Christian David

List of Publications by Year
in descending order

70 papers	3,789 citations	147566 31 h-index	128067 60 g-index
75 all docs	75 docs citations	75 times ranked	2465 citing authors

#	Article	IF	Citations
1	Water-Induced Damage in Microporous Carbonate Rock by Low-Pressure Injection Test. Rock Mechanics and Rock Engineering, 2021, 54, 5185-5206.	2.6	9
2	Pressure Solution Compaction During Creep Deformation of Tournemire Shale: Implications for Temporal Sealing in Shales. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021370.	1.4	5
3	Continuous Recording of Viscoelastic Relaxation Processes at a Constant Ultrasonic Frequency Due To Waveâ€Induced Fluid Flow in a Microporous Carbonate Rock. Geophysical Research Letters, 2021, 48, e2021GL095244.	1.5	3
4	An Integrated Study of Water Weakening and Fluid Rock Interaction Processes in Porous Rocks: Linking Mechanical Behavior to Surface Properties. Applied Sciences (Switzerland), 2021, 11, 11437.	1.3	3
5	Petrophysical and acoustic characteristics of Jurassic and Cretaceous rocks from Central Lebanon. Carbonates and Evaporites, 2020, 35, 1.	0.4	12
6	Acoustics and petrophysical investigations on upper cretaceous carbonate rocks from northern Lebanon. Journal of African Earth Sciences, 2020, 172, 103955.	0.9	1
7	Petrophysical and acoustic assessment of carbonate rocks, Zahle area, central Lebanon. Bulletin of Engineering Geology and the Environment, 2020, 79, 5455-5475.	1.6	6
8	Seismic and Microseismic Signatures of Fluids in Rocks: Bridging the Scale Gap. Journal of Geophysical Research: Solid Earth, 2019, 124, 5379-5386.	1.4	7
9	Numerical Simulation of Deformation Band Occurrence and the Associated Stress Field during the Growth of a Fault-Propagation Fold. Geosciences (Switzerland), 2019, 9, 257.	1.0	4
10	Evolution in Seismic Properties During Low and Intermediate Water Saturation: Competing Mechanisms During Water Imbibition?. Geophysical Research Letters, 2019, 46, 4581-4590.	1.5	16
11	Microstructures and physical properties in carbonate rocks: A comprehensive review. Marine and Petroleum Geology, 2019, 103, 366-376.	1.5	54
12	Deformation bands, early markers of tectonic activity in front of a fold-and-thrust belt: Example from the Tremp-Graus basin, southern Pyrenees, Spain. Journal of Structural Geology, 2018, 110, 65-85.	1.0	28
13	Time and Temperature Dependent Creep in Tournemire Shale. Journal of Geophysical Research: Solid Earth, 2018, 123, 9658-9675.	1.4	38
14	KGÂ²B, a collaborative benchmarking exercise for estimating the permeability of the Grimsel granodioriteâ€"Part 2: modelling, microstructures and complementary data. Geophysical Journal International, 2018, 215, 825-843.	1.0	10
15	KGÂ²B, a collaborative benchmarking exercise for estimating the permeability of the Grimsel granodiorite â€“ Part 1: measurements, pressure dependence and pore-fluid effects. Geophysical Journal International, 2018, 215, 799-824.	1.0	16
16	Reply to Comment by Y. Kovalyshen on â€œUltrasonic Monitoring of Spontaneous Imbibition Experiments: Precursory Moisture Diffusion Effects Ahead of Water Frontâ€• Journal of Geophysical Research: Solid Earth, 2018, 123, 6610.	1.4	4
17	Fault imprint in clay units: Magnetic fabric, p-wave velocity, structural and mineralogical signatures. Tectonophysics, 2018, 745, 264-277.	0.9	3
18	Strength anisotropy of shales deformed under uppermost crustal conditions. Journal of Geophysical Research: Solid Earth, 2017, 122, 110-129.	1.4	63

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19	Elastic Anisotropy Reversal During Brittle Creep in Shale. Geophysical Research Letters, 2017, 44, 10,887.	1.5	42
20	Pressureâ€Dependent Elastic and Transport Properties of Porous and Permeable Rocks: Microstructural Control. Journal of Geophysical Research: Solid Earth, 2017, 122, 8952-8968.	1.4	26
21	Ultrasonic monitoring of spontaneous imbibition experiments: Acoustic signature of fluid migration. Journal of Geophysical Research: Solid Earth, 2017, 122, 4931-4947.	1.4	11
22	A single laboratory setup for investigating the anisotropy of both seismic and electrical properties in core samples. Geophysical Journal International, 2017, 210, 1595-1608.	1.0	4
23	Elastic wave velocity evolution of shales deformed under uppermost crustal conditions. Journal of Geophysical Research: Solid Earth, 2017, 122, 130-141.	1.4	39
24	Ultrasonic monitoring of spontaneous imbibition experiments: Precursory moisture diffusion effects ahead of water front. Journal of Geophysical Research: Solid Earth, 2017, 122, 4948-4962.	1.4	12
25	The KG ² B Project: A World-Wide Benchmark of Low Permeability Measurement. , 2017, , .		2
26	Remote monitoring of the mechanical instability induced by fluid substitution and water weakening in the laboratory. Physics of the Earth and Planetary Interiors, 2016, 261, 69-87.	0.7	19
27	Monitoring Strength Reduction in Sandstones Associated With Fluid Substitution Using Advanced Rock Mechanics Testing. , 2016, , .		1
28	X-Ray CT scanning imaging for the Nubia sandstone as a tool for characterizing its capillary properties. Geosciences Journal, 2016, 20, 691-704.	0.6	41
29	Mechanical instability induced by water weakening in laboratory fluid injection tests. Journal of Geophysical Research: Solid Earth, 2015, 120, 4171-4188.	1.4	41
30	Acoustic and reservoir properties of microporous carbonate rocks: Implication of micrite particle size and morphology. Journal of Geophysical Research: Solid Earth, 2015, 120, 790-811.	1.4	65
31	Detection of moving capillary front in porous rocks using X-ray and ultrasonic methods. Frontiers in Physics, 2015, 3, .	1.0	26
32	Influence of microporosity distribution on the mechanical behavior of oolithic carbonate rocks. Geomechanics for Energy and the Environment, 2015, 3, 11-23.	1.2	32
33	Normal faults, layering and elastic properties of rocks. Tectonophysics, 2014, 622, 96-109.	0.9	12
34	Compaction, permeability evolution and stress path effects in unconsolidated sand and weakly consolidated sandstone. International Journal of Rock Mechanics and Minings Sciences, 2014, 67, 226-239.	2.6	55
35	Pore fabric geometry inferred from magnetic and acoustic anisotropies in rocks with various mineralogy, permeability and porosity. Tectonophysics, 2014, 629, 109-122.	0.9	19
36	The influence of environmental conditions on weathering of porous rocks by gypsum: a non-destructive study using acoustic emissions. Environmental Earth Sciences, 2013, 68, 1691-1706.	1.3	21

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37	Impact of sedimentology and diagenesis on the petrophysical properties of a tight oolitic carbonate reservoir. The case of the Oolithe Blanche Formation (Bathonian, Paris Basin, France). Marine and Petroleum Geology, 2013, 48, 323-340.	1.5	38
38	Lithological control on shear-wave velocity anisotropy in core samples from the Taiwan Chelungpu Fault Drilling Project. Journal of Asian Earth Sciences, 2012, 52, 63-72.	1.0	2
39	Elastic anisotropy of core samples from the Taiwan Chelungpu Fault Drilling Project (TCDP): direct 3-D measurements and weak anisotropy approximations. Geophysical Journal International, 2012, 188, 239-252.	1.0	7
40	X-ray imaging of water motion during capillary imbibition: Geometry and kinetics of water front in intact and damaged porous rocks. Journal of Geophysical Research, 2011, 116, .	3.3	21
41	X-ray imaging of water motion during capillary imbibition: A study on how compaction bands impact fluid flow in Bentheim sandstone. Journal of Geophysical Research, 2011, 116, .	3.3	15
42	An integrated study of the petrophysical properties of carbonate rocks from the â€œOolithe Blancheâ€• formation in the Paris Basin. Tectonophysics, 2011, 503, 18-33.	0.9	32
43	Interrelations of the petrophysical, sedimentological and microstructural properties of the Oolithe Blanche Formation (Bathonian, saline aquifer of the Paris Basin). Sedimentary Geology, 2010, 230, 123-138.	1.0	38
44	Influence of temperature and salt concentration on the salt weathering of a sedimentary stone with sodium sulphate. Geological Society Special Publication, 2010, 333, 35-42.	0.8	6
45	Compaction and Failure in High Porosity Carbonates: Mechanical Data and Microstructural Observations. Pure and Applied Geophysics, 2009, 166, 869-898.	0.8	92
46	Compaction and Failure in High Porosity Carbonates: Mechanical Data and Microstructural Observations. , 2009, , 869-898.		5
47	Modification of the porous network by salt crystallization in experimentally weathered sedimentary stones. Materials and Structures/Materiaux Et Constructions, 2008, 41, 1091-1108.	1.3	82
48	Anisotropy of magnetic susceptibility and P-wave velocity in core samples from the Taiwan Chelungpu-Fault Drilling Project (TCDP). Journal of Structural Geology, 2008, 30, 948-962.	1.0	27
49	Influence of mechanical damage on fluid flow patterns investigated using CT scanning imaging and acoustic emissions techniques. Geophysical Research Letters, 2008, 35, .	1.5	17
50	Temperature-induced evolution of the elastic and magnetic anisotropy in argillite samples from Bure underground research laboratory, eastern France. Geological Society Special Publication, 2007, 284, 57-69.	0.8	2
51	Rock physics and geomechanics in the study of reservoirs and repositories. Geological Society Special Publication, 2007, 284, 1-14.	0.8	9
52	Anisotropy of elastic, magnetic and microstructural properties of the Callovo-Oxfordian argillite. Physics and Chemistry of the Earth, 2007, 32, 145-153.	1.2	27
53	Salt crystallization in pores: quantification and estimation of damage. Environmental Geology, 2007, 52, 205-213.	1.2	142
54	Multiscale anisotropy controlled by folding: the example of the Chaudrons fold (CorbiÃ¨res, France). Journal of Structural Geology, 2006, 28, 549-560.	1.0	14

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55	Microstructural control on the anisotropy of elastic and transport properties in undeformed sandstones. International Journal of Rock Mechanics and Minings Sciences, 2005, 42, 911-923.	2.6	71
56	Effects of bedding and foliation on mechanical anisotropy, damage evolution and failure mode. Geological Society Special Publication, 2005, 245, 223-249.	0.8	40
57	A single method for the inversion of anisotropic data sets with application to structural studies. Journal of Structural Geology, 2004, 26, 2065-2072.	1.0	30
58	Mechanical Compaction. International Geophysics, 2004, , 55-114.	0.6	33
59	Comparison of the anisotropic behaviour of undeformed sandstones under dry and saturated conditions. Tectonophysics, 2003, 370, 193-212.	0.9	71
60	Mechanical compaction, microstructures and permeability evolution in sandstones. Physics and Chemistry of the Earth, 2001, 26, 45-51.	0.6	97
61	Confocal scanning laser microscopy applied to the study of pore and crack networks in rocks. Computers and Geosciences, 2001, 27, 1101-1109.	2.0	51
62	Influence of stress-induced and thermal cracking on physical properties and microstructure of La Peyratte granite. International Journal of Rock Mechanics and Minings Sciences, 1999, 36, 433-448.	2.6	221
63	A study of the crack network in thermally and mechanically cracked granite samples using confocal scanning laser microscopy. Physics and Chemistry of the Earth, 1999, 24, 627-632.	0.6	88
64	The mechanical behaviour of synthetic sandstone with varying brittle cement content. International Journal of Rock Mechanics and Minings Sciences, 1998, 35, 759-770.	2.6	67
65	The transition from brittle faulting to cataclastic flow in porous sandstones: Mechanical deformation. Journal of Geophysical Research, 1997, 102, 3009-3025.	3.3	729
66	Network modeling of permeability evolution during cementation and hot isostatic pressing. Journal of Geophysical Research, 1995, 100, 15451-15464.	3.3	118
67	Laboratory measurement of compaction-induced permeability change in porous rocks: Implications for the generation and maintenance of pore pressure excess in the crust. Pure and Applied Geophysics, 1994, 143, 425-456.	0.8	560
68	Pore structures and transport properties of sandstone. Transport in Porous Media, 1993, 11, 161-177.	1.2	32
69	Geometry of flow paths for fluid transport in rocks. Journal of Geophysical Research, 1993, 98, 12267-12278.	3.3	132
70	Effective medium theory and network theory applied to the transport properties of rock. Journal of Geophysical Research, 1990, 95, 6993-7005.	3.3	120