Bernhard Steinberger

List of Publications by Year
in descending order

98	11,001	31976 53	39675 94
papers	citations	h-index	g-index

113	113	113	6200
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mantle convection and possible mantle plumes beneath Antarctica â€“ insights from geodynamic models and implications for topography. Geological Society Memoir, 2023, 56, 253-266.	1.7	10
2	Spatial Characteristics of Recycled and Primordial Reservoirs in the Deep Mantle. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009525.	2.5	20
3	The supercontinent cycle. Nature Reviews Earth & Environment, 2021, 2, 358-374.	29.7	102
4	Mantle plumes and their role in Earth processes. Nature Reviews Earth & Environment, 2021, 2, 382-401.	29.7	78
5	A record of plume-induced plate rotation triggering subduction initiation. Nature Geoscience, 2021, 14, 626-630.	12.9	50
6	The Indian Ocean Geoid Low at a plume-slab overpass. Tectonophysics, 2021, 817, 229037.	2.2	9
7	Glacialâ€Isostatic Adjustment Models Using Geodynamically Constrained 3D Earth Structures. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009853.	2.5	13
8	Increased density of large low-velocity provinces recovered by seismologically constrained gravity inversion. Solid Earth, 2020, 11, 1551-1569.	2.8	0
9	Pacificâ€Panthalassic Reconstructions: Overview, Errata and the Way Forward. Geochemistry, Geophysics, Geosystems, 2019, 20, 3659-3689.	2.5	79
10	Yellowstone Plume Conduit Tilt Caused by Largeâ€Scale Mantle Flow. Geochemistry, Geophysics, Geosystems, 2019, 20, 5896-5912.	2.5	11
11	Widespread volcanism in the Greenlandâ€“North Atlantic region explained by the Iceland plume. Nature Geoscience, 2019, 12, 61-68.	12.9	57
12	On the amplitude of dynamic topography at spherical harmonic degree two. Tectonophysics, 2019, 760, 221-228.	2.2	32
13	On the relative motions of long-lived Pacific mantle plumes. Nature Communications, 2018, 9, 854.	12.8	55
14	Comparison of gravimetric and mantle flow solutions for sub-lithopsheric stress modeling and their combination. Geophysical Journal International, 2018, 213, 1013-1028.	2.4	8
15	Evaluating the Influence of Plate Boundary Friction and Mantle Viscosity on Plate Velocities. Geochemistry, Geophysics, Geosystems, 2018, 19, 642-666.	2.5	13
16	Mantle flow influence on subduction evolution. Earth and Planetary Science Letters, 2018, 489, 258-266.	4.4	14
17	A comparison of lithospheric thickness models. Tectonophysics, 2018, 746, 325-338.	2.2	69
18	Variable Melt Production Rate of the Kerguelen HotSpot Due To Longâ€Term Plumeâ€Ridge Interaction. Geophysical Research Letters, 2018, 45, 126-136.	4.0	17

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19	What drives 20th century polar motion?. Earth and Planetary Science Letters, 2018, 502, 126-132.	4.4	40
20	Inferences on the mantle viscosity structure and the post-overturn evolutionary state of Venus. Icarus, 2018, 313, 107-123.	2.5	32
21	Effects of upper mantle heterogeneities on the lithospheric stress field and dynamic topography. Solid Earth, 2018, 9, 649-668.	2.8	22
22	Seismic structure of the lithosphere beneath <scp>NW</scp><scp>N</scp>amibia: Impact of the <scp>T</scp>ristan da <scp>C</scp>unha mantle plume. Geochemistry, Geophysics, Geosystems, 2017, 18, 125-141.	2.5	14
23	Limited true polar wander as evidence that Earth's nonhydrostatic shape is persistently triaxial. Geophysical Research Letters, 2017, 44, 827-834.	4.0	12
24	Pacific plate motion change caused the Hawaiian-Emperor Bend. Nature Communications, 2017, 8, 15660.	12.8	68
25	The Importance of Upper Mantle Heterogeneity in Generating the Indian Ocean Geoid Low. Geophysical Research Letters, 2017, 44, 9707-9715.	4.0	37
26	How plumeâ€ridge interaction shapes the crustal thickness pattern of the <scp>R</scp>Ã©union hotspot track. Geochemistry, Geophysics, Geosystems, 2017, 18, 2930-2948.	2.5	26
27	A failure to reject: Testing the correlation between large igneous provinces and deep mantle structures with EDF statistics. Geochemistry, Geophysics, Geosystems, 2016, 17, 1130-1163.	2.5	60
28	Major influence of plumeâ€ridge interaction, lithosphere thickness variations, and global mantle flow on hotspot volcanismâ€"The example of <scp>T</scp>ristan. Geochemistry, Geophysics, Geosystems, 2016, 17, 1454-1479.	2.5	41
29	Melting at the base of the Greenland ice sheet explained by Iceland hotspot history. Nature Geoscience, 2016, 9, 366-369.	12.9	91
30	Topography caused by mantle density variations: observation-based estimates and models derived from tomography and lithosphere thickness. Geophysical Journal International, 2016, 205, 604-621.	2.4	67
31	Earth evolution and dynamicsâ€"a tribute to Kevin Burke. Canadian Journal of Earth Sciences, 2016, 53, 1073-1087.	1.3	60
32	Survival of LLSVPs for billions of years in a vigorously convecting mantle: Replenishment and destruction of chemical anomaly. Journal of Geophysical Research: Solid Earth, 2015, 120, 3824-3847.	3.4	64
33	Dynamic Topography. , 2015, , .		0
34	Interior structure of the Moon: Constraints from seismic tomography, gravity and topography. Physics of the Earth and Planetary Interiors, 2015, 245, 26-39.	1.9	8
35	Continental crust beneath southeast Iceland. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1818-27.	7.1	102
36	The key role of global solidâ€Earth processes in preconditioning Greenland's glaciation since the Pliocene. Terra Nova, 2015, 27, 1-8.	2.1	38

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37	Deep mantle structure as a reference frame for movements in and on the Earth. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8735-8740.	7.1	200
38	Constraints on past plate and mantle motion from new ages for the Hawaiianâ€Emperor Seamount Chain. Geochemistry, Geophysics, Geosystems, 2013, 14, 4564-4584.	2.5	95
39	A Precambrian microcontinent in the Indian Ocean. Nature Geoscience, 2013, 6, 223-227.	12.9	147
40	Stability of active mantle upwelling revealed by net characteristics of plate tectonics. Nature, 2013, 498, 479-482.	27.8	71
41	Mantle Plumes and Hotspots. , 2013, , .		0
42	Conrad et al. reply. Nature, 2013, 503, E4-E4.	27.8	0
43	Subduction to the lower mantle â€“ a comparison between geodynamic and tomographic models. Solid Earth, 2012, 3, 415-432.	2.8	41
44	Possible links between long-term geomagnetic variations and whole-mantle convection processes. Nature Geoscience, 2012, 5, 526-533.	12.9	152
45	Absolute plate motions in a reference frame defined by moving hot spots in the Pacific, Atlantic, and Indian oceans. Journal of Geophysical Research, 2012, 117, .	3.3	252
46	A geodynamic model of plumes from the margins of Large Low Shear Velocity Provinces. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	142
47	On the role of slab pull in the Cenozoic motion of the Pacific plate. Geophysical Research Letters, 2012, 39, .	4.0	62
48	Why is the areoid like the residual geoid?. Geophysical Research Letters, 2012, 39, .	4.0	6
49	Phanerozoic polar wander, palaeogeography and dynamics. Earth-Science Reviews, 2012, 114, 325-368.	9.1	1,088
50	Could the mantle have caused subsidence of the Congo Basin?. Tectonophysics, 2012, 514-517, 62-80.	2.2	32
51	Acceleration and deceleration of India-Asia convergence since the Cretaceous: Roles of mantle plumes and continental collision. Journal of Geophysical Research, 2011, 116, .	3.3	315
52	Influence of variable uncertainties in seismic tomography models on constraining mantle viscosity from geoid observations. Physics of the Earth and Planetary Interiors, 2011, 184, 51-62.	1.9	18
53	Deep versus shallow origin of gravity anomalies, topography and volcanism on Earth, Venus and Mars. Icarus, 2010, 207, 564-577.	2.5	60
54	Diamonds sampled by plumes from the coreâ€“mantle boundary. Nature, 2010, 466, 352-355.	27.8	399

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55	Toward an explanation for the present and past locations of the poles. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	58
56	Plate tectonics and net lithosphere rotation over the past 150 My. Earth and Planetary Science Letters, 2010, 291, 106-112.	4.4	150
57	Integrating deep Earth dynamics in paleogeographic reconstructions of Australia. Tectonophysics, 2010, 483, 135-150.	2.2	64
58	Geodynamics of the Yellowstone hotspot and mantle plume: Seismic and GPS imaging, kinematics, and mantle flow. Journal of Volcanology and Geothermal Research, 2009, 188, 26-56.	2.1	210
59	New seismic constraints on the upper mantle structure of the Hainan plume. Physics of the Earth and Planetary Interiors, 2009, 173, 33-50.	1.9	176
60	Mantle flow models with coreâ€mantle boundary constraints and chemical heterogeneities in the lowermost mantle. Journal of Geophysical Research, 2008, 113, .	3.3	58
61	Global plate motion frames: Toward a unified model. Reviews of Geophysics, 2008, 46, .	23.0	531
62	Long-Term Sea-Level Fluctuations Driven by Ocean Basin Dynamics. Science, 2008, 319, 1357-1362.	12.6	610
63	On the statistical significance of correlations between synthetic mantle plumes and tomographic models. Physics of the Earth and Planetary Interiors, 2008, 167, 230-238.	1.9	31
64	Subsidence in intracontinental basins due to dynamic topography. Physics of the Earth and Planetary Interiors, 2008, 171, 252-264.	1.9	82
65	The effect of the large-scale mantle flow field on the Iceland hotspot track. Tectonophysics, 2008, 447, 5-18.	2.2	33
66	Plume Generation Zones at the margins of Large Low Shear Velocity Provinces on the coreâ€“mantle boundary. Earth and Planetary Science Letters, 2008, 265, 49-60.	4.4	422
67	Long term stability in deep mantle structure: Evidence from the ~ 300ÂMa Skagerrak-Centered Large Igneous Province (the SCLIP). Earth and Planetary Science Letters, 2008, 267, 444-452.	4.4	136
68	Longitude: Linking Earth's ancient surface to its deep interior. Earth and Planetary Science Letters, 2008, 276, 273-282.	4.4	146
69	Absolute plate motions and true polar wander in the absence of hotspot tracks. Nature, 2008, 452, 620-623.	27.8	213
70	Reconstructing Earth History in Three Dimensions. Science, 2008, 322, 866-868.	12.6	6
71	Plate-tectonic reconstructions predict part of the Hawaiian hotspot track to be preserved in the Bering Sea. Geology, 2007, 35, 407.	4.4	47
72	Effects of latent heat release at phase boundaries on flow in the Earthâ€™s mantle, phase boundary topography and dynamic topography at the Earthâ€™s surface. Physics of the Earth and Planetary Interiors, 2007, 164, 2-20.	1.9	96

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73	Mantle plumes: Dynamic models and seismic images. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	92
74	Conduit diameter and buoyant rising speed of mantle plumes: Implications for the motion of hot spots and shape of plume conduits. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	84
75	Origin of anomalous subsidence along the Northern South China Sea margin and its relationship to dynamic topography. Marine and Petroleum Geology, 2006, 23, 745-765.	3.3	242
76	Models of large-scale viscous flow in the Earth's mantle with constraints from mineral physics and surface observations. Geophysical Journal International, 2006, 167, 1461-1481.	2.4	249
77	Large igneous provinces generated from the margins of the large low-velocity provinces in the deep mantle. Geophysical Journal International, 2006, 167, 1447-1460.	2.4	280
78	On the effect of a low viscosity asthenosphere on the temporal change of the geoidâ€”A challenge for future gravity missions. Journal of Geodynamics, 2005, 39, 493-511.	1.6	8
79	On the uncertainties in hot spot reconstructions and the significance of moving hot spot reference frames. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	237
80	MANTLE PLUMES AND HOT SPOTS. , 2005, , 335-343.		1
81	Modelled palaeolatitudes for the Louisville hot spot and the Ontong Java Plateau. Geological Society Special Publication, 2004, 229, 21-30.	1.3	15
82	Prediction of Emperor-Hawaii seamount locations from a revised model of global plate motion and mantle flow. Nature, 2004, 430, 167-173.	27.8	324
83	Implications of a nonlinear40Ar/39Ar age progression along the Louisville seamount trail for models of fixed and moving hot spots. Geochemistry, Geophysics, Geosystems, 2004, 5, .	2.5	107
84	Genesis of the Western Samoa seamount province: age, geochemical fingerprint and tectonics. Earth and Planetary Science Letters, 2004, 227, 37-56.	4.4	96
85	The Emperor Seamounts: Southward Motion of the Hawaiian Hotspot Plume in Earth's Mantle. Science, 2003, 301, 1064-1069.	12.6	375
86	Geodynamic implications of moving Indian Ocean hotspots. Earth and Planetary Science Letters, 2003, 215, 151-168.	4.4	84
87	Two models in one. , 2003, , 1029-1033.		0
88	Motion of the Easter hot spot relative to Hawaii and Louisville hot spots. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-27.	2.5	33
89	An explanation for the shape of Earth's gravity spectrum based on viscous mantle flow models. Geophysical Research Letters, 2002, 29, 15-1.	4.0	6
90	Paleolatitudes of the Kerguelen hotspot: new paleomagnetic results and dynamic modeling. Earth and Planetary Science Letters, 2002, 203, 635-650.	4.4	45

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91	The convective mantle flow signal in rates of true polar wander. Geodynamic Series, 2002, , 233-256.	0.1	21
92	Large-scale lithospheric stress field and topography induced by global mantle circulation. Earth and Planetary Science Letters, 2001, 186, 75-91.	4.4	132
93	Effects of mantle flow on hotspot motion. Geophysical Monograph Series, 2000, , 377-398.	0.1	35
94	Slabs in the lower mantle â€" results of dynamic modelling compared with tomographic images and the geoid. Physics of the Earth and Planetary Interiors, 2000, 118, 241-257.	1.9	98
95	Plumes in a convecting mantle: Models and observations for individual hotspots. Journal of Geophysical Research, 2000, 105, 11127-11152.	3.3	341
96	Advection of plumes in mantle flow: implications for hotspot motion, mantle viscosity and plume distribution. Geophysical Journal International, 1998, 132, 412-434.	2.4	289
97	Changes of the Earth's rotation axis owing to advection of mantle density heterogeneities. Nature, 1997, 387, 169-173.	27.8	160
98	Movement of magnetic bacteria in time-varying magnetic fields. Journal of Fluid Mechanics, 1994, 273, 189-211.	3.4	47