Martyn R. Drury

List of Publications by Year
in descending order

118	5,915	57758	79698
papers	citations	44 h-index	73 g-index

119	119	119	4148
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Crystalâ€Plastic Deformation in Seismically Active Carbonate Fault Rocks. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020626.	3.4	4
2	Mechanisms of fault mirror formation and fault healing in carbonate rocks. Earth and Planetary Science Letters, 2020, 530, 115886.	4.4	16
3	Microstructural analysis of Greenland ice using a cryogenic scanning electron microscope equipped with an electron backscatter diffraction detector. Bulletin of Glaciological Research, 2019, 37, 31-45.	1.0	5
4	Deep komatiite signature in cratonic mantle pyroxenite. Journal of Metamorphic Geology, 2018, 36, 591-602.	3.4	5
5	A combined cathodoluminescence and electron backscatter diffraction examination of the growth relationships between Jwaneng diamonds and their eclogitic inclusions. Mineralogy and Petrology, 2018, 112, 231-242.	1.1	10
6	Potential permeability enhancement in Early Jurassic shales due to their swelling and shrinkage behavior. International Journal of Coal Geology, 2018, 196, 115-125.	5.0	6
7	Fluid flow from matrix to fractures in Early Jurassic shales. International Journal of Coal Geology, 2017, 175, 26-39.	5.0	14
8	Using mineral equilibria to estimate H2O activities in peridotites from the Western Gneiss Region of Norway. American Mineralogist, 2017, 102, 1021-1036.	1.9	8
9	Experimental investigation of the brittle-viscous transition in mafic rocks â€“ Interplay between fracturing, reaction, and viscous deformation. Journal of Structural Geology, 2017, 105, 62-79.	2.3	32
10	Mechanisms of fine extinction band development in vein quartz: new insights from correlative light and electron microscopy. Contributions To Mineralogy and Petrology, 2017, 172, 1.	3.1	1
11	Scanning electron microscope cathodoluminescence imaging of subgrain boundaries, twins and planar deformation features in quartz. Physics and Chemistry of Minerals, 2017, 44, 263-275.	0.8	15
12	Microscale cavitation as a mechanism for nucleating earthquakes at the base of the seismogenic zone. Nature Communications, 2017, 8, 1645.	12.8	23
13	Constraints on the rheology of the lower crust in a strike-slip plate boundary: evidence from the San QuintÃn xenoliths, BajaÂCalifornia,ÂMexico. Solid Earth, 2017, 8, 1211-1239.	2.8	14
14	The Force of Crystallization and Fracture Propagation during In-Situ Carbonation of Peridotite. Minerals (Basel, Switzerland), 2017, 7, 190.	2.0	28
15	EBSD analysis of subgrain boundaries and dislocation slip systems in Antarctic and Greenland ice. Solid Earth, 2017, 8, 883-898.	2.8	17
16	The Relevance of Grain Dissection for Grain Size Reduction in Polar Ice: Insights from Numerical Models and Ice Core Microstructure Analysis. Frontiers in Earth Science, 2017, 5, .	1.8	14
17	Nano-Tomography of Porous Geological Materials Using Focused Ion Beam-Scanning Electron Microscopy. Minerals (Basel, Switzerland), 2016, 6, 104.	2.0	34
18	Distinction between amorphous and healed planar deformation features in shocked quartz using composite color scanning electron microscope cathodoluminescence (<scp>SEM</scp>â€<scp>CL</scp>) imaging. Meteoritics and Planetary Science, 2016, 51, 1914-1931.	1.6	9

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19	Three sets of crystallographic sub-planar structures in quartz formed by tectonic deformation. Earth and Planetary Science Letters, 2016, 442, 157-161.	4.4	2
20	Microstructures of Early Jurassic (Toarcian) shales of Northern Europe. International Journal of Coal Geology, 2016, 165, 76-89.	5.0	39
21	Semiâ€brittle flow of granitoid fault rocks in experiments. Journal of Geophysical Research: Solid Earth, 2016, 121, 1677-1705.	3.4	55
22	Microstructural characteristics of the Whitby Mudstone Formation (UK). Marine and Petroleum Geology, 2016, 70, 185-200.	3.3	25
23	A search for shocked quartz grains in the AllerÃ¸â€Younger Dryas boundary layer. Meteoritics and Planetary Science, 2015, 50, 483-498.	1.6	9
24	Mantle strength of the San Andreas fault system and the role of mantle-crust feedbacks. Geology, 2015, 43, 891-894.	4.4	18
25	Influence of deformation conditions on the development of heterogeneous recrystallization microstructures in experimentally deformed Carrara marble. Geological Society Special Publication, 2015, 409, 175-200.	1.3	7
26	Low-temperature intracrystalline deformation microstructures in quartz. Journal of Structural Geology, 2015, 71, 3-23.	2.3	40
27	The Younger Dryas impact hypothesis: a critical review. Quaternary Science Reviews, 2014, 83, 95-114.	3.0	60
28	Cryo-FIBâ€“SEM and MIP study of porosity and pore size distribution of bentonite and kaolin at different moisture contents. Applied Clay Science, 2013, 80-81, 358-365.	5.2	48
29	Peridotite dissolution and carbonation rates at fracture surfaces under conditions relevant for in situ mineralization of CO2. Geochimica Et Cosmochimica Acta, 2013, 106, 1-24.	3.9	34
30	Cosmic impact or natural fires at the AllerÃ¸â€“Younger Dryas boundary: A matter of dating and calibration. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3896.	7.1	7
31	Glacial isostatic adjustment model with composite 3-D Earth rheology for Fennoscandia. Geophysical Journal International, 2013, 194, 61-77.	2.4	69
32	Quantitative Analysis of EBSD Data in Rocks and other Crystalline Materials: Investigation of Strain Induced Recrystallisation and Growth of New Phases. Materials Science Forum, 2012, 715-716, 62-71.	0.3	2
33	Nanodiamonds and wildfire evidence in the Usselo horizon postdate the AllerÃ¸d-Younger Dryas boundary. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7648-7653.	7.1	41
34	Microstructural and seismic properties of the upper mantle underneath a rifted continental terrane (Baja California): An example of sub-crustal mechanical asthenosphere?. Earth and Planetary Science Letters, 2012, 345-348, 60-71.	4.4	24
35	Origin of pseudotachylites in slow creep experiments. Earth and Planetary Science Letters, 2012, 355-356, 299-310.	4.4	66
36	Lateral, radial, and temporal variations in upper mantle viscosity and rheology under Scandinavia. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	21

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37	Upper mantle viscosity and lithospheric thickness under Iceland. Journal of Geodynamics, 2011, 52, 260-270.	1.6	19
38	Cryogenic EBSD on ice: preserving a stable surface in a low pressure SEM. Journal of Microscopy, 2011, 242, 295-310.	1.8	34
39	FIB-SEM cathodoluminescence tomography: practical and theoretical considerations. Journal of Microscopy, 2011, 243, 315-326.	1.8	11
40	Scanning electron microscopeâ€cathodoluminescence (SEMâ€CL) imaging of planar deformation features and tectonic deformation lamellae in quartz. Meteoritics and Planetary Science, 2011, 46, 1814-1831.	1.6	50
41	Crystal preferred orientation in peridotite ultramylonites deformed by grain size sensitive creep, Ã‰tang de Lers, Pyrenees, France. Journal of Structural Geology, 2011, 33, 1776-1789.	2.3	31
42	Time-lapse misorientation maps for the analysis of electron backscatter diffraction data from evolving microstructures. Scripta Materialia, 2011, 65, 600-603.	5.2	8
43	Three-dimensional cathodoluminescence imaging and electron backscatter diffraction: tools for studying the genetic nature of diamond inclusions. Contributions To Mineralogy and Petrology, 2011, 161, 565-579.	3.1	21
44	Architectureâ€Dependent Distribution of Mesopores in Steamed Zeolite Crystals as Visualized by FIBâ€SEM Tomography. Angewandte Chemie - International Edition, 2011, 50, 1294-1298.	13.8	63
45	The Porosity, Acidity, and Reactivity of Dealuminated Zeolite ZSMâ€5 at the Single Particle Level: The Influence of the Zeolite Architecture. Chemistry - A European Journal, 2011, 17, 13773-13781.	3.3	94
46	Control of shear zone location and thickness by initial grain size variations in upper mantle peridotites. Journal of Structural Geology, 2010, 32, 832-842.	2.3	11
47	Unified Internal Architecture and Surface Barriers for Molecular Diffusion of Microporous Crystalline Aluminophosphates. Angewandte Chemie - International Edition, 2010, 49, 6790-6794.	13.8	23
48	Evidence for low viscosity garnet-rich layers in the upper mantle. Earth and Planetary Science Letters, 2010, 289, 54-67.	4.4	6
49	Grain boundary plane populations in minerals: the example of wet NaCl after low strain deformation. Contributions To Mineralogy and Petrology, 2009, 158, 53-67.	3.1	13
50	Constraints on shallow low-viscosity zones in Northern Europe from future GOCE gravity data. Geophysical Journal International, 2009, 178, 65-84.	2.4	17
51	The weighted Burgers vector: a new quantity for constraining dislocation densities and types using electron backscatter diffraction on 2D sections through crystalline materials. Journal of Microscopy, 2009, 233, 482-494.	1.8	85
52	Tomography of insulating biological and geological materials using focused ion beam (FIB) sectioning and lowâ€kV BSE imaging. Journal of Microscopy, 2009, 233, 372-383.	1.8	115
53	Morphology-dependent zeolite intergrowth structures leading to distinct internal and outer-surface molecular diffusion barriers. Nature Materials, 2009, 8, 959-965.	27.5	251
54	Long-lived, cold burial of Baltica to 200Âkm depth. Earth and Planetary Science Letters, 2009, 281, 27-35.	4.4	72

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55	Tomography of Biological Materials using Focused Ion Beam Sectioning and Backscattered Electron Imaging. Microscopy and Microanalysis, 2009, 15, 576-577.	0.4	1
56	Intergrowth Structure of Zeolite Crystals and Pore Orientation of Individual Subunits Revealed by Electron Backscatter Diffraction/Focused Ion Beam Experiments. Angewandte Chemie - International Edition, 2008, 47, 5637-5640.	13.8	80
57	Cryogenic vitrification and 3D serial sectioning using high resolution cryoâ€FIB SEM technology for brineâ€filled grain boundaries in halite: first results. Geofluids, 2008, 8, 60-72.	0.7	46
58	The Othris Ophiolite, Greece: A snapshot of subduction initiation at a mid-ocean ridge. Lithos, 2008, 100, 234-254.	1.4	71
59	Magnetic petrology of equatorial Atlantic sediments: Electron microscopy results and their implications for environmental magnetic interpretation. Paleoceanography, 2007, 22, .	3.0	28
60	Identification of magnetic Fe-Ti oxides in marine sediments by electron backscatter diffraction in scanning electron microscopy. Geophysical Journal International, 2007, 170, 545-555.	2.4	19
61	Electron backscattered diffraction as a tool to quantify subgrains in deformed calcite. Journal of Microscopy, 2006, 224, 264-276.	1.8	24
62	Deep origin and hot melting of an Archaean orogenic peridotite massif in Norway. Nature, 2006, 440, 913-917.	27.8	120
63	The influence of water on deformation microstructures and textures in synthetic NaCl measured using EBSD. Journal of Structural Geology, 2006, 28, 588-601.	2.3	23
64	Grain boundary populations in wet and dry NaCl. Materials Science and Technology, 2006, 22, 1307-1315.	1.6	9
65	Low-angle subgrain misorientations in deformed NaCl. Journal of Microscopy, 2005, 217, 130-137.	1.8	16
66	The development of subgrain misorientations with strain in dry synthetic NaCl measured using EBSD. Journal of Structural Geology, 2005, 27, 2159-2170.	2.3	36
67	Dynamic recrystallization and strain softening of olivine aggregates in the laboratory and the lithosphere. Geological Society Special Publication, 2005, 243, 143-158.	1.3	47
68	Melt distribution in olivine rocks based on electrical conductivity measurements. Journal of Geophysical Research, 2005, 110, .	3.3	111
69	Shear zones in the upper mantle: evidence from alpine- and ophiolite-type peridotite massifs. Geological Society Special Publication, 2004, 224, 11-24.	1.3	22
70	Magmatism-related localized deformation in the mantle: a case study. Contributions To Mineralogy and Petrology, 2004, 146, 493-505.	3.1	8
71	Electrical properties of fine-grained olivine: Evidence for grain boundary transport. Journal of Geophysical Research, 2004, 109, .	3.3	78
72	Interaction between small-scale mantle diapirs and a continental root. Geochemistry, Geophysics, Geosystems, 2003, 4, .	2.5	10

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73	From geometry to dynamics of microstructure: using boundary lengths to quantify boundary misorientations and anisotropy. Tectonophysics, 2003, 376, 19-35.	2.2	25
74	Diffuse porous melt flow and melt-rock reaction in the mantle lithosphere at a slow-spreading ridge: A structural petrology and LA-ICP-MS study of the Othris Peridotite Massif (Greece). Geochemistry, Geophysics, Geosystems, 2003, 4, .	2.5	95
75	Geochemistry of the Othris Ophiolite, Greece: Evidence for Refertilization?. Journal of Petrology, 2003, 44, 1759-1785.	2.8	99
76	Microdiamonds in a megacrystic garnet websterite pod from Bardane on the island of FjÃ¸rtoft, western Norway: Evidence for diamond formation in mantle rocks during deep continental subduction. Geology, 2002, 30, 959.	4.4	172
77	Current issues and new developments in deformation mechanisms, rheology and tectonics. Geological Society Special Publication, 2002, 200, 1-27.	1.3	19
78	Microstructures and lattice fabrics in the Hilti mantle section (Oman Ophiolite): Evidence for shear localization and melt weakening in the crust-mantle transition zone?. Journal of Geophysical Research, 2002, 107, ETG 2-1-ETG 2-18.	3.3	43
79	On the role of melt-rock reaction in mantle shear zone formation in the Othris Peridotite Massif (Greece). Journal of Structural Geology, 2002, 24, 1431-1450.	2.3	89
80	Misorientation distributions in hot deformed NaCl using electron backscattered diffraction. Journal of Microscopy, 2002, 208, 75-75.	1.8	3
81	EBSD of zeolites. Journal of Materials Science Letters, 2001, 20, 1099-1101.	0.5	10
82	Structural Petrology of Plagioclase Peridotites in the West Othris Mountains (Greece): Melt Impregnation in Mantle Lithosphere. Journal of Petrology, 2001, 42, 5-24.	2.8	89
83	Relict Majoritic Garnet Microstructures from Ultra-Deep Orogenic Peridotites in Western Norway. Journal of Petrology, 2001, 42, 117-130.	2.8	85
84	Emplacement of Deep Upper-Mantle Rocks into Cratonic Lithosphere by Convection and Diapiric Upwelling. Journal of Petrology, 2001, 42, 131-140.	2.8	26
85	Non-silicate inclusions in garnet from an ultra-deep orogenic peridotite. Geological Journal, 2000, 35, 209-229.	1.3	45
86	Recognising the crystallographic signature of recrystallisation processes in deformed rocks: a study of experimentally deformed rocksalt. Journal of Structural Geology, 2000, 22, 1609-1620.	2.3	40
87	Recent developments and goals in texture research of geological materials. Journal of Structural Geology, 2000, 22, 1531-1540.	2.3	18
88	Misorientations across etched boundaries in deformed rocksalt: a study using electron backscatter diffraction. Journal of Structural Geology, 2000, 22, 81-89.	2.3	24
89	Evidence for stable grain boundary melt films in experimentally deformed olivine-orthopyroxene rocks. Physics and Chemistry of Minerals, 2000, 27, 480-494.	0.8	33
90	Characterization of magnetite particles in shocked quartz by means of electron- and magnetic force microscopy: Vredefort, South Africa. Contributions To Mineralogy and Petrology, 1999, 137, 232-245.	3.1	35

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91	Crystallographic preferred orientations and misorientations in some olivine rocks deformed by diffusion or dislocation creep. Tectonophysics, 1999, 303, 1-27.	2.2	79
92	Deformation processes in a peridotite shear zone: reaction-softening by an H2O-deficient, continuous net transfer reaction. Tectonophysics, 1999, 303, 193-222.	2.2	131
93	Ultra-high pressure (P > 6 GPa) garnet peridotites in Western Norway: exhumation of mantle rocks from > 185 km depth. Terra Nova, 1998, 10, 295-301.	2.1	192
94	Mylonitic deformation in upper mantle peridotites of the North Pyrenean Zone (France): implications for strength and strain localization in the lithosphere. Tectonophysics, 1997, 279, 303-325.	2.2	66
95	Evidence for dominant grain-boundary sliding deformation in greenschist- and amphibolite-grade polymineralic ultramylonites from the Redbank Deformed Zone, Central Australia. Journal of Structural Geology, 1997, 19, 1495-1520.	2.3	124
96	Grain boundary melt films in an experimentally deformed olivine-orthopyroxene rock: Implications for melt distribution in upper mantle rocks. Geophysical Research Letters, 1996, 23, 701-704.	4.0	64
97	Mantle shear zones and their effect on lithosphere strength during continental breakup. Tectonophysics, 1995, 249, 155-171.	2.2	105
98	Relationships between dynamically recrystallized grain size and deformation conditions in experimentally deformed olivine rocks. Geophysical Research Letters, 1993, 20, 1479-1482.	4.0	235
99	Subsolidus Emplacement of Mantle Peridotites during Incipient Oceanic Rifting and Opening of the Mesozoic Tethys (Voltri Massif, NW Italy). Journal of Petrology, 1993, 34, 901-927.	2.8	116
100	Oblique fabrics in porphyroclastic Alpine-type peridotites: a shear-sense indicator for upper mantle flow. Journal of Structural Geology, 1992, 14, 839-846.	2.3	26
101	Deformation and recrystallization mechanisms in naturally deformed omphacites from the Sesia-Lanzo zone; geophysical consequences. Tectonophysics, 1991, 195, 11-27.	2.2	76
102	Shear zones in the upper mantle: A case study in an Alpine lherzolite massif. Geology, 1991, 19, 990.	4.4	98
103	Shear localisation in upper mantle peridotites. Pure and Applied Geophysics, 1991, 137, 439-460.	1.9	108
104	Hydration-induced climb dissociation of dislocations in naturally deformed mantle olivine. Physics and Chemistry of Minerals, 1991, 18, 106-116.	0.8	36
105	Deformation-related recrystallization processes. Tectonophysics, 1990, 172, 235-253.	2.2	360
106	Effect of dynamic recrystallization on the importance of grain-boundary sliding during creep. Journal of Materials Science, 1989, 24, 154-162.	3.7	14
107	Dynamic recrystallization and chemical evolution of clinoamphibole from Senja, Norway. Contributions To Mineralogy and Petrology, 1989, 101, 339-349.	3.1	59
108	Fluid Assisted Recrystallization in Upper Mantle Peridotite Xenoliths from Kimberlites. Journal of Petrology, 1989, 30, 133-152.	2.8	92

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109	Recrystallization mechanisms in omphacite. Ultramicroscopy, 1988, 24, 427.	1.9	0
110	Stress estimates and fault history from quartz microstructures. Journal of Structural Geology, 1988, 10, 673-684.	2.3	46
111	Microstructural shear criteria associated with grain-boundary sliding during ductile deformation. Journal of Structural Geology, 1988, 10, 83-89.	2.3	69
112	Metasomatic origin for Fe-Ti-rich multiphase inclusions in olivine from kimberlite xenoliths. Geology, 1988, 16, 1035.	4.4	25
113	Defect structures in naturally deformed clino-amphibole. Ultramicroscopy, 1987, 21, 188.	1.9	0
114	Measurement of crystallographic preferred orientations (fabrics) in fine-grained quartz polycrystals by transmission electron microscopy (TEM). Ultramicroscopy, 1987, 21, 189-190.	1.9	0
115	The development of microstructure in Al-5% Mg during high temperature deformation. Acta Metallurgica, 1986, 34, 2259-2271.	2.1	187
116	Large strain deformation studies using polycrystalline magnesium as a rock analogue. Part I: grain size paleopiezometry in mylonite zones. Physics of the Earth and Planetary Interiors, 1985, 40, 201-207.	1.9	25
117	Large strain deformation studies using polycrystalline magnesium as a rock analogue. Part II: dynamic recrystallisation mechanisms at high temperatures. Physics of the Earth and Planetary Interiors, 1985, 40, 208-222.	1.9	132
118	The Weighted Burgers Vector: A Quantity for Constraining Dislocation Densities and Types Using Electron Backscatter Diffraction on 2D Sections through Crystalline Materials. Materials Science Forum, 0, 715-716, 732-736.	0.3	4