Jason Phipps Morgan

List of Publications by Year in Descending Order

125 papers	8,214 citations	46 h-index	89 g-index
137 ext. papers	8,884 ext. citations	8.7 avg, IF	6.02 L-index

#	Paper	IF	Citations
125	Plume-Lithosphere Interaction and Delamination at Yellowstone and Its Implications for the Boundary of Craton Stability. *Geophysical Research Letters*, **2022**, 49,	4.9	1
124	Mechanism of progressive broad deformation from oceanic transform valley to off-transform faulting and rifting.. *Innovation(China)*, **2022**, 3, 100193	17.8	
123	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
122	A strength inversion origin for non-volcanic tremor.. *Nature Communications*, **2022**, 13, 2311	17.4	
121	Extensional tectonics and two-stage crustal accretion at oceanic transform faults. *Nature*, **2021**, 591, 402-407	50.4	12
120	The lifecycle of sub-continental peridotites: From rifted continental margins to mountains via subduction processes: REPLY. *Geology*, **2021**, 49, e522-e522	5	
119	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
118	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
117	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
116	Paired EMI-HIMU hotspots in the South Atlantic-Starting plume heads trigger compositionally distinct secondary plumes?. *Science Advances*, **2020**, 6, eaba0282	14.3	6
115	Spatial variations of incoming sediments at the northeastern Japan arc and their implications for megathrust earthquakes. *Geology*, **2020**, 48, 614-619	5	15
114	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	
113	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
112	The life cycle of subcontinental peridotites: From rifted continental margins to mountains via subduction processes. *Geology*, **2020**, 48, 1154-1158	5	2
111	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
110	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
109	Earth's deepest earthquake swarms track fluid ascent beneath nascent arc volcanoes. *Earth and Planetary Science Letters*, **2019**, 521, 25-36	5.3	9

108	Overview of the Tectonics and Geodynamics of Costa Rica. *Active Volcanoes of the World*, **2019**, 1-12	0.4	3
107	LaCoDe: A Lagrangian two-dimensional thermo-mechanical code for large-strain compressible visco-elastic geodynamical modeling. *Tectonophysics*, **2019**, 767, 228173	3.1	4
106	Thermomechanical Implications of Sediment Transport for the Architecture and Evolution of Continental Rifts and Margins. *Tectonics*, **2019**, 38, 641-665	4.3	27
105	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
104	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
103	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
102	Seamount chain–subduction zone interactions: Implications for accretionary and erosive subduction zone behavior. *Geology*, **2018**, 46, 367-370	5	20
101	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
100	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
99	The Current Energetics of Earth's Interior: A Gravitational Energy Perspective. *Frontiers in Earth Science*, **2016**, 4,	3.5	4
98	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
97	Origin and dynamics of depositionary subduction margins. *Geochemistry, Geophysics, Geosystems*, **2016**, 17, 1966-1974	3.6	26
96	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	
95	How and when plume zonation appeared during the 132 Myr evolution of the Tristan Hotspot. *Nature Communications*, **2015**, 6, 7799	17.4	84
94	Deformation-related volcanism in the Pacific Ocean linked to the Hawaiian–Emperor bend. *Nature Geoscience*, **2015**, 8, 393-397	18.3	21
93	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
92	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
91	87Sr/86Sr in recent accumulations of calcium sulfate on landscapes of hyperarid settings: A bimodal altitudinal dependence for northern Chile (19.5°S–21.5°S). *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 4311-4328	3.6	10

90	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
89	Hybrid shallow on-axis and deep off-axis hydrothermal circulation at fast-spreading ridges. *Nature*, **2014**, 508, 508-12	50.4	67
88	Small-Scale Convection and Mantle Melting Beneath Mid-Ocean Ridges. *Geophysical Monograph Series*, **2013**, 327-352	1.1	28
87	Implications of Subduction Rehydration for Earth's Deep Water Cycle. *Geophysical Monograph Series* , **2013**, 263-276	1.1	9
86	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
85	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
84	Petrological Systematics of Mid-Ocean Ridge Basalts: Constraints on Melt Generation Beneath Ocean Ridges. *Geophysical Monograph Series*, **2013**, 183-280	1.1	342
83	Geophysical Constraints on Mantle Flow and Melt Generation Beneath Mid-Ocean Ridges. *Geophysical Monograph Series*, **2013**, 1-65	1.1	61
82	Phase Equilibria Constraints on the Origin of Ocean Floor Basalts. *Geophysical Monograph Series*, **2013**, 67-102	1.1	56
81	Mantle Flow and Melt Migration Beneath Oceanic Ridges: Models Derived from Observations in Ophiolites. *Geophysical Monograph Series*, **2013**, 123-154	1.1	21
80	The Physics of Magma Migration and Mantle Flow Beneath a Mid-Ocean Ridge. *Geophysical Monograph Series*, **2013**, 155-182	1.1	37
79	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
78	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
77	Controls of faulting and reaction kinetics on serpentinization and double Benioff zones. *Geochemistry, Geophysics, Geosystems*, **2012**, 13,	3.6	41
76	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
75	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
74	Seismic structure of an oceanic core complex at the Mid-Atlantic Ridge, 22°19?N. *Journal of Geophysical Research*, **2010**, 115,		25
73	Feedbacks between mantle hydration and hydrothermal convection at ocean spreading centers. *Earth and Planetary Science Letters*, **2010**, 296, 34-44	5.3	53

72	Australian Antarctic Discordance as a simple mantle boundary. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	12
71	Crustal redistribution, crust–mantle recycling and Phanerozoic evolution of the continental crust. *Earth-Science Reviews*, **2009**, 97, 80-104	10.2	156
70	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
69	Flood basalts and ocean island basalts: A deep source or shallow entrainment?. *Earth and Planetary Science Letters*, **2009**, 284, 553-563	5.3	10
68	Modeling petrological geodynamics in the Earth's mantle. *Geochemistry, Geophysics, Geosystems*, **2009**, 10, n/a-n/a	3.6	29
67	Near-isothermal conditions in the middle and lower crust induced by melt migration. *Nature*, **2008**, 452, 80-3	50.4	60
66	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
65	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
64	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
63	On subducting slab entrainment of buoyant asthenosphere. *Terra Nova*, **2007**, 19, 167-173	3	27
62	Global plume-fed asthenosphere flow: Application to the geochemical segmentation of mid-ocean ridges **2007**, 189-208		5
61	The Hawaiian SWELL pilot experiment: Evidence for lithosphere rejuvenation from ocean bottom surface wave data **2007**, 209-233		11
60	Global plume-fed asthenosphere flow: Motivation and model development **2007**, 165-188		12
59	Plate velocities in the hotspot reference frame **2007**, 65-78		24
58	Intraplate termination of transform faulting within the Antarctic continent. *Earth and Planetary Science Letters*, **2007**, 260, 115-126	5.3	47
57	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
56	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
55	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

54	Reply to A. Glikson's comment on Contemporaneous mass extinctions, continental flood basalts, and impact signalsAre mantle plume-induced lithospheric gas explosions the causal link?[EPSL 217 (2004) 26385]. *Earth and Planetary Science Letters*, **2005**, 236, 938-941	5.3	0
53	Vug waves: A mechanism for coupled rock deformation and fluid migration. *Geochemistry, Geophysics, Geosystems*, **2005**, 6, n/a-n/a	3.6	21
52	Relationship between bend-faulting at trenches and intermediate-depth seismicity. *Geochemistry, Geophysics, Geosystems*, **2005**, 6, n/a-n/a	3.6	203
51	Viscous Energy Dissipation and Strain Partitioning in Partially Molten Rocks. *Journal of Petrology*, **2005**, 46, 2569-2592	3.9	60
50	Continental geotherm and the evolution of rifted margins. *Geology*, **2004**, 32, 133	5	56
49	Serpentine and the subduction zone water cycle. *Earth and Planetary Science Letters*, **2004**, 223, 17-34	5.3	540
48	Contemporaneous mass extinctions, continental flood basalts, and impact signalsare mantle plume-induced lithospheric gas explosions the causal link?. *Earth and Planetary Science Letters*, **2004**, 217, 263-284	5.3	78
47	Deep roots of the Messinian salinity crisis. *Nature*, **2003**, 422, 602-6	50.4	439
46	Bending-related faulting and mantle serpentinization at the Middle America trench. *Nature*, **2003**, 425, 367-73	50.4	703
45	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
44	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
43	Thermodynamics of pressure release melting of a veined plum pudding mantle. *Geochemistry, Geophysics, Geosystems*, **2001**, 2, n/a-n/a	3.6	93
42	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
41	Existence of complex spatial zonation in the Galpagos plume. *Geology*, **2000**, 28, 435	5	114
40	The Pacific-Antarctic Ridgefoundation hotspot interaction: a case study of a ridge approaching a hotspot. *Marine Geology*, **2000**, 167, 61-84	3.3	27
39	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
38	Existence of complex spatial zonation in the Galpagos plume. *Geology*, **2000**, 28, 435-438	5	7
37	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

36	First results from the Hawaiian SWELL Pilot Experiment. *Geophysical Research Letters*, **1999**, 26, 3397-3400	4.9	29
35	Thermal and rare gas evolution of the mantle. *Chemical Geology*, **1998**, 145, 431-445	4.2	31
34	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
33	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
32	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
31	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
30	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
29	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
28	Hotspot melting generates both hotspot volcanism and a hotspot swell?. *Journal of Geophysical Research*, **1995**, 100, 8045-8062		179
27	Observational hints for a plume-fed, suboceanic asthenosphere and its role in mantle convection. *Journal of Geophysical Research*, **1995**, 100, 12753-12767		126
26	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
25	Systematics of ridge propagation south of 30°S. *Earth and Planetary Science Letters*, **1994**, 121, 245-258	5.3	55
24	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
23	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
22	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
21	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
20	The genesis of oceanic crust: Magma injection, hydrothermal circulation, and crustal flow. *Journal of Geophysical Research*, **1993**, 98, 6283-6297		407
19	Convection and melting at mid-ocean ridges. *Journal of Geophysical Research*, **1993**, 98, 19477-19503		53

18	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
17	Morphology and tectonics of the Australian-Antarctic Discordance between 123° E and 128° E. *Marine Geophysical Researches*, **1993**, 15, 121-152	2.3	44
16	Dependence of ridge-axis morphology on magma supply and spreading rate. *Nature*, **1993**, 364, 706-708	50.4	187
15	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
14	The spreading rate dependence of three-dimensional mid-ocean ridge gravity structure. *Geophysical Research Letters*, **1992**, 19, 13-16	4.9	232
13	Melting and mantle flow beneath a mid-ocean spreading center. *Earth and Planetary Science Letters* , **1992**, 111, 493-516	5.3	30
12	Flattening of the sea-floor depth-age curve as a response to asthenospheric flow. *Nature*, **1992**, 359, 524-527	50.4	115
11	Australian-Antarctic discordance. *Geology*, **1991**, 19, 429	5	46
10	Transform zone migration: Implications of bookshelf faulting at oceanic and Icelandic propagating ridges. *Tectonics*, **1991**, 10, 920-935	4.3	33
9	Mid-Ocean Ridge Dynamics: Observations and Theory. *Reviews of Geophysics*, **1991**, 29, 807-822	23.1	18
8	Spreading rate dependence of three-dimensional structure in oceanic spreading centres. *Nature*, **1990**, 348, 325-328	50.4	178
7	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
6	Triple junction reorganization. *Journal of Geophysical Research*, **1988**, 93, 2981		33
5	Melt migration beneath mid-ocean spreading centers. *Geophysical Research Letters*, **1987**, 14, 1238-1241	4.9	164
4	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
3	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
2	Causes and rate-limiting mechanisms of ridge propagation: A fracture mechanics model. *Journal of Geophysical Research*, **1985**, 90, 8603-8612		146
1	Lithospheric stress near a ridge-transform intersection. *Geophysical Research Letters*, **1984**, 11, 113-116	4.9	68