Andrew Biggin

List of Publications by Year
in descending order

85 papers	2,896 citations	201674 27 h-index	189892 50 g-index
94 all docs	94 docs citations	94 times ranked	1534 citing authors

#	Article	IF	Citations
1	Geomagnetic secular variation and the statistics of palaeomagnetic directions. Geophysical Journal International, 2011, 186, 509-520.	2.4	280
2	Palaeomagnetic field intensity variations suggest Mesoproterozoic inner-core nucleation. Nature, 2015, 526, 245-248.	27.8	162
3	On improving the selection of Thellier-type paleointensity data. Geochemistry, Geophysics, Geosystems, 2014, 15, 1180-1192.	2.5	154
4	Possible links between long-term geomagnetic variations and whole-mantle convection processes. Nature Geoscience, 2012, 5, 526-533.	12.9	152
5	Geomagnetic secular variation in the Cretaceous Normal Superchron and in the Jurassic. Physics of the Earth and Planetary Interiors, 2008, 169, 3-19.	1.9	148
6	The intensity of the geomagnetic field in the late-Archaean: new measurements and an analysis of the updated IAGA palaeointensity database. Earth, Planets and Space, 2009, 61, 9-22.	2.5	112
7	Evidence for a very-long-term trend in geomagnetic secular variation. Nature Geoscience, 2008, 1, 395-398.	12.9	78
8	Palaeomagnetism of Archaean rocks of the Onverwacht Group, Barberton Greenstone Belt (southern) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Planetary Science Letters, 2011, 302, 314-328.	4.4	73
9	A reliable absolute palaeointensity determination obtained from a non-ideal recorder. Earth and Planetary Science Letters, 2007, 257, 545-563.	4.4	70
10	Rapid regional perturbations to the recent global geomagnetic decay revealed by a new Hawaiian record. Nature Communications, 2013, 4, 2727.	12.8	69
11	Analysis of long-term variations in the geomagnetic poloidal field intensity and evaluation of their relationship with global geodynamics. Geophysical Journal International, 2003, 152, 392-415.	2.4	65
12	A new set of qualitative reliability criteria to aid inferences on palaeomagnetic dipole moment variations through geological time. Frontiers in Earth Science, 0, 2, .	1.8	64
13	Archaeomagnetic study of five mounds from Upper Mesopotamia between 2500 and 700 BCE: Further evidence for an extremely strong geomagnetic field ca. 3000 years ago. Earth and Planetary Science Letters, 2012, 357-358, 84-98.	4.4	63
14	The application of acceptance criteria to results of Thellier palaeointensity experiments performed on samples with pseudo-single-domain-like characteristics. Physics of the Earth and Planetary Interiors, 2003, 138, 279-287.	1.9	56
15	Paleointensity Database Updated and Upgraded. Eos, 2010, 91, 15-15.	0.1	56
16	Subduction flux modulates the geomagnetic polarity reversal rate. Tectonophysics, 2018, 742-743, 34-49.	2.2	53
17	High paleointensities for the Canary Islands constrain the Levant geomagnetic high. Earth and Planetary Science Letters, 2015, 419, 154-167.	4.4	51
18	The effect of cooling rate on the intensity of thermoremanent magnetization (TRM) acquired by assemblages of pseudo-single domain, multidomain and interacting single-domain grains. Geophysical Journal International, 2013, 193, 1239-1249.	2.4	50

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19	Microwave palaeointensities from a recent Mexican lava flow, baked sediments and reheated pottery. Earth and Planetary Science Letters, 2003, 214, 221-236.	4.4	45
20	Latitude Dependence of Geomagnetic Paleosecular Variation and its Relation to the Frequency of Magnetic Reversals: Observations From the Cretaceous and Jurassic. Geochemistry, Geophysics, Geosystems, 2019, 20, 1240-1279.	2.5	43
21	Analysis of an Updated Paleointensity Database (Q_{PI}â€PINT) for 65â€“200 Ma: Implications for the Longâ€Term History of Dipole Moment Through the Mesozoic. Journal of Geophysical Research: Solid Earth, 2019, 124, 9999-10022.	3.4	42
22	First-order symmetry of weak-field partial thermoremanence in multi-domain ferromagnetic grains. 1. Experimental evidence and physical implications. Earth and Planetary Science Letters, 2006, 245, 438-453.	4.4	40
23	First-order symmetry of weak-field partial thermoremanence in multi-domain (MD) ferromagnetic grains: 2. Implications for Thellier-type palaeointensity determination. Earth and Planetary Science Letters, 2006, 245, 454-470.	4.4	39
24	Was the Devonian geomagnetic field dipolar or multipolar? Palaeointensity studies of Devonian igneous rocks from the Minusa Basin (Siberia) and the Kola Peninsula dykes, Russia. Geophysical Journal International, 2017, 209, 1265-1286.	2.4	37
25	Thellier-type paleointensity data from multidomain specimens. Physics of the Earth and Planetary Interiors, 2015, 245, 117-133.	1.9	35
26	An exceptionally weak Devonian geomagnetic field recorded by the Viluy Traps, Siberia. Earth and Planetary Science Letters, 2019, 506, 134-145.	4.4	34
27	Ultra-low palaeointensities from East European Craton, Ukraine support a globally anomalous palaeomagnetic field in the Ediacaran. Geophysical Journal International, 2020, 220, 1928-1946.	2.4	32
28	A comparison of a quasi-perpendicular method of absolute palaeointensity determination with other thermal and microwave techniques. Earth and Planetary Science Letters, 2007, 257, 564-581.	4.4	28
29	Are systematic differences between thermal and microwave Thellier-type palaeointensity estimates a consequence of multidomain bias in the thermal results?. Physics of the Earth and Planetary Interiors, 2010, 180, 16-40.	1.9	28
30	How many paleointensity determinations are required from a single lava flow to constitute a reliable average?. Geophysical Research Letters, 2003, 30, .	4.0	27
31	Continuous millennial decrease of the Earthâ€™s magnetic axial dipole. Physics of the Earth and Planetary Interiors, 2018, 274, 72-86.	1.9	26
32	An extended period of extremely weak geomagnetic field suggested by palaeointensities from the Ediacaran Grenville dykes (SE Canada). Earth and Planetary Science Letters, 2021, 568, 117025.	4.4	26
33	Application of the multispecimen palaeointensity method to Pleistocene lava flows from the Trans-Mexican Volcanic Belt. Physics of the Earth and Planetary Interiors, 2010, 179, 139-156.	1.9	25
34	A comparison of detailed equatorial red bed records of secular variation during the Permo-Carboniferous Reversed Superchron. Geophysical Journal International, 2009, 177, 834-848.	2.4	24
35	Petrological Architecture of a Magmatic Shear Zone: A Multidisciplinary Investigation of Strain Localisation During Magma Ascent at Unzen Volcano, Japan. Journal of Petrology, 2019, 60, 791-826.	2.8	24
36	Quantitative estimates of average geomagnetic axial dipole dominance in deep geological time. Nature Communications, 2020, 11, 6100.	12.8	23

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37	Towards the robust selection of Thellierâ€type paleointensity data: The influence of experimental noise. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	22
38	The performance of various palaeointensity techniques as a function of rock magnetic behaviour â€" A case study for La Palma. Physics of the Earth and Planetary Interiors, 2015, 242, 36-49.	1.9	22
39	Advancing Precambrian palaeomagnetism with the PALEOMAGIA and PINT(QPI) databases. Scientific Data, 2017, 4, 170068.	5.3	22
40	The PINTÂdatabase: a definitive compilation of absolute palaeomagnetic intensity determinations since 4 billion years ago. Geophysical Journal International, 2022, 229, 522-545.	2.4	22
41	Full vector archaeomagnetic records from Anatolia between 2400 and 1350 BCE: Implications for geomagnetic field models and the dating of fires in antiquity. Earth and Planetary Science Letters, 2016, 434, 171-186.	4.4	21
42	Late Cenozoic evolution in the Pamir-Tian Shan convergence: New chronological constraints from the magnetostratigraphic record of the southwestern Tianshan foreland basin (Ulugqat area). Tectonophysics, 2017, 717, 51-64.	2.2	21
43	A palaeomagnetic study of Jurassic intrusives from southern New South Wales: further evidence for a pre-Cenozoic dipole low. Geophysical Journal International, 2000, 140, 621-635.	2.4	20
44	An assessment of long duration geodynamo simulations using new paleomagnetic modeling criteria (QPM). Earth and Planetary Science Letters, 2019, 526, 115758.	4.4	20
45	A method to reduce the curvature of Arai plots produced during Thellier palaeointensity experiments performed on multidomain grains. Geophysical Journal International, 2003, 155, F13-F19.	2.4	19
46	Intensity of the Earth's magnetic field: Evidence for a Mid-Paleozoic dipole low. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	18
47	New Paleointensities From the Skinner Cove Formation, Newfoundland, Suggest a Changing State of the Geomagnetic Field at the Ediacaranâ€Cambrian Transition. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022292.	3.4	16
48	Does the Mesozoic dipole low really exist?. Eos, 2003, 84, 97.	0.1	14
49	Paleointensity.org: An Online, Open Source, Application for the Interpretation of Paleointensity Data. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008791.	2.5	14
50	Dynamo constraints on the long-term evolution of Earthâ€™s magnetic field strength. Geophysical Journal International, 2021, 228, 316-336.	2.4	14
51	A rapid multiple-sample approach to the determination of absolute paleointensity. Journal of Geophysical Research, 2005, 110, .	3.3	13
52	The coolingâ€rate effect on microwave archeointensity estimates. Geophysical Research Letters, 2013, 40, 3847-3852.	4.0	13
53	Extreme geomagnetic field variability indicated by Eastern Mediterranean full-vector archaeomagnetic records. Earth and Planetary Science Letters, 2020, 531, 115979.	4.4	13
54	Covariant Giant Gaussian Process Models With Improved Reproduction of Palaeosecular Variation. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC008960.	2.5	13

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55	Solving the mystery of the 1960 Hawaiian lava flow: implications for estimating Earth's magnetic field. Geophysical Journal International, 2019, 218, 1796-1806.	2.4	12
56	Elevated paleomagnetic dispersion at Saint Helena suggests long-lived anomalous behavior in the South Atlantic. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18258-18263.	7.1	12
57	First palaeointensity data from the cryogenian and their potential implications for inner core nucleation age. Geophysical Journal International, 2021, 226, 66-77.	2.4	12
58	Numerical Dynamo Simulations Reproduce Paleomagnetic Field Behavior. Geophysical Research Letters, 2021, 48, e2020GL090544.	4.0	11
59	New palaeodirections and palaeointensity data from extensive profiles through the Ediacaran section of the Volyn Basalt Province (NW Ukraine). Geophysical Journal International, 2022, 231, 474-492.	2.4	11
60	Eruption and emplacement timescales of ignimbrite super-eruptions from thermo-kinetics of glass shards. Frontiers in Earth Science, 2015, 3, .	1.8	10
61	The characteristics of environmental particulate matter in the urban area of Beijing, China, during the 2008 Olympic Games. Atmospheric Pollution Research, 2017, 8, 141-148.	3.8	10
62	A persistent non-uniformitarian paleomagnetic field in the Devonian?. Earth-Science Reviews, 2022, 231, 104073.	9.1	10
63	Microwave paleointensities indicate a low paleomagnetic dipole moment at the Permo-Triassic boundary. Physics of the Earth and Planetary Interiors, 2016, 260, 62-73.	1.9	9
64	The Origin and Evolution of Magnetic Fabrics in Mafic Sills. Frontiers in Earth Science, 2019, 7, .	1.8	9
65	Paleosecular Variation and the Timeâ€Averaged Geomagnetic Field Since 10ÂMa. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC010063.	2.5	9
66	Analyzing Triassic and Permian Geomagnetic Paleosecular Variation and the Implications for Ancient Field Morphology. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009930.	2.5	8
67	Low Paleointensities and Ar/Ar Ages From Saint Helena Provide Evidence for Recurring Magnetic Field Weaknesses in the South Atlantic. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	8
68	Robust estimators of palaeosecular variation. Geophysical Journal International, 2015, 200, 1046-1051.	2.4	7
69	Full-vector geomagnetic field records from the East Eifel, Germany. Physics of the Earth and Planetary Interiors, 2018, 274, 148-157.	1.9	7
70	The behaviour and detection of partial thermoremanent magnetisation (PTRM) tails in Thellier palaeointensity experiments. Earth, Planets and Space, 2007, 59, 717-725.	2.5	6
71	Palustrine wetland formation during the MIS 3 interstadial: Implications for preserved alluvial records in the South African Karoo. Sedimentary Geology, 2020, 405, 105698.	2.1	6
72	Comparison of Thermal and Microwave Paleointensity Estimates in Specimens Displaying Nonâ€Ideal Behavior in Thellierâ€Style Paleointensity Experiments. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019802.	3.4	6

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73	Improvements to the Shaw-Type Absolute Palaeointensity Method. Frontiers in Earth Science, 2021, 9, .	1.8	6
74	New Paleointensity Data Suggest Possible Phanerozoicâ€Type Paleomagnetic Variations in the Precambrian. Geochemistry, Geophysics, Geosystems, 2021, 22, .	2.5	6
75	Magnetic survey of the Poortown Dolerite, Isle of Man. Geological Society Special Publication, 1999, 160, 155-163.	1.3	4
76	Scientific bodies must take own action on emissions. Nature, 2007, 448, 749-749.	27.8	4
77	Thermoremanent Behavior in Synthetic Samples Containing Natural Oxyexsolved Titanomagnetite. Geochemistry, Geophysics, Geosystems, 2018, 19, 1751-1766.	2.5	4
78	Corrigendum for â€œAre systematic differences between thermal and microwave Thellier-type palaeointensity estimates a consequence of multidomain bias in the thermal results?â€•[Phys. Earth Planet. Inter. 180 (2010) 16â€"40]. Physics of the Earth and Planetary Interiors, 2010, 182, 199.	1.9	3
79	Reply to comment on â€œA comparison of a quasi-perpendicular method of absolute palaeointensity determination with other thermal and microwave techniquesâ€• Earth and Planetary Science Letters, 2008, 265, 327.	4.4	2
80	Correlation of palaeomagnetic directions constrains eruption rate of large igneous provinces. Earth and Planetary Science Letters, 2014, 387, 4-9.	4.4	2
81	Obtaining archaeointensity data from British Neolithic pottery: A feasibility study. Journal of Archaeological Science: Reports, 2021, 37, 102895.	0.5	1
82	Deciphering syn- and post-emplacement processes in shallow mafic dykes using magnetic anisotropy. Journal of Volcanology and Geothermal Research, 2022, 422, 107456.	2.1	1
83	Paleomagnetic Field Intensity. Encyclopedia of Earth Sciences Series, 2021, , 1187-1193.	0.1	0
84	Palaeomagnetic Field Intensity. Encyclopedia of Earth Sciences Series, 2020, , 1-7.	0.1	0
85	Investigating the utility of a high-temperature Thellier-style paleointensity experimental protocol. Earth, Planets and Space, 2021, 73, .	2.5	0