

Ilka Weikusat

List of Publications by Year in descending order

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56
papers

3,157
citations

236925
25
h-index

168389
53
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92
all docs

92
docs citations

92
times ranked

3330
citing authors

#	ARTICLE	IF	CITATIONS
1	One-to-one coupling of glacial climate variability in Greenland and Antarctica. <i>Nature</i> , 2006, 444, 195-198.	27.8	1,111
2	Eemian interglacial reconstructed from a Greenland folded ice core. <i>Nature</i> , 2013, 493, 489-494.	27.8	565
3	Characterization of an antifreeze protein from the polar diatom <i>Fragilariopsis cylindrus</i> and its relevance in sea ice. <i>Cryobiology</i> , 2011, 63, 210-219.	0.7	89
4	The microstructure of polar ice. Part II: State of the art. <i>Journal of Structural Geology</i> , 2014, 61, 21-49.	2.3	86
5	The microstructure of polar ice. Part I: Highlights from ice core research. <i>Journal of Structural Geology</i> , 2014, 61, 2-20.	2.3	78
6	Layer disturbances and the radio-echo free zone in ice sheets. <i>Cryosphere</i> , 2009, 3, 195-203.	3.9	68
7	Fabric along the NEEM ice core, Greenland, and its comparison with GRIP and NGRIP ice cores. <i>Cryosphere</i> , 2014, 8, 1129-1138.	3.9	67
8	Microstructure mapping: a new method for imaging deformation-induced microstructural features of ice on the grain scale. <i>Journal of Glaciology</i> , 2006, 52, 398-406.	2.2	60
9	Converging flow and anisotropy cause large-scale folding in Greenland's ice sheet. <i>Nature Communications</i> , 2016, 7, 11427.	12.8	56
10	Apparent boudinage in dykes. <i>Journal of Structural Geology</i> , 2004, 26, 625-636.	2.3	49
11	Evidence of dynamic recrystallization in polar firn. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	48
12	Subgrain boundaries and related microstructural features in EDML (Antarctica) deep ice core. <i>Journal of Glaciology</i> , 2009, 55, 461-472.	2.2	47
13	Physical analysis of an Antarctic ice core – towards an integration of micro- and macrodynamics of polar ice. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150347.	3.4	44
14	Application of a continuum-mechanical model for the flow of anisotropic polar ice to the EDML core, Antarctica. <i>Journal of Glaciology</i> , 2008, 54, 631-642.	2.2	41
15	Seismic wave propagation in anisotropic ice – Part 2: Effects of crystal anisotropy in geophysical data. <i>Cryosphere</i> , 2015, 9, 385-398.	3.9	39
16	Full-field predictions of ice dynamic recrystallisation under simple shear conditions. <i>Earth and Planetary Science Letters</i> , 2016, 450, 233-242.	4.4	38
17	Dynamic recrystallisation of ice aggregates during co-axial viscoplastic deformation: a numerical approach. <i>Journal of Glaciology</i> , 2016, 62, 359-377.	2.2	36
18	Greenland Ice Sheet: Higher Nonlinearity of Ice Flow Significantly Reduces Estimated Basal Motion. <i>Geophysical Research Letters</i> , 2018, 45, 6542-6548.	4.0	35

#	ARTICLE	IF	CITATIONS
19	Cryogenic EBSD on ice: preserving a stable surface in a low pressure SEM. <i>Journal of Microscopy</i> , 2011, 242, 295-310.	1.8	34
20	Small-scale disturbances in the stratigraphy of the NEEM ice core: observations and numerical model simulations. <i>Cryosphere</i> , 2016, 10, 359-370.	3.9	34
21	Subgrain boundaries in Antarctic ice quantified by X-ray Laue diffraction. <i>Journal of Glaciology</i> , 2011, 57, 111-120.	2.2	33
22	Evolution of ice crystal microstructure during creep experiments. <i>Journal of Glaciology</i> , 2007, 53, 479-489.	2.2	32
23	Dynamic recrystallization during deformation of polycrystalline ice: insights from numerical simulations. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150346.	3.4	31
24	Location and distribution of micro-inclusions in the EDML and NEEM ice cores using optical microscopy and in situ Raman spectroscopy. <i>Cryosphere</i> , 2017, 11, 1075-1090.	3.9	28
25	Potential mechanisms for anisotropy in ice-penetrating radar data. <i>Journal of Glaciology</i> , 2012, 58, 613-624.	2.2	27
26	Influence of ice crystal anisotropy on seismic velocity analysis. <i>Annals of Glaciology</i> , 2014, 55, 97-106.	1.4	27
27	Confocal Raman microscopy of frozen bread dough. <i>Journal of Cereal Science</i> , 2014, 60, 555-560.	3.7	26
28	Competition between grain growth and grain-size reduction in polar ice. <i>Journal of Glaciology</i> , 2011, 57, 942-948.	2.2	23
29	Strain localization and dynamic recrystallization in the ice-air aggregate: a numerical study. <i>Cryosphere</i> , 2016, 10, 3071-3089.	3.9	22
30	Impurity Analysis and Microstructure Along the Climatic Transition From MIS 6 Into 5e in the EDML Ice Core Using Cryo-Raman Microscopy. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	18
31	Complete determination of ice crystal orientation using Laue X-ray diffraction method. <i>Journal of Glaciology</i> , 2011, 57, 103-110.	2.2	17
32	EBSD analysis of subgrain boundaries and dislocation slip systems in Antarctic and Greenland ice. <i>Solid Earth</i> , 2017, 8, 883-898.	2.8	17
33	Using a composite flow law to model deformation in the NEEM deep ice core, Greenland – Part 2: The role of grain size and premelting on ice deformation at high homologous temperature. <i>Cryosphere</i> , 2020, 14, 2449-2467.	3.9	17
34	The effect of dynamic recrystallisation on the rheology and microstructures of partially molten rocks. <i>Journal of Structural Geology</i> , 2019, 118, 224-235.	2.3	15
35	A stratigraphy-based method for reconstructing ice core orientation. <i>Annals of Glaciology</i> , 2021, 62, 191-202.	1.4	15
36	The Relevance of Grain Dissection for Grain Size Reduction in Polar Ice: Insights from Numerical Models and Ice Core Microstructure Analysis. <i>Frontiers in Earth Science</i> , 2017, 5, .	1.8	14

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37	Multi-channel and multi-polarization radar measurements around the NEEM site. Cryosphere, 2018, 12, 2689-2705.	3.9	14
38	Using a composite flow law to model deformation in the NEEM deep ice core, Greenland – Part 1: The role of grain size and grain size distribution on deformation of the upper 2207m. Cryosphere, 2020, 14, 2429-2448.	3.9	14
39	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.	9.9	13
40	A Review of the Microstructural Location of Impurities in Polar Ice and Their Impacts on Deformation. Frontiers in Earth Science, 2021, 8, .	1.8	12
41	Microstructure, micro-inclusions, and mineralogy along the EGRIP ice core – Part 1: Localisation of inclusions and deformation patterns. Cryosphere, 2021, 15, 5717-5737.	3.9	12
42	Shear localisation in anisotropic, non-linear viscous materials that develop a CPO: A numerical study. Journal of Structural Geology, 2019, 124, 81-90.	2.3	11
43	Deriving micro- to macro-scale seismic velocities from ice-core <i>c</i>-axis orientations. Cryosphere, 2018, 12, 1715-1734.	3.9	10
44	Crystallographic analysis of temperate ice on Rhonegletscher, Swiss Alps. Cryosphere, 2021, 15, 677-694.	3.9	10
45	Acoustic velocity measurements for detecting the crystal orientation fabrics of a temperate ice core. Cryosphere, 2021, 15, 3507-3521.	3.9	9
46	Raman tomography of natural air hydrates. Journal of Glaciology, 2015, 61, 923-930.	2.2	8
47	Comment on “Exceptionally high heat flux needed to sustain the Northeast Greenland Ice Stream” by Smith-Johnsen et al.(2020). Cryosphere, 2021, 15, 2251-2254.	3.9	7
48	Microstructure through an Ice Sheet. Materials Science Forum, 2013, 753, 481-484.	0.3	6
49	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.	1.0	5
50	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.	2.2	5
51	Seismic Anisotropy of Temperate Ice in Polar Ice Sheets. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2020JF005714.	2.8	4
52	Microstructure, micro-inclusions, and mineralogy along the EGRIP (East Greenland Ice Core Project) ice core – Part 2: Implications for palaeo-mineralogy. Cryosphere, 2022, 16, 667-688.	3.9	4
53	Can changes in deformation regimes be inferred from crystallographic preferred orientations in polar ice?. Cryosphere, 2022, 16, 2009-2024.	3.9	4
54	Melt in the Greenland EastGRIP ice core reveals Holocene warm events. Climate of the Past, 2022, 18, 1011-1034.	3.4	3

#	ARTICLE	IF	CITATIONS
55	142 Ice growth in the presence of an antifreeze protein. Cryobiology, 2013, 67, 438.	0.7	0
56	Photograph of the month. Journal of Structural Geology, 2014, 61, 143.	2.3	0