

# David Goldsby

## List of Publications by Year in descending order

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Version: 2024-02-01

29  
papers

2,531  
citations

430442

18  
h-index

500791

28  
g-index

31  
all docs

31  
docs citations

31  
times ranked

2005  
citing authors

#	ARTICLE	IF	CITATIONS
1	Using grain boundary irregularity to quantify dynamic recrystallization in ice. <i>Acta Materialia</i> , 2021, 209, 116810.	3.8	13
2	An Experimental Investigation of the Effect of Grain Size on Dislocation Creep of Ice. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021824.	1.4	6
3	Kinking facilitates grain nucleation and modifies crystallographic preferred orientations during high-stress ice deformation. <i>Earth and Planetary Science Letters</i> , 2021, 572, 117136.	1.8	5
4	Crystallographic Preferred Orientation (CPO) Development Governs Strain Weakening in Ice: Insights From High-Temperature Deformation Experiments. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, .	1.4	6
5	The Rheological Behavior of CO <sub>2</sub> Ice: Application to Glacial Flow on Mars. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL090431.	1.5	6
6	Dislocation interactions during low-temperature plasticity of olivine and their impact on the evolution of lithospheric strength. <i>Earth and Planetary Science Letters</i> , 2020, 543, 116349.	1.8	24
7	Thermal Pressurization Weakening in Laboratory Experiments. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018872.	1.4	19
8	Deformation Structures From Splay and Collement Faults in the Nankai Accretionary Prism, SW Japan (IODP NanTroSEIZE Expedition 316): Evidence for Slow and Rapid Slip in Fault Rocks. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008786.	1.0	5
9	Temperature and strain controls on ice deformation mechanisms: insights from the microstructures of samples deformed to progressively higher strains at 10, 20 and 30°C. <i>Cryosphere</i> , 2020, 14, 3875-3905.	1.5	21
10	Memory Distance for Interfacial Chemical Bond-Induced Friction at the Nanoscale. <i>ACS Nano</i> , 2019, 13, 7425-7434.	7.3	12
11	Low-Temperature Plasticity in Olivine: Grain Size, Strain Hardening, and the Strength of the Lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 5427-5449.	1.4	44
12	Nanoindentation Studies of Plasticity and Dislocation Creep in Halite. <i>Geosciences (Switzerland)</i> , 2019, 9, 79.	1.0	14
13	Constraints on the Physical Mechanism of Frictional Aging From Nanoindentation. <i>Geophysical Research Letters</i> , 2018, 45, 13,306.	1.5	15
14	Inhibition of Grain Boundary Sliding in Fine-Grained Ice by Intergranular Particles: Implications for Planetary Ice Masses. <i>Geophysical Research Letters</i> , 2018, 45, 12,757.	1.5	15
15	Size effects resolve discrepancies in 40 years of work on low-temperature plasticity in olivine. <i>Science Advances</i> , 2017, 3, e1701338.	4.7	51
16	Nanoscale Roughness of Natural Fault Surfaces Controlled by Scale-Dependent Yield Strength. <i>Geophysical Research Letters</i> , 2017, 44, 9299-9307.	1.5	27
17	Generation of shock lamellae and melting in rocks by lightning-induced shock waves and electrical heating. <i>Geophysical Research Letters</i> , 2017, 44, 8757-8768.	1.5	24
18	The down-stress transition from cluster to cone fabrics in experimentally deformed ice. <i>Earth and Planetary Science Letters</i> , 2017, 471, 136-147.	1.8	36

#	ARTICLE	IF	CITATIONS
19	Mineralogical and compositional features of rock fulgurites: A record of lightning effects on granite. <i>American Mineralogist</i> , 2017, 102, 1470-1481.	0.9	29
20	Flash weakening of serpentinite at near-seismic slip rates. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	61
21	Frictional ageing from interfacial bonding and the origins of rate and state friction. <i>Nature</i> , 2011, 480, 233-236.	13.7	236
22	Flash Heating Leads to Low Frictional Strength of Crustal Rocks at Earthquake Slip Rates. <i>Science</i> , 2011, 334, 216-218.	6.0	249
23	Rheological and Thermal Properties of Icy Materials. <i>Space Science Reviews</i> , 2010, 153, 273-298.	3.7	87
24	Constitutive relationships and physical basis of fault strength due to flash heating. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	210
25	Nanoindentation creep of quartz, with implications for rate- and state-variable friction laws relevant to earthquake mechanics. <i>Journal of Materials Research</i> , 2004, 19, 357-365.	1.2	61
26	Friction falls towards zero in quartz rock as slip velocity approaches seismic rates. <i>Nature</i> , 2004, 427, 436-439.	13.7	479
27	Low frictional strength of quartz rocks at subseismic slip rates. <i>Geophysical Research Letters</i> , 2002, 29, 25-1-25-4.	1.5	231
28	Superplastic deformation of ice: Experimental observations. <i>Journal of Geophysical Research</i> , 2001, 106, 11017-11030.	3.3	527
29	Superplastic Flow of Ice Relevant to Glacier and Ice-Sheet Mechanics. , 0, , 308-314.		18