Jason Phipps Morgan

List of Publications by Year
in descending order

129 papers	9,795 citations	46984 47 h-index	40954 93 g-index
137 all docs	137 docs citations	137 times ranked	5818 citing authors

#	Article	IF	Citations
1	Bending-related faulting and mantle serpentinization at the Middle America trench. Nature, 2003, 425, 367-373.	13.7	828
2	Serpentine and the subduction zone water cycle. Earth and Planetary Science Letters, 2004, 223, 17-34.	1.8	641
3	Petrological Systematics of Mid-Ocean Ridge Basalts: Constraints on Melt Generation Beneath Ocean Ridges. Geophysical Monograph Series, 0, , 183-280.	0.1	493
4	Deep roots of the Messinian salinity crisis. Nature, 2003, 422, 602-606.	13.7	489
5	The genesis of oceanic crust: Magma injection, hydrothermal circulation, and crustal flow. Journal of Geophysical Research, 1993, 98, 6283-6297.	3.3	458
6	The spreading rate dependence of threeâ€dimensional midâ€ocean ridge gravity structure. Geophysical Research Letters, 1992, 19, 13-16.	1.5	262
7	Relationship between bend-faulting at trenches and intermediate-depth seismicity. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	1.0	256
8	Threeâ€dimensional flow and temperature perturbations due to a transform offset: Effects on oceanic crustal and upper mantle structure. Journal of Geophysical Research, 1988, 93, 2955-2966.	3.3	254
9	Dependence of ridge-axis morphology on magma supply and spreading rate. Nature, 1993, 364, 706-708.	13.7	223
10	Testing the fixed hotspot hypothesis using 40Ar/39Ar age progressions along seamount trails. Earth and Planetary Science Letters, 2001, 185, 237-252.	1.8	218
11	Hotspot melting generates both hotspot volcanism and a hotspot swell?. Journal of Geophysical Research, 1995, 100, 8045-8062.	3.3	204
12	Mechanisms for the origin of midâ€ocean ridge axial topography: Implications for the thermal and mechanical structure of accreting plate boundaries. Journal of Geophysical Research, 1987, 92, 12823-12836.	3.3	203
13	Spreading rate dependence of three-dimensional structure in oceanic spreading centres. Nature, 1990, 348, 325-328.	13.7	189
14	Melt migration beneath midâ€ocean spreading centers. Geophysical Research Letters, 1987, 14, 1238-1241.	1.5	183
15	Two-stage melting and the geochemical evolution of the mantle: a recipe for mantle plum-pudding. Earth and Planetary Science Letters, 1999, 170, 215-239.	1.8	179
16	Crustal redistribution, crustâ€“mantle recycling and Phanerozoic evolution of the continental crust. Earth-Science Reviews, 2009, 97, 80-104.	4.0	179
17	Are the regional variations in Central American arc lavas due to differing basaltic versus peridotitic slab sources of fluids?. Geology, 2002, 30, 1035.	2.0	174
18	Causes and rateâ€limiting mechanisms of ridge propagation: A fracture mechanics model. Journal of Geophysical Research, 1985, 90, 8603-8612.	3.3	160

#	Article	IF	Citations
19	Observational hints for a plume-fed, suboceanic asthenosphere and its role in mantle convection. Journal of Geophysical Research, 1995, 100, 12753-12767.	3.3	144
20	The relationship between near-axis hydrothermal cooling and the spreading rate of mid-ocean ridges. Earth and Planetary Science Letters, 1996, 142, 137-145.	1.8	135
21	Existence of complex spatial zonation in the GalÃ¡pagos plume. Geology, 2000, 28, 435.	2.0	133
22	Flattening of the sea-floor depth-age curve as a response to asthenospheric flow. Nature, 1992, 359, 524-527.	13.7	125
23	Teleseismic imaging of subaxial flow at mid-ocean ridges: traveltime effects of anisotropic mineral texture in the mantle. Geophysical Journal International, 1996, 127, 415-426.	1.0	118
24	Thermodynamics of pressure release melting of a veined plum pudding mantle. Geochemistry, Geophysics, Geosystems, 2001, 2, n/a-n/a.	1.0	116
25	How and when plume zonation appeared during the 132â€‰Myr evolution of the Tristan Hotspot. Nature Communications, 2015, 6, 7799.	5.8	116
26	The rift to drift transition at non-volcanic margins: Insights from numerical modelling. Earth and Planetary Science Letters, 2006, 244, 458-473.	1.8	111
27	The generation of a compositional lithosphere by mid-ocean ridge melting and its effect on subsequent off-axis hotspot upwelling and melting. Earth and Planetary Science Letters, 1997, 146, 213-232.	1.8	105
28	Threeâ€dimensional mantle convection beneath a segmented spreading center: Implications for alongâ€axis variations in crustal thickness and gravity. Journal of Geophysical Research, 1993, 98, 21977-21995.	3.3	90
29	Contemporaneous mass extinctions, continental flood basalts, and â€˜impact signalsâ€™: are mantle plume-induced lithospheric gas explosions the causal link?. Earth and Planetary Science Letters, 2004, 217, 263-284.	1.8	88
30	Hybrid shallow on-axis and deep off-axis hydrothermal circulation at fast-spreading ridges. Nature, 2014, 508, 508-512.	13.7	88
31	The role of mantle-depletion and melt-retention buoyancy in spreading-center segmentation. Earth and Planetary Science Letters, 1994, 125, 221-234.	1.8	83
32	Geophysical Constraints on Mantle Flow and Melt Generation Beneath Mid-Ocean Ridges. Geophysical Monograph Series, 0, , 1-65.	0.1	83
33	Phase Equilibria Constraints on the Origin of Ocean Floor Basalts. Geophysical Monograph Series, 0, , 67-102.	0.1	82
34	Lithospheric stress near a ridgeâ€transform intersection. Geophysical Research Letters, 1984, 11, 113-116.	1.5	81
35	Near-isothermal conditions in the middle and lower crust induced by melt migration. Nature, 2008, 452, 80-83.	13.7	76
36	Rapid pulses of uplift, subsidence, and subduction erosion offshore Central America: Implications for building the rock record of convergent margins. Geology, 2013, 41, 995-998.	2.0	76

#	Article	IF	Citations
37	Intra-arc extension in Central America: Links between plate motions, tectonics, volcanism, and geochemistry. Earth and Planetary Science Letters, 2008, 272, 365-371.	1.8	74
38	Seismic constraints on mantle flow and topography of the 660-km discontinuity: evidence for whole-mantle convection. Nature, 1993, 365, 506-511.	13.7	67
39	Continental geotherm and the evolution of rifted margins. Geology, 2004, 32, 133.	2.0	67
40	Viscous Energy Dissipation and Strain Partitioning in Partially Molten Rocks. Journal of Petrology, 2005, 46, 2569-2592.	1.1	64
41	Systematics of ridge propagation south of 30Â°S. Earth and Planetary Science Letters, 1994, 121, 245-258.	1.8	58
42	The effects of spreading rate, the magma budget, and the geometry of magma emplacement on the axial heat flux at mid-ocean ridges. Journal of Geophysical Research, 1996, 101, 11475-11482.	3.3	58
43	Convection and melting at midâ€ocean ridges. Journal of Geophysical Research, 1993, 98, 19477-19503.	3.3	57
44	Intraplate termination of transform faulting within the Antarctic continent. Earth and Planetary Science Letters, 2007, 260, 115-126.	1.8	54
45	Feedbacks between mantle hydration and hydrothermal convection at ocean spreading centers. Earth and Planetary Science Letters, 2010, 296, 34-44.	1.8	54
46	Toward a dynamic concept of the subduction channel at erosive convergent margins with implications for interplate material transfer. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	54
47	Asthenosphere flow model of hotspotâ€"ridge interactions: a comparison of Iceland and Kerguelen. Earth and Planetary Science Letters, 1998, 161, 45-56.	1.8	50
48	Controls of faulting and reaction kinetics on serpentinization and double Benioff zones. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	50
49	Australian-Antarctic discordance. Geology, 1991, 19, 429.	2.0	49
50	Morphology and tectonics of the Australian-Antarctic Discordance between 123ï¿½ E and 128ï¿½ E. Marine Geophysical Researches, 1993, 15, 121-152.	0.5	47
51	Serpentinization and magmatism during extension at non-volcanic margins: the effect of initial lithospheric structure. Geological Society Special Publication, 2001, 187, 551-576.	0.8	47
52	The Physics of Magma Migration and Mantle Flow Beneath a Mid-Ocean Ridge. Geophysical Monograph Series, 0, , 155-182.	0.1	45
53	Coupled mechanical and hydrothermal modeling of crustal accretion at intermediate to fast spreading ridges. Earth and Planetary Science Letters, 2011, 311, 275-286.	1.8	43
54	Thermomechanical Implications of Sediment Transport for the Architecture and Evolution of Continental Rifts and Margins. Tectonics, 2019, 38, 641-665.	1.3	42

#	Article	IF	Citations
55	Lower Crustal Strength Controls on Melting and Serpentinization at Magmaâ€Poor Margins: Potential Implications for the South Atlantic. Geochemistry, Geophysics, Geosystems, 2017, 18, 4538-4557.	1.0	41
56	Triple junction reorganization. Journal of Geophysical Research, 1988, 93, 2981-2996.	3.3	38
57	The Pacific-Antarctic Ridgeâ€“Foundation hotspot interaction: a case study of a ridge approaching a hotspot. Marine Geology, 2000, 167, 61-84.	0.9	38
58	Deformation-related volcanism in the Pacific Ocean linked to the Hawaiianâ€“Emperor bend. Nature Geoscience, 2015, 8, 393-397.	5.4	38
59	Spatial variations of incoming sediments at the northeastern Japan arc and their implications for megathrust earthquakes. Geology, 2020, 48, 614-619.	2.0	36
60	Crenulated seafloor: Evidence for spreading-rate dependent structure of mantle upwelling and melting beneath a mid-oceanic spreading center. Earth and Planetary Science Letters, 1995, 129, 73-84.	1.8	35
61	Seismic Broadband Ocean-Bottom Data and Noise Observed with Free-Fall Stations: Experiences from Long-Term Deployments in the North Atlantic and the Tyrrhenian Sea. Bulletin of the Seismological Society of America, 2006, 96, 647-664.	1.1	35
62	Extensional tectonics and two-stage crustal accretion at oceanic transform faults. Nature, 2021, 591, 402-407.	13.7	35
63	Transform zone migration: Implications of bookshelf faulting at oceanic and Icelandic propagating ridges. Tectonics, 1991, 10, 920-935.	1.3	34
64	Isotope topology of individual hotspot basalt arrays: Mixing curves or melt extraction trajectories?. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	1.0	34
65	Small-Scale Convection and Mantle Melting Beneath Mid-Ocean Ridges. Geophysical Monograph Series, 0, , 327-352.	0.1	34
66	Evidence for variable upper mantle temperature and crustal thickness in and near the Australian-Antarctic Discordance. Earth and Planetary Science Letters, 1994, 128, 135-153.	1.8	33
67	Lithospheric Strength and Rift Migration Controls on Synrift Stratigraphy and Breakup Unconformities at Rifted Margins: Examples From Numerical Models, the Atlantic and South China Sea Margins. Tectonics, 2020, 39, e2020TC006255.	1.3	33
68	Melting and mantle flow beneath a mid-ocean spreading center. Earth and Planetary Science Letters, 1992, 111, 493-516.	1.8	32
69	Thermal and rare gas evolution of the mantle. Chemical Geology, 1998, 145, 431-445.	1.4	32
70	First results from the Hawaiian SWELL Pilot Experiment. Geophysical Research Letters, 1999, 26, 3397-3400.	1.5	32
71	Plate velocities in the hotspot reference frame. , 2007, , 65-78.		32
72	Seismic structure of an oceanic core complex at the Midâ€Atlantic Ridge, 22Â°19â€²N. Journal of Geophysical Research, 2010, 115, .	3.3	32

#	Article	IF	Citations
73	Variation of effective elastic thickness and melt production along the Deccanâ€“Reunion hotspot track. Earth and Planetary Science Letters, 2007, 264, 9-21.	1.8	29
74	On subducting slab entrainment of buoyant asthenosphere. Terra Nova, 2007, 19, 167-173.	0.9	29
75	Modeling petrological geodynamics in the Earth's mantle. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	29
76	2D and 3D numerical models on compositionally buoyant diapirs in the mantle wedge. Earth and Planetary Science Letters, 2011, 311, 53-68.	1.8	29
77	Mantle Flow and Melt Migration Beneath Oceanic Ridges: Models Derived from Observations in Ophiolites. Geophysical Monograph Series, 0, , 123-154.	0.1	29
78	Subduction erosion, and the de-construction of continental crust: The Central America case and its global implications. Gondwana Research, 2016, 40, 184-198.	3.0	29
79	Origin and dynamics of depositionary subduction margins. Geochemistry, Geophysics, Geosystems, 2016, 17, 1966-1974.	1.0	29
80	Nonlinear40Ar/39Ar age systematics along the Gilbert Ridge and Tokelau Seamount Trail and the timing of the Hawaii-Emperor Bend. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	1.0	27
81	Seamount chainâ€“subduction zone interactions: Implications for accretionary and erosive subduction zone behavior. Geology, 2018, 46, 367-370.	2.0	26
82	Paired EMI-HIMU hotspots in the South Atlanticâ€"Starting plume heads trigger compositionally distinct secondary plumes?. Science Advances, 2020, 6, eaba0282.	4.7	26
83	Vug waves: A mechanism for coupled rock deformation and fluid migration. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	1.0	25
84	Craton Destruction 1: Cratonic Keel Delamination Along a Weak Midlithospheric Discontinuity Layer. Journal of Geophysical Research: Solid Earth, 2018, 123, 10,040.	1.4	24
85	Inversion of combined gravity and bathymetry data for crustal structure: A prescription for downward continuation. Earth and Planetary Science Letters, 1993, 119, 167-179.	1.8	22
86	Earth's deepest earthquake swarms track fluid ascent beneath nascent arc volcanoes. Earth and Planetary Science Letters, 2019, 521, 25-36.	1.8	20
87	A three-dimensional gravity study of the 95.5Â°W propagating rift in the Galapagos spreading center. Earth and Planetary Science Letters, 1987, 81, 289-298.	1.8	19
88	New observational and experimental evidence for a plume-fed asthenosphere boundary layer in mantle convection. Earth and Planetary Science Letters, 2013, 366, 99-111.	1.8	19
89	The Effects of Plate Thickening on Three-Dimensional, Passive Flow of the Mantle Beneath Mid-Ocean Ridges. Geophysical Monograph Series, 0, , 311-326.	0.1	19
90	Midâ€Ocean Ridge Dynamics: Observations and Theory. Reviews of Geophysics, 1991, 29, 807-822.	9.0	18

#	Article	IF	Citations
91	North Arch volcanic fields near Hawaii are evidence favouring the restiteâ€root hypothesis for the origin of hotspot swells. Terra Nova, 2009, 21, 452-466.	0.9	18
92	Global plume-fed asthenosphere flowâ€"I: Motivation and model development. , 2007, , 165-188.		17
93	Enhanced Mantle Upwelling/Melting Caused Segment Propagation, Oceanic Core Complex Die Off, and the Death of a Transform Fault: The Midâ€Atlantic Ridge at 21.5Â°N. Journal of Geophysical Research: Solid Earth, 2018, 123, 941-956.	1.4	17
94	Causes and consequences of asymmetric lateral plume flow during South Atlantic rifting. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27877-27883.	3.3	17
95	Flood basalts and ocean island basalts: A deep source or shallow entrainment?. Earth and Planetary Science Letters, 2009, 284, 553-563.	1.8	16
96	A new free-surface stabilization algorithm for geodynamical modelling: Theory and numerical tests. Physics of the Earth and Planetary Interiors, 2015, 246, 41-51.	0.7	16
97	The Hawaiian SWELL pilot experimentâ€"Evidence for lithosphere rejuvenation from ocean bottom surface wave data. , 2007, , 209-233.		15
98	Australian Antarctic Discordance as a simple mantle boundary. Geophysical Research Letters, 2010, 37, .	1.5	15
99	Implications of Subduction Rehydration for Earth's Deep Water Cycle. Geophysical Monograph Series, 2013, , 263-276.	0.1	15
100	Direct evidence of ancient shock metamorphism at the site of the 1908 Tunguska event. Earth and Planetary Science Letters, 2015, 409, 168-174.	1.8	13
101	Crustal Structure Across the Extinct Midâ€Ocean Ridge in South China Sea From OBS Receiver Functions: Insights Into the Spreading Rate and Magma Supply Prior to the Ridge Cessation. Geophysical Research Letters, 2021, 48, e2020GL089755.	1.5	13
102	Connection Between a Subcontinental Plume and the Midâ€Lithospheric Discontinuity Leads to Fast and Intense Craton Lithospheric Thinning. Tectonics, 2021, 40, e2021TC006711.	1.3	13
103	Geoid effects of lateral viscosity variation near the top of the mantle: A 2D model. Earth and Planetary Science Letters, 1993, 119, 617-625.	1.8	12
104	Craton Destruction 2: Evolution of Cratonic Lithosphere After a Rapid Keel Delamination Event. Journal of Geophysical Research: Solid Earth, 2018, 123, 10,069.	1.4	12
105	Existence of complex spatial zonation in the GalÃ¡pagos plume. Geology, 2000, 28, 435-438.	2.0	12
106	⁸⁷Sr/⁸⁶Sr in recent accumulations of calcium sulfate on landscapes of hyperarid settings: A bimodal altitudinal dependence for northern <scp>C</scp>hile (19.5Â°Sâ€“21.5Â°S). Geochemistry, Geophysics, Geosystems, 2015, 16, 4311-4328.	1.0	10
107	LaCoDe: A Lagrangian two-dimensional thermo-mechanical code for large-strain compressible visco-elastic geodynamical modeling. Tectonophysics, 2019, 767, 228173.	0.9	10
108	Global plume-fed asthenosphere flowâ€"II: Application to the geochemical segmentation of mid-ocean ridges. , 2007, , 189-208.		7

#	Article	IF	Citations
109	Plumeâ€Lithosphere Interaction and Delamination at Yellowstone and Its Implications for the Boundary of Craton Stability. Geophysical Research Letters, 2022, 49, .	1.5	6
110	The Current Energetics of Earth's Interior: A Gravitational Energy Perspective. Frontiers in Earth Science, 2016, 4, .	0.8	5
111	Overview of the Tectonics and Geodynamics of Costa Rica. Active Volcanoes of the World, 2019, , 1-12.	1.0	5
112	Shear Wave Splitting Evidence for Keelâ€Deflected Mantle Flow at the Northern Margin of the Ordos Block and Its Implications for the Ongoing Modification of Craton Lithosphere. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020485.	1.4	5
113	Melt-filled hybrid fractures in the oceanic mantle: Melt enhanced deformation during along-axis flow beneath a propagating spreading ridge axis. Earth and Planetary Science Letters, 2008, 273, 270-278.	1.8	4
114	Generation of unstructured meshes in 2-D, 3-D, and spherical geometries with embedded high-resolution sub-regions. Computers and Geosciences, 2019, 133, 104324.	2.0	4
115	Modeling Trench Sedimentâ€Controlled Flow in Subduction Channels: Implications for the Topographic Evolution of the Central Andean Fore Arc. Journal of Geophysical Research: Solid Earth, 2018, 123, 9121-9135.	1.4	3
116	The life cycle of subcontinental peridotites: From rifted continental margins to mountains via subduction processes. Geology, 2020, 48, 1154-1158.	2.0	3
117	Transmogrification of ocean into continent: implications for continental evolution. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2122694119.	3.3	3
118	Reply [to â€œComment on â€˜The genesis of oceanic crust: Magma injection, hydrothermal circulation, and crustal flowâ€™ by Jason Phipps Morgan and Y. John Chenâ€]. Journal of Geophysical Research, 1994, 99, 12031-12032.	3.3	2
119	The ultraslow difference. Nature, 2003, 426, 401-401.	13.7	2
120	Mechanism of progressive broad deformation from oceanic transform valley to off-transform faulting and rifting. Innovation(China), 2022, 3, 100193.	5.2	2
121	Reply to A. Glikson's comment on â€˜Contemporaneous mass extinctions, continental flood basalts, and â€˜impact signalsâ€™: Are mantle plume-induced lithospheric gas explosions the causal link?â€™ [EPSL 217 (2004) 263â€"285]. Earth and Planetary Science Letters, 2005, 236, 938-941.	1.8	1
122	Reply to Comment on: â€œDirect evidence of ancient shock metamorphism at the site of the 1908 Tunguska eventâ€ by P. Vannucchi et al. [Earth Planet. Sci. Lett. 409 (2015) 168â€"174]. Earth and Planetary Science Letters, 2015, 419, 224-227.	1.8	1
123	Shapeâ€preserving finite elements in cylindrical and spherical geometries: The double Jacobian approach. International Journal for Numerical Methods in Fluids, 2020, 92, 635-668.	0.9	1
124	A new type of article for Terra Nova. Terra Nova, 2015, 27, 399-399.	0.9	0
125	Reply to comment on â€œDirect evidence of ancient shock metamorphism at the site of the 1908 Tunguska eventâ€•by Vannucchi et al. (Earth Planet. Sci. Lett. 409 (2015) 168â€"174). Earth and Planetary Science Letters, 2015, 415, 215.	1.8	0
126	Debate articles: have changes in Quaternary climate affected erosion?. Terra Nova, 2016, 28, 1-1.	0.9	0

#	Article	IF	Citations
127	HOW TO WRITE A GOOD ARTICLE FOR PUBLICATION IN TERRA NOVA. Terra Nova, 2018, 30, 389-392.	0.9	0
128	The lifecycle of sub-continental peridotites: From rifted continental margins to mountains via subduction processes: REPLY. Geology, 2021, 49, e522-e522.	2.0	0
129	A strength inversion origin for non-volcanic tremor. Nature Communications, 2022, 13, 2311.	5.8	0