Christoph Humborg

List of Publications by Year
in descending order

116 papers	9,041 citations	50170 46 h-index	43802 91 g-index
134 all docs	134 docs citations	134 times ranked	9929 citing authors

#	Article	IF	Citations
1	Global carbon dioxide emissions from inland waters. Nature, 2013, 503, 355-359.	13.7	1,670
2	Effect of Danube River dam on Black Sea biogeochemistry and ecosystem structure. Nature, 1997, 386, 385-388.	13.7	665
3	Overview of eutrophication indicators to assess environmental status within the European Marine Strategy Framework Directive. Estuarine, Coastal and Shelf Science, 2011, 93, 117-131.	0.9	375
4	Hypoxia in the Baltic Sea and Basin-Scale Changes in Phosphorus Biogeochemistry. Environmental Science & Technology, 2002, 36, 5315-5320.	4.6	372
5	Hypoxia Is Increasing in the Coastal Zone of the Baltic Sea. Environmental Science & Technology, 2011, 45, 6777-6783.	4.6	364
6	Silicon Retention in River Basins: Far-reaching Effects on Biogeochemistry and Aquatic Food Webs in Coastal Marine Environments. Ambio, 2000, 29, 45-50.	2.8	301
7	Nitrogen fluxes from the landscape are controlled by net anthropogenic nitrogen inputs and by climate. Frontiers in Ecology and the Environment, 2012, 10, 37-43.	1.9	281
8	An extensive bloom of the N2-fixing cyanobacterium Trichodesmium erythraeum in the central Arabian Sea. Marine Ecology - Progress Series, 1998, 172, 281-292.	0.9	217
9	CO₂ supersaturation along the aquatic conduit in Swedish watersheds as constrained by terrestrial respiration, aquatic respiration and weathering. Global Change Biology, 2010, 16, 1966-1978.	4.2	177
10	Net anthropogenic nitrogen inputs to watersheds and riverine N export to coastal waters: a brief overview. Current Opinion in Environmental Sustainability, 2012, 4, 203-211.	3.1	145
11	Decreased Silica Landâ€“sea Fluxes through Damming in the Baltic Sea Catchment â€“ Significance of Particle Trapping and Hydrological Alterations. Biogeochemistry, 2006, 77, 265-281.	1.7	138
12	Hydrological Alterations and Marine Biogeochemistry: A Silicate Issue?. BioScience, 2000, 50, 776.	2.2	131
13	Long-term ecological changes in Romanian coastal Waters of the Black Sea. Marine Pollution Bulletin, 1996, 32, 32-38.	2.3	126
14	Evaluating regional variation of net anthropogenic nitrogen and phosphorus inputs (NANI/NAPI), major drivers, nutrient retention pattern and management implications in the multinational areas of Baltic Sea basin. Ecological Modelling, 2012, 227, 117-135.	1.2	125
15	Source identification of nitrate by means of isotopic tracers in the Baltic Sea catchments. Biogeosciences, 2006, 3, 663-676.	1.3	115
16	The Baltic Sea a century ago â€" a reconstruction from model simulations, verified by observations. Journal of Marine Systems, 2008, 74, 485-494.	0.9	109
17	Hypoxia Sustains Cyanobacteria Blooms in the Baltic Sea. Environmental Science & Technology, 2014, 48, 2598-2602.	4.6	109
18	Nonconservative behavior of dissolved organic carbon across the Laptev and East Siberian seas. Global Biogeochemical Cycles, 2010, 24, .	1.9	107

#	ARTICLE	IF	CITATIONS
19	Estimation of permafrost thawing rates in a sub-arctic catchment using recession flow analysis. Hydrology and Earth System Sciences, 2009, 13, 595-604.	1.9	101
20	Management Options and Effects on a Marine Ecosystem: Assessing the Future of the Baltic. Ambio, 2007, 36, 243-249.	2.8	100
21	Making the ecosystem approach operationalâ€"Can regime shifts in ecological- and governance systems facilitate the transition?. Marine Policy, 2010, 34, 1290-1299.	1.5	99
22	Nutrient variations in boreal and subarctic Swedish rivers: Landscape control of landâ€•sea fluxes. Limnology and Oceanography, 2004, 49, 1871-1883.	1.6	88
23	Reducing agricultural nutrient surpluses in a large catchment â€" Links to livestock density. Science of the Total Environment, 2019, 648, 1549-1559.	3.9	88
24	How well do ecosystem indicators communicate the effects of anthropogenic eutrophication?. Estuarine, Coastal and Shelf Science, 2009, 82, 583-596.	0.9	87
25	History and scenarios of future development of Baltic Sea eutrophication. Estuarine, Coastal and Shelf Science, 2011, 92, 307-322.	0.9	87
26	Nutrient budgets for European seas: A measure of the effectiveness of nutrient reduction policies. Marine Pollution Bulletin, 2008, 56, 1609-1617.	2.3	84
27	Future changes in the Baltic Sea acidâ€"base (pH) and oxygen balances. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 19586.	0.8	84
28	Hydrological alterations with river damming in northern Sweden: Implications for weathering and river biogeochemistry. Global Biogeochemical Cycles, 2002, 16, 12-1-12-13.	1.9	83
29	Methane fluxes from the sea to the atmosphere across the Siberian shelf seas. Geophysical Research Letters, 2016, 43, 5869-5877.	1.5	83
30	Degradation of terrestrial organic carbon, primary production and out-gassing of CO2 in the Laptev and East Siberian Seas as inferred from Î´13C values of DIC. Geochimica Et Cosmochimica Acta, 2012, 95, 143-159.	1.6	68
31	Inventories and behavior of particulate organic carbon in the Laptev and East Siberian seas. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	1.9	67
32	Advances in NANI and NAPI accounting for the Baltic drainage basin: spatial and temporal trends and relationships to watershed TN and TP fluxes. Biogeochemistry, 2017, 133, 245-261.	1.7	67
33	A Century of Legacy Phosphorus Dynamics in a Large Drainage Basin. Global Biogeochemical Cycles, 2018, 32, 1107-1122.	1.9	67
34	Changes in dissolved silicate loads to the Baltic Sea â€" The effects of lakes and reservoirs. Journal of Marine Systems, 2008, 73, 223-235.	0.9	60
35	River Nutrient Loads and Catchment Size. Biogeochemistry, 2005, 75, 83-107.	1.7	59
36	Tracing terrestrial organic matter by Î´34S and Î´13C signatures in a subarctic estuary. Limnology and Oceanography, 2008, 53, 2594-2602.	1.6	59

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37	Nutrient landâ€“sea fluxes in oligothrophic and pristine estuaries of the Gulf of Bothnia, Baltic Sea. Estuarine, Coastal and Shelf Science, 2003, 56, 781-793.	0.9	58
38	Nitrogen and phosphorus budgets of the Gulf of GdaÅ„sk (Baltic Sea). Estuarine, Coastal and Shelf Science, 2003, 57, 239-248.	0.9	56
39	Carbon cycling in the Baltic Sea â€" The fate of allochthonous organic carbon and its impact on airâ€“sea CO2 exchange. Journal of Marine Systems, 2014, 129, 289-302.	0.9	56
40	Reduction of Baltic Sea Nutrient Inputs and Allocation of Abatement Costs Within the Baltic Sea Catchment. Ambio, 2014, 43, 11-25.	2.8	56
41	Modeling Social--Ecological Scenarios in Marine Systems. BioScience, 2013, 63, 735-744.	2.2	55
42	Past, present and future state of the biogeochemical Si cycle in the Baltic Sea. Journal of Marine Systems, 2008, 73, 338-346.	0.9	54
43	Nitrogen flows from European regional watersheds to coastal marine waters. , 0, , 271-297.		54
44	The relationship between subsurface hydrology and dissolved carbon fluxes for a sub-arctic catchment. Hydrology and Earth System Sciences, 2010, 14, 941-950.	1.9	53
45	Tracing inputs of terrestrial high molecular weight dissolved organic matter within the Baltic Sea ecosystem. Biogeosciences, 2012, 9, 4465-4475.	1.3	52
46	A box model approach for a long-term assessment of estuarine eutrophication, Szczecin Lagoon, southern Baltic. Journal of Marine Systems, 2000, 25, 387-403.	0.9	50
47	Scenario Analysis on Protein Consumption and Climate Change Effects on Riverine N Export to the Baltic Sea. Environmental Science & Technology, 2010, 44, 2379-2385.	4.6	50
48	Catchment-scale dissolved carbon concentrations and export estimates across six subarctic streams in northern Sweden. Biogeosciences, 2014, 11, 525-537.	1.3	50
49	Modeling Riverine Nutrient Transport to the Baltic Sea: A Large-scale Approach. Ambio, 2007, 36, 124-133.	2.8	46
50	An enormous amorphous silica stock in boreal wetlands. Journal of Geophysical Research, 2010, 115, .	3.3	46
51	Nitrogen processes in aquatic ecosystems. , 2011, , 126-146.		46
52	Modelling nutrient fluxes from sub-arctic basins: Comparison of pristine vs. dammed rivers. Journal of Marine Systems, 2008, 73, 236-249.	0.9	45
53	Five critical questions of scale for the coastal zone. Estuarine, Coastal and Shelf Science, 2012, 96, 9-21.	0.9	44
54	Hydro-economic modelling of cost-effective transboundary water quality management in the Baltic Sea. Water Resources and Economics, 2014, 5, 1-23.	0.9	43

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55	Direct determination of the airâ€sea CO₂ gas transfer velocity in Arctic sea ice regions. Geophysical Research Letters, 2017, 44, 3770-3778.	1.5	43
56	Primary Productivity Regime and Nutrient Removal in the Danube Estuary. Estuarine, Coastal and Shelf Science, 1997, 45, 579-589.	0.9	42
57	Biogeochemical Control of the Coupled CO2â€“O2 System of the Baltic Sea: A Review of the Results of Baltic-C. Ambio, 2014, 43, 49-59.	2.8	42
58	High Emissions of Carbon Dioxide and Methane From the Coastal Baltic Sea at the End of a Summer Heat Wave. Frontiers in Marine Science, 2019, 6, .	1.2	41
59	Modeling hydrology and silicon-carbon interactions in taiga and tundra biomes from a landscape perspective: Implications for global warming feedbacks. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	40
60	Opportunities to reduce nutrient inputs to the Baltic Sea by improving manure use efficiency in agriculture. Regional Environmental Change, 2018, 18, 1843-1854.	1.4	39
61	Riverine transport of biogenic elements to the Baltic Sea â€“ past and possible future perspectives. Hydrology and Earth System Sciences, 2007, 11, 1593-1607.	1.9	35
62	Nitrogen budgets of the Polish agriculture 1960â€“2000: implications for riverine nitrogen loads to the Baltic Sea from transitional countries. Biogeochemistry, 2007, 85, 153-168.	1.7	35
63	Effects of growth and dissolution on the fractionation of silicon isotopes by estuarine diatoms. Geochimica Et Cosmochimica Acta, 2014, 130, 156-166.	1.6	35
64	External total alkalinity loads versus internal generation: The influence of nonriverine alkalinity sources in the Baltic Sea. Global Biogeochemical Cycles, 2014, 28, 1358-1370.	1.9	33
65	Future Nutrient Load Scenarios for the Baltic Sea Due to Climate and Lifestyle Changes. Ambio, 2014, 43, 337-351.	2.8	31
66	Spatiotemporal variations of <i>p</i>CO₂ and Î´¹³Câ€DIC in subarctic streams in northern Sweden. Global Biogeochemical Cycles, 2013, 27, 176-186.	1.9	28
67	Bathymetric properties of the Baltic Sea. Ocean Science, 2019, 15, 905-924.	1.3	28
68	Silicon dynamics in the Oder estuary, Baltic Sea. Journal of Marine Systems, 2008, 73, 250-262.	0.9	26
69	Export of calcium carbonate corrosive waters from the East Siberian Sea. Biogeosciences, 2017, 14, 1811-1823.	1.3	24
70	Removal of phosphorus and nitrogen in sediments of the eutrophic Stockholm archipelago, Baltic Sea. Biogeosciences, 2020, 17, 2745-2766.	1.3	24
71	Reference state, structure, regime shifts, and regulatory drivers in a coastal sea over the last century: The Central Baltic Sea case. Limnology and Oceanography, 2022, 67, .	1.6	24
72	Landscape variations in stream water SO42âˆ’ and Î´34SSO4 in a boreal stream network. Geochimica Et Cosmochimica Acta, 2009, 73, 4648-4660.	1.6	23

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73	Nitrogen surface water retention in the Baltic Sea drainage basin. Hydrology and Earth System Sciences, 2015, 19, 981-996.	1.9	23
74	Influence of the bordering shelves on nutrient distribution in the Arctic halocline inferred from water column nitrate isotopes. Limnology and Oceanography, 2018, 63, 2154-2170.	1.6	23
75	Biogeochemical functioning of the Baltic Sea. Earth System Dynamics, 2022, 13, 633-685.	2.7	22
76	Nonâ€Redfieldian Dynamics Explain Seasonal pCO₂ Drawdown in the Gulf of Bothnia. Journal of Geophysical Research: Oceans, 2018, 123, 166-188.	1.0	21
77	Stable silicon isotopic compositions of the Lena River and its tributaries: Implications for silicon delivery to the Arctic Ocean. Geochimica Et Cosmochimica Acta, 2018, 241, 120-133.	1.6	21
78	Landscape elements and river chemistry as affected by river regulation â€“ a 3-D perspective. Hydrology and Earth System Sciences, 2009, 13, 1597-1606.	1.9	19
79	Identifying Hot Spots of Agricultural Nitrogen Loss Within the Baltic Sea Drainage Basin. Water, Air, and Soil Pollution, 2016, 227, 1.	1.1	19
80	Silicon isotope enrichment in diatoms during nutrient-limited blooms in a eutrophied river system. Journal of Geochemical Exploration, 2013, 132, 173-180.	1.5	18
81	Sedimentary alkalinity generation and long-term alkalinity development in the Baltic Sea. Biogeosciences, 2019, 16, 437-456.	1.3	18
82	Tracing terrestrial DOC in the Baltic Seaâ€”A 3â€D model study. Global Biogeochemical Cycles, 2016, 30, 134-148.	1.9	17
83	The exceptional Oder Flood in summer 1997 â€” the fate of nutrients and particulate organic matter in the Baltic Sea. Ocean Dynamics, 1998, 50, 169-181.	0.2	16
84	Application of a novel modeling tool with multistressor functionality to support management of organic contaminants in the Baltic Sea. Ambio, 2015, 44, 498-506.	2.8	16
85	Potential links between Baltic Sea submarine terraces and groundwater seeping. Earth Surface Dynamics, 2020, 8, 1-15.	1.0	16
86	Origin and fate of dissolved organic matter in four shallow Baltic Sea estuaries. Biogeochemistry, 2021, 154, 385-403.	1.7	16
87	High spatiotemporal variability of methane concentrations challenges estimates of emissions across vegetated coastal ecosystems. Global Change Biology, 2022, 28, 4308-4322.	4.2	16
88	A centennial record of fluvial organic matter input from the discontinuous permafrost catchment of Lake TornetrÃsk. Journal of Geophysical Research, 2012, 117, .	3.3	15
89	Riverine nitrogen export in Swedish catchments dominated by atmospheric inputs. Biogeochemistry, 2012, 111, 203-217.	1.7	14
90	Low Abundance of Methanotrophs in Sediments of Shallow Boreal Coastal Zones With High Water Methane Concentrations. Frontiers in Microbiology, 2020, 11, 1536.	1.5	14

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91	Stable silicon isotope analysis on nanomole quantities using MC-ICP-MS with a hexapole gas-collision cell. Journal of Analytical Atomic Spectrometry, 2010, 25, 156-162.	1.6	13
92	Modeling Socialâ€“Ecological Scenarios in Marine Systems. BioScience, 2013, 63, 735-744.	2.2	13
93	Seaâ€air exchange patterns along the central and outer East Siberian Arctic Shelf as inferred from continuous CO₂, stable isotope, and bulk chemistry measurements. Global Biogeochemical Cycles, 2017, 31, 1173-1191.	1.9	13
94	Understanding Environmental Changes in Temperate Coastal Seas: Linking Models of Benthic Fauna to Carbon and Nutrient Fluxes. Frontiers in Marine Science, 2020, 7, .	1.2	13
95	Climate-related Change in Terrestrial and Freshwater Ecosystems. , 2008, , 221-308.		12
96	Climate dependent diatom production is preserved in biogenic Si isotope signatures. Biogeosciences, 2011, 8, 3491-3499.	1.3	12
97	Carbon geochemistry of plankton-dominated samples in the Laptev and East Siberian shelves: contrasts in suspended particle composition. Ocean Science, 2017, 13, 735-748.	1.3	12
98	Macroalgae fuels coastal soft-sediment macrofauna: A triple-isotope approach across spatial scales. Marine Environmental Research, 2020, 162, 105163.	1.1	12
99	Temporal and spatial variations of rock weathering and CO2 consumption in the Baltic Sea catchment. Chemical Geology, 2017, 466, 57-69.	1.4	10
100	Re-thinking the â€œecological envelopeâ€•of Eastern Baltic cod (<i>Gadus morhua</i>): conditions for productivity, reproduction, and feeding over time. ICES Journal of Marine Science, 2022, 79, 689-708.	1.2	10
101	Remineralization rate of terrestrial DOC as inferred from CO₂ supersaturated coastal waters. Biogeosciences, 2019, 16, 863-879.	1.3	9
102	The Importance of Benthic Nutrient Fluxes in Supporting Primary Production in the Laptev and East Siberian Shelf Seas. Global Biogeochemical Cycles, 2021, 35, e2020GB006849.	1.9	8
103	Seasonal and Regional Patterns in Performance for a Baltic Sea Drainage Basin Hydrologic Model. Journal of the American Water Resources Association, 2015, 51, 550-566.	1.0	7
104	Increasing the cost-effectiveness of nutrient reduction targets using different spatial scales. Science of the Total Environment, 2021, 790, 147824.	3.9	7
105	Nitrogen driving force and pressure relationships at contrasting scales: Implications for catchment management. International Journal of River Basin Management, 2009, 7, 221-232.	1.5	6
106	Modelling the 13C and 12C isotopes of inorganic and organic carbon in the Baltic Sea. Journal of Marine Systems, 2015, 148, 122-130.	0.9	6
107	Use of food web knowledge in environmental conservation and management of living resources in the Baltic Sea. ICES Journal of Marine Science, 2021, 78, 2645-2663.	1.2	6
108	Food-web comparisons between two shallow vegetated habitat types in the Baltic Sea. Marine Environmental Research, 2021, 169, 105402.	1.1	5

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109	Letter to editor regarding Kotta et al. 2020: Cleaning up seas using blue growth initiatives: Mussel farming for eutrophication control in the Baltic Sea. Science of the Total Environment, 2020, 727, 138665.	3.9	3
110	Anthropogenic Inputs of Terrestrial Organic Matter Influence Carbon Loading and Methanogenesis in Coastal Baltic Sea Sediments. Frontiers in Earth Science, 2021, 9, .	0.8	3
111	Perturbed silicon cycle discussed. Eos, 2000, 81, 198.	0.1	2
112	Estimation of permafrost thawing rates in the sub-arctic using recession flow analysis. IOP Conference Series: Earth and Environmental Science, 2009, 6, 092018.	0.2	2
113	Nutrient processes and consequences.. , 2008, , 30-45.		2
114	Comment on â€œUnderstanding the Permafrostâ€"Hydrate System and Associated Methane Releases in the East Siberian Arctic Shelfâ€• Geosciences (Switzerland), 2019, 9, 384.	1.0	1
115	Environmental Impactsâ€"Freshwater Biogeochemistry. Regional Climate Studies, 2015, , 307-336.	1.2	1
116	On the decline of eastern Baltic cod: we need to take more holistic views into account. Reply to Brander (2022) comment on SvedÃng et al. (2022). ICES Journal of Marine Science, 0, , .	1.2	0