Jason Phipps Morgan

List of Publications by Citations

125	8,214	46	89
papers	citations	h-index	g-index

137	8,884	8.7	6.02
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
125	Bending-related faulting and mantle serpentinization at the Middle America trench. *Nature*, **2003**, 425, 367-73	50.4	703
124	Serpentine and the subduction zone water cycle. *Earth and Planetary Science Letters*, **2004**, 223, 17-34	5.3	540
123	Deep roots of the Messinian salinity crisis. *Nature*, **2003**, 422, 602-6	50.4	439
122	The genesis of oceanic crust: Magma injection, hydrothermal circulation, and crustal flow. *Journal of Geophysical Research*, **1993**, 98, 6283-6297		407
121	Petrological Systematics of Mid-Ocean Ridge Basalts: Constraints on Melt Generation Beneath Ocean Ridges. *Geophysical Monograph Series*, **2013**, 183-280	1.1	342
120	Three-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		234
119	The spreading rate dependence of three-dimensional mid-ocean ridge gravity structure. *Geophysical Research Letters*, **1992**, 19, 13-16	4.9	232
118	Relationship between bend-faulting at trenches and intermediate-depth seismicity. *Geochemistry, Geophysics, Geosystems*, **2005**, 6, n/a-n/a	3.6	203
117	Dependence of ridge-axis morphology on magma supply and spreading rate. *Nature*, **1993**, 364, 706-708	50.4	187
116	Mechanisms for the origin of mid-ocean ridge axial topography: Implications for the thermal and mechanical structure of accreting plate boundaries. *Journal of Geophysical Research*, **1987**, 92, 12823		183
115	Testing the fixed hotspot hypothesis using 40Ar/39Ar age progressions along seamount trails. *Earth and Planetary Science Letters*, **2001**, 185, 237-252	5.3	182
114	Hotspot melting generates both hotspot volcanism and a hotspot swell?. *Journal of Geophysical Research*, **1995**, 100, 8045-8062		179
113	Spreading rate dependence of three-dimensional structure in oceanic spreading centres. *Nature*, **1990**, 348, 325-328	50.4	178
112	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	5.3	165
111	Melt migration beneath mid-ocean spreading centers. *Geophysical Research Letters*, **1987**, 14, 1238-1241	4.9	164
110	Crustal redistribution, crust–mantle recycling and Phanerozoic evolution of the continental crust. *Earth-Science Reviews*, **2009**, 97, 80-104	10.2	156
109	Are the regional variations in Central American arc lavas due to differing basaltic versus peridotitic slab sources of fluids?. *Geology*, **2002**, 30, 1035	5	153

108	Causes and rate-limiting mechanisms of ridge propagation: A fracture mechanics model. *Journal of Geophysical Research*, **1985**, 90, 8603-8612		146
107	Observational hints for a plume-fed, suboceanic asthenosphere and its role in mantle convection. *Journal of Geophysical Research*, **1995**, 100, 12753-12767		126
106	Flattening of the sea-floor depth-age curve as a response to asthenospheric flow. *Nature*, **1992**, 359, 524-527	50.4	115
105	Existence of complex spatial zonation in the Galápagos plume. *Geology*, **2000**, 28, 435	5	114
104	The relationship between near-axis hydrothermal cooling and the spreading rate of mid-ocean ridges. *Earth and Planetary Science Letters*, **1996**, 142, 137-145	5.3	110
103	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	2.6	105
102	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	5.3	97
101	Thermodynamics of pressure release melting of a veined plum pudding mantle. *Geochemistry, Geophysics, Geosystems*, **2001**, 2, n/a-n/a	3.6	93
100	The rift to drift transition at non-volcanic margins: Insights from numerical modelling. *Earth and Planetary Science Letters*, **2006**, 244, 458-473	5.3	90
99	How and when plume zonation appeared during the 132 Myr evolution of the Tristan Hotspot. *Nature Communications*, **2015**, 6, 7799	17.4	84
98	Three-dimensional mantle convection beneath a segmented spreading center: Implications for along-axis variations in crustal thickness and gravity. *Journal of Geophysical Research*, **1993**, 98, 21977-21995		84
97	Contemporaneous mass extinctions, continental flood basalts, and “impact signals” are mantle plume-induced lithospheric gas explosions the causal link?. *Earth and Planetary Science Letters*, **2004**, 217, 263-284	5.3	78
96	The role of mantle-depletion and melt-retention buoyancy in spreading-center segmentation. *Earth and Planetary Science Letters*, **1994**, 125, 221-234	5.3	76
95	Lithospheric stress near a ridge-transform intersection. *Geophysical Research Letters*, **1984**, 11, 113-116	4.9	68
94	Hybrid shallow on-axis and deep off-axis hydrothermal circulation at fast-spreading ridges. *Nature*, **2014**, 508, 508-12	50.4	67
93	Intra-arc extension in Central America: Links between plate motions, tectonics, volcanism, and geochemistry. *Earth and Planetary Science Letters*, **2008**, 272, 365-371	5.3	67
92	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	5	65
91	Geophysical Constraints on Mantle Flow and Melt Generation Beneath Mid-Ocean Ridges. *Geophysical Monograph Series*, **2013**, 1-65	1.1	61

90	Near-isothermal conditions in the middle and lower crust induced by melt migration. *Nature*, **2008**, 452, 80-3	50.4	60
89	Viscous Energy Dissipation and Strain Partitioning in Partially Molten Rocks. *Journal of Petrology*, **2005**, 46, 2569-2592	3.9	60
88	Seismic constraints on mantle flow and topography of the 660-km discontinuity: evidence for whole-mantle convection. *Nature*, **1993**, 365, 506-511	50.4	60
87	Phase Equilibria Constraints on the Origin of Ocean Floor Basalts. *Geophysical Monograph Series*, **2013**, 67-102	1.1	56
86	Continental geotherm and the evolution of rifted margins. *Geology*, **2004**, 32, 133	5	56
85	Systematics of ridge propagation south of 30°S. *Earth and Planetary Science Letters*, **1994**, 121, 245-258	5.3	55
84	Feedbacks between mantle hydration and hydrothermal convection at ocean spreading centers. *Earth and Planetary Science Letters*, **2010**, 296, 34-44	5.3	53
83	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		53
82	Convection and melting at mid-ocean ridges. *Journal of Geophysical Research*, **1993**, 98, 19477-19503		53
81	Asthenosphere flow model of hotspot�ridge interactions: a comparison of Iceland and Kerguelen. *Earth and Planetary Science Letters*, **1998**, 161, 45-56	5.3	47
80	Intraplate termination of transform faulting within the Antarctic continent. *Earth and Planetary Science Letters*, **2007**, 260, 115-126	5.3	47
79	Australian-Antarctic discordance. *Geology*, **1991**, 19, 429	5	46
78	Morphology and tectonics of the Australian-Antarctic Discordance between 123° E and 128° E. *Marine Geophysical Researches*, **1993**, 15, 121-152	2.3	44
77	Toward a dynamic concept of the subduction channel at erosive convergent margins with implications for interplate material transfer. *Geochemistry, Geophysics, Geosystems*, **2012**, 13, n/a-n/a	3.6	43
76	Controls of faulting and reaction kinetics on serpentinization and double Benioff zones. *Geochemistry, Geophysics, Geosystems*, **2012**, 13,	3.6	41
75	Serpentinization and magmatism during extension at non-volcanic margins: the effect of initial lithospheric structure. *Geological Society Special Publication*, **2001**, 187, 551-576	1.7	41
74	The Physics of Magma Migration and Mantle Flow Beneath a Mid-Ocean Ridge. *Geophysical Monograph Series*, **2013**, 155-182	1.1	37
73	Transform zone migration: Implications of bookshelf faulting at oceanic and Icelandic propagating ridges. *Tectonics*, **1991**, 10, 920-935	4.3	33

72	Triple junction reorganization. *Journal of Geophysical Research*, **1988**, 93, 2981		33
71	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	5.3	32
70	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	5.3	32
69	Coupled mechanical and hydrothermal modeling of crustal accretion at intermediate to fast spreading ridges. *Earth and Planetary Science Letters*, **2011**, 311, 275-286	5.3	31
68	Thermal and rare gas evolution of the mantle. *Chemical Geology*, **1998**, 145, 431-445	4.2	31
67	Melting and mantle flow beneath a mid-ocean spreading center. *Earth and Planetary Science Letters*, **1992**, 111, 493-516	5.3	30
66	Modeling petrological geodynamics in the Earth's mantle. *Geochemistry, Geophysics, Geosystems*, **2009**, 10, n/a-n/a	3.6	29
65	First results from the Hawaiian SWELL Pilot Experiment. *Geophysical Research Letters*, **1999**, 26, 3397-3400	4.9	29
64	Small-Scale Convection and Mantle Melting Beneath Mid-Ocean Ridges. *Geophysical Monograph Series*, **2013**, 327-352	1.1	28
63	Lower Crustal Strength Controls on Melting and Serpentinization at Magma-Poor Margins: Potential Implications for the South Atlantic. *Geochemistry, Geophysics, Geosystems*, **2017**, 18, 4538-4557	3.6	28
62	On subducting slab entrainment of buoyant asthenosphere. *Terra Nova*, **2007**, 19, 167-173	3	27
61	The Pacific-Antarctic Ridge–Foundation hotspot interaction: a case study of a ridge approaching a hotspot. *Marine Geology*, **2000**, 167, 61-84	3.3	27
60	Thermomechanical Implications of Sediment Transport for the Architecture and Evolution of Continental Rifts and Margins. *Tectonics*, **2019**, 38, 641-665	4.3	27
59	Origin and dynamics of depositionary subduction margins. *Geochemistry, Geophysics, Geosystems*, **2016**, 17, 1966-1974	3.6	26
58	2D and 3D numerical models on compositionally buoyant diapirs in the mantle wedge. *Earth and Planetary Science Letters*, **2011**, 311, 53-68	5.3	25
57	Seismic structure of an oceanic core complex at the Mid-Atlantic Ridge, 22°19?N. *Journal of Geophysical Research*, **2010**, 115,		25
56	Nonlinear 40Ar/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	3.6	25
55	Variation of effective elastic thickness and melt production along the Deccan–Reunion hotspot track. *Earth and Planetary Science Letters*, **2007**, 264, 9-21	5.3	25

54	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	2.3	25
53	Plate velocities in the hotspot reference frame **2007**, 65-78		24
52	Deformation-related volcanism in the Pacific Ocean linked to the Hawaiian–Emperor bend. *Nature Geoscience*, **2015**, 8, 393-397	18.3	21
51	Mantle Flow and Melt Migration Beneath Oceanic Ridges: Models Derived from Observations in Ophiolites. *Geophysical Monograph Series*, **2013**, 123-154	1.1	21
50	Vug waves: A mechanism for coupled rock deformation and fluid migration. *Geochemistry, Geophysics, Geosystems*, **2005**, 6, n/a-n/a	3.6	21
49	Isotope topology of individual hotspot basalt arrays: Mixing curves or melt extraction trajectories?. *Geochemistry, Geophysics, Geosystems*, **2000**, 1, n/a-n/a	3.6	20
48	Inversion of combined gravity and bathymetry data for crustal structure: A prescription for downward continuation. *Earth and Planetary Science Letters*, **1993**, 119, 167-179	5.3	20
47	Subduction erosion, and the de-construction of continental crust: The Central America case and its global implications. *Gondwana Research*, **2016**, 40, 184-198	5.1	20
46	Seamount chain–subduction zone interactions: Implications for accretionary and erosive subduction zone behavior. *Geology*, **2018**, 46, 367-370	5	20
45	New observational and experimental evidence for a plume-fed asthenosphere boundary layer in mantle convection. *Earth and Planetary Science Letters*, **2013**, 366, 99-111	5.3	18
44	Mid-Ocean Ridge Dynamics: Observations and Theory. *Reviews of Geophysics*, **1991**, 29, 807-822	23.1	18
43	A three-dimensional gravity study of the 95.5°W propagating rift in the Galapagos spreading center. *Earth and Planetary Science Letters*, **1987**, 81, 289-298	5.3	18
42	The Effects of Plate Thickening on Three-Dimensional, Passive Flow of the Mantle Beneath Mid-Ocean Ridges. *Geophysical Monograph Series*, **2013**, 311-326	1.1	17
41	North Arch volcanic fields near Hawaii are evidence favouring the restite-root hypothesis for the origin of hotspot swells. *Terra Nova*, **2009**, 21, 452-466	3	17
40	Spatial variations of incoming sediments at the northeastern Japan arc and their implications for megathrust earthquakes. *Geology*, **2020**, 48, 614-619	5	15
39	Craton Destruction 1: Cratonic Keel Delamination Along a Weak Midlithospheric Discontinuity Layer. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 10,040-10,068	3.6	15
38	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	4.3	15
37	Enhanced Mantle Upwelling/Melting Caused Segment Propagation, Oceanic Core Complex Die Off, and the Death of a Transform Fault: The Mid-Atlantic Ridge at 21.5°N. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 941-956	3.6	13

36	Australian Antarctic Discordance as a simple mantle boundary. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	12
35	Global plume-fed asthenosphere flow□ Motivation and model development **2007**, 165-188		12
34	Geoid effects of lateral viscosity variation near the top of the mantle: A 2D model. *Earth and Planetary Science Letters*, **1993**, 119, 617-625	5.3	12
33	Extensional tectonics and two-stage crustal accretion at oceanic transform faults. *Nature*, **2021**, 591, 402-407	50.4	12
32	The Hawaiian SWELL pilot experiment□Evidence for lithosphere rejuvenation from ocean bottom surface wave data **2007**, 209-233		11
31	Direct evidence of ancient shock metamorphism at the site of the 1908 Tunguska event. *Earth and Planetary Science Letters*, **2015**, 409, 168-174	5.3	10
30	87Sr/86Sr in recent accumulations of calcium sulfate on landscapes of hyperarid settings: A bimodal altitudinal dependence for northern Chile (19.5°S□1.5°S). *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 4311-4328	3.6	10
29	A new free-surface stabilization algorithm for geodynamical modelling: Theory and numerical tests. *Physics of the Earth and Planetary Interiors*, **2015**, 246, 41-51	2.3	10
28	Flood basalts and ocean island basalts: A deep source or shallow entrainment?. *Earth and Planetary Science Letters*, **2009**, 284, 553-563	5.3	10
27	Earth's deepest earthquake swarms track fluid ascent beneath nascent arc volcanoes. *Earth and Planetary Science Letters*, **2019**, 521, 25-36	5.3	9
26	Craton Destruction 2: Evolution of Cratonic Lithosphere After a Rapid Keel Delamination Event. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 10,069-10,090	3.6	9
25	Implications of Subduction Rehydration for Earth's Deep Water Cycle. *Geophysical Monograph Series* , **2013**, 263-276	1.1	9
24	Existence of complex spatial zonation in the Gal□pagos plume. *Geology*, **2000**, 28, 435-438	5	7
23	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	11.5	7
22	Paired EMI-HIMU hotspots in the South Atlantic-Starting plume heads trigger compositionally distinct secondary plumes?. *Science Advances*, **2020**, 6, eaba0282	14.3	6
21	Global plume-fed asthenosphere flow□: Application to the geochemical segmentation of mid-ocean ridges **2007**, 189-208		5
20	Connection Between a Subcontinental Plume and the Mid-Lithospheric Discontinuity Leads to Fast and Intense Craton Lithospheric Thinning. *Tectonics*, **2021**, 40, e2021TC006711	4.3	5
19	LaCoDe: A Lagrangian two-dimensional thermo-mechanical code for large-strain compressible visco-elastic geodynamical modeling. *Tectonophysics*, **2019**, 767, 228173	3.1	4

18	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	5.3	4
17	The Current Energetics of Earth's Interior: A Gravitational Energy Perspective. *Frontiers in Earth Science*, **2016**, 4,	3.5	4
16	Overview of the Tectonics and Geodynamics of Costa Rica. *Active Volcanoes of the World*, **2019**, 1-12	0.4	3
15	Modeling Trench Sediment-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	3.6	3
14	Generation of unstructured meshes in 2-D, 3-D, and spherical geometries with embedded high-resolution sub-regions. *Computers and Geosciences*, **2019**, 133, 104324	4.5	2
13	Shear Wave Splitting Evidence for Keel-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	3.6	2
12	Reply [to “Comment on “The genesis of oceanic crust: Magma injection, hydrothermal circulation, and crustal flow” by Jason Phipps Morgan and Y. John Chen”]. *Journal of Geophysical Research*, **1994** , 99, 12031-12032		2
11	The life cycle of subcontinental peridotites: From rifted continental margins to mountains via subduction processes. *Geology*, **2020**, 48, 1154-1158	5	2
10	Plume-Lithosphere Interaction and Delamination at Yellowstone and Its Implications for the Boundary of Craton Stability. *Geophysical Research Letters*, **2022**, 49,	4.9	1
9	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	11.5	1
8	Reply to Comment on: “Direct evidence of ancient shock metamorphism at the site of the 1908 Tunguska event” by P. Vannucchi et al. [Earth Planet. Sci. Lett. 409 (2015) 168–174]. *Earth and Planetary Science Letters*, **2015**, 419, 224-227	5.3	0
7	Reply to A. Glikson's comment on “Contemporaneous mass extinctions, continental flood basalts, and “impact signals”: Are mantle plume-induced lithospheric gas explosions the causal link?” [EPSL 217 (2004) 263–285]. *Earth and Planetary Science Letters*, **2005**, 236, 938-941	5.3	0
6	Crustal Structure Across the Extinct Mid-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	4.9	0
5	Reply to comment on “Direct evidence of ancient shock metamorphism at the site of the 1908 Tunguska event” by Vannucchi et al. (Earth Planet. Sci. Lett. 409 (2015) 168–174). *Earth and Planetary Science Letters*, **2015**, 415, 215	5.3	
4	Mechanism of progressive broad deformation from oceanic transform valley to off-transform faulting and rifting.. *Innovation(China)*, **2022**, 3, 100193	17.8	
3	Shape-preserving finite elements in cylindrical and spherical geometries: The double Jacobian approach. *International Journal for Numerical Methods in Fluids*, **2020**, 92, 635-668	1.9	
2	The lifecycle of sub-continental peridotites: From rifted continental margins to mountains via subduction processes: REPLY. *Geology*, **2021**, 49, e522-e522	5	
1	A strength inversion origin for non-volcanic tremor.. *Nature Communications*, **2022**, 13, 2311	17.4	