Thomas A Douglas

List of Publications by Year
in descending order

79	3,607	109321	149698
papers	citations	35 h-index	56 g-index

86	86	86	4226
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mass-independent fractionation of mercury isotopes in Arctic snow driven by sunlight. Nature Geoscience, 2010, 3, 173-177.	12.9	233
2	Photochemical production of molecular bromine in Arctic surface snowpacks. Nature Geoscience, 2013, 6, 351-356.	12.9	175
3	First-year sea-ice contact predicts bromine monoxide (BrO) levels at Barrow, Alaska better than potential frost flower contact. Atmospheric Chemistry and Physics, 2007, 7, 621-627.	4.9	157
4	Microbial survival strategies in ancient permafrost: insights from metagenomics. ISME Journal, 2017, 11, 2305-2318.	9.8	149
5	Reviews and syntheses: Changing ecosystem influences on soil thermal regimes in northern high-latitude permafrost regions. Biogeosciences, 2018, 15, 5287-5313.	3.3	143
6	Interactive effects of wildfire and climate on permafrost degradation in Alaskan lowland forests. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1619-1637.	3.0	113
7	The fate of mercury in Arctic terrestrial and aquatic ecosystems, a review. Environmental Chemistry, 2012, 9, 321.	1.5	106
8	Halogens in the coastal snow pack near Barrow, Alaska: Evidence for active bromine air-snow chemistry during springtime. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	104
9	Influence of Snow and Ice Crystal Formation and Accumulation on Mercury Deposition to the Arctic. Environmental Science & Technology, 2008, 42, 1542-1551.	10.0	101
10	Impact of wildfire on permafrost landscapes: A review of recent advances and future prospects. Permafrost and Periglacial Processes, 2020, 31, 371-382.	3.4	98
11	Arctic haze, mercury and the chemical composition of snow across northwestern Alaska. Atmospheric Environment, 2004, 38, 805-820.	4.1	94
12	Phylogenetic Analysis of Bacteria Preserved in a Permafrost Ice Wedge for 25,000 Years. Applied and Environmental Microbiology, 2007, 73, 2360-2363.	3.1	88
13	Widespread global peatland establishment and persistence over the last 130,000 y. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4822-4827.	7.1	82
14	The chemical composition of surface snow in the Arctic: Examining marine, terrestrial, and atmospheric influences. Atmospheric Environment, 2012, 50, 349-359.	4.1	79
15	Convective forcing of mercury and ozone in the Arctic boundary layer induced by leads in sea ice. Nature, 2014, 506, 81-84.	27.8	79
16	Elevated mercury measured in snow and frost flowers near Arctic sea ice leads. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	65
17	Changes in the Active, Dead, and Dormant Microbial Community Structure across a Pleistocene Permafrost Chronosequence. Applied and Environmental Microbiology, 2019, 85, .	3.1	63
18	Missing pieces to modeling the Arctic-Boreal puzzle. Environmental Research Letters, 2018, 13, 020202.	5.2	61

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19	Frost flower chemical composition during growth and its implications for aerosol production and bromine activation. Journal of Geophysical Research, 2008, 113, .	3.3	60
20	Arctic mercury cycling. Nature Reviews Earth & Environment, 2022, 3, 270-286.	29.7	60
21	Increased rainfall stimulates permafrost thaw across a variety of Interior Alaskan boreal ecosystems. Npj Climate and Atmospheric Science, 2020, 3, .	6.8	59
22	Investigation of the deposition and emission of mercury in arctic snow during an atmospheric mercury depletion event. Journal of Geophysical Research, 2008, 113, .	3.3	58
23	Temporal variations in organic carbon species and fluxes from the Chena River, Alaska. Limnology and Oceanography, 2008, 53, 1408-1419.	3.1	58
24	Evolution of the Snow Area Index of the Subarctic Snowpack in Central Alaska over a Whole Season. Consequences for the Air to Snow Transfer of Pollutants. Environmental Science & Technology, 2006, 40, 7521-7527.	10.0	55
25	Frost flowers growing in the Arctic oceanâ€atmosphereâ€“sea iceâ€“snow interface: 1. Chemical composition. Journal of Geophysical Research, 2012, 117, .	3.3	53
26	Hydrogeochemistry of seasonal flow regimes in the Chena River, a subarctic watershed draining discontinuous permafrost in interior Alaska (USA). Chemical Geology, 2013, 335, 48-62.	3.3	53
27	Mercury Isotopes Reveal Atmospheric Gaseous Mercury Deposition Directly to the Arctic Coastal Snowpack. Environmental Science and Technology Letters, 2019, 6, 235-242.	8.7	50
28	Biogeochemical and geocryological characteristics of wedge and thermokarstâ€cave ice in the CRREL permafrost tunnel, Alaska. Permafrost and Periglacial Processes, 2011, 22, 120-128.	3.4	49
29	Quantifying landscape change in an arctic coastal lowland using repeat airborne LiDAR. Environmental Research Letters, 2013, 8, 045025.	5.2	47
30	Atmospheric mercury over sea ice during the OASIS-2009 campaign. Atmospheric Chemistry and Physics, 2013, 13, 7007-7021.	4.9	42
31	Climate change and mercury in the Arctic: Abiotic interactions. Science of the Total Environment, 2022, 824, 153715.	8.0	42
32	Glaciibacter superstes gen. nov., sp. nov., a novel member of the family Microbacteriaceae isolated from a permafrost ice wedge. International Journal of Systematic and Evolutionary Microbiology, 2009, 59, 482-486.	1.7	41
33	Glacierized headwater streams as aquifer recharge corridors, subarctic Alaska. Geophysical Research Letters, 2017, 44, 6876-6885.	4.0	40
34	Chemical composition of the snowpack during the OASIS spring campaign 2009 at Barrow, Alaska. Journal of Geophysical Research, 2012, 117, .	3.3	39
35	Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems. Environmental Research Letters, 2021, 16, 015001.	5.2	39
36	Seasonal variations in nutrient concentrations and speciation in the Chena River, Alaska. Journal of Geophysical Research, 2008, 113, .	3.3	36

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37	Watershed slope as a predictor of fluvial dissolved organic matter and nitrate concentrations across geographical space and catchment size in the Arctic. Environmental Research Letters, 2018, 13, 104015.	5.2	35
38	Degrading permafrost mapped with electrical resistivity tomography, airborne imagery and LiDAR, and seasonal thaw measurements. Geophysics, 2016, 81, WA71-WA85.	2.6	34
39	Sublimation of terrestrial permafrost and the implications for ice-loss processes on Mars. Nature Communications, 2019, 10, 1716.	12.8	33
40	Thawing permafrost: an overlooked source of seeds for Arctic cloud formation. Environmental Research Letters, 2020, 15, 084022.	5.2	33
41	Soluble chromophores in marine snow, seawater, sea ice and frost flowers near Barrow, Alaska. Journal of Geophysical Research, 2012, 117, .	3.3	32
42	Frost flowers growing in the Arctic oceanâ€atmosphereâ€“sea iceâ€“snow interface: 2. Mercury exchange between the atmosphere, snow, and frost flowers. Journal of Geophysical Research, 2012, 117, .	3.3	32
43	In Situ Structural Study of Sb(V) Adsorption on Hematite (11Ì…02) Using X-ray Surface Scattering. Environmental Science & Technology, 2018, 52, 11161-11168.	10.0	28
44	Linking vegetation cover and seasonal thaw depths in interior Alaska permafrost terrains using remote sensing. Remote Sensing of Environment, 2019, 233, 111363.	11.0	28
45	Simulation of the specific surface area of snow using a one-dimensional physical snowpack model: implementation and evaluation for subarctic snow in Alaska. Cryosphere, 2010, 4, 35-51.	3.9	28
46	The specific surface area and chemical composition of diamond dust near Barrow, Alaska. Journal of Geophysical Research, 2011, 116, .	3.3	27
47	Characterizing Boreal Peatland Plant Composition and Species Diversity with Hyperspectral Remote Sensing. Remote Sensing, 2019, 11, 1685.	4.0	27
48	A Pulse of Mercury and Major Ions in Snowmelt Runoff from a Small Arctic Alaska Watershed. Environmental Science & Technology, 2017, 51, 11145-11155.	10.0	24
49	Seasonality of dissolved nitrogen from spring melt to fall freezeup in Alaskan Arctic tundra and mountain streams. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 1718-1737.	3.0	22
50	The Roles of Climate Extremes, Ecological Succession, and Hydrology in Repeated Permafrost Aggradation and Degradation in Fens on the Tanana Flats, Alaska. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005824.	3.0	22
51	Sources and sinks of carbon in boreal ecosystems of interior Alaska: A review. Elementa, 2014, 2, .	3.2	22
52	A time series investigation of the stability of nitramine and nitroaromatic explosives in surface water samples at ambient temperature. Chemosphere, 2009, 76, 1-8.	8.2	21
53	Investigating the Fate of Nitroaromatic (TNT) and Nitramine (RDX and HMX) Explosives in Fractured and Pristine Soils. Journal of Environmental Quality, 2009, 38, 2285-2294.	2.0	21
54	Recent degradation of interior Alaska permafrost mapped with ground surveys, geophysics, deep drilling, and repeat airborne lidar. Cryosphere, 2021, 15, 3555-3575.	3.9	21

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55	Desorption and Transformation of Nitroaromatic (TNT) and Nitramine (RDX and HMX) Explosive Residues on Detonated Pure Mineral Phases. Water, Air, and Soil Pollution, 2012, 223, 2189-2200.	2.4	20
56	Spatially Resolved Organomineral Interactions across a Permafrost Chronosequence. Environmental Science & Technology, 2020, 54, 2951-2960.	10.0	19
57	In situ structural study of the surface complexation of lead(II) on the chemically mechanically polished hematite (<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif") Tj ETQq1 1 0.784314 rgBT /Ov surface. Journal of Colloid and Interface Science, 2018, 524, 65-75.	9.4	18
58	Life at the Frozen Limit: Microbial Carbon Metabolism Across a Late Pleistocene Permafrost Chronosequence. Frontiers in Microbiology, 2020, 11, 1753.	3.5	16
59	Metal accumulation capacity in indigenous Alaska vegetation growing on military training lands. International Journal of Phytoremediation, 2020, 22, 259-266.	3.1	15
60	The role of changing temperature in microbial metabolic processes during permafrost thaw. PLoS ONE, 2020, 15, e0232169.	2.5	15
61	Desorption of nitramine and nitroaromatic explosive residues from soils detonated under controlled conditions. Environmental Toxicology and Chemistry, 2011, 30, 345-353.	4.3	13
62	Environmental impact of metals resulting from military training activities: A review. Chemosphere, 2021, 265, 129110.	8.2	12
63	Dissolution and sorption of hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) and 2,4,6-trinitrotoluene (TNT) residues from detonated mineral surfaces. Chemosphere, 2011, 84, 1058-1065.	8.2	11
64	Lead and antimony from bullet weathering in newly constructed target berms: Chemical speciation, mobilization, and remediation strategies. Science of the Total Environment, 2019, 658, 558-569.	8.0	11
65	Mercury in the Arctic tundra snowpack: temporal and spatial concentration patterns and trace gas exchanges. Cryosphere, 2018, 12, 1939-1956.	3.9	10
66	Mapping CO2 fluxes of cypress swamp and marshes in the Greater Everglades using eddy covariance measurements and Landsat data. Remote Sensing of Environment, 2021, 262, 112523.	11.0	10
67	Selective Adsorption of Pb(II) on an Annealed Hematite (1<ovl>1</ovl>02) Surface: Evidence from Crystal Truncation Rod X-ray Diffraction and Density Functional Theory. Environmental Science & Technology, 2020, 54, 6651-6660.	10.0	9
68	Changing Biogeochemical Cycles of Organic Carbon, Nitrogen, Phosphorus, and Trace Elements in Arctic Rivers. , 2021, , 315-348.		9
69	Groundâ€penetrating radar, electromagnetic induction, terrain, and vegetation observations coupled with machine learning to map permafrost distribution at Twelvemile Lake, Alaska. Permafrost and Periglacial Processes, 2021, 32, 407-426.	3.4	7
70	Yedoma Cryostratigraphy of Recently Excavated Sections of the CRREL Permafrost Tunnel Near Fairbanks, Alaska. Frontiers in Earth Science, 2022, 9, .	1.8	7
71	Fostering multidisciplinary research on interactions between chemistry, biology, and physics within the coupled cryosphere-atmosphere system. Elementa, 2019, 7, .	3.2	6
72	Machine learning analyses of remote sensing measurements establish strong relationships between vegetation and snow depth in the boreal forest of Interior Alaska. Environmental Research Letters, 2021, 16, 065014.	5.2	5

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73	Modeling and mapping permafrost active layer thickness using field measurements and remote sensing techniques. International Journal of Applied Earth Observation and Geoinformation, 2021, 102, 102455.	2.8	5
74	Drivers of historical and projected changes in diverse boreal ecosystems: fires, thermokarst, riverine dynamics, and humans. Environmental Research Letters, 2022, 17, 045016.	5.2	4
75	Geochronologic and thermobarometric constraints on the metamorphic history of the Fairbanks Mining District, western Yukon-Tanana terrane, Alaska. Canadian Journal of Earth Sciences, 2002, 39, 1107-1126.	1.3	3
76	The Fate of Nitroaromatic (TNT) and Nitramine (RDX and HMX) Explosive Residues in the Presence of Pure Metal Oxides. ACS Symposium Series, 2011, , 197-215.	0.5	3
77	Multi-Scale Temporal Patterns in Stream Biogeochemistry Indicate Linked Permafrost and Ecological Dynamics of Boreal Catchments. Ecosystems, 2022, 25, 1189-1206.	3.4	3
78	Mapping Vegetation and Seasonal Thaw Depth in Central Alaska Using Airborne Hyperspectral and LiDAR Data. , 2020, , .		1
79	Alaskan palaeosols in modern times: Deciphering unique microbial diversity within the late-Holocene. Holocene, 0, , 095968362211012.	1.7	0