

Bernhard Steinberger

List of Publications by Year in descending order

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98
papers

11,001
citations

31902

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113
docs citations

113
times ranked

6200
citing authors

#	ARTICLE	IF	CITATIONS
1	Mantle convection and possible mantle plumes beneath Antarctica – insights from geodynamic models and implications for topography. <i>Geological Society Memoir</i> , 2023, 56, 253-266.	0.9	10
2	Spatial Characteristics of Recycled and Primordial Reservoirs in the Deep Mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009525.	1.0	20
3	The supercontinent cycle. <i>Nature Reviews Earth & Environment</i> , 2021, 2, 358-374.	12.2	102
4	Mantle plumes and their role in Earth processes. <i>Nature Reviews Earth & Environment</i> , 2021, 2, 382-401.	12.2	78
5	A record of plume-induced plate rotation triggering subduction initiation. <i>Nature Geoscience</i> , 2021, 14, 626-630.	5.4	50
6	The Indian Ocean Geoid Low at a plume-slab overpass. <i>Tectonophysics</i> , 2021, 817, 229037.	0.9	9
7	Glacial–isostatic Adjustment Models Using Geodynamically Constrained 3D Earth Structures. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009853.	1.0	13
8	Increased density of large low-velocity provinces recovered by seismologically constrained gravity inversion. <i>Solid Earth</i> , 2020, 11, 1551-1569.	1.2	0
9	Pacific–Panthalassic Reconstructions: Overview, Errata and the Way Forward. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 3659-3689.	1.0	79
10	Yellowstone Plume Conduit Tilt Caused by Large–Scale Mantle Flow. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 5896-5912.	1.0	11
11	Widespread volcanism in the Greenland–North Atlantic region explained by the Iceland plume. <i>Nature Geoscience</i> , 2019, 12, 61-68.	5.4	57
12	On the amplitude of dynamic topography at spherical harmonic degree two. <i>Tectonophysics</i> , 2019, 760, 221-228.	0.9	32
13	On the relative motions of long-lived Pacific mantle plumes. <i>Nature Communications</i> , 2018, 9, 854.	5.8	55
14	Comparison of gravimetric and mantle flow solutions for sub-lithospheric stress modeling and their combination. <i>Geophysical Journal International</i> , 2018, 213, 1013-1028.	1.0	8
15	Evaluating the Influence of Plate Boundary Friction and Mantle Viscosity on Plate Velocities. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 642-666.	1.0	13
16	Mantle flow influence on subduction evolution. <i>Earth and Planetary Science Letters</i> , 2018, 489, 258-266.	1.8	14
17	A comparison of lithospheric thickness models. <i>Tectonophysics</i> , 2018, 746, 325-338.	0.9	69
18	Variable Melt Production Rate of the Kerguelen HotSpot Due To Long–Term Plume–Ridge Interaction. <i>Geophysical Research Letters</i> , 2018, 45, 126-136.	1.5	17

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19	What drives 20th century polar motion?. Earth and Planetary Science Letters, 2018, 502, 126-132.	1.8	40
20	Inferences on the mantle viscosity structure and the post-overtun evolutionary state of Venus. Icarus, 2018, 313, 107-123.	1.1	32
21	Effects of upper mantle heterogeneities on the lithospheric stress field and dynamic topography. Solid Earth, 2018, 9, 649-668.	1.2	22
22	Seismic structure of the lithosphere beneath <sc>NW</sc><sc>N</sc>amibia: Impact of the <sc>T</sc>ristan da <sc>C</sc>unha mantle plume. Geochemistry, Geophysics, Geosystems, 2017, 18, 125-141.	1.0	14
23	Limited true polar wander as evidence that Earth's nonhydrostatic shape is persistently triaxial. Geophysical Research Letters, 2017, 44, 827-834.	1.5	12
24	Pacific plate motion change caused the Hawaiian-Emperor Bend. Nature Communications, 2017, 8, 15660.	5.8	68
25	The Importance of Upper Mantle Heterogeneity in Generating the Indian Ocean Geoid Low. Geophysical Research Letters, 2017, 44, 9707-9715.	1.5	37
26	How plume-ridge interaction shapes the crustal thickness pattern of the <sc>R</sc>-Åunion hotspot track. Geochemistry, Geophysics, Geosystems, 2017, 18, 2930-2948.	1.0	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.	1.0	60
28	Major influence of plume-ridge interaction, lithosphere thickness variations, and global mantle flow on hotspot volcanism- The example of <sc>T</sc>ristan. Geochemistry, Geophysics, Geosystems, 2016, 17, 1454-1479.	1.0	41
29	Melting at the base of the Greenland ice sheet explained by Iceland hotspot history. Nature Geoscience, 2016, 9, 366-369.	5.4	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.	1.0	67
31	Earth evolution and dynamics- a tribute to Kevin Burke. Canadian Journal of Earth Sciences, 2016, 53, 1073-1087.	0.6	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.	1.4	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.	0.7	8
35	Continental crust beneath southeast Iceland. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1818-27.	3.3	102
36	The key role of global solid-Earth processes in preconditioning Greenland's glaciation since the Pliocene. Terra Nova, 2015, 27, 1-8.	0.9	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.	3.3	200
38	Constraints on past plate and mantle motion from new ages for the Hawaiian–Emperor Seamount Chain. Geochemistry, Geophysics, Geosystems, 2013, 14, 4564-4584.	1.0	95
39	A Precambrian microcontinent in the Indian Ocean. Nature Geoscience, 2013, 6, 223-227.	5.4	147
40	Stability of active mantle upwelling revealed by net characteristics of plate tectonics. Nature, 2013, 498, 479-482.	13.7	71
41	Mantle Plumes and Hotspots. , 2013, , .		0
42	Conrad et al. reply. Nature, 2013, 503, E4-E4.	13.7	0
43	Subduction to the lower mantle – a comparison between geodynamic and tomographic models. Solid Earth, 2012, 3, 415-432.	1.2	41
44	Possible links between long-term geomagnetic variations and whole-mantle convection processes. Nature Geoscience, 2012, 5, 526-533.	5.4	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, .	1.0	142
47	On the role of slab pull in the Cenozoic motion of the Pacific plate. Geophysical Research Letters, 2012, 39, .	1.5	62
48	Why is the areoid like the residual geoid?. Geophysical Research Letters, 2012, 39, .	1.5	6
49	Phanerozoic polar wander, palaeogeography and dynamics. Earth-Science Reviews, 2012, 114, 325-368.	4.0	1,088
50	Could the mantle have caused subsidence of the Congo Basin?. Tectonophysics, 2012, 514-517, 62-80.	0.9	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.	0.7	18
53	Deep versus shallow origin of gravity anomalies, topography and volcanism on Earth, Venus and Mars. Icarus, 2010, 207, 564-577.	1.1	60
54	Diamonds sampled by plumes from the core–mantle boundary. Nature, 2010, 466, 352-355.	13.7	399

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55	Toward an explanation for the present and past locations of the poles. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	58
56	Plate tectonics and net lithosphere rotation over the past 150 My. <i>Earth and Planetary Science Letters</i> , 2010, 291, 106-112.	1.8	150
57	Integrating deep Earth dynamics in paleogeographic reconstructions of Australia. <i>Tectonophysics</i> , 2010, 483, 135-150.	0.9	64
58	Geodynamics of the Yellowstone hotspot and mantle plume: Seismic and GPS imaging, kinematics, and mantle flow. <i>Journal of Volcanology and Geothermal Research</i> , 2009, 188, 26-56.	0.8	210
59	New seismic constraints on the upper mantle structure of the Hainan plume. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 173, 33-50.	0.7	176
60	Mantle flow models with core-mantle boundary constraints and chemical heterogeneities in the lowermost mantle. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	58
61	Global plate motion frames: Toward a unified model. <i>Reviews of Geophysics</i> , 2008, 46, .	9.0	531
62	Long-Term Sea-Level Fluctuations Driven by Ocean Basin Dynamics. <i>Science</i> , 2008, 319, 1357-1362.	6.0	610
63	On the statistical significance of correlations between synthetic mantle plumes and tomographic models. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 167, 230-238.	0.7	31
64	Subsidence in intracontinental basins due to dynamic topography. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 171, 252-264.	0.7	82
65	The effect of the large-scale mantle flow field on the Iceland hotspot track. <i>Tectonophysics</i> , 2008, 447, 5-18.	0.9	33
66	Plume Generation Zones at the margins of Large Low Shear Velocity Provinces on the core-mantle boundary. <i>Earth and Planetary Science Letters</i> , 2008, 265, 49-60.	1.8	422
67	Long term stability in deep mantle structure: Evidence from the ~ 300 Ma Skagerrak-Centered Large Igneous Province (the SCLIP). <i>Earth and Planetary Science Letters</i> , 2008, 267, 444-452.	1.8	136
68	Longitude: Linking Earth's ancient surface to its deep interior. <i>Earth and Planetary Science Letters</i> , 2008, 276, 273-282.	1.8	146
69	Absolute plate motions and true polar wander in the absence of hotspot tracks. <i>Nature</i> , 2008, 452, 620-623.	13.7	213
70	Reconstructing Earth History in Three Dimensions. <i>Science</i> , 2008, 322, 866-868.	6.0	6
71	Plate-tectonic reconstructions predict part of the Hawaiian hotspot track to be preserved in the Bering Sea. <i>Geology</i> , 2007, 35, 407.	2.0	47
72	Effects of latent heat release at phase boundaries on flow in the Earth's mantle, phase boundary topography and dynamic topography at the Earth's surface. <i>Physics of the Earth and Planetary Interiors</i> , 2007, 164, 2-20.	0.7	96

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73	Mantle plumes: Dynamic models and seismic images. <i>Geochemistry, Geophysics, Geosystems</i> , 2007, 8, .	1.0	92
74	Conduit diameter and buoyant rising speed of mantle plumes: Implications for the motion of hot spots and shape of plume conduits. <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	1.0	84
75	Origin of anomalous subsidence along the Northern South China Sea margin and its relationship to dynamic topography. <i>Marine and Petroleum Geology</i> , 2006, 23, 745-765.	1.5	242
76	Models of large-scale viscous flow in the Earth's mantle with constraints from mineral physics and surface observations. <i>Geophysical Journal International</i> , 2006, 167, 1461-1481.	1.0	249
77	Large igneous provinces generated from the margins of the large low-velocity provinces in the deep mantle. <i>Geophysical Journal International</i> , 2006, 167, 1447-1460.	1.0	280
78	On the effect of a low viscosity asthenosphere on the temporal change of the geoid – A challenge for future gravity missions. <i>Journal of Geodynamics</i> , 2005, 39, 493-511.	0.7	8
79	On the uncertainties in hot spot reconstructions and the significance of moving hot spot reference frames. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	1.0	237
80	MANTLE PLUMES AND HOT SPOTS. , 2005, , 335-343.		1
81	Modelled palaeolatitudes for the Louisville hot spot and the Ontong Java Plateau. <i>Geological Society Special Publication</i> , 2004, 229, 21-30.	0.8	15
82	Prediction of Emperor-Hawaii seamount locations from a revised model of global plate motion and mantle flow. <i>Nature</i> , 2004, 430, 167-173.	13.7	324
83	Implications of a nonlinear $^{40}\text{Ar}/^{39}\text{Ar}$ age progression along the Louisville seamount trail for models of fixed and moving hot spots. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, .	1.0	107
84	Genesis of the Western Samoa seamount province: age, geochemical fingerprint and tectonics. <i>Earth and Planetary Science Letters</i> , 2004, 227, 37-56.	1.8	96
85	The Emperor Seamounts: Southward Motion of the Hawaiian Hotspot Plume in Earth's Mantle. <i>Science</i> , 2003, 301, 1064-1069.	6.0	375
86	Geodynamic implications of moving Indian Ocean hotspots. <i>Earth and Planetary Science Letters</i> , 2003, 215, 151-168.	1.8	84
87	Two models in one. , 2003, , 1029-1033.		0
88	Motion of the Easter hot spot relative to Hawaii and Louisville hot spots. <i>Geochemistry, Geophysics, Geosystems</i> , 2002, 3, 1-27.	1.0	33
89	An explanation for the shape of Earth's gravity spectrum based on viscous mantle flow models. <i>Geophysical Research Letters</i> , 2002, 29, 15-1.	1.5	6
90	Paleolatitudes of the Kerguelen hotspot: new paleomagnetic results and dynamic modeling. <i>Earth and Planetary Science Letters</i> , 2002, 203, 635-650.	1.8	45

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91	The convective mantle flow signal in rates of true polar wander. <i>Geodynamic Series</i> , 2002, , 233-256.	0.1	21
92	Large-scale lithospheric stress field and topography induced by global mantle circulation. <i>Earth and Planetary Science Letters</i> , 2001, 186, 75-91.	1.8	132
93	Effects of mantle flow on hotspot motion. <i>Geophysical Monograph Series</i> , 2000, , 377-398.	0.1	35
94	Slabs in the lower mantle " results of dynamic modelling compared with tomographic images and the geoid. <i>Physics of the Earth and Planetary Interiors</i> , 2000, 118, 241-257.	0.7	98
95	Plumes in a convecting mantle: Models and observations for individual hotspots. <i>Journal of Geophysical Research</i> , 2000, 105, 11127-11152.	3.3	341
96	Advection of plumes in mantle flow: implications for hotspot motion, mantle viscosity and plume distribution. <i>Geophysical Journal International</i> , 1998, 132, 412-434.	1.0	289
97	Changes of the Earth's rotation axis owing to advection of mantle density heterogeneities. <i>Nature</i> , 1997, 387, 169-173.	13.7	160
98	Movement of magnetic bacteria in time-varying magnetic fields. <i>Journal of Fluid Mechanics</i> , 1994, 273, 189-211.	1.4	47