Paul D. Bons

List of Publications by Year in descending order

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147 papers

5,363 citations

41 h-index

71102

106344 65 g-index

177 all docs

177 docs citations

177 times ranked

3528 citing authors

#	Article	IF	CITATIONS
1	Relationship between stylolite morphology and the sealing potential of stylolite-bearing carbonate cap rocks. Bulletin of the Geological Society of America, 2023, 135, 689-711.	3.3	4
2	Petrogenesis and tectonic setting of the early-middle triassic subduction-related granite in the eastern segment of East Kunlun: evidences from petrology, geochemistry, and zircon U-Pb-Hf isotopes. International Geology Review, 2022, 64, 698-721.	2.1	8
3	Stylolites and stylolite networks as primary controls on the geometry and distribution of carbonate diagenetic alterations. Marine and Petroleum Geology, 2022, 136, 105444.	3.3	16
4	Structural Controls on Basin- and Crustal-Scale Fluid Flow and Resulting Mineral Reactions. Geofluids, 2022, 2022, 1-6.	0.7	1
5	Folds inside pebbles: When do they form during conglomerate deformation? Numerical modelling and comparison with the Hutuo Group conglomerates, North China Craton. Journal of Structural Geology, 2022, 160, 104620.	2.3	2
6	Can changes in deformation regimes be inferred from crystallographic preferred orientations in polar ice?. Cryosphere, 2022, 16, 2009-2024.	3.9	4
7	Comment on "Exceptionally high heat flux needed to sustain the Northeast Greenland Ice Stream―by Smith-Johnsen et al.Â(2020). Cryosphere, 2021, 15, 2251-2254.	3.9	7
8	Texture characterization of some large hailstones with an automated technique. Journal of Glaciology, 2021, 67, 1190-1204.	2.2	4
9	A stratigraphy-based method for reconstructing ice core orientation. Annals of Glaciology, 2021, 62, 191-202.	1.4	15
10	The Cretaceous crustal shortening and thickening of the South Qiangtang Terrane and implications for proto-Tibetan Plateau formation. Gondwana Research, 2020, 78, 141-155.	6.0	26
11	Quantitative analysis of stylolite networks in different platform carbonate facies. Marine and Petroleum Geology, 2020, 114, 104203.	3.3	14
12	Seismic Anisotropy of Temperate Ice in Polar Ice Sheets. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2020JF005714.	2.8	4
13	Interaction between Crustal-Scale Darcy and Hydrofracture Fluid Transport: A Numerical Study. Geofluids, 2020, 2020, 1-14.	0.7	7
14	Subduction Reversal in a Divergent Double Subduction Zone Drives the Exhumation of Southern Qiangtang Blueschistâ€Bearing Mélange, Central Tibet. Tectonics, 2020, 39, e2019TC006051.	2.8	12
15	Origin of Meteoric Fluids in Extensional Detachments. Geofluids, 2020, 2020, 1-8.	0.7	4
16	Time for anisotropy: The significance of mechanical anisotropy for the development of deformation structures. Journal of Structural Geology, 2019, 125, 41-47.	2.3	12
17	Out of Africa by spontaneous migration waves. PLoS ONE, 2019, 14, e0201998.	2.5	15
18	Stylolite-controlled diagenesis of a mudstone carbonate reservoir: A case study from the Zechstein_2_Carbonate (Central European Basin, NW Germany). Marine and Petroleum Geology, 2019, 109, 88-107.	3.3	26

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19	Controls on Convective Fluid Flow Systems Resulting in the Formation of Massive Diagenetic Alterations. Advances in Science, Technology and Innovation, 2019, , 223-224.	0.4	O
20	Shear localisation in anisotropic, non-linear viscous materials that develop a CPO: A numerical study. Journal of Structural Geology, 2019, 124, 81-90.	2.3	11
21	Crystallographic preferred orientations of ice deformed in direct-shear experiments at low temperatures. Cryosphere, 2019, 13, 351-371.	3.9	34
22	The effect of dynamic recrystallisation on the rheology and microstructures of partially molten rocks. Journal of Structural Geology, 2019, 118, 224-235.	2.3	15
23	Activation of stylolites as conduits for overpressured fluid flow in dolomitized platform carbonates. Geological Society Special Publication, 2018, 459, 157-176.	1.3	36
24	Mayer Kangri metamorphic complexes in Central Qiangtang (Tibet, western China): implications for the Triassic–early Jurassic tectonics associated with the Paleo-Tethys Ocean. International Journal of Earth Sciences, 2018, 107, 757-776.	1.8	8
25	High-strain deformation of conglomerates: Numerical modelling, strain analysis, and an example from the Wutai Mountains, North China Craton. Journal of Structural Geology, 2018, 114, 222-234.	2.3	9
26	Greenland Ice Sheet: Higher Nonlinearity of Ice Flow Significantly Reduces Estimated Basal Motion. Geophysical Research Letters, 2018, 45, 6542-6548.	4.0	35
27	Microdynamics of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160437.	3.4	0
28	lce microstructures and microdynamics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160438.	3.4	1
29	Subgrain Rotation Recrystallization During Shearing: Insights From Fullâ€Field Numerical Simulations of Halite Polycrystals. Journal of Geophysical Research: Solid Earth, 2017, 122, 8810-8827.	3.4	22
30	Early Cretaceous exhumation of the Qiangtang Terrane during collision with the Lhasa Terrane, Central Tibet. Terra Nova, 2017, 29, 382-391.	2.1	34
31	Comment on "First records of syn-diagenetic non-tectonic folding in Quaternary thermogene travertines caused by hydrothermal incremental veining―by Billi et al. Tectonophysics 700–701 (2017) 60–79. Tectonophysics, 2017, 721, 491-500.	2.2	11
32	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
33	Dynamic recrystallization during deformation of polycrystalline ice: insights from numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150346.	3.4	31
34	Strain localization and dynamic recrystallization in the ice–air aggregate: a numerical study. Cryosphere, 2016, 10, 3071-3089.	3.9	22
35	Small-scale disturbances in the stratigraphy of the NEEM ice core: observations and numerical model simulations. Cryosphere, 2016, 10, 359-370.	3.9	34
36	Dynamic recrystallisation of ice aggregates during co-axial viscoplastic deformation: a numerical approach. Journal of Glaciology, 2016, 62, 359-377.	2.2	36

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37	Full-field predictions of ice dynamic recrystallisation under simple shear conditions. Earth and Planetary Science Letters, 2016, 450, 233-242.	4.4	38
38	Converging flow and anisotropy cause large-scale folding in Greenland's ice sheet. Nature Communications, 2016, 7, 11427.	12.8	56
39	A new stylolite classification scheme to estimate compaction and local permeability variations. Sedimentary Geology, 2016, 346, 60-71.	2.1	69
40	Using elliptical best fits to characterize dental shapes. American Journal of Physical Anthropology, 2016, 159, 342-347.	2.1	2
41	Transport efficiency and dynamics of hydraulic fracture networks. Frontiers in Physics, 2015, 3, .	2.1	19
42	Tectonic evolution and high-pressure rock exhumation in the Qiangtang terrane, central Tibet. Solid Earth, 2015, 6, 457-473.	2.8	24
43	Layered intrusions and traffic jams. Geology, 2015, 43, 71-74.	4.4	19
44	Emplacement and geochemical evolution of highly evolved syenites investigated by a combined structural and geochemical field study: The lujavrites of the IlĀmaussaq complex, SW Greenland. Lithos, 2015, 231, 62-76.	1.4	16
45	Crystal mat-formation as an igneous layering-forming process: Textural and geochemical evidence from the †lower layered' nepheline syenite sequence of the IlÃmaussaq complex, South Greenland. Lithos, 2015, 224-225, 295-309.	1.4	15
46	From Migmatites to Plutons: Power Law Relationships in theÂEvolution of Magmatic Bodies. Pure and Applied Geophysics, 2015, 172, 1787-1801.	1.9	11
47	The Jabal Akhdar dome in the Oman Mountains: Evolution of a dynamic fracture system. Numerische Mathematik, 2014, 314, 1104-1139.	1.4	43
48	Fluid mixing from below in unconformity-related hydrothermal ore deposits. Geology, 2014, 42, 1035-1038.	4.4	78
49	Crustal-scale folding: Palaeozoic deformation of the Mt Painter Inlier, South Australia. Geological Society Special Publication, 2014, 394, 53-77.	1.3	17
50	Influence of bubbles on grain growth in ice. Journal of Structural Geology, 2014, 61, 123-132.	2.3	19
51	Multiscale modeling of ice deformation behavior. Journal of Structural Geology, 2014, 61, 78-108.	2.3	64
52	Simplified numerical model for clarifying scaling behavior in the intermediate dispersion regime in homogeneous porous media. Computer Physics Communications, 2014, 185, 3291-3301.	7. 5	4
53	Reactivity of dolomitizing fluids and Mg source evaluation of fault-controlled dolomitization at the BenicÃssim outcrop analogue (Maestrat basin, E Spain). Marine and Petroleum Geology, 2014, 55, 26-42.	3.3	62
54	Origin and pre-Cenozoic evolution of the south Qiangtang basement, Central Tibet. Tectonophysics, 2014, 623, 52-66.	2.2	61

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55	What happens to deformed rocks after deformation? A refined model for recovery based on numerical simulations. Geological Society Special Publication, 2014, 394, 215-234.	1.3	16
56	Long-lived crustal-scale fluid flow: the hydrothermal mega-breccia of Hidden Valley, Mt. Painter Inlier, South Australia. International Journal of Earth Sciences, 2013, 102, 1219-1236.	1.8	25
57	Fracture network evaluation program (FraNEP): A software for analyzing 2D fracture trace-line maps. Computers and Geosciences, 2013, 60, 11-22.	4.2	36
58	Evaluation of sampling methods for fracture network characterization using outcrops. AAPG Bulletin, 2013, 97, 1545-1566.	1.5	74
59	New constraints on Phanerozoic magmatic and hydrothermal events in the Mt Painter Province, South Australia. Gondwana Research, 2013, 24, 700-712.	6.0	48
60	Numerical modelling of porphyroclast and porphyroblast rotation in anisotropic rocks. Tectonophysics, 2013, 587, 4-29.	2.2	61
61	Single layer folding in simple shear. Journal of Structural Geology, 2013, 50, 209-220.	2.3	47
62	When do folds unfold during progressive shear?. Geology, 2013, 41, 563-566.	4.4	32
63	GRAVITATIONAL FRACTIONATION OF ISOTOPES AND DISSOLVED COMPONENTS AS A FIRST-ORDER PROCESS IN CRUSTAL FLUIDS. Economic Geology, 2013, 108, 1195-1201.	3.8	11
64	A general unified expression for solute and heat dispersion in homogeneous porous media. Water Resources Research, 2013, 49, 6166-6178.	4.2	20
65	The Application of <i>In Situ</i> 3D X-Ray Diffraction in Annealing Experiments: First Interpretation of Substructure Development in Deformed NaCl. Materials Science Forum, 2012, 715-716, 461-466.	0.3	4
66	Analytical model for tracer dispersion in porous media. Physical Review E, 2012, 85, 011306.	2.1	19
67	A review of the formation of tectonic veins and their microstructures. Journal of Structural Geology, 2012, 43, 33-62.	2.3	507
68	Metasomatism and metallogeny of A-type granites of the Mt Painter–Mt Babbage Inliers, South Australia. Lithos, 2012, 151, 83-104.	1.4	22
69	Deformation of a crystalline aggregate with a small percentage of high-dihedral-angle liquid: Implications for core–mantle differentiation during planetary formation. Earth and Planetary Science Letters, 2011, 305, 124-134.	4.4	30
70	Strain localization and porphyroclast rotation. Geology, 2011, 39, 275-278.	4.4	43
71	Competition between grain growth and grain-size reduction in polar ice. Journal of Glaciology, 2011, 57, 942-948.	2.2	23
72	Modelo de flujo de fractura basado en im \tilde{A}_i genes satelitales de Wajid Sandstone, Saudi Arabia. Hydrogeology Journal, 2010, 18, 1699-1712.	2.1	16

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73	Numerical simulations of microstructures using the Elle platform: A modern research and teaching tool. Journal of the Geological Society of India, 2010, 75, 110-127.	1.1	32
74	Anisotropic scaling of tectonic stylolites: A fossilized signature of the stress field?. Journal of Geophysical Research, 2010, 115, .	3.3	30
75	Granite formation: Stepwise accumulation of melt or connected networks?., 2010,,.		2
76	Porphyroblast rotation versus nonrotation: Conflict resolution!. Geology, 2009, 37, e182-e188.	4.4	15
77	Granite formation: Stepwise accumulation of melt or connected networks?. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2009, 100, 105-115.	0.3	25
78	Photograph of the Month: Antitaxial fibrous calcite vein, Arkaroola, South Australia. Journal of Structural Geology, 2009, 31, 627.	2.3	1
79	A tale of two viscosities. Journal of Structural Geology, 2009, 31, 719-736.	2.3	75
80	Phase-field simulations of partial melts in geological materials. Computers and Geosciences, 2009, 35, 1907-1916.	4.2	11
81	Potential evidence of fossilised Neoproterozoic deep life: SEM observations on calcite veins from Oppaminda Creek, Arkaroola, South Australia. International Journal of Earth Sciences, 2009, 98, 327-343.	1.8	13
82	Hydrothermal vein formation by extension-driven dewatering of the middle crust: An example from SW Germany. Earth and Planetary Science Letters, 2009, 286, 387-395.	4.4	94
83	Erosion rates on subalpine paleosurfaces in the western Mediterranean by in-situ 10Be concentrations in granites: implications for surface processes and long-term landscape evolution in Corsica (France). International Journal of Earth Sciences, 2008, 97, 549-564.	1.8	16
84	A new front-tracking method to model anisotropic grain and phase boundary motion in rocks. Computers and Geosciences, 2008, 34, 201-212.	4.2	32
85	Finding what is now not there anymore: Recognizing missing fluid and magma volumes. Geology, 2008, 36, 851.	4.4	49
86	Microprocess Simulations. , 2008, , 75-206.		0
87	Case studies and coupling of processes. , 2008, , 207-266.		0
88	Liquid-distribution and attainment of textural equilibrium in a partially-molten crystalline system with a high-dihedral-angle liquid phase. Earth and Planetary Science Letters, 2007, 262, 517-532.	4.4	40
89	Strain and vorticity analysis using small-scale faults and associated drag folds. Journal of Structural Geology, 2007, 29, 1882-1899.	2.3	33
90	Tension gash-like back-arc basin opening and its control on subduction rollback inferred from Tertiary faulting in Sardinia. Tectonics, 2006, 25, n/a-n/a.	2.8	7

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91	South Variscan terrane accretion: Sardinian constraints on the intra-Alpine Variscides. Journal of Structural Geology, 2006, 28, 1277-1291.	2.3	29
92	A vector of high-temperature paleo-fluid flow deduced from mass transfer across permeability barriers (quartz veins). Geofluids, 2005, 5, 67-82.	0.7	7
93	The formation of antitaxial calcite veins with well-developed fibres, Oppaminda Creek, South Australia. Journal of Structural Geology, 2005, 27, 231-248.	2.3	64
94	Numerical simulations of polycrystal growth in veins. Journal of Structural Geology, 2005, 27, 217-230.	2.3	59
95	Deformation of melt-bearing systems—insight from in situ grain-scale analogue experiments. Journal of Structural Geology, 2005, 27, 1666-1679.	2.3	48
96	On the applicability of Fick's law to diffusion in inhomogeneous systems. European Journal of Physics, 2005, 26, 913-925.	0.6	84
97	A new type of numerical experiment on the spatial and temporal patterns of localization of deformation in a material with a coupling of grain size and rheology. Earth and Planetary Science Letters, 2005, 239, 309-326.	4.4	40
98	Numerical Experiments into the Localization of Deformation during Recrystallization Flow. Materials Science Forum, 2004, 467-470, 647-652.	0.3	3
99	The integration of experimental in-situ EBSD observations and numerical simulations: a novel technique of microstructural process analysis. Journal of Microscopy, 2004, 213, 273-284.	1.8	25
100	Apparent boudinage in dykes. Journal of Structural Geology, 2004, 26, 625-636.	2.3	49
101	Melt extraction and accumulation from partially molten rocks. Lithos, 2004, 78, 25-42.	1.4	87
102	Development of antitaxial strain fringes during non-coaxial deformation: an experimental study. Journal of Structural Geology, 2003, 25, 263-275.	2.3	33
103	The development of oblique preferred orientations in zeolite films and membranes. Microporous and Mesoporous Materials, 2003, 62, 9-16.	4.4	87
104	A newly defined Late Ordovician magmaticâ€thermal event in the Mt Painter Province, northern Flinders Ranges, South Australia. Australian Journal of Earth Sciences, 2003, 50, 611-631.	1.0	64
105	Accumulation and self-organization in hydrofracturetransport of fluids. Journal of Geochemical Exploration, 2003, 78-79, 667-670.	3.2	4
106	Disequilibrium melt distribution during static recrystallization. Geology, 2003, 31, 1009.	4.4	27
107	Dominance of microstructural processes and their effect on microstructural development: insights from numerical modelling of dynamic recrystallization. Geological Society Special Publication, 2002, 200, 149-170.	1.3	29
108	The origin of fibrous veins: constraints from geochemistry. Geological Society Special Publication, 2002, 200, 103-118.	1.3	27

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109	Hillslope evolution by nonlinear creep and landsliding: An experimental study: Comment and Reply. Geology, 2002, 30, 481.	4.4	4
110	Are polymers suitable rock analogs?. Tectonophysics, 2002, 350, 35-47.	2.2	63
111	The influence of matrix rheology and vorticity on fabric development of populations of rigid objects during plane strain deformation. Tectonophysics, 2002, 351, 315-329.	2.2	35
112	The influence of strain localisation on the rotation behaviour of rigid objects in experimental shear zones. Journal of Structural Geology, 2002, 24, 485-499.	2.3	67
113	The numerical simulation of microstructure. Geological Society Special Publication, 2002, 200, 137-147.	1.3	4
114	Modeling of anisotropic grain growth in minerals. , 2001, , .		13
115	The formation of large quartz veins by rapid ascent of fluids in mobile hydrofractures. Tectonophysics, 2001, 336, 1-17.	2.2	147
116	Mechanisms of fluid flow and fluid-rock interaction in fossil metamorphic hydrothermal systems inferred from vein-wallrock patterns, geometry and microstructure. Geofluids, 2001, 1, 137-162.	0.7	233
117	Age and metasomatic alteration of the Mt Neill Granite at Nooldoonooldoona Waterhole, Mt Painter Inlier, South Australia. Australian Journal of Earth Sciences, 2001, 48, 721-730.	1.0	15
118	Computer experiments to investigate complex fibre patterns in natural antitaxial strain fringes. Journal of Metamorphic Geology, 2001, 19, 217-231.	3.4	31
119	Stepwise accumulation and ascent of magmas. Journal of Metamorphic Geology, 2001, 19, 627-633.	3.4	67
120	Elle: the numerical simulation of metamorphic and deformation microstructures. Computers and Geosciences, 2001, 27, 17-30.	4.2	99
121	Development of crystal morphology during unitaxial growth in a progressively widening vein: I. The numerical model. Journal of Structural Geology, 2001, 23, 865-872.	2.3	84
122	Development of crystal morphology during unitaxial growth in a progressively widening vein: II. Numerical simulations of the evolution of antitaxial fibrous veins. Journal of Structural Geology, 2001, 23, 873-885.	2.3	122
123	Age and metasomatic alteration of the Mt Neill Granite at Nooldoonooldoona Waterhole, Mt Painter Inlier, South Australia. Australian Journal of Earth Sciences, 2001, 48, 721.	1.0	27
124	New experiment to model self-organized critical transport and accumulation of melt and hydrocarbons from their source rocks. Geology, 2001, 29, 919.	4.4	79
125	Numerical simulation of fibre growth in antitaxial strain fringes. Journal of Structural Geology, 2000, 22, 1311-1324.	2.3	56
126	Crystallographic preferred orientation development by dissolution–precipitation creep. Journal of Structural Geology, 2000, 22, 1713-1722.	2.3	107

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127	Freestone dykes—an alkaliâ€rich Jurassic dyke population in eastern Victoria. Australian Journal of Earth Sciences, 1999, 46, 1-9.	1.0	15
128	Micro-shear zones in experimentally deformed octachloropropane. Journal of Structural Geology, 1999, 21, 323-334.	2.3	52
129	Divergent double subduction:Tectonic and petrologic consequences: Comment and Reply. Geology, 1998, 26, 1051.	4.4	10
130	Divergent double subduction: Tectonic and petrologic consequences. Geology, 1997, 25, 755.	4.4	113
131	The development of \hat{l} -clasts in non-linear viscous materials: a numerical approach. Tectonophysics, 1997, 270, 29-41.	2.2	46
132	Experimental simulation of the formation of fibrous veins by localised dissolution-precipitation creep. Mineralogical Magazine, 1997, 61, 53-63.	1.4	73
133	An apparatus to experimentally model the dynamics of ductile shear zones. Tectonophysics, 1996, 256, 145-164.	2.2	21
134	Image analysis of microstructures in natural and experimental samples. Computer Methods in the Geosciences, 1996, , 135-166.	0.0	8
135	Strain analysis in deformation experiments with pattern matching or a stereoscope. Journal of Structural Geology, 1995, 17, 917-921.	2.3	11
136	Experimental deformation of two-phase rock analogues. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 175, 221-229.	5.6	28
137	Analogue experiments and numerical modelling on the relation between microgeometry and flow properties of polyphase materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 175, 237-245.	5.6	28
138	Self consistent modelling of the creep behavior of mixtures of camphor and octachloropropane. Materials Science & Description A: Structural Materials: Properties, Microstructure and Processing, 1994, 175, 231-236.	5.6	11
139	The analysis of progressive deformation in rock analogues. Journal of Structural Geology, 1993, 15, 403-411.	2.3	51
140	\hat{l}' objects as a gauge for stress sensitivity of strain rate in mylonites. Earth and Planetary Science Letters, 1993, 120, 239-245.	4.4	53
141	Syndeformational grain growth: microstructures and kinetics. Journal of Structural Geology, 1992, 14, 1101-1109.	2.3	66
142	The formation of veins and their microstructures. Journal of the Virtual Explorer, 0, 02, .	0.0	63
143	VIEPS/Mainz Microstructure Course. Journal of the Virtual Explorer, 0, 02, .	0.0	2
144	Analogue modelling of segregation and ascent of magma. Journal of the Virtual Explorer, 0, 04, .	0.0	6

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145	Animations of progressive fibrous vein and fringe formation. Journal of the Virtual Explorer, 0, 04, .	0.0	2
146	Animations of dynamic recrystallization with the numerical modelling system Elle. Journal of the Virtual Explorer, 0, 04, .	0.0	11
147	Numerical simulation of disequilibrium structures in solid-melt systems during grain-growth. Journal of the Virtual Explorer, 0, 15, .	0.0	1