

# Carolyn D Ruppel

## List of Publications by Year in descending order

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91  
papers

6,431  
citations

76031

42  
h-index

75989

78  
g-index

99  
all docs

99  
docs citations

99  
times ranked

5255  
citing authors

#	ARTICLE	IF	CITATIONS
1	US Atlantic Margin Gas Hydrates. , 2022, , 287-302.		2
2	Estimating the Impact of Seep Methane Oxidation on Ocean pH and Dissolved Inorganic Radiocarbon Along the U.S. Mid-Atlantic Bight. Journal of Geophysical Research G: Biogeosciences, 2021, 126, .	1.3	13
3	Elevated levels of radiocarbon in methane dissolved in seawater reveal likely local contamination from nuclear powered vessels. Science of the Total Environment, 2021, 806, 150456.	3.9	1
4	Hydrate Formation on Marine Seep Bubbles and the Implications for Water Column Methane Dissolution. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017363.	1.0	14
5	Surface Methane Concentrations Along the Mid-Atlantic Bight Driven by Aerobic Subsurface Production Rather Than Seafloor Gas Seeps. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015989.	1.0	9
6	Gas hydrates in sustainable chemistry. Chemical Society Reviews, 2020, 49, 5225-5309.	18.7	443
7	Timescales and Processes of Methane Hydrate Formation and Breakdown, With Application to Geologic Systems. Journal of Geophysical Research: Solid Earth, 2020, 125, e2018JB016459.	1.4	45
8	Introduction to Special Issue on Gas Hydrate in Porous Media: Linking Laboratory and Field-Scale Phenomena. Journal of Geophysical Research: Solid Earth, 2019, 124, 7525-7537.	1.4	3
9	Heat Flow in the Western Arctic Ocean (Amerasian Basin). Journal of Geophysical Research: Solid Earth, 2019, 124, 7562-7587.	1.4	9
10	Examination of Bathymodiolus childressi nutritional sources, isotopic niches, and food-web linkages at two seeps in the US Atlantic margin using stable isotope analysis and mixing models. Deep-Sea Research Part I: Oceanographic Research Papers, 2019, 148, 53-66.	0.6	28
11	Submarine Permafrost Map in the Arctic Modeled Using 1-€ Transient Heat Flux (SuPerMAP). Journal of Geophysical Research: Oceans, 2019, 124, 3490-3507.	1.0	55
12	Limited contribution of ancient methane to surface waters of the U.S. Beaufort Sea shelf. Science Advances, 2018, 4, eaao4842.	4.7	43
13	Enhanced CO <sub>2</sub> 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.	3.3	47
14	The interaction of climate change and methane hydrates. Reviews of Geophysics, 2017, 55, 126-168.	9.0	560
15	Ephemerality of discrete methane vents in lake sediments. Geophysical Research Letters, 2016, 43, 4374-4381.	1.5	32
16	Determining the flux of methane into Hudson Canyon at the edge of methane clathrate hydrate stability. Geochemistry, Geophysics, Geosystems, 2016, 17, 3882-3892.	1.0	19
17	Subsea ice-bearing permafrost on the U.S. Beaufort Margin: 2. Borehole constraints. Geochemistry, Geophysics, Geosystems, 2016, 17, 4333-4353.	1.0	28
18	Subsea ice-bearing permafrost on the U.S. Beaufort Margin: 1. Minimum seaward extent defined from multichannel seismic reflection data. Geochemistry, Geophysics, Geosystems, 2016, 17, 4354-4365.	1.0	33

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19	Insights into methane dynamics from analysis of authigenic carbonates and chemosynthetic mussels at newly-discovered Atlantic Margin seeps. <i>Earth and Planetary Science Letters</i> , 2016, 449, 332-344.	1.8	57
20	Exploration of the Canyon-Incised Continental Margin of the Northeastern United States Reveals Dynamic Habitats and Diverse Communities. <i>PLoS ONE</i> , 2015, 10, e0139904.	1.1	79
21	Permafrost-Associated Gas Hydrate: Is It Really Approximately 1 % of the Global System?. <i>Journal of Chemical &amp; Engineering Data</i> , 2015, 60, 429-436.	1.0	81
22	Widespread gas hydrate instability on the upper U.S. Beaufort margin. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 8594-8609.	1.4	37
23	Dynamics of submarine groundwater discharge and associated fluxes of dissolved nutrients, carbon, and trace gases to the coastal zone (Okatee River estuary, South Carolina). <i>Geochimica Et Cosmochimica Acta</i> , 2014, 131, 81-97.	1.6	67
24	Widespread methane leakage from the sea floor on the northern US Atlantic margin. <i>Nature Geoscience</i> , 2014, 7, 657-661.	5.4	251
25	Seabed fluid expulsion along the upper slope and outer shelf of the U.S. Atlantic continental margin. <i>Geophysical Research Letters</i> , 2014, 41, 96-101.	1.5	51
26	Mass fractionation of noble gases in synthetic methane hydrate: Implications for naturally occurring gas hydrate dissociation. <i>Chemical Geology</i> , 2013, 339, 242-250.	1.4	6
27	Evidence for extensive methane venting on the southeastern U.S. Atlantic margin. <i>Geology</i> , 2013, 41, 807-810.	2.0	53
28	Scientific drilling for climate-related objectives on Arctic Ocean margins. <i>Eos</i> , 2012, 93, 213-213.	0.1	0
29	Minimum distribution of subsea ice-bearing permafrost on the U.S. Beaufort Sea continental shelf. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	45
30	Strong atmospheric chemistry feedback to climate warming from Arctic methane emissions. <i>Global Biogeochemical Cycles</i> , 2011, 25, n/a-n/a.	1.9	55
31	A conduit dilation model of methane venting from lake sediments. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	88
32	26. The Impact of Hydrate Saturation on the Mechanical, Electrical, and Thermal Properties of Hydrate-Bearing Sand, Silts, and Clay. , 2010, , 373-384.		36
33	Volume change associated with formation and dissociation of hydrate in sediment. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	57
34	Parametric study of the physical properties of hydrate-bearing sand, silt, and clay sediments: 2. Small-strain mechanical properties. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	61
35	Parametric study of the physical properties of hydrate-bearing sand, silt, and clay sediments: 1. Electromagnetic properties. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	39
36	Thermal conductivity of hydrate-bearing sediments. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	95

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37	Modern Perspectives on Measuring and Interpreting Seafloor Heat Flux: The Future of Marine Heat Flow: Defining Scientific Goals and Experimental Needs for the 21st Century; Salt Lake City, Utah, 6â€“7 September 2007. <i>Eos</i> , 2008, 89, 23.	0.1	4
38	Assessing sulfate reduction and methane cycling in a high salinity pore water system in the northern Gulf of Mexico. <i>Marine and Petroleum Geology</i> , 2008, 25, 942-951.	1.5	60
39	Mechanical and electromagnetic properties of northern Gulf of Mexico sediments with and without THF hydrates. <i>Marine and Petroleum Geology</i> , 2008, 25, 884-895.	1.5	50
40	Scientific results from Gulf of Mexico Gas Hydrates Joint Industry Project Leg 1 Drilling: Introduction and overview. <i>Marine and Petroleum Geology</i> , 2008, 25, 819-829.	1.5	111
41	Scientific Objectives of the Gulf of Mexico Gas Hydrate JIP Leg II Drilling. , 2008, , .		12
42	Integrating hydrologic and geophysical data to constrain coastal surficial aquifer processes at multiple spatial and temporal scales. <i>Geophysical Monograph Series</i> , 2007, , 161-182.	0.1	1
43	Tapping Methane Hydrates for Unconventional Natural Gas. <i>Elements</i> , 2007, 3, 193-199.	0.5	59
44	Observations related to tetrahydrofuran and methane hydrates for laboratory studies of hydrate-bearing sediments. <i>Geochemistry, Geophysics, Geosystems</i> , 2007, 8, n/a-n/a.	1.0	108
45	Three-dimensional structure of fluid conduits sustaining an active deep marine cold seep. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	34
46	Mechanical properties of sand, silt, and clay containing tetrahydrofuran hydrate. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	361
47	Triggering mechanism and tsunamogenic potential of the Cape Fear Slide complex, U.S. Atlantic margin. <i>Geochemistry, Geophysics, Geosystems</i> , 2007, 8, .	1.0	49
48	Salt tectonics and shallow subseafloor fluid convection: models of coupled fluidâ€“heatâ€“salt transport. <i>Geofluids</i> , 2007, 7, 377-386.	0.3	30
49	Characteristics of vesicomyid clams and their environment at the Blake Ridge cold seep, South Carolina, USA. <i>Marine Ecology - Progress Series</i> , 2007, 339, 169-184.	0.9	23
50	Comment on "Thermal and visual time-series at a seafloor gas hydrate deposit on the Gulf of Mexico slope," by I.R. MacDonald, L.C. Bender, M. Vardaro, B. Bernard, and J.M. Brooks [ <i>Earth Planet. Sci. Lett.</i> 233 (2005) 49âˆ“59]. <i>Earth and Planetary Science Letters</i> , 2006, 245, 481-482.	1.8	0
51	Barium cycling in shallow sediment above active mud volcanoes in the Gulf of Mexico. <i>Chemical Geology</i> , 2006, 226, 1-30.	1.4	63
52	Gas Hydrates in Marine Sediments: Lessons from Scientific Ocean Drilling. <i>Oceanography</i> , 2006, 19, 124-142.	0.5	113
53	Instrumented pressure testing chamber for characterizing sediment cores recovered at in situ hydrostatic pressure. <i>Marine Geology</i> , 2006, 229, 285-293.	0.9	72
54	Inversion of inductive electromagnetic data in highly conductive terrains. <i>Geophysics</i> , 2005, 70, G16-G28.	1.4	24

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55	Coupled geophysical constraints on heat flow and fluid flux at a salt diapir. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	29
56	Geophysical and geotechnical properties of near-seafloor sediments in the northern Gulf of Mexico gas hydrate province. <i>Earth and Planetary Science Letters</i> , 2005, 237, 924-939.	1.8	88
57	Heat and salt inhibition of gas hydrate formation in the northern Gulf of Mexico. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	125
58	Compressional and shear wave velocities in uncemented sediment containing gas hydrate. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	211
59	Redox zonation at the saline-influenced boundaries of a permeable surficial aquifer: effects of physical forcing on the biogeochemical cycling of iron and manganese. <i>Journal of Hydrology</i> , 2004, 296, 164-178.	2.3	75
60	Permeability evolution during the formation of gas hydrates in marine sediments. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	156
61	Blake Ridge methane seeps: characterization of a soft-sediment, chemosynthetically based ecosystem. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2003, 50, 281-300.	0.6	162
62	Volcanism of the Central Atlantic Magmatic Province as a potential driving force in the end-Triassic mass extinction. <i>Geophysical Monograph Series</i> , 2003, , 255-267.	0.1	28
63	Cyclo-, magneto-, and bio-stratigraphic constraints on the duration of the CAMP event and its relationship to the Triassic-Jurassic boundary. <i>Geophysical Monograph Series</i> , 2003, , 7-32.	0.1	48
64	A reactivated back-arc source for CAMP magma. <i>Geophysical Monograph Series</i> , 2003, , 151-162.	0.1	15
65	Temporal chemical variations within lowermost jurassic tholeiitic magmas of the Central Atlantic Magmatic Province. <i>Geophysical Monograph Series</i> , 2003, , 163-177.	0.1	6
66	The Late Triassic-Early Jurassic volcanism of Morocco and Portugal in the framework of the Central Atlantic Magmatic Province: An overview. <i>Geophysical Monograph Series</i> , 2003, , 179-207.	0.1	25
67	The Central Atlantic Magmatic Province (CAMP) in Brazil: Petrology, geochemistry, $^{40}\text{Ar}/^{39}\text{Ar}$ ages, paleomagnetism and geodynamic implications. <i>Geophysical Monograph Series</i> , 2003, , 91-128.	0.1	30
68	Critical evaluation of $^{40}\text{Ar}/^{39}\text{Ar}$ ages for the Central Atlantic Magmatic Province: Timing, duration and possible migration of magmatic centers. <i>Geophysical Monograph Series</i> , 2003, , 77-90.	0.1	5
69	Magma flow pattern in the North Mountain basalts of the 200 Ma CAMP event: Evidence from the magnetic fabric. <i>Geophysical Monograph Series</i> , 2003, , 227-239.	0.1	0
70	Thermal State of the Gas Hydrate Reservoir. <i>Coastal Systems and Continental Margins</i> , 2003, , 29-42.	0.0	9
71	The northernmost CAMP: $^{40}\text{Ar}/^{39}\text{Ar}$ age, petrology and Sr-Nd-Pb isotope geochemistry of the Kerforne dike, Brittany, France. <i>Geophysical Monograph Series</i> , 2003, , 209-226.	0.1	18
72	Relative timing of CAMP, rifting, continental breakup, and basin inversion: Tectonic significance. <i>Geophysical Monograph Series</i> , 2003, , 33-59.	0.1	33

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73	Volatile emissions from Central Atlantic Magmatic Province Basalts: Mass assumptions and environmental consequences. <i>Geophysical Monograph Series</i> , 2003, , 241-254.	0.1	46
74	Paleomagnetic and geochemical constraints on the timing and duration of the CAMP activity in northeastern Brazil. <i>Geophysical Monograph Series</i> , 2003, , 129-149.	0.1	9
75	Thermal Conductivity Measurements in Porous Mixtures of Methane Hydrate and Quartz Sand. <i>Geophysical Research Letters</i> , 2002, 29, 82-1-82-4.	1.5	94
76	Constraints on hydraulic parameters and implications for groundwater flux across the upland-estuary interface. <i>Journal of Hydrology</i> , 2002, 260, 255-269.	2.3	52
77	Anomalous Fresh Water Lens Morphology on a Strip Barrier Island. <i>Ground Water</i> , 2000, 38, 872-881.	0.7	38
78	New evidence for geologically instantaneous emplacement of earliest Jurassic Central Atlantic magmatic province basalts on the North American margin. <i>Geology</i> , 2000, 28, 859.	2.0	179
79	Fluid, methane, and energy flux in an active margin gas hydrate province, offshore Costa Rica. <i>Earth and Planetary Science Letters</i> , 2000, 179, 153-165.	1.8	65
80	New evidence for geologically instantaneous emplacement of earliest Jurassic Central Atlantic magmatic province basalts on the North American margin. <i>Geology</i> , 2000, 28, 859-862.	2.0	2
81	Predicting the occurrence, distribution, and evolution of methane gas hydrate in porous marine sediments. <i>Journal of Geophysical Research</i> , 1999, 104, 5081-5095.	3.3	427
82	Anomalously cold temperatures observed at the base of the gas hydrate stability zone on the U.S. Atlantic passive margin. <i>Geology</i> , 1997, 25, 699.	2.0	119
83	Rifting of oceanic crust at Endeavor Deep on the Juan Fernandez microplate. <i>Marine Geophysical Researches</i> , 1995, 17, 251-273.	0.5	10
84	Extensional processes in continental lithosphere. <i>Journal of Geophysical Research</i> , 1995, 100, 24187-24215.	3.3	207
85	Heat flux through an old ( $\sim 175$ Ma) passive margin: Offshore southeastern United States. <i>Journal of Geophysical Research</i> , 1995, 100, 20037-20057.	3.3	28
86	Pressure-temperature-time paths from two-dimensional thermal models: Prograde, retrograde, and inverted metamorphism. <i>Tectonics</i> , 1994, 13, 17-44.	1.3	104
87	Role of horizontal thermal conduction and finite time thrust emplacement in simulation of pressure-temperature-time paths. <i>Earth and Planetary Science Letters</i> , 1994, 123, 49-60.	1.8	24
88	Implications of new gravity data for Baikal rift zone structure. <i>Geophysical Research Letters</i> , 1993, 20, 1635-1638.	1.5	36
89	Regional compensation of the Greater Caucasus mountains based on an analysis of Bouguer gravity data. <i>Earth and Planetary Science Letters</i> , 1990, 98, 360-379.	1.8	36
90	Thermal modeling of extensional tectonics: Application to pressure-temperature-time histories of metamorphic rocks. <i>Tectonics</i> , 1988, 7, 947-957.	1.3	116

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91	Seismic and thermal investigations of the Blake Ridge gas hydrate area: a synthesis. , 0, , .		35