Nick Petford

List of Publications by Year in descending order

72 papers	5,406 citations	218381 26 h-index	102304 66 g-index
76 all docs	76 docs citations	76 times ranked	3277 citing authors

#	Article	IF	Citations
1	Generation of sodium-rich magmas from newly underplated basaltic crust. Nature, 1993, 362, 144-146.	13.7	1,135
2	Na-rich Partial Melts from Newly Underplated Basaltic Crust: the Cordillera Blanca Batholith, Peru. Journal of Petrology, 1996, 37, 1491-1521.	1.1	826
3	Granite magma formation, transport and emplacement in the Earth's crust. Nature, 2000, 408, 669-673.	13.7	714
4	Partial melting of mafic (amphibolitic) lower crust by periodic influx of basaltic magma. Earth and Planetary Science Letters, 2001, 193, 483-499.	1.8	406
5	Dike transport of granitoid magmas. Geology, 1993, 21, 845.	2.0	270
6	RHEOLOGY OFGRANITICMAGMASDURINGASCENT ANDEMPLACEMENT. Annual Review of Earth and Planetary Sciences, 2003, 31, 399-427.	4.6	216
7	Are granitic intrusions scale invariant?. Journal of the Geological Society, 1997, 154, 1-4.	0.9	197
8	The ascent of felsic magmas in dykes. Lithos, 1994, 32, 161-168.	0.6	120
9	Dykes or diapirs?. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1996, 87, 105-114.	0.3	114
10	Granitic melt viscosity and silicic magma dynamics in contrasting tectonic settings. Journal of the Geological Society, 1999, 156, 1057-1060.	0.9	108
11	Which effective viscosity?. Mineralogical Magazine, 2009, 73, 167-191.	0.6	107
12	Granitoid emplacement and deformation along a major crustal lineament: The Cordillera Blanca, Peru. Tectonophysics, 1992, 205, 171-185.	0.9	78
13	Changing sources of magma generation beneath intra-oceanic island arcs: An insight from the juvenile Kohistan island arc, Pakistan Himalaya. Chemical Geology, 2006, 233, 46-74.	1.4	54
14	Fe-liquid segregation in deforming planetesimals: Coupling Core-Forming compositions with transport phenomena. Earth and Planetary Science Letters, 2005, 239, 185-202.	1.8	53
15	Deep crustal melting in the Peruvian Andes: Felsic magma generation during delamination and uplift. Lithos, 2011, 125, 272-286.	0.6	50
16	Self-organisation and fracture connectivity in rapidly heated continental crust. Journal of Structural Geology, 1998, 20, 1425-1434.	1.0	48
17	Analyses on granular mass movement mechanics and deformation with distinct element numerical modeling: implications for large-scale rock and debris avalanches. Acta Geotechnica, 2009, 4, 233-247.	2.9	47
18	Plutonism and the growth of Andean Crust at 9 Â°S from 100 to 3 Ma. Journal of South American Earth Sciences, 1996, 9, 1-9.	0.6	46

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19	Development of characteristic volcanic debris avalanche deposit structures: New insight from distinct element simulations. Journal of Volcanology and Geothermal Research, 2010, 192, 191-200.	0.8	46
20	Segregation of tonalitic-trondhjemitic melts in the continental crust: The mantle connection. Journal of Geophysical Research, 1995, 100, 15735-15743.	3.3	45
21	Volcanic rock-mass properties from Snowdonia and Tenerife: implications for volcano edifice strength. Journal of the Geological Society, 2004, 161, 939-946.	0.9	45
22	Rapid magma production rates, underplating and remelting in the Andes: isotopic evidence from northern-central Peru (9â€“11 Â°S). Journal of South American Earth Sciences, 1996, 9, 69-78.	0.6	42
23	Hydrocarbons in crystalline rocks: an introduction. Geological Society Special Publication, 2003, 214, 1-5.	0.8	42
24	Towards a coupled physical and chemical model for tonaliteâ€“trondhjemiteâ€“granodiorite magma formation. Lithos, 2005, 79, 43-60.	0.6	33
25	Vibro-agitation of chambered magma. Journal of Volcanology and Geothermal Research, 2007, 167, 24-36.	0.8	33
26	Preliminary confocal scanning laser microscopy study of fluid inclusions in quartz. Journal of Microscopy, 1995, 178, 37-41.	0.8	27
27	Granular flow and viscous fluctuations in low Bagnold number granitic magmas. Journal of the Geological Society, 1998, 155, 873-881.	0.9	25
28	Investigation of the petrophysical properties of a porous sandstone sample using confocal scanning laser microscopy. Petroleum Geoscience, 2001, 7, 99-105.	0.9	25
29	Shear-induced pressure changes and seepage phenomena in a deforming porous layer - I. Geophysical Journal International, 2003, 155, 857-869.	1.0	25
30	Image-based modelling of lateral magma flow: the Basement Sill, Antarctica. Royal Society Open Science, 2017, 4, 161083.	1.1	25
31	Shear-induced material transfer across the core-mantle boundary aided by the post-perovskite phase transition. Earth, Planets and Space, 2005, 57, 459-464.	0.9	24
32	The study of fission track and other crystalline defects using confocal scanning laser microscopy. Journal of Microscopy, 1993, 170, 201-212.	0.8	23
33	Dykes or diapirs?. , 1996, , .		22
34	Controls on primary porosity and permeability development in igneous rocks. Geological Society Special Publication, 2003, 214, 93-107.	0.8	22
35	The effect of internal gas pressurization on volcanic edifice stability: evolution towards a critical state. Terra Nova, 2004, 16, 312-317.	0.9	21
36	SLM confocal microscopy: an improved way of viewing fission tracks. Journal of the Geological Society, 1990, 147, 217-218.	0.9	20

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37	An exploratory qualitative study on perceptions about mosquito bed nets in the Niger Delta: what are the barriers to sustained use?. Journal of Multidisciplinary Healthcare, 2011, 4, 73.	1.1	20
38	Melt infiltration and advection in microdioritic enclaves. European Journal of Mineralogy, 1996, 8, 405-412.	0.4	20
39	A new method of imaging particle tracks in solid state nuclear track detectors. Journal of Microscopy, 2010, 237, 1-6.	0.8	18
40	Supporting open innovation with the use of a balanced scorecard approach: a study on deep smarts and effective knowledge transfer to SMEs. Production Planning and Control, 2019, 30, 842-853.	5.8	18
41	Igneous differentiation by deformation. Contributions To Mineralogy and Petrology, 2020, 175, 1.	1.2	17
42	The automated counting of fission tracks in an external detector by image analysis. Computers and Geosciences, 1993, 19, 585-591.	2.0	15
43	Quantitative analysis and scaling of sheared granitic magmas. Geophysical Research Letters, 2000, 27, 1231-1234.	1.5	15
44	Microsegregation rates of liquid Feâ€Niâ€S metal in natural silicateâ€metal systems: A combined experimental and numerical study. Geochemistry, Geophysics, Geosystems, 2011, 12, .	1.0	15
45	Geochemistry of upper palaeozoic-lower triassic granitoids of the central frontal cordillera (33) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.6	14
46	Physical geology of high-level magmatic systems: introduction. Geological Society Special Publication, 2004, 234, 1-4.	0.8	11
47	3-D imaging of particle tracks in solid state nuclear track detectors. Natural Hazards and Earth System Sciences, 2010, 10, 1033-1036.	1.5	11
48	Fractal analysis in granitoid petrology: a means of quantifying irregular grain morphologies. European Journal of Mineralogy, 1993, 5, 593-598.	0.4	9
49	Application of Confocal Microscopy for 3D Assessment of Carotid Plaque Structure: Implications for Carotid Blood Flow and Stroke Research. Journal of Vascular and Interventional Neurology, 2011, 4, 1-4.	1.1	9
50	Dyke widths and ascent rates of silicic magmas on Venus. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2000, 91, 87-95.	0.3	8
51	Thermally induced primary fracture development in tabular granitic plutons: a preliminary analysis. Geological Society Special Publication, 2003, 214, 143-150.	0.8	8
52	Shear-induced pressure changes and seepage phenomena in a deforming porous layer - II. Geophysical Journal International, 2005, 163, 385-402.	1.0	7
53	Large-scale mechanics of fracture-mediated felsic magma intrusion driven by hydraulic inflation and buoyancy pumping. Geological Society Special Publication, 2008, 302, 3-29.	0.8	7
54	Origins and Scales of Compositional Variations in Crustally Derived Granitic Rocks: The Example of the Dartmoor Pluton in the Cornubian Batholith of Southwest Britain. Journal of Geology, 2021, 129, 131-169.	0.7	7

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55	Dike transport of granitoid magmas: Comment and Reply. Geology, 1994, 22, 473.	2.0	6
56	Radon track imaging in CR-39 plastic detectors using confocal scanning laser microscopy. Journal of Microscopy, 2005, 217, 179-183.	0.8	6
57	Shear-induced pressure changes and seepage phenomena in a deforming porous layer-III. Geophysical Journal International, 2007, 171, 943-953.	1.0	5
58	Threeâ€dimensional visualization of dermal skin structure using confocal laser scanning microscopy. Journal of Microscopy, 2013, 251, 14-18.	0.8	5
59	Counting fission tracks in mica external detectors. Pure and Applied Geophysics, 1993, 140, 667-680.	0.8	4
60	Deformation-induced mechanical instabilities at the core-mantle boundary. Geophysical Monograph Series, 2007, , 271-287.	0.1	4
61	The Field Description of Igneous Rocks, Second Edition. Environmental and Engineering Geoscience, 2012, 18, 399-400.	0.3	3
62	Some aspects of the application of image analysis to the study of fission tracks. Mineralogical Magazine, 1995, 59, 197-201.	0.6	2
63	Granites are not diapiric!. Geology Today, 2000, 16, 180-184.	0.3	2
64	Proposed methods for correcting external detector fission track counts for tracks lost during etching. Journal of the Geological Society, 1993, 150, 1051-1054.	0.9	2
65	Pore-structure visualization in microdioritic enclaves. Geological Society Special Publication, 1997, 122, 37-46.	0.8	1
66	Mantle underplating, granite tectonics, and metamorphic P-T-tpaths: Comment and Reply. Geology, 1997, 25, 763.	2.0	1
67	Title is missing!. Geological Magazine, 1994, 131, 280-281.	0.9	0
68	W. S. Pitcher, 1993. The Nature and Origin of Granite. xiii + 321 pp. London, Glasgow, New York, Tokyo, Melbourne, Madras: Blackie Academic & Professional. Price Â£39.95 (hard covers). ISBN 0 7514 0800 7.. Geological Magazine, 1995, 132, 245-245.	0.9	0
69	P. C. Lichtner, C. I. Steefel and E. H. Oelkers (eds). Reactive Transport in Porous Media. Washington, D.C. (Mineralogical Society of America: Reviews in Mineralogy Vol. 34), 1996, xiv + 438 pp. Price US$28.00 (MSA Members $21.00). ISBN 0-939950-42-1.. Mineralogical Magazine, 1998, 62, 576-577.	0.6	0
70	Structure and emplacement of high-level magmatic systems: introduction. Geological Society Special Publication, 2008, 302, 1-2.	0.8	0
71	Numerical analysis of separation and mixing dynamics in multiphase granular systems. , 2013, , .		0
72	A. Castro, C. Fernandez and J.L. Vigneresse (Eds). Understanding Granites: Integrating New and Classical Techniques. Geological Society Special Publication 168, 1999. 278 pp. Price Â£70. ISBN 1-86239-058-4.. Mineralogical Magazine, 2000, 64, 1183-1184.	0.6	0