Maurine Montagnat

List of Publications by Year
in descending order

61	1,772	279778 23	302107 39
papers	citations	h-index	g-index

78	78	78	1637
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Influence of Porosity on Ice Dynamic Tensile Behavior as Assessed by Spalling Tests. Journal of Dynamic Behavior of Materials, 2021, 7, 575-590.	1.7	11
2	Texture characterization of some large hailstones with an automated technique. Journal of Glaciology, 2021, 67, 1190-1204.	2.2	4
3	On the Birth of Structural and Crystallographic Fabric Signals in Polar Snow: A Case Study From the EastGRIP Snowpack. Frontiers in Earth Science, 2020, 8, .	1.8	9
4	Dislocation dynamics during cyclic loading in copper single crystal. Materialia, 2019, 8, 100501.	2.7	3
5	Microâ€Seismic Monitoring of a Shear Fault Within a Floating Ice Plate. Journal of Geophysical Research: Solid Earth, 2019, 124, 10444-10467.	3.4	1
6	Recrystallization processes, microstructure and crystallographic preferred orientation evolution in polycrystalline ice during high-temperature simple shear. Cryosphere, 2019, 13, 1495-1511.	3.9	22
7	A study of the mechanical response of polycrystalline ice subjected to dynamic tension loading using the spalling test technique. International Journal of Impact Engineering, 2019, 132, 103315.	5.0	20
8	The physics and chemistry of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190138.	3.4	0
9	Multi-channel and multi-polarization radar measurements around the NEEM site. Cryosphere, 2018, 12, 2689-2705.	3.9	14
10	The layered evolution of fabric and microstructure of snow at Point Barnola, Central East Antarctica. Earth and Planetary Science Letters, 2017, 460, 293-301.	4.4	14
11	Modelling the transport of geometrically necessary dislocations on slip systems: application to single- and multi-crystals of ice. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 025010.	2.0	6
12	Investigation of nucleation processes during dynamic recrystallization of ice using cryo-EBSD. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150345.	3.4	16
13	Microstructural evolution during thermal annealing of ice-Ih. Journal of Structural Geology, 2017, 99, 31-44.	2.3	10
14	Microdynamics of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160437.	3.4	0
15	Ice microstructures and microdynamics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160438.	3.4	1
16	Monitoring ice thickness and elastic properties from the measurement of leaky guided waves: A laboratory experiment. Journal of the Acoustical Society of America, 2017, 142, 2873-2880.	1.1	13
17	Non-basal dislocations should be accounted for in simulating ice mass flow. Earth and Planetary Science Letters, 2017, 473, 247-255.	4.4	20
18	Strain field evolution at the ductile-to-brittle transition: a case study on ice. Solid Earth, 2017, 8, 943-953.	2.8	9

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19	Critical investigation of calculation methods for the elastic velocities in anisotropic ice polycrystals. Cryosphere, 2016, 10, 3063-3070.	3.9	6
20	Propagation of elastic waves through textured polycrystals: application to ice. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140988.	2.1	22
21	Analysis of Dynamic Recrystallization of Ice from EBSD Orientation Mapping. Frontiers in Earth Science, 2015, 3, .	1.8	33
22	Effect of local stress heterogeneities on dislocation fields: Examples from transient creep in polycrystalline ice. Acta Materialia, 2015, 90, 303-309.	7.9	29
23	Strain field evolution during dynamic recrystallization nucleation; A case study on ice. Acta Materialia, 2015, 101, 116-124.	7.9	26
24	Fabric along the NEEM ice core, Greenland, and its comparison with GRIP and NGRIP ice cores. Cryosphere, 2014, 8, 1129-1138.	3.9	67
25	Multiscale modeling of ice deformation behavior. Journal of Structural Geology, 2014, 61, 78-108.	2.3	64
26	3D diffraction imaging and orientation mapping in deformed ice crystals. Nuclear Instruments & Methods in Physics Research B, 2013, 300, 6-10.	1.4	3
27	Evolution of crystal orientation in snow during temperature gradient metamorphism. Journal of Glaciology, 2013, 59, 47-55.	2.2	25
28	Ice cascade growth and decay: a thermodynamic approach. Journal of Glaciology, 2013, 59, 507-523.	2.2	5
29	On Duddu and Waisman (2012, 2013) concerning continuum damage mechanics applied to crevassing and iceberg calving. Journal of Glaciology, 2013, 59, 797-798.	2.2	5
30	Substructure Dynamics in Crystalline Materials: New Insight from In Situ Experiments, Detailed EBSD Analysis of Experimental and Natural Samples and Numerical Modelling. Materials Science Forum, 2012, 715-716, 502-507.	0.3	6
31	Measurements and numerical simulation of fabric evolution along the Talos Dome ice core, Antarctica. Earth and Planetary Science Letters, 2012, 357-358, 168-178.	4.4	31
32	Experimental characterization of the intragranular strain field in columnar ice during transient creep. Acta Materialia, 2012, 60, 3655-3666.	7.9	67
33	On the role of long-range internal stresses on grain nucleation during dynamic discontinuous recrystallization. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 546, 207-211.	5.6	15
34	Multi-scale modeling of the mechanical behavior of polycrystalline ice under transient creep. Procedia IUTAM, 2012, 3, 76-90.	1.2	46
35	Measurements and full-field predictions of deformation heterogeneities in ice. Earth and Planetary Science Letters, 2011, 305, 153-160.	4.4	43
36	TALDICE-1 age scale of the Talos Dome deep ice core, East Antarctica. Climate of the Past, 2011, 7, 1-16.	3.4	93

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37	Waterfall ice: mechanical stability of vertical structures. Journal of Glaciology, 2011, 57, 407-415.	2.2	9
38	Expression of the bipolar see-saw in Antarctic climate records during the last deglaciation. Nature Geoscience, 2011, 4, 46-49.	12.9	212
39	Competition between grain growth and grain-size reduction in polar ice. Journal of Glaciology, 2011, 57, 942-948.	2.2	23
40	Intragranular strain ï¬eld in columnar ice during transient creep regime and relation with the local microstucture. EPJ Web of Conferences, 2010, 6, 31001.	0.3	1
41	Enhancement factors for grounded ice and ice shelves inferred from an anisotropic ice-flow model. Journal of Glaciology, 2010, 56, 805-812.	2.2	92
42	Creep and plasticity of glacier ice: a material science perspective. Journal of Glaciology, 2010, 56, 1059-1068.	2.2	34
43	Waterfall ice: formation, structure and evolution. Journal of Glaciology, 2010, 56, 225-234.	2.2	17
44	Modeling viscoplastic behavior and heterogeneous intracrystalline deformation of columnar ice polycrystals. Acta Materialia, 2009, 57, 1405-1415.	7.9	71
45	Subâ€structure characterization of experimentally and naturally deformed ice using cryoâ€EBSD. Journal of Microscopy, 2008, 230, 509-519.	1.8	54
46	Elastoviscoplastic micromechanical modeling of the transient creep of ice. Journal of Geophysical Research, 2008, 113, .	3.3	29
47	Effects of Size on the Dynamics of Dislocations in Ice Single Crystals. Physical Review Letters, 2007, 99, 155507.	7.8	36
48	Long-range spatial correlations and scaling in dislocation and slip patterns. Philosophical Magazine, 2007, 87, 1161-1174.	1.6	8
49	The heterogeneous nature of slip in ice single crystals deformed under torsion. Philosophical Magazine, 2006, 86, 4259-4270.	1.6	29
50	A user-friendly anisotropic flow law for ice-sheet modeling. Journal of Glaciology, 2005, 51, 3-14.	2.2	57
51	Lattice distortion and basal slip bands in deformed ice crystals revealed by hard X-ray diffraction. European Physical Journal Special Topics, 2004, 118, 27-33.	0.2	0
52	Dislocations in Ice and Deformation Mechanisms: from Single Crystals to Polar Ice. Defect and Diffusion Forum, 2004, 229, 43-0.	0.4	30
53	The viscoplastic behaviour of ice in polar ice sheets: experimental results and modelling. Comptes Rendus Physique, 2004, 5, 699-708.	0.9	16
54	Strain gradients and geometrically necessary dislocations in deformed ice single crystals. Scripta Materialia, 2003, 49, 411-415.	5.2	25

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55	Lattice distortion in ice crystals from the Vostok core (Antarctica) revealed by hard X-ray diffraction; implication in the deformation of ice at low stresses. Earth and Planetary Science Letters, 2003, 214, 369-378.	4.4	21
56	On friction and surface cracking during sliding of ice on ice. Journal of Glaciology, 2003, 49, 391-396.	2.2	29
57	Comment on â€œSuperplastic deformation of ice: Experimental observationsâ€•by D. L. Goldsby and D. L. Kohlstedt. Journal of Geophysical Research, 2002, 107, ECV 4-1-ECV 4-2.	3.3	31
58	High crystalline quality of large single crystals of subglacial ice above Lake Vostok (Antarctica) revealed by hard X-ray diffraction. Comptes Rendus De L'AcadÃ©mie Des Sciences Earth & Planetary Sciences SÃ©rie II, Sciences De La Terre Et Des PlanÃ¨tes =, 2001, 333, 419-425.	0.2	8
59	Deformation and recrystallization processes of ice from polar ice sheets. Annals of Glaciology, 2000, 30, 83-87.	1.4	33
60	Rate controlling processes in the creep of polar ice, influence of grain boundary migration associated with recrystallization. Earth and Planetary Science Letters, 2000, 183, 179-186.	4.4	134
61	Investigation of a cold-based ice apron on a high-mountain permafrost rock wall using ice texture analysis and micro-14C dating: a case study of the Triangle du Tacul ice apron (Mont Blanc massif,) Tj ETQq1 1 0.784314 rgBT /Overlock		