

Ilka Weikusat

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

59
papers

2,594
citations

23
h-index

50
g-index

92
ext. papers

2,849
ext. citations

5.7
avg, IF

5.94
L-index

#	Paper	IF	Citations
59	One-to-one coupling of glacial climate variability in Greenland and Antarctica. <i>Nature</i> , 2006 , 444, 195-8	50.4	966
58	Eemian interglacial reconstructed from a Greenland folded ice core. <i>Nature</i> , 2013 , 493, 489-94	50.4	474
57	The microstructure of polar ice. Part II: State of the art. <i>Journal of Structural Geology</i> , 2014 , 61, 21-49	3	72
56	Characterization of an antifreeze protein from the polar diatom <i>Fragilariopsis cylindrus</i> and its relevance in sea ice. <i>Cryobiology</i> , 2011 , 63, 210-9	2.7	68
55	The microstructure of polar ice. Part I: Highlights from ice core research. <i>Journal of Structural Geology</i> , 2014 , 61, 2-20	3	65
54	Fabric along the NEEM ice core, Greenland, and its comparison with GRIP and NGRIP ice cores. <i>Cryosphere</i> , 2014 , 8, 1129-1138	5.5	54
53	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	3.4	53
52	Layer disturbances and the radio-echo free zone in ice sheets. <i>Cryosphere</i> , 2009 , 3, 195-203	5.5	51
51	Subgrain boundaries and related microstructural features in EDML (Antarctica) deep ice core. <i>Journal of Glaciology</i> , 2009 , 55, 461-472	3.4	45
50	Converging flow and anisotropy cause large-scale folding in Greenland's ice sheet. <i>Nature Communications</i> , 2016 , 7, 11427	17.4	44
49	Evidence of dynamic recrystallization in polar firn. <i>Journal of Geophysical Research</i> , 2009 , 114,		43
48	Apparent boudinage in dykes. <i>Journal of Structural Geology</i> , 2004 , 26, 625-636	3	41
47	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	3.4	38
46	Cryogenic EBSD on ice: preserving a stable surface in a low pressure SEM. <i>Journal of Microscopy</i> , 2011 , 242, 295-310	1.9	33
45	Subgrain boundaries in Antarctic ice quantified by X-ray Laue diffraction. <i>Journal of Glaciology</i> , 2011 , 57, 111-120	3.4	30
44	Small-scale disturbances in the stratigraphy of the NEEM ice core: observations and numerical model simulations. <i>Cryosphere</i> , 2016 , 10, 359-370	5.5	30
43	Dynamic recrystallisation of ice aggregates during co-axial viscoplastic deformation: a numerical approach. <i>Journal of Glaciology</i> , 2016 , 62, 359-377	3.4	30

42	Full-field predictions of ice dynamic recrystallisation under simple shear conditions. <i>Earth and Planetary Science Letters</i> , 2016 , 450, 233-242	5.3	30
41	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,	3	29
40	Evolution of ice crystal microstructure during creep experiments. <i>Journal of Glaciology</i> , 2007 , 53, 479-489.	4	28
39	Seismic wave propagation in anisotropic ice [Part 2: Effects of crystal anisotropy in geophysical data. <i>Cryosphere</i> , 2015 , 9, 385-398	5.5	27
38	Greenland Ice Sheet: Higher Nonlinearity of Ice Flow Significantly Reduces Estimated Basal Motion. <i>Geophysical Research Letters</i> , 2018 , 45, 6542-6548	4.9	25
37	Dynamic recrystallization during deformation of polycrystalline ice: insights from numerical simulations. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	25
36	Potential mechanisms for anisotropy in ice-penetrating radar data. <i>Journal of Glaciology</i> , 2012 , 58, 613-624	4	22
35	Confocal Raman microscopy of frozen bread dough. <i>Journal of Cereal Science</i> , 2014 , 60, 555-560	3.8	21
34	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	5.5	20
33	Competition between grain growth and grain-size reduction in polar ice. <i>Journal of Glaciology</i> , 2011 , 57, 942-948	3.4	20
32	Influence of ice crystal anisotropy on seismic velocity analysis. <i>Annals of Glaciology</i> , 2014 , 55, 97-106	2.5	19
31	Strain localization and dynamic recrystallization in the icefir aggregate: a numerical study. <i>Cryosphere</i> , 2016 , 10, 3071-3089	5.5	18
30	Complete determination of ice crystal orientation using Laue X-ray diffraction method. <i>Journal of Glaciology</i> , 2011 , 57, 103-110	3.4	15
29	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,	3.5	14
28	EBSD analysis of subgrain boundaries and dislocation slip systems in Antarctic and Greenland ice. <i>Solid Earth</i> , 2017 , 8, 883-898	3.3	13
27	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,	3.5	13
26	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	5.5	13
25	Multi-channel and multi-polarization radar measurements around the NEEM site. <i>Cryosphere</i> , 2018 , 12, 2689-2705	5.5	12

24	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 2207 m. <i>Cryosphere</i> , 2020 , 14, 2429-2448	5.5	9
23	Shear localisation in anisotropic, non-linear viscous materials that develop a CPO: A numerical study. <i>Journal of Structural Geology</i> , 2019 , 124, 81-90	3	8
22	A stratigraphy-based method for reconstructing ice core orientation. <i>Annals of Glaciology</i> , 1-12	2.5	8
21	The effect of dynamic recrystallisation on the rheology and microstructures of partially molten rocks. <i>Journal of Structural Geology</i> , 2019 , 118, 224-235	3	7
20	Raman tomography of natural air hydrates. <i>Journal of Glaciology</i> , 2015 , 61, 923-930	3.4	6
19	Microstructure through an Ice Sheet. <i>Materials Science Forum</i> , 2013 , 753, 481-484	0.4	6
18	Crystallographic analysis of temperate ice on Rhonegletscher, Swiss Alps. <i>Cryosphere</i> , 2021 , 15, 677-694	5.5	6
17	Deriving micro- to macro-scale seismic velocities from ice-core & axis orientations. <i>Cryosphere</i> , 2018 , 12, 1715-1734	5.5	6
16	Acoustic velocity measurements for detecting the crystal orientation fabrics of a temperate ice core. <i>Cryosphere</i> , 2021 , 15, 3507-3521	5.5	5
15	Fabric measurement along the NEEM ice core, Greenland, and comparison with GRIP and NGRIP ice cores		4
14	Microstructural analysis of Greenland ice using a cryogenic scanning electron microscope equipped with an electron backscatter diffraction detector. <i>Bulletin of Glaciological Research</i> , 2019 , 37, 31-45	0.4	4
13	A Review of the Microstructural Location of Impurities in Polar Ice and Their Impacts on Deformation. <i>Frontiers in Earth Science</i> , 2021 , 8,	3.5	4
12	Comment on [Exceptionally high heat flux needed to sustain the Northeast Greenland Ice Stream] by Smith-Johnsen et al. (2020). <i>Cryosphere</i> , 2021 , 15, 2251-2254	5.5	3
11	Seismic Anisotropy of Temperate Ice in Polar Ice Sheets. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2020JF005714	3.8	2
10	Airborne ultra-wideband radar sounding over the shear margins and along flow lines at the onset region of the Northeast Greenland Ice Stream		2
9	EBSD in Antarctic and Greenland Ice 2017 ,		1
8	Seismic wave propagation in anisotropic ice [Part 2: Effects of crystal anisotropy in geophysical data		1
7	Origin of englacial stratigraphy at three deep ice core sites of the Greenland Ice Sheet by synthetic radar modelling. <i>Journal of Glaciology</i> , 1-13	3.4	1

6	Microstructure, micro-inclusions, and mineralogy along the EGRIP ice core [Part 1: Localisation of inclusions and deformation patterns. <i>Cryosphere</i> , 2021 , 15, 5717-5737	5.5	1
5	Can changes in deformation regimes be inferred from crystallographic preferred orientations in polar ice?. <i>Cryosphere</i> , 2022 , 16, 2009-2024	5.5	1
4	Microstructure, micro-inclusions, and mineralogy along the EGRIP (East Greenland Ice Core Project) ice core [Part 2: Implications for palaeo-mineralogy. <i>Cryosphere</i> , 2022 , 16, 667-688	5.5	0
3	Airborne ultra-wideband radar sounding over the shear margins and along flow lines at the onset region of the Northeast Greenland Ice Stream. <i>Earth System Science Data</i> , 2022 , 14, 763-779	10.5	0
2	Melt in the Greenland EastGRIP ice core reveals Holocene warm events. <i>Climate of the Past</i> , 2022 , 18, 1011-1034	3.9	0
1	Photograph of the month. <i>Journal of Structural Geology</i> , 2014 , 61, 143	3	