benoit Cordonnier

List of Publications by Year
in descending order

41 papers	1,709 citations	304743 22 h-index	289244 40 g-index
43 all docs	43 docs citations	43 times ranked	1322 citing authors

#	Article	IF	Citations
1	Non-Newtonian rheological law for highly crystalline dome lavas. Geology, 2007, 35, 843.	4.4	164
2	Seismogenic lavas and explosive eruption forecasting. Nature, 2008, 453, 507-510.	27.8	161
3	The role of melt-fracture degassing in defusing explosive rhyolite eruptions at volcÃ¡n ChaitÃ©n. Earth and Planetary Science Letters, 2012, 333-334, 63-69.	4.4	125
4	The viscous-brittle transition of crystal-bearing silicic melt: Direct observation of magma rupture and healing. Geology, 2012, 40, 611-614.	4.4	113
5	Rheological properties of dome lavas: Case study of Unzen volcano. Earth and Planetary Science Letters, 2009, 279, 263-272.	4.4	101
6	Gas-driven filter pressing in magmas: Insights into in-situ melt segregation from crystal mushes. Geology, 2015, 43, 699-702.	4.4	88
7	Rapid laccolith intrusion driven by explosive volcanic eruption. Nature Communications, 2016, 7, 13585.	12.8	70
8	Critical Evolution of Damage Toward Systemâ€Size Failure in Crystalline Rock. Journal of Geophysical Research: Solid Earth, 2018, 123, 1969-1986.	3.4	66
9	Microscale characterization of rupture nucleation unravels precursors to faulting in rocks. Earth and Planetary Science Letters, 2017, 476, 69-78.	4.4	64
10	A deformation rig for synchrotron microtomography studies of geomaterials under conditionsÂdown to 10â€…km depth in the Earth. Journal of Synchrotron Radiation, 2016, 23, 1030-1034.	2.4	63
11	Dynamic In Situ Three-Dimensional Imaging and Digital Volume Correlation Analysis to Quantify Strain Localization and Fracture Coalescence in Sandstone. Pure and Applied Geophysics, 2019, 176, 1083-1115.	1.9	57
12	Volumetric and shear processes in crystalline rock approaching faulting. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16234-16239.	7.1	56
13	Viscous heating in rhyolite: An in situ experimental determination. Earth and Planetary Science Letters, 2008, 275, 121-126.	4.4	46
14	Investigating the Onset of Strain Localization Within Anisotropic Shale Using Digital Volume Correlation of Timeâ€Resolved Xâ€Ray Microtomography Images. Journal of Geophysical Research: Solid Earth, 2018, 123, 7509-7528.	3.4	42
15	Benchmarking lava-flow models. Geological Society Special Publication, 2016, 426, 425-445.	1.3	39
16	Dynamics of Microscale Precursors During Brittle Compressive Failure in Carrara Marble. Journal of Geophysical Research: Solid Earth, 2019, 124, 6121-6139.	3.4	39
17	Rheological flow laws for multiphase magmas: An empirical approach. Journal of Volcanology and Geothermal Research, 2016, 321, 158-170.	2.1	37
18	Viscous heating in silicate melts: An experimental and numerical comparison. Journal of Geophysical Research, 2012, 117, .	3.3	35

#	ARTICLE	IF	CITATIONS
19	Effects of Confinement on Reactionâ€Induced Fracturing During Hydration of Periclase. Geochemistry, Geophysics, Geosystems, 2018, 19, 2661-2672.	2.5	35
20	Synchrotron X-ray imaging in 4D: Multiscale failure and compaction localization in triaxially compressed porous limestone. Earth and Planetary Science Letters, 2019, 528, 115831.	4.4	35
21	High-load, high-temperature deformation apparatus for synthetic and natural silicate melts. Review of Scientific Instruments, 2007, 78, 075102.	1.3	28
22	The Viscous to Brittle Transition in Crystal- and Bubble-Bearing Magmas. Frontiers in Earth Science, 2015, 3, .	1.8	25
23	Real Time 3D Observations of Portland Cement Carbonation at CO₂ Storage Conditions. Environmental Science & Technology, 2020, 54, 8323-8332.	10.0	21
24	Volumetric and Shear Strain Localization in Mt. Etna Basalt. Geophysical Research Letters, 2019, 46, 2425-2433.	4.0	19
25	Groundmass crystallisation and cooling rates of lava-like ignimbrites: the Greyâ€™s Landing ignimbrite, southern Idaho, USA. Bulletin of Volcanology, 2015, 77, 1.	3.0	18
26	Influence of decompression rate on fragmentation processes: An experimental study. Journal of Volcanology and Geothermal Research, 2010, 193, 182-188.	2.1	16
27	Permeability Profiles Across the Crustâ€Mantle Sections in the Oman Drilling Project Inferred From Dry and Wet Resistivity Data. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018698.	3.4	16
28	Mixedâ€Mode Strain Localization Generated by Hydration Reaction at Crustal Conditions. Journal of Geophysical Research: Solid Earth, 2019, 124, 4507-4522.	3.4	15
29	A new plesiosaurian from the Jurassicâ€“Cretaceous transitional interval of the SlottsmÃ¸ya Member (Volgian), with insights into the cranial anatomy of cryptoclidids using computed tomography. PeerJ, 2020, 8, e8652.	2.0	14
30	Isolating the Factors That Govern Fracture Development in Rocks Throughout Dynamic In Situ Xâ€Ray Tomography Experiments. Geophysical Research Letters, 2019, 46, 11127-11135.	4.0	13
31	Conclusion: recommendations and findings of the RED SEED working group. Geological Society Special Publication, 2016, 426, 567-648.	1.3	12
32	Effects of crystallization and bubble nucleation on the seismic properties of magmas. Geochemistry, Geophysics, Geosystems, 2016, 17, 602-615.	2.5	11
33	Localized slip controlled by dehydration embrittlement of partly serpentinized dunites, Leka Ophiolite Complex, Norway. Earth and Planetary Science Letters, 2017, 463, 277-285.	4.4	11
34	The evolving energy budget of experimental faults within continental crust: Insights from in situ dynamic X-ray microtomography. Journal of Structural Geology, 2019, 123, 42-53.	2.3	11
35	Creep Burst Coincident With Faulting in Marble Observed in 4â€Ð Synchrotron Xâ€Ray Imaging Triaxial Compression Experiments. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020354.	3.4	9
36	Neutron Imaging of Cadmium Sorption and Transport in Porous Rocks. Frontiers in Earth Science, 2019, 7, .	1.8	7

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37	The influence of spatial resolution and noise on fracture network properties calculated from X-ray microtomography data. International Journal of Rock Mechanics and Minings Sciences, 2021, 147, 104922.	5.8	6
38	Predicting Fracture Network Development in Crystalline Rocks. Pure and Applied Geophysics, 2022, 179, 275-299.	1.9	6
39	Synchrotron 4D X-Ray Imaging Reveals Strain Localization at the Onset of System-Size Failure in Porous Reservoir Rocks. Pure and Applied Geophysics, 0, , .	1.9	6
40	Competition between slow slip and damage on and off faults revealed in 4D synchrotron imaging experiments. Tectonophysics, 2020, 782-783, 228437.	2.2	5
41	4D Synchrotron X-ray Imaging of Grain Scale Deformation Mechanisms in a Seismogenic Gas Reservoir Sandstone During Axial Compaction. Rock Mechanics and Rock Engineering, 2022, 55, 4697-4715.	5.4	4