Ilka Weikusat

List of Publications by Year
in descending order

56 papers	3,157 citations	236612 25 h-index	168136 53 g-index
92 all docs	92 docs citations	92 times ranked	3330 citing authors

#	Article	IF	Citations
1	Microstructure, micro-inclusions, and mineralogy along the EGRIP (East Greenland Ice Core Project) ice core â€“ Part 2: Implications for palaeo-mineralogy. Cryosphere, 2022, 16, 667-688.	1.5	4
2	Airborne ultra-wideband radar sounding over the shear margins and along flow lines at the onset region of the Northeast Greenland Ice Stream. Earth System Science Data, 2022, 14, 763-779.	3.7	13
3	Melt in the Greenland EastGRIP ice core reveals Holocene warm events. Climate of the Past, 2022, 18, 1011-1034.	1.3	3
4	Can changes in deformation regimes be inferred from crystallographic preferred orientations in polar ice?. Cryosphere, 2022, 16, 2009-2024.	1.5	4
5	A Review of the Microstructural Location of Impurities in Polar Ice and Their Impacts on Deformation. Frontiers in Earth Science, 2021, 8, .	0.8	12
6	Crystallographic analysis of temperate ice on Rhonegletscher, Swiss Alps. Cryosphere, 2021, 15, 677-694.	1.5	10
7	Comment on â€œExceptionally high heat flux needed to sustain the Northeast Greenland Ice Streamâ€•by Smith-Johnsen et al.Â(2020). Cryosphere, 2021, 15, 2251-2254.	1.5	7
8	Acoustic velocity measurements for detecting the crystal orientation fabrics of a temperate ice core. Cryosphere, 2021, 15, 3507-3521.	1.5	9
9	A stratigraphy-based method for reconstructing ice core orientation. Annals of Glaciology, 2021, 62, 191-202.	2.8	15
10	Microstructure, micro-inclusions, and mineralogy along the EGRIP ice core â€“ Part 1: Localisation of inclusions and deformation patterns. Cryosphere, 2021, 15, 5717-5737.	1.5	12
11	Seismic Anisotropy of Temperate Ice in Polar Ice Sheets. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2020JF005714.	1.0	4
12	Using a composite flow law to model deformation in the NEEM deep ice core, Greenland â€“ Part 1: The role of grain size and grain size distribution on deformation of the upper 2207â€‰m. Cryosphere, 2020, 14, 2429-2448.	1.5	14
13	Using a composite flow law to model deformation in the NEEM deep ice core, Greenland â€“ Part 2: The role of grain size and premelting on ice deformation at high homologous temperature. Cryosphere, 2020, 14, 2449-2467.	1.5	17
14	Impurity Analysis and Microstructure Along the Climatic Transition From MIS 6 Into 5e in the EDML Ice Core Using Cryo-Raman Microscopy. Frontiers in Earth Science, 2019, 7, .	0.8	18
15	Shear localisation in anisotropic, non-linear viscous materials that develop a CPO: A numerical study. Journal of Structural Geology, 2019, 124, 81-90.	1.0	11
16	The effect of dynamic recrystallisation on the rheology and microstructures of partially molten rocks. Journal of Structural Geology, 2019, 118, 224-235.	1.0	15
17	Microstructural analysis of Greenland ice using a cryogenic scanning electron microscope equipped with an electron backscatter diffraction detector. Bulletin of Glaciological Research, 2019, 37, 31-45.	0.5	5
18	Deriving micro- to macro-scale seismic velocities from ice-core <i>c</i>Âaxis orientations. Cryosphere, 2018, 12, 1715-1734.	1.5	10

#	Article	IF	Citations
19	Multi-channel and multi-polarization radar measurements around the NEEM site. Cryosphere, 2018, 12, 2689-2705.	1.5	14
20	Greenland Ice Sheet: Higher Nonlinearity of Ice Flow Significantly Reduces Estimated Basal Motion. Geophysical Research Letters, 2018, 45, 6542-6548.	1.5	35
21	Physical analysis of an Antarctic ice coreâ€"towards an integration of micro- and macrodynamics of polar ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150347.	1.6	44
22	EBSD analysis of subgrain boundaries and dislocation slip systems in Antarctic and Greenland ice. Solid Earth, 2017, 8, 883-898.	1.2	17
23	The Relevance of Grain Dissection for Grain Size Reduction in Polar Ice: Insights from Numerical Models and Ice Core Microstructure Analysis. Frontiers in Earth Science, 2017, 5, .	0.8	14
24	Location and distribution of micro-inclusions in the EDML and NEEM ice cores using optical microscopy and in situ Raman spectroscopy. Cryosphere, 2017, 11, 1075-1090.	1.5	28
25	Dynamic recrystallization during deformation of polycrystalline ice: insights from numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150346.	1.6	31
26	Strain localization and dynamic recrystallization in the iceâ€"air aggregate: a numerical study. Cryosphere, 2016, 10, 3071-3089.	1.5	22
27	Small-scale disturbances in the stratigraphy of the NEEM ice core: observations and numerical model simulations. Cryosphere, 2016, 10, 359-370.	1.5	34
28	Dynamic recrystallisation of ice aggregates during co-axial viscoplastic deformation: a numerical approach. Journal of Glaciology, 2016, 62, 359-377.	1.1	36
29	Full-field predictions of ice dynamic recrystallisation under simple shear conditions. Earth and Planetary Science Letters, 2016, 450, 233-242.	1.8	38
30	Converging flow and anisotropy cause large-scale folding in Greenland's ice sheet. Nature Communications, 2016, 7, 11427.	5.8	56
31	Raman tomography of natural air hydrates. Journal of Glaciology, 2015, 61, 923-930.	1.1	8
32	Seismic wave propagation in anisotropic ice â€" Part 2: Effects of crystal anisotropy in geophysical data. Cryosphere, 2015, 9, 385-398.	1.5	39
33	Fabric along the NEEM ice core, Greenland, and its comparison with GRIP and NGRIP ice cores. Cryosphere, 2014, 8, 1129-1138.	1.5	67
34	Confocal Raman microscopy of frozen bread dough. Journal of Cereal Science, 2014, 60, 555-560.	1.8	26
35	The microstructure of polar ice. Part II: State of the art. Journal of Structural Geology, 2014, 61, 21-49.	1.0	86
36	The microstructure of polar ice. Part I: Highlights from ice core research. Journal of Structural Geology, 2014, 61, 2-20.	1.0	78

#	Article	IF	Citations
37	Photograph of the month. Journal of Structural Geology, 2014, 61, 143.	1.0	0
38	Influence of ice crystal anisotropy on seismic velocity analysis. Annals of Glaciology, 2014, 55, 97-106.	2.8	27
39	142 Ice growth in the presence of an antifreeze protein. Cryobiology, 2013, 67, 438.	0.3	0
40	Eemian interglacial reconstructed from a Greenland folded ice core. Nature, 2013, 493, 489-494.	13.7	565
41	Microstructure through an Ice Sheet. Materials Science Forum, 2013, 753, 481-484.	0.3	6
42	Potential mechanisms for anisotropy in ice-penetrating radar data. Journal of Glaciology, 2012, 58, 613-624.	1.1	27
43	Characterization of an antifreeze protein from the polar diatom Fragilariopsis cylindrus and its relevance in sea ice. Cryobiology, 2011, 63, 210-219.	0.3	89
44	Cryogenic EBSD on ice: preserving a stable surface in a low pressure SEM. Journal of Microscopy, 2011, 242, 295-310.	0.8	34
45	Competition between grain growth and grain-size reduction in polar ice. Journal of Glaciology, 2011, 57, 942-948.	1.1	23
46	Subgrain boundaries in Antarctic ice quantified by X-ray Laue diffraction. Journal of Glaciology, 2011, 57, 111-120.	1.1	33
47	Complete determination of ice crystal orientation using Laue X-ray diffraction method. Journal of Glaciology, 2011, 57, 103-110.	1.1	17
48	Evidence of dynamic recrystallization in polar firn. Journal of Geophysical Research, 2009, 114, .	3.3	48
49	Subgrain boundaries and related microstructural features in EDML (Antarctica) deep ice core. Journal of Glaciology, 2009, 55, 461-472.	1.1	47
50	Layer disturbances and the radio-echo free zone in ice sheets. Cryosphere, 2009, 3, 195-203.	1.5	68
51	Application of a continuum-mechanical model for the flow of anisotropic polar ice to the EDML core, Antarctica. Journal of Glaciology, 2008, 54, 631-642.	1.1	41
52	Evolution of ice crystal microstructure during creep experiments. Journal of Glaciology, 2007, 53, 479-489.	1.1	32
53	One-to-one coupling of glacial climate variability in Greenland and Antarctica. Nature, 2006, 444, 195-198.	13.7	1,111
54	Microstructure mapping: a new method for imaging deformation-induced microstructural features of ice on the grain scale. Journal of Glaciology, 2006, 52, 398-406.	1.1	60

#	Article	IF	Citations
55	Apparent boudinage in dykes. Journal of Structural Geology, 2004, 26, 625-636.	1.0	49
56	Origin of englacial stratigraphy at three deep ice core sites of the Greenland Ice Sheet by synthetic radar modelling. Journal of Glaciology, 0, , 1-13.	1.1	5