

# Shijie Zhong

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3187215/publications.pdf>

Version: 2024-02-01

99  
papers

7,925  
citations

50276

46  
h-index

49909

87  
g-index

99  
all docs

99  
docs citations

99  
times ranked

3682  
citing authors

#	ARTICLE	IF	CITATIONS
1	Seismic Strain Rate and Flexure at the Hawaiian Islands Constrain the Frictional Coefficient. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009547.	2.5	5
2	Constraints on Mantle Viscosity From Intermediate-Wavelength Geoid Anomalies in Mantle Convection Models With Plate Motion History. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021561.	3.4	14
3	Formation of Horizontally Deflected Slabs in the Mantle Transition Zone Caused by Spinel to Post-Spinel Phase Transition, Its Associated Grainsize Reduction Effects, and Trench Retreat. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093679.	4.0	2
4	Reconciling lithospheric rheology between laboratory experiments, field observations and different tectonic settings. <i>Geophysical Journal International</i> , 2021, 228, 857-875.	2.4	5
5	Effects of a Weak Lower Crust on the Flexure of Continental Lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022678.	3.4	3
6	The effects of non-Newtonian rheology in the upper mantle on relative sea level change and geodetic observables induced by glacial isostatic adjustment process. <i>Geophysical Journal International</i> , 2021, 228, 1887-1906.	2.4	9
7	Constraints on the Rheology of the Lithosphere From Flexure of the Pacific Plate at the Hawaiian Islands. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008819.	2.5	15
8	Controls on Global Mantle Convective Structures and Their Comparison With Seismic Models. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 9345-9372.	3.4	10
9	Modeling the Inception of Supercontinent Breakup: Stress State and the Importance of Orogens. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 4830-4848.	2.5	21
10	Lateral Motion of Mantle Plumes in 3D Geodynamic Models. <i>Geophysical Research Letters</i> , 2019, 46, 4685-4693.	4.0	11
11	Linking lowermost mantle structure, core-mantle boundary heat flux and mantle plume formation. <i>Physics of the Earth and Planetary Interiors</i> , 2018, 277, 10-29.	1.9	30
12	Formation of the Lunar Fossil Bulges and Its Implication for the Early Earth and Moon. <i>Geophysical Research Letters</i> , 2018, 45, 1286-1296.	4.0	13
13	Slab stagnation due to a reduced viscosity layer beneath the mantle transition zone. <i>Nature Geoscience</i> , 2018, 11, 876-881.	12.9	62
14	Dynamic weakening with grain-damage and implications for slab detachment. <i>Physics of the Earth and Planetary Interiors</i> , 2018, 285, 76-90.	1.9	8
15	The source location of mantle plumes from 3D spherical models of mantle convection. <i>Earth and Planetary Science Letters</i> , 2017, 478, 47-57.	4.4	38
16	Constraining mantle viscosity structure for a thermochemical mantle using the geoid observation. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 895-913.	2.5	41
17	Elastic tidal response of a laterally heterogeneous planet: a complete perturbation formulation. <i>Geophysical Journal International</i> , 2016, 207, 89-110.	2.4	4
18	Quantifying melt production and degassing rate at mid-ocean ridges from global mantle convection models with plate motion history. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 2884-2904.	2.5	19

#	ARTICLE	IF	CITATIONS
19	Heat flux and topography constraints on thermochemical structure below North China Craton regions and implications for evolution of cratonic lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 3081-3098.	3.4	6
20	The Long-Wavelength Mantle Structure, and the supercontinent Evolution since the Paleozoic. <i>Acta Geologica Sinica</i> , 2016, 90, 49-49.	1.4	0
21	The long-wavelength mantle structure and dynamics and implications for large-scale tectonics and volcanism in the Phanerozoic. <i>Gondwana Research</i> , 2016, 29, 83-104.	6.0	28
22	On the temporal evolution of long-wavelength mantle structure of the Earth since the early Paleozoic. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 1599-1615.	2.5	38
23	The long-wavelength geoid from three-dimensional spherical models of thermal and thermochemical mantle convection. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 4572-4596.	3.4	20
24	Episodic and multistaged gravitational instability of cratonic lithosphere and its implications for reactivation of the North China Craton. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 815-833.	2.5	11
25	Core evolution driven by mantle global circulation. <i>Physics of the Earth and Planetary Interiors</i> , 2015, 243, 44-55.	1.9	48
26	Timescale and morphology of Martian mantle overturn immediately following magma ocean solidification. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 454-467.	3.6	29
27	A perturbation method and its application: elastic tidal response of a laterally heterogeneous planet. <i>Geophysical Journal International</i> , 2014, 199, 631-647.	2.4	13
28	How Did Early Earth Become Our Modern World?. <i>Annual Review of Earth and Planetary Sciences</i> , 2014, 42, 151-178.	11.0	82
29	History and dynamics of net rotation of the mantle and lithosphere. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 3645-3657.	2.5	38
30	Controls on geomagnetic reversals and core evolution by mantle convection in the Phanerozoic. <i>Physics of the Earth and Planetary Interiors</i> , 2013, 214, 87-103.	1.9	67
31	Constraints of the topography, gravity and volcanism on Venusian mantle dynamics and generation of plate tectonics. <i>Earth and Planetary Science Letters</i> , 2013, 362, 207-214.	4.4	38
32	Computations of the viscoelastic response of a 3-D compressible Earth to surface loading: an application to Glacial Isostatic Adjustment in Antarctica and Canada. <i>Geophysical Journal International</i> , 2013, 192, 557-572.	2.4	464
33	Does quadrupole stability imply LLSVP fixity?. <i>Nature</i> , 2013, 503, E3-E4.	27.8	10
34	Lithospheric deformation induced by loading of the Hawaiian Islands and its implications for mantle rheology. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 6025-6048.	3.4	74
35	Predicting and testing continental vertical motion histories since the Paleozoic. <i>Earth and Planetary Science Letters</i> , 2012, 317-318, 426-435.	4.4	48
36	Epeirogeny or eustasy? Paleozoic-Mesozoic vertical motion of the North American continental interior from thermochronometry and implications for mantle dynamics. <i>Earth and Planetary Science Letters</i> , 2012, 317-318, 436-445.	4.4	42

#	ARTICLE	IF	CITATIONS
37	Can tidal tomography be used to unravel the long-wavelength structure of the lunar interior?. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	21
38	Constraints on the formation of the Martian crustal dichotomy from remnant crustal magnetism. <i>Physics of the Earth and Planetary Interiors</i> , 2012, 212-213, 55-63.	1.9	18
39	Martian crustal dichotomy and Tharsis formation by partial melting coupled to early plume migration. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	38
40	Correlation of deep moonquakes and mare basalts: Implications for lunar mantle structure and evolution. <i>Icarus</i> , 2012, 220, 100-105.	2.5	24
41	Implementation and application of adaptive mesh refinement for thermochemical mantle convection studies. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, .	2.5	23
42	On the location of plumes and lateral movement of thermochemical structures with high bulk modulus in the 3-D compressible mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	2.5	100
43	Heat fluxes at the Earth's surface and core-mantle boundary since Pangea formation and their implications for the geomagnetic superchrons. <i>Earth and Planetary Science Letters</i> , 2011, 306, 205-216.	4.4	65
44	A community benchmark for 2-D Cartesian compressible convection in the Earth's mantle. <i>Geophysical Journal International</i> , 2010, 180, 73-87.	2.4	89
45	Effects of lateral viscosity variations on the geoid. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	68
46	A model for the evolution of the Earth's mantle structure since the Early Paleozoic. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	113
47	Constraints on upper mantle viscosity from the flow-induced pressure gradient across the Australian continental keel. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	2.5	23
48	Long-wavelength stagnant lid convection with hemispheric variation in lithospheric thickness: Link between Martian crustal dichotomy and Tharsis?. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	26
49	Core-mantle boundary topography as a possible constraint on lower mantle chemistry and dynamics. <i>Earth and Planetary Science Letters</i> , 2010, 289, 232-241.	4.4	60
50	Constraints on viscous dissipation of plate bending from compressible mantle convection. <i>Earth and Planetary Science Letters</i> , 2010, 297, 154-164.	4.4	19
51	Supercontinent formation from stochastic collision and mantle convection models. <i>Gondwana Research</i> , 2009, 15, 267-275.	6.0	46
52	Migration of Tharsis volcanism on Mars caused by differential rotation of the lithosphere. <i>Nature Geoscience</i> , 2009, 2, 19-23.	12.9	70
53	Supercontinent-superplume coupling, true polar wander and plume mobility: Plate dominance in whole-mantle tectonics. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 176, 143-156.	1.9	229
54	More constraints on internal heating rate of the Earth's mantle from plume observations. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	9

#	ARTICLE	IF	CITATIONS
55	Viscous heating, adiabatic heating and energetic consistency in compressible mantle convection. <i>Geophysical Journal International</i> , 2008, 173, 693-702.	2.4	43
56	Controls on plume heat flux and plume excess temperature. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	67
57	A benchmark study on mantle convection in a 3D spherical shell using CitcomS. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	2.5	254
58	Supercontinent cycles, true polar wander, and very long-wavelength mantle convection. <i>Earth and Planetary Science Letters</i> , 2007, 261, 551-564.	4.4	253
59	Bathymetry of the Pacific plate and its implications for thermal evolution of lithosphere and mantle dynamics. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	32
60	Limitations on the inversion for mantle viscosity from postglacial rebound. <i>Geophysical Journal International</i> , 2007, 168, 1195-1209.	2.4	73
61	Inference of mantle viscosity from GRACE and relative sea level data. <i>Geophysical Journal International</i> , 2007, 171, 497-508.	2.4	314
62	The cause for the north-south orientation of the crustal dichotomy and the equatorial location of Tharsis on Mars. <i>Icarus</i> , 2007, 190, 24-31.	2.5	24
63	Constraints on thermochemical convection of the mantle from plume heat flux, plume excess temperature, and upper mantle temperature. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	182
64	Degree-1 convection in the Martian mantle and the origin of the hemispheric dichotomy. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	141
65	Dynamics of thermal plumes in three-dimensional isoviscous thermal convection. <i>Geophysical Journal International</i> , 2005, 162, 289-300.	2.4	45
66	Modelling post-glacial rebound with lateral viscosity variations. <i>Geophysical Journal International</i> , 2005, 163, 357-371.	2.4	112
67	Thermochemical structures beneath Africa and the Pacific Ocean. <i>Nature</i> , 2005, 437, 1136-1139.	27.8	394
68	New evidence for dislocation creep from 3-D geodynamic modeling of the Pacific upper mantle structure. <i>Earth and Planetary Science Letters</i> , 2005, 238, 146-155.	4.4	89
69	Degree-one mantle convection: Dependence on internal heating and temperature-dependent rheology. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	49
70	Sublithospheric small-scale convection and its implications for the residual topography at old ocean basins and the plate model. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	66
71	The anisotropic and rheological structure of the oceanic upper mantle from a simple model of plate shear. <i>Geophysical Journal International</i> , 2004, 158, 287-296.	2.4	50
72	Thermochemical structures within a spherical mantle: Superplumes or piles?. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	210

#	ARTICLE	IF	CITATIONS
73	Plume-induced topography and geoid anomalies and their implications for the Tharsis rise on Mars. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	45
74	Convective instability in ice I with non-Newtonian rheology: Application to the icy Galilean satellites. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	37
75	The influence of thermochemical convection on the fixity of mantle plumes. <i>Earth and Planetary Science Letters</i> , 2004, 222, 485-500.	4.4	51
76	Entrainment of a dense layer by thermal plumes. <i>Geophysical Journal International</i> , 2003, 154, 666-676.	2.4	61
77	Three-dimensional finite-element modelling of Earth's viscoelastic deformation: effects of lateral variations in lithospheric thickness. <i>Geophysical Journal International</i> , 2003, 155, 679-695.	2.4	121
78	The effect of shearing on the onset and vigor of small-scale convection in a Newtonian rheology. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	44
79	Controls on sublithospheric small-scale convection. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	99
80	Surface versus internal loading of the Tharsis rise, Mars. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	31
81	Effects of lithosphere on the long-wavelength gravity anomalies and their implications for the formation of the Tharsis rise on Mars. <i>Journal of Geophysical Research</i> , 2002, 107, 8-1.	3.3	46
82	Constraints on the dynamics of mantle plumes from uplift of the Hawaiian Islands. <i>Earth and Planetary Science Letters</i> , 2002, 203, 105-116.	4.4	79
83	Role of ocean-continent contrast and continental keels on plate motion, net rotation of lithosphere, and the geoid. <i>Journal of Geophysical Research</i> , 2001, 106, 703-712.	3.3	88
84	Degree-1 mantle convection and the crustal dichotomy on Mars. <i>Earth and Planetary Science Letters</i> , 2001, 189, 75-84.	4.4	223
85	On the competing roles of fault reactivation and brittle failure in generating plate tectonics from mantle convection. <i>Geophysical Monograph Series</i> , 2000, , 73-94.	0.1	55
86	A dynamic origin for the global asymmetry of lunar mare basalts. <i>Earth and Planetary Science Letters</i> , 2000, 177, 131-140.	4.4	127
87	Internal Structure and Early Thermal Evolution of Mars from Mars Global Surveyor Topography and Gravity. <i>Science</i> , 2000, 287, 1788-1793.	12.6	518
88	Role of temperature-dependent viscosity and surface plates in spherical shell models of mantle convection. <i>Journal of Geophysical Research</i> , 2000, 105, 11063-11082.	3.3	493
89	Long-wavelength topographic relaxation for self-gravitating planets and implications for the time-dependent compensation of surface topography. <i>Journal of Geophysical Research</i> , 2000, 105, 4153-4164.	3.3	76
90	Effects of plate and slab viscosities on the geoid. <i>Earth and Planetary Science Letters</i> , 1999, 170, 487-496.	4.4	104

#	ARTICLE	IF	CITATIONS
91	Mixing in a 3D spherical model of present-day mantle convection. <i>Earth and Planetary Science Letters</i> , 1999, 171, 533-547.	4.4	83
92	Role of faults, nonlinear rheology, and viscosity structure in generating plates from instantaneous mantle flow models. <i>Journal of Geophysical Research</i> , 1998, 103, 15255-15268.	3.3	142
93	Dynamics of crustal compensation and its influences on crustal isostasy. <i>Journal of Geophysical Research</i> , 1997, 102, 15287-15299.	3.3	39
94	The accuracy of finite element solutions of Stokes's flow with strongly varying viscosity. <i>Physics of the Earth and Planetary Interiors</i> , 1996, 97, 83-94.	1.9	148
95	Interaction of weak faults and non-newtonian rheology produces plate tectonics in a 3D model of mantle flow. <i>Nature</i> , 1996, 383, 245-247.	27.8	97
96	Role of plates and temperature-dependent viscosity in phase change dynamics. <i>Journal of Geophysical Research</i> , 1994, 99, 15903.	3.3	155
97	Accurate determination of surface normal stress in viscous flow from a consistent boundary flux method. <i>Physics of the Earth and Planetary Interiors</i> , 1993, 78, 1-8.	1.9	33
98	Dynamic feedback between a continentlike raft and thermal convection. <i>Journal of Geophysical Research</i> , 1993, 98, 12219-12232.	3.3	124
99	CitcomSVE: A Three-dimensional Finite Element Software Package for Modeling Planetary Mantle's Viscoelastic Deformation in Response to Surface and Tidal Loads. <i>Geochemistry, Geophysics, Geosystems</i> , 0, , .	2.5	1