Jens Greinert

List of Publications by Citations

114 papers	5,752 citations	44 h-index	74 g-index
135 ext. papers	6,590 ext. citations	3.8 avg, IF	5.45 L-index

#	Paper	IF	Citations
114	Fate of rising methane bubbles in stratified waters: How much methane reaches the atmosphere?. *Journal of Geophysical Research*, **2006**, 111,		364
113	Gas hydrate destabilization: enhanced dewatering, benthic material turnover and large methane plumes at the Cascadia convergent margin. *Earth and Planetary Science Letters*, **1999**, 170, 1-15	5.3	333
112	Authigenic carbonates from the Cascadia subduction zone and their relation to gas hydrate stability. *Geology*, **1998**, 26, 647	5	314
111	Tectonic and geological framework for gas hydrates and cold seeps on the Hikurangi subduction margin, New Zealand. *Marine Geology*, **2010**, 272, 26-48	3.3	203
110	1300-m-high rising bubbles from mud volcanoes at 2080m in the Black Sea: Hydroacoustic characteristics and temporal variability. *Earth and Planetary Science Letters*, **2006**, 244, 1-15	5.3	189
109	Archaea mediating anaerobic methane oxidation in deep-sea sediments at cold seeps of the eastern Aleutian subduction zone. *Organic Geochemistry*, **2000**, 31, 1175-1187	3.1	176
108	Silicate weathering in anoxic marine sediments. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 2895-2918	5.5	148
107	Geological and morphological setting of 2778 methane seeps in the Dnepr paleo-delta, northwestern Black Sea. *Marine Geology*, **2006**, 227, 177-199	3.3	145
106	Biological responses to disturbance from simulated deep-sea polymetallic nodule mining. *PLoS ONE* , **2017**, 12, e0171750	3.7	140
105	Quantifying fluid flow, solute mixing, and biogeochemical turnover at cold vents of the eastern Aleutian subduction zone. *Geochimica Et Cosmochimica Acta*, **1997**, 61, 5209-5219	5.5	125
104	Massive barite deposits and carbonate mineralization in the Derugin Basin, Sea of Okhotsk: precipitation processes at cold seep sites. *Earth and Planetary Science Letters*, **2002**, 203, 165-180	5.3	125
103	Depth-related structure and ecological significance of cold-seep communities□ case study from the Sea of Okhotsk. *Deep-Sea Research Part I: Oceanographic Research Papers*, **2003**, 50, 1391-1409	2.5	116
102	Ocean currents shape the microbiome of Arctic marine sediments. *ISME Journal*, **2013**, 7, 685-96	11.9	108
101	Arctic methane sources: Isotopic evidence for atmospheric inputs. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	105
100	Mud volcanoes and gas hydrates in the Black Sea: new data from Dvurechenskii and Odessa mud volcanoes. *Geo-Marine Letters*, **2003**, 23, 239-249	1.9	105
99	Methane seepage along the Hikurangi Margin, New Zealand: Overview of studies in 2006 and 2007 and new evidence from visual, bathymetric and hydroacoustic investigations. *Marine Geology*, **2010**, 272, 6-25	3.3	94
98	Quantification of seep-related methane gas emissions at Tommeliten, North Sea. *Continental Shelf Research*, **2011**, 31, 867-878	2.4	91

97	A study of the chemistry of pore fluids and authigenic carbonates in methane seep environments: Kodiak Trench, Hydrate Ridge, Monterey Bay, and Eel River Basin. *Chemical Geology*, **2005**, 220, 329-345	4.2	87
96	Hydrocarbon seep-carbonates of a Miocene forearc (East Coast Basin), North Island, New Zealand. *Sedimentary Geology*, **2008**, 204, 83-105	2.8	80
95	Effects of climate change on methane emissions from seafloor sediments in the Arctic Ocean: A review. *Limnology and Oceanography*, **2016**, 61, S283-S299	4.8	78
94	Focussed fluid flow on the Hikurangi Margin, New Zealand – Evidence from possible local upwarping of the base of gas hydrate stability. *Marine Geology*, **2010**, 272, 99-113	3.3	76
93	Methane emission from high-intensity marine gas seeps in the Black Sea into the atmosphere. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	74
92	Efficiency of the benthic filter: Biological control of the emission of dissolved methane from sediments containing shallow gas hydrates at Hydrate Ridge. *Global Biogeochemical Cycles*, **2006**, 20, n/a-n/a	5.9	74
91	Stromatolitic fabric of authigenic carbonate crusts: result of anaerobic methane oxidation at cold seeps in 4,850 m water depth. *International Journal of Earth Sciences*, **2002**, 91, 698-711	2.2	74
90	Thermogenic methane injection via bubble transport into the upper Arctic Ocean from the hydrate-charged Vestnesa Ridge, Svalbard. *Geochemistry, Geophysics, Geosystems*, **2014**, 15, 1945-1959	3.6	70
89	Seismic imaging of gas conduits beneath seafloor seep sites in a shallow marine gas hydrate province, Hikurangi Margin, New Zealand. *Marine Geology*, **2010**, 272, 114-126	3.3	69
88	Water column methanotrophy controlled by a rapid oceanographic switch. *Nature Geoscience*, **2015**, 8, 378-382	18.3	67
87	Societal need for improved understanding of climate change, anthropogenic impacts, and geo-hazard warning drive development of ocean observatories in European Seas. *Progress in Oceanography*, **2011**, 91, 1-33	3.8	65
86	Gas Hydrate-Associated Carbonates and Methane-Venting at Hydrate Ridge: Classification, Distribution, and Origin of Authigenic Lithologies. *Geophysical Monograph Series*, **2013**, 99-113	1.1	63
85	Acoustic imaging of natural gas seepage in the North Sea: Sensing bubbles controlled by variable currents. *Limnology and Oceanography: Methods*, **2010**, 8, 155-171	2.6	63
84	Anomalous sea-floor backscatter patterns in methane venting areas, Dnepr paleo-delta, NW Black Sea. *Marine Geology*, **2008**, 251, 253-267	3.3	61
83	Glendonites and methane-derived Mg-calcites in the Sea of Okhotsk, Eastern Siberia: implications of a venting-related ikaite/glendonite formation. *Marine Geology*, **2004**, 204, 129-144	3.3	61
82	Extensive release of methane from Arctic seabed west of Svalbard during summer 2014 does not influence the atmosphere. *Geophysical Research Letters*, **2016**, 43, 4624-4631	4.9	60
81	Cold-water coral habitats in the Penmarch and Guilvinec Canyons (Bay of Biscay): Deep-water versus shallow-water settings. *Marine Geology*, **2011**, 282, 40-52	3.3	59
80	Simulation of long-term feedbacks from authigenic carbonate crust formation at cold vent sites. *Chemical Geology*, **2005**, 216, 157-174	4.2	57

79	Atmospheric methane flux from bubbling seeps: Spatially extrapolated quantification from a Black Sea shelf area. *Journal of Geophysical Research*, **2010**, 115,		55
78	Flare imaging with multibeam systems: Data processing for bubble detection at seeps. *Geochemistry, Geophysics, Geosystems*, **2007**, 8, n/a-n/a	3.6	53
77	A new methodology for quantifying bubble flow rates in deep water using splitbeam echosounders: Examples from the Arctic offshore NW-Svalbard. *Limnology and Oceanography: Methods*, **2015**, 13, 267-287	2.6	52
76	Monitoring temporal variability of bubble release at seeps: The hydroacoustic swath system GasQuant. *Journal of Geophysical Research*, **2008**, 113,		51
75	Authigenic carbon entombed in methane-soaked sediments from the northeastern transform margin of the Guaymas Basin, Gulf of California. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **2007**, 54, 1240-1267	2.3	50
74	Hydroacoustic experiments to establish a method for the determination of methane bubble fluxes at cold seeps. *Geo-Marine Letters*, **2004**, 24, 75-85	1.9	50
73	Flammable Ice. *Scientific American*, **1999**, 281, 76-83	0.5	50
72	The link between bottom-simulating reflections and methane flux into the gas hydrate stability zone new evidence from Lima Basin, Peru Margin. *Earth and Planetary Science Letters*, **2001**, 185, 343-354	5.3	49
71	Methane seepage and its relation to slumping and gas hydrate at the Hikurangi margin, New Zealand. *New Zealand Journal of Geology, and Geophysics*, **2006**, 49, 503-516	1.6	47
70	Biological effects 26 years after simulated deep-sea mining. *Scientific Reports*, **2019**, 9, 8040	4.9	44
69	Methane seepage along the Hikurangi Margin of New Zealand: Geochemical and physical data from the water column, sea surface and atmosphere. *Marine Geology*, **2010**, 272, 170-188	3.3	44
68	Gas-controlled seafloor doming. *Geology*, **2015**, 43, 571-574	5	43
67	Geological imprint of methane seepage on the seabed and biota of the convergent Hikurangi Margin, New Zealand: Box core and grab carbonate results. *Marine Geology*, **2010**, 272, 285-306	3.3	43
66	Benthic nitrogen fluxes and fractionation of nitrate in the Mauritanian oxygen minimum zone (Eastern Tropical North Atlantic). *Geochimica Et Cosmochimica Acta*, **2014**, 134, 234-256	5.5	39
65	Acoustic and visual characterisation of methane-rich seabed seeps at Omakere Ridge on the Hikurangi Margin, New Zealand. *Marine Geology*, **2010**, 272, 154-169	3.3	39
64	Understanding Mn-nodule distribution and evaluation of related deep-sea mining impacts using AUV-based hydroacoustic and optical data. *Biogeosciences*, **2018**, 15, 2525-2549	4.6	38
63	Bottom-simulating reflector dynamics at Arctic thermogenic gas provinces: An example from Vestnesa Ridge, offshore west Svalbard. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 4089-4105	3.6	37
62	Sea Floor Methane Hydrates at Hydrate Ridge, Cascadia Margin. *Geophysical Monograph Series*, **2013**, 87-98	1.1	37

61	Active venting sites on the gas-hydrate-bearing Hikurangi Margin, off New Zealand: Diffusive- versus bubble-released methane. *Marine Geology*, **2010**, 272, 233-250	3.3	36
60	DeepSurveyCam--A Deep Ocean Optical Mapping System. *Sensors*, **2016**, 16, 164	3.8	35
59	Spread, Behavior, and Ecosystem Consequences of Conventional Munitions Compounds in Coastal Marine Waters. *Frontiers in Marine Science*, **2018**, 5,	4.5	34
58	Quantum rotations in natural methane-clathrates from the Pacific sea-floor. *Europhysics Letters*, **1999**, 48, 269-275	1.6	33
57	Enhanced CO uptake at a shallow Arctic Ocean seep field overwhelms the positive warming potential of emitted methane. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 5355-5360	11.5	32
56	Testing proposed mechanisms for seafloor weakening at the top of gas hydrate stability on an uplifted submarine ridge (Rock Garden), New Zealand. *Marine Geology*, **2010**, 272, 127-140	3.3	28
55	Sedimentation and formation of secondary minerals in the hypersaline Discovery Basin, eastern Mediterranean. *Marine Geology*, **2002**, 186, 9-28	3.3	28
54	Current and future trends in marine image annotation software. *Progress in Oceanography*, **2016**, 149, 106-120	3.8	28
53	Gas seepage in the Dnepr paleo-delta area (NW-Black Sea) and its regional impact on the water column methane cycle. *Journal of Marine Systems*, **2010**, 80, 90-100	2.7	26
52	Processing of multibeam water column image data for automated bubble/seep detection and repeated mapping. *Limnology and Oceanography: Methods*, **2017**, 15, 1-21	2.6	25
51	Assessing marine gas emission activity and contribution to the atmospheric methane inventory: A multidisciplinary approach from the Dutch Dogger Bank seep area (North Sea). *Geochemistry, Geophysics, Geosystems*, **2017**, 18, 2617-2633	3.6	25
50	Methanotrophic microbial communities associated with bubble plumes above gas seeps in the Black Sea. *Geochemistry, Geophysics, Geosystems*, **2006**, 7, n/a-n/a	3.6	25
49	Compact-Morphology-based poly-metallic Nodule Delineation. *Scientific Reports*, **2017**, 7, 13338	4.9	24
48	Single bubble dissolution model The graphical user interface SiBu-GUI. *Environmental Modelling and Software*, **2009**, 24, 1012-1013	5.2	24
47	Diversity and biogeochemical structuring of bacterial communities across the Porangahau ridge accretionary prism, New Zealand. *FEMS Microbiology Ecology*, **2011**, 77, 518-32	4.3	23
46	Geo- and hydro-acoustic manifestations of shallow gas and gas seeps in the Dnepr paleodelta, northwestern Black Sea. *The Leading Edge*, **2009**, 28, 1030-1040	1	23
45	Morphometric and critical taper analysis of the Rock Garden region, Hikurangi Margin, New Zealand: Implications for slope stability and potential tsunami generation. *Marine Geology*, **2010**, 272, 141-153	3.3	22
44	Quantitative mapping and predictive modeling of Mn nodulesSdistribution from hydroacoustic and optical AUV data linked by random forests machine learning. *Biogeosciences*, **2018**, 15, 7347-7377	4.6	21

43	Morphology and recent history of the Rhone River Delta in Lake Geneva (Switzerland). *Swiss Journal of Geosciences*, **2010**, 103, 33-42	2.1	20
42	Methane and methane carbon isotope ratios in the Northeast Atlantic including the Mid-Atlantic Ridge (50°N). *Deep-Sea Research Part I: Oceanographic Research Papers*, **2005**, 52, 1043-1070	2.5	18
41	Dissolved methane in the Beaufort Sea and the Arctic Ocean, 1992–2009; sources and atmospheric flux. *Limnology and Oceanography*, **2016**, 61, S300-S323	4.8	17
40	Acoustic discrimination of relatively homogeneous fine sediments using Bayesian classification on MBES data. *Marine Geology*, **2015**, 370, 31-42	3.3	17
39	A quantitative assessment of methane cycling in Hikurangi Margin sediments (New Zealand) using geophysical imaging and biogeochemical modeling. *Geochemistry, Geophysics, Geosystems*, **2016**, 17, 4817-4835	3.6	15
38	Carbon Isotopes of Biomarkers Derived from Methane-Oxidizing Microbes at Hydrate Ridge, Cascadia Convergent Margin. *Geophysical Monograph Series*, **2013**, 115-129	1.1	14
37	Multi-angle backscatter classification and sub-bottom profiling for improved seafloor characterization. *Marine Geophysical Researches*, **2018**, 39, 289-306	2.3	12
36	Observations of deep-sea fishes and mobile scavengers from the abyssal DISCOL experimental mining area. *Biogeosciences*, **2019**, 16, 3133-3146	4.6	11
35	Exploration of the munition dumpsite Kolberger Heide in Kiel Bay, Germany: Example for a standardised hydroacoustic and optic monitoring approach. *Continental Shelf Research*, **2020**, 198, 104108	2.4	11
34	Scars in the abyss: reconstructing sequence, location and temporal change of the 78 plough tracks of the 1989 DISCOL deep-sea disturbance experiment in the Peru Basin. *Biogeosciences*, **2020**, 17, 1463-1493	4.6	11
33	TuLUMIS - a tunable LED-based underwater multispectral imaging system. *Optics Express*, **2018**, 26, 7811-7828	3.5	11
32	Variability of Acoustically Evidenced Methane Bubble Emissions Offshore Western Svalbard. *Geophysical Research Letters*, **2019**, 46, 9072-9081	4.9	10
31	Authigenic Carbonate and Barite Mineralization in Sediments of the Deryugin Basin (Sea of Okhotsk). *Lithology and Mineral Resources*, **2000**, 35, 504-508	0.7	10
30	Separation of 3He and CH4 signals on the Mid-Atlantic Ridge at 5°N and 51°N. *Geochimica Et Cosmochimica Acta*, **2006**, 70, 5766-5778	5.5	9
29	Perspectives In Visual Imaging for Marine Biology and Ecology: From Acquisition to Understanding. *Oceanography and Marine Biology*, **2016**, 1-73		9
28	RECENT STUDIES ON SOURCES AND SINKS OF METHANE IN THE BLACK SEA. *NATO Science Series Series IV, Earth and Environmental Sciences*, **2006**, 419-441		8
27	Megafauna community assessment of polymetallic-nodule fields with cameras: platform and methodology comparison. *Biogeosciences*, **2020**, 17, 3115-3133	4.6	8
26	The Hyper-Angular Cube Concept for Improving the Spatial and Acoustic Resolution of MBES Backscatter Angular Response Analysis. *Geosciences (Switzerland)*, **2018**, 8, 446	2.7	8

25	Silicate weathering in anoxic marine sediments. *Mineralogical Magazine*, **2008**, 72, 363-366	1.7	7
24	An acquisition, curation and management workflow for sustainable, terabyte-scale marine image analysis. *Scientific Data*, **2018**, 5, 180181	8.2	7
23	Seep-bubble characteristics and gas flow rates from a shallow-water, high-density seep field on the shelf-to-slope transition of the Hikurangi subduction margin. *Marine Geology*, **2019**, 417, 105985	3.3	6
22	The Character and Formation of Elongated Depressions on the Upper Bulgarian Slope. *Journal of Ocean University of China*, **2018**, 17, 555-562	1	6
21	From ESONET multidisciplinary scientific community to EMSO novel European research infrastructure for ocean observation **2015**, 531-563		6
20	Numerical Simulation of Deep-Sea Sediment Transport Induced by a Dredge Experiment in the Northeastern Pacific Ocean. *Frontiers in Marine Science*, **2021**, 8,	4.5	6
19	Biomarker chemistry and flux quantification methods for natural petroleum seeps and produced oils, offshore southern California. *USGS Scientific Investigations Report*,i-45		5
18	Variability of internal frontal bore breaking above Opouawe Bank methane seep area (New Zealand). *Geochemistry, Geophysics, Geosystems*, **2013**, 14, 2460-2473	3.6	4
17	Brennendes Eis: Methanhydrat Energiequelle der Zukunft oder Gefahr fs Klima?. *Physik Journal* , **2001**, 57, 49-54		4
16	Quantification of the fine-scale distribution of Mn-nodules: insights from AUV multi-beam and optical imagery data fusion		4
15	Seabed Mining. *Springer Geology*, **2018**, 481-502	0.8	4
14	Turbulent high-latitude oceanic intrusions details of non-smooth apparent isopycnal transport West of Svalbard. *Ocean Dynamics*, **2016**, 66, 785-794	2.3	4
13	Genetic link between Miocene seafloor methane seep limestones and underlying carbonate conduit concretions at Rocky Knob, Gisborne, New Zealand. *New Zealand Journal of Geology, and Geophysics*, **2019**, 62, 318-340	1.6	3
12	PlasPI marine cameras: Open-source, affordable camera systems for time series marine studies.. *HardwareX*, **2020**, 7, e00102	2.7	3
11	Estimating the spatial position of marine mammals based on digital camera recordings. *Ecology and Evolution*, **2015**, 5, 578-89	2.8	2
10	MOSES: A Novel Observation System to Monitor Dynamic Events Across Earth Compartments. *Bulletin of the American Meteorological Society*, **2021**, 1-23	6.1	2
9	Explosives compounds from sea-dumped relic munitions accumulate in marine biota. *Science of the Total Environment*, **2022**, 806, 151266	10.2	2
8	Towards automatic recognition of mining targets using an autonomous robot **2018**,		2

7	How volcanically active is an abyssal plain? Evidence for recent volcanism on 20 Ma Nazca Plate seafloor. *Marine Geology*, **2021**, 440, 106548	3.3	2
6	Visualising geospatial time series datasets in realtime with the digital earth viewer. *Computers and Graphics*, **2022**, 103, 121-121	1.8	1
5	Importance of Spatial Autocorrelation in Machine Learning Modeling of Polymetallic Nodules, Model Uncertainty and Transferability at Local Scale. *Minerals (Basel, Switzerland)*, **2021**, 11, 1172	2.4	1
4	Automated Activity Estimation of the Cold-Water Coral Lophelia pertusa by Multispectral Imaging and Computational Pixel Classification. *Journal of Atmospheric and Oceanic Technology*, **2021**, 38, 141-154	2	1
3	Tidally Driven Dispersion of a Deep-Sea Sediment Plume Originating from Seafloor Disturbance in the DISCOL Area (SE-Pacific Ocean). *Geosciences (Switzerland)*, **2022**, 12, 8	2.7	0
2	The role of heat wave events in the occurrence and persistence of thermal stratification in the southern North Sea. *Natural Hazards and Earth System Sciences*, **2022**, 22, 1683-1698	3.9	0
1	Visual and Hydroacoustic Investigations of Gas Bubbles Detection and Quantification of Natural and Man-Made Methane Expulsions. *Energy Exploration and Exploitation*, **2003**, 21, 293-297	2.1	