Hans-Peter Bunge

List of Publications by Year
in descending order

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45
papers

3,031
citations

201674
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docs citations

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times ranked

1778
citing authors

#	ARTICLE	IF	CITATIONS
1	Evidence for active upper mantle flow in the Atlantic and Indo-Australian realms since the Upper Jurassic from hiatus maps and spreading rate changes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	3
2	Global mantle flow retrodictions for the early Cenozoic using an adjoint method: evolving dynamic topographies, deep mantle structures, flow trajectories and sublithospheric stresses. Geophysical Journal International, 2021, 226, 1432-1460.	2.4	12
3	Yellowstone Plume Drives Neogene North American Plate Motion Change. Geophysical Research Letters, 2021, 48, e2021GL095079.	4.0	4
4	Continent-scale Hiatus Maps for the Atlantic Realm and Australia since the Upper Jurassic and links to mantle flow induced dynamic topography. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200390.	2.1	9
5	Impact of model inconsistencies on reconstructions of past mantle flow obtained using the adjoint method. Geophysical Journal International, 2020, 221, 617-639.	2.4	5
6	Hotspot motion caused the Hawaiian-Emperor Bend and LLSVPs are not fixed. Nature Communications, 2019, 10, 3370.	12.8	35
7	Analysis of geological hiatus surfaces across Africa in the Cenozoic and implications for the timescales of convectively-maintained topography. Canadian Journal of Earth Sciences, 2019, 56, 1333-1346.	1.3	13
8	On the observability of epeirogenic movement in current and future gravity missions. Gondwana Research, 2018, 53, 273-284.	6.0	11
9	Retrodictions of Mid Paleogene mantle flow and dynamic topography in the Atlantic region from compressible high resolution adjoint mantle convection models: Sensitivity to deep mantle viscosity and tomographic input model. Gondwana Research, 2018, 53, 252-272.	6.0	62
10	Stratigraphic framework for the plume mode of mantle convection and the analysis of interregional unconformities on geological maps. Gondwana Research, 2018, 53, 159-188.	6.0	44
11	Models and observations of vertical motion (MoveOn) associated with rifting to passive margins: Preface. Gondwana Research, 2018, 53, 1-8.	6.0	16
12	The adjoint equations for thermochemical compressible mantle convection: derivation and verification by twin experiments. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180329.	2.1	13
13	Correlations of oceanic spreading rates and hiatus surface area in the North Atlantic realm. Lithosphere, 2018, 10, 677-684.	1.4	15
14	The Collaborative Seismic Earth Model: Generation 1. Geophysical Research Letters, 2018, 45, 4007-4016.	4.0	71
15	MMAâ€•EoS: A Computational Framework for Mineralogical Thermodynamics. Journal of Geophysical Research: Solid Earth, 2017, 122, 9881-9920.	3.4	24
16	On the ratio of dynamic topography and gravity anomalies in a dynamic Earth. Geophysical Research Letters, 2016, 43, 2510-2516.	4.0	68
17	Constraining central Neoâ€•Tethys Ocean reconstructions with mantle convection models. Geophysical Research Letters, 2016, 43, 9595-9603.	4.0	33
18	The compressible adjoint equations in geodynamics: derivation and numerical assessment. GEM - International Journal on Geomathematics, 2016, 7, 1-30.	1.6	23

#	Article	IF	Citations
19	Fast asthenosphere motion in highâ€resolution global mantle flow models. Geophysical Research Letters, 2015, 42, 7429-7435.	4.0	39
20	On retrodictions of global mantle flow with assimilated surface velocities. Geophysical Research Letters, 2015, 42, 8341-8348.	4.0	26
21	Rapid Plate Motion Variations Through Geological Time: Observations Serving Geodynamic Interpretation. Annual Review of Earth and Planetary Sciences, 2015, 43, 571-592.	11.0	40
22	Restoring past mantle convection structure through fluid dynamic inverse theory: regularisation through surface velocity boundary conditions. GEM - International Journal on Geomathematics, 2015, 6, 83-100.	1.6	11
23	The adjoint method in geodynamics: derivation from a general operator formulation and application to the initial condition problem in a high resolution mantle circulation model. GEM - International Journal on Geomathematics, 2014, 5, 163-194.	1.6	28
24	Rapid South Atlantic spreading changes and coeval vertical motion in surrounding continents: Evidence for temporal changes of pressure-driven upper mantle flow. Tectonics, 2014, 33, 1304-1321.	2.8	79
25	Geological, tomographic, kinematic and geodynamic constraints on the dynamics of sinking slabs. Journal of Geodynamics, 2014, 73, 1-13.	1.6	93
26	Full waveform tomography of the upper mantle in the South Atlantic region: Imaging a westward fluxing shallow asthenosphere?. Tectonophysics, 2013, 604, 26-40.	2.2	54
27	Testing absolute plate reference frames and the implications for the generation of geodynamic mantle heterogeneity structure. Earth and Planetary Science Letters, 2012, 317-318, 204-217.	4.4	53
28	Reconciling dynamic and seismic models of Earth's lower mantle: The dominant role of thermal heterogeneity. Earth and Planetary Science Letters, 2012, 353-354, 253-269.	4.4	190
29	Full waveform tomography for radially anisotropic structure: New insights into present and past states of the Australasian upper mantle. Earth and Planetary Science Letters, 2010, 290, 270-280.	4.4	179
30	Full seismic waveform tomography for upper-mantle structure in the Australasian region using adjoint methods. Geophysical Journal International, 2009, 179, 1703-1725.	2.4	352
31	The Bent Hawaiian-Emperor Hotspot Track: Inheriting the Mantle Wind. Science, 2009, 324, 50-53.	12.6	151
32	Thermal versus elastic heterogeneity in highâ€resolution mantle circulation models with pyrolite composition: High plume excess temperatures in the lowermost mantle. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	111
33	Tomographic filtering of highâ€resolution mantle circulation models: Can seismic heterogeneity be explained by temperature alone?. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	141
34	Stability of the rotation axis in highâ€resolution mantle circulation models: Weak polar wander despite strong core heating. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	27
35	Theoretical background for continental- and global-scale full-waveform inversion in the time-frequency domain. Geophysical Journal International, 2008, 175, 665-685.	2.4	229
36	Topography growth drives stress rotations in the central Andes: Observations and models. Geophysical Research Letters, 2008, 35, .	4.0	26

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37	A mineralogical model for density and elasticity of the Earth's mantle. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	43
38	Feedback between mountain belt growth and plate convergence. Geology, 2006, 34, 893.	4.4	107
39	Cluster Design in the Earth Sciences Tethys. Lecture Notes in Computer Science, 2006, , 31-40.	1.3	54
40	Low plume excess temperature and high core heat flux inferred from non-adiabatic geotherms in internally heated mantle circulation models. Physics of the Earth and Planetary Interiors, 2005, 153, 3-10.	1.9	113
41	Mantle circulation models with variational data assimilation: inferring past mantle flow and structure from plate motion histories and seismic tomography. Geophysical Journal International, 2003, 152, 280-301.	2.4	170
42	Tomographic images of a mantle circulation model. Geophysical Research Letters, 2001, 28, 77-80.	4.0	25
43	Imaging 3-D spherical convection models: What can seismic tomography tell us about mantle dynamics?. Geophysical Research Letters, 1997, 24, 1299-1302.	4.0	45
44	The origin of large scale structure in mantle convection: Effects of plate motions and viscosity stratification. Geophysical Research Letters, 1996, 23, 2987-2990.	4.0	90
45	Mantle convection modeling on parallel virtual machines. Computers in Physics, 1995, 9, 207.	0.5	77