, 2015, 12, 1271-1284.	3.3	26
59	On the effect of low oxygen concentrations on bacterial degradation of sinking particles. Scientific Reports, 2017, 7, 16722.	3.3	26
60	Influence of pH and Dissolved Organic Matter on Iron Speciation and Apparent Iron Solubility in the Peruvian Shelf and Slope Region. Environmental Science & Technology, 2021, 55, 9372-9383.	10.0	26
61	Marvelous Marine Microgels: On the Distribution and Impact of Gel-Like Particles in the Oceanic Water-Column. Frontiers in Marine Science, 2020, 7, .	2.5	25
62	Characterizing the surface microlayer in the Mediterranean Sea: trace metal concentrations and microbial plankton abundance. Biogeosciences, 2020, 17, 2349-2364.	3.3	23
63	Biogenic halocarbons from the Peruvian upwelling region as tropospheric halogen source. Atmospheric Chemistry and Physics, 2016, 16, 12219-12237.	4.9	22
64	Bacterial Community Composition in the Sea Surface Microlayer Off the Peruvian Coast. Frontiers in Microbiology, 2018, 9, 2699.	3.5	22
65	Organic Matter in the Surface Microlayer: Insights From a Wind Wave Channel Experiment. Frontiers in Marine Science, 2018, 5, .	2.5	22
66	Dissolved organic carbon (<scp>DOC</scp>) is essential to balance the metabolic demands of four dominant <scp>Northâ€Atlantic</scp> deepâ€sea sponges. Limnology and Oceanography, 2021, 66, 925-938.	3.1	21
67	Effects of varied nitrate and phosphate supply on polysaccharidic and proteinaceous gel particle production during tropical phytoplankton bloom experiments. Biogeosciences, 2015, 12, 5647-5665.	3.3	20
68	Effect of wind speed on the size distribution of gel particles in the sea surface microlayer: insights from a windâ€“wave channel experiment. Biogeosciences, 2018, 15, 3577-3589.	3.3	20
69	Concerted measurements of free amino acids at the Cabo Verde islands: high enrichments in submicron sea spray aerosol particles and cloud droplets. Atmospheric Chemistry and Physics, 2021, 21, 163-181.	4.9	20
70	Bacterial degradation activity in the eastern tropical South Pacific oxygen minimum zone. Biogeosciences, 2020, 17, 215-230.	3.3	20
71	Multiple environmental changes induce interactive effects on bacterial degradation activity in the <scp>A</scp>rctic <scp>O</scp>cean. Limnology and Oceanography, 2015, 60, 1392-1410.	3.1	19
72	Surface ocean microbiota determine cloud precursors. Scientific Reports, 2021, 11, 281.	3.3	19

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73	Pelagic community production and carbon-nutrient stoichiometry under variable ocean acidification in an Arctic fjord. Biogeosciences, 2013, 10, 4847-4859.	3.3	18
74	Variations in the elemental ratio of organic matter in the central Baltic Sea: Part Iâ€"Linking primary production to remineralization. Continental Shelf Research, 2015, 100, 25-45.	1.8	18
75	Response of <i>Nodularia spumigena</i> to <i>p</i>CO₂ â€“ Part 3: Turnover of phosphorus compounds. Biogeosciences, 2013, 10, 1483-1499.	3.3	16
76	Remote and local drivers of oxygen and nitrate variability in the shallow oxygen minimum zone off Mauritania in June 2014. Biogeosciences, 2019, 16, 979-998.	3.3	16
77	Composition and vertical flux of particulate organic matter to the oxygen minimum zone of the central Baltic Sea: impact of a sporadic North Sea inflow. Biogeosciences, 2019, 16, 927-947.	3.3	16
78	Accumulation of Gel Particles in the Sea-Surface Microlayer during an Experimental Study with the Diatom <i>Thalassiosira</i> <i>weissflogii</i>. International Journal of Geosciences, 2013, 04, 129-145.	0.6	15
79	Changes in organic matter cycling in a plankton community exposed to warming under different light intensities. Journal of Plankton Research, 2014, 36, 658-671.	1.8	14
80	Diapycnal dissolved organic matter supply into the upper Peruvian oxycline. Biogeosciences, 2019, 16, 2033-2047.	3.3	14
81	The MILAN Campaign: Studying Diel Light Effects on the Airâ€"Sea Interface. Bulletin of the American Meteorological Society, 2020, 101, E146-E166.	3.3	14
82	Impact of dust addition on the metabolism of Mediterranean plankton communities and carbon export under present and future conditions of pH and temperature. Biogeosciences, 2021, 18, 5423-5446.	3.3	14
83	Seasonal variations of the sea surface microlayer at the Boknis Eck Times Series Station (Baltic Sea). Journal of Plankton Research, 2017, 39, 943-961.	1.8	12
84	Nutrient regulation of late spring phytoplankton blooms in the midlatitude North Atlantic. Limnology and Oceanography, 2020, 65, 1136-1148.	3.1	12
85	Organic matter composition and heterotrophic bacterial activity at declining summer sea ice in the central Arctic Ocean. Limnology and Oceanography, 2021, 66, S343.	3.1	12
86	Submesoscale physicochemical dynamics directly shape bacterioplankton community structure in space and time. Limnology and Oceanography, 2021, 66, 2901-2913.	3.1	12
87	Mediterranean nascent sea spray organic aerosol and relationships with seawater biogeochemistry. Atmospheric Chemistry and Physics, 2021, 21, 10625-10641.	4.9	12
88	Organic Matter Supply and Utilization in Oxygen Minimum Zones. Annual Review of Marine Science, 2022, 14, 355-378.	11.6	11
89	Influence of atmospheric deposition on biogeochemical cycles in an oligotrophic ocean system. Biogeosciences, 2021, 18, 5699-5717.	3.3	11
90	Enhanced Calcite Dissolution in the Presence of the Aerobic Methanotroph Methylosinus trichosporium. Geomicrobiology Journal, 2014, 31, 325-337.	2.0	10

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91	Eukaryotic community composition in the sea surface microlayer across an eastâ€“west transect in the Mediterranean Sea. Biogeosciences, 2021, 18, 2107-2118.	3.3	10
92	A two-component parameterization of marine ice-nucleating particles based on seawater biology and sea spray aerosol measurements in the Mediterranean Sea. Atmospheric Chemistry and Physics, 2021, 21, 4659-4676.	4.9	10
93	Effects of nitrate and phosphate supply on chromophoric and fluorescent dissolved organic matter in the Eastern Tropical North Atlantic: a mesocosm study. Biogeosciences, 2015, 12, 6897-6914.	3.3	9
94	Effect of temperature on the accumulation of marine biogenic gels in the surface microlayer near the outlet of nuclear power plants and adjacent areas in the Daya Bay, China. PLoS ONE, 2018, 13, e0198735.	2.5	9
95	Relevance of Nutrient-Limited Phytoplankton Production and Its Bacterial Remineralization for Carbon and Oxygen Fluxes in the Baltic Sea. Frontiers in Marine Science, 2019, 6, .	2.5	9
96	Iron Regulation of North Atlantic Eddy Phytoplankton Productivity. Geophysical Research Letters, 2021, 48, e2020GL091403.	4.0	9
97	Sediment release of dissolved organic matter to the oxygen minimum zone off Peru. Biogeosciences, 2020, 17, 4663-4679.	3.3	9
98	High number concentrations of transparent exopolymer particles in ambient aerosol particles and cloud water â€“ a case study at the tropical Atlantic Ocean. Atmospheric Chemistry and Physics, 2022, 22, 5725-5742.	4.9	9
99	Variations of microbial communities and substrate regimes in the eastern Fram Strait between summer and fall. Environmental Microbiology, 2022, 24, 4124-4136.	3.8	9
100	Climate-Biogeochemistry Interactions in the Tropical Ocean: Data Collection and Legacy. Frontiers in Marine Science, 2021, 8, .	2.5	8
101	Variability of the Sea Surface Microlayer Across a Filamentâ€™s Edge and Potential Influences on Gas Exchange. Frontiers in Marine Science, 2021, 8, .	2.5	8
102	Dynamics of organic matter and bacterial activity in the Fram Strait during summer and autumn. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190366.	3.4	7
103	Dissolved Organic Matter in the Upwelling System off Peru: Imprints of Bacterial Activity and Water Mass Characteristics. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG006048.	3.0	7
104	A protocol for quantifying mono- and polysaccharides in seawater and related saline matrices by electro-dialysis (ED) â€“ combined with HPAEC-PAD. Ocean Science, 2020, 16, 817-830.	3.4	7
105	Variabilities of biochemical properties of the sea surface microlayer: Insights to the atmospheric deposition impacts. Science of the Total Environment, 2022, 838, 156440.	8.0	7
106	Spatial patterns of ectoenzymatic kinetics in relation to biogeochemical properties in the Mediterranean Sea and the concentration of the fluorogenic substrate used. Biogeosciences, 2021, 18, 2301-2323.	3.3	6
107	Summertime Amino Acid and Carbohydrate Patterns in Particulate and Dissolved Organic Carbon Across Fram Strait. Frontiers in Marine Science, 2021, 8, .	2.5	3
108	Ocean acidification modifies biomolecule composition in organic matter through complex interactions. Scientific Reports, 2020, 10, 20599.	3.3	2

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109	Uncoupled seasonal variability of transparent exopolymer and Coomassie stainable particles in coastal Mediterranean waters. Elementa, 2021, 9, .	3.2	1
110	The Milan Campaign: Studying the Sea Surface Microlayer. Bulletin of the American Meteorological Society, 2020, 101, 299-304.	3.3	0