

# David Goldsby

## List of Publications by Year in descending order

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29  
papers

2,531  
citations

430754

18  
h-index

501076

28  
g-index

31  
all docs

31  
docs citations

31  
times ranked

2005  
citing authors

#	ARTICLE	IF	CITATIONS
1	Superplastic deformation of ice: Experimental observations. <i>Journal of Geophysical Research</i> , 2001, 106, 11017-11030.	3.3	527
2	Friction falls towards zero in quartz rock as slip velocity approaches seismic rates. <i>Nature</i> , 2004, 427, 436-439.	13.7	479
3	Flash Heating Leads to Low Frictional Strength of Crustal Rocks at Earthquake Slip Rates. <i>Science</i> , 2011, 334, 216-218.	6.0	249
4	Frictional ageing from interfacial bonding and the origins of rate and state friction. <i>Nature</i> , 2011, 480, 233-236.	13.7	236
5	Low frictional strength of quartz rocks at subseismic slip rates. <i>Geophysical Research Letters</i> , 2002, 29, 25-1-25-4.	1.5	231
6	Constitutive relationships and physical basis of fault strength due to flash heating. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	210
7	Rheological and Thermal Properties of Icy Materials. <i>Space Science Reviews</i> , 2010, 153, 273-298.	3.7	87
8	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
9	Flash weakening of serpentinite at near-seismic slip rates. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	61
10	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
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	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
13	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
14	Nanoscale Roughness of Natural Fault Surfaces Controlled by Scale-Dependent Yield Strength. <i>Geophysical Research Letters</i> , 2017, 44, 9299-9307.	1.5	27
15	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
16	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
17	Temperature and strain controls on ice deformation mechanisms: insights from the microstructures of samples deformed to progressively higher strains at $\sim 10$ , $\sim 20$ and $\sim 30$ Å°C. <i>Cryosphere</i> , 2020, 14, 3875-3905.	1.5	21
18	Thermal Pressurization Weakening in Laboratory Experiments. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018872.	1.4	19

#	ARTICLE	IF	CITATIONS
19	Superplastic Flow of Ice Relevant to Glacier and Ice-Sheet Mechanics. , 0, , 308-314.		18
20	Constraints on the Physical Mechanism of Frictional Aging From Nanoindentation. Geophysical Research Letters, 2018, 45, 13,306.	1.5	15
21	Inhibition of Grain Boundary Sliding in Fine-Grained Ice by Intergranular Particles: Implications for Planetary Ice Masses. Geophysical Research Letters, 2018, 45, 12,757.	1.5	15
22	Nanoindentation Studies of Plasticity and Dislocation Creep in Halite. Geosciences (Switzerland), 2019, 9, 79.	1.0	14
23	Using grain boundary irregularity to quantify dynamic recrystallization in ice. Acta Materialia, 2021, 209, 116810.	3.8	13
24	Memory Distance for Interfacial Chemical Bond-Induced Friction at the Nanoscale. ACS Nano, 2019, 13, 7425-7434.	7.3	12
25	The Rheological Behavior of CO <sub>2</sub> Ice: Application to Glacial Flow on Mars. Geophysical Research Letters, 2020, 47, e2020GL090431.	1.5	6
26	An Experimental Investigation of the Effect of Grain Size on Dislocation Creep of Ice. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021824.	1.4	6
27	Crystallographic Preferred Orientation (CPO) Development Governs Strain Weakening in Ice: Insights From High-Temperature Deformation Experiments. Journal of Geophysical Research: Solid Earth, 2021, 126, .	1.4	6
28	Deformation Structures From Splay and Décollement Faults in the Nankai Accretionary Prism, SW Japan (IODP NanTroSEIZE Expedition 316): Evidence for Slow and Rapid Slip in Fault Rocks. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008786.	1.0	5
29	Kinking facilitates grain nucleation and modifies crystallographic preferred orientations during high-stress ice deformation. Earth and Planetary Science Letters, 2021, 572, 117136.	1.8	5