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List of Publications by Year
in descending order

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150 papers	9,687 citations	30070 54 h-index	40979 93 g-index
162 all docs	162 docs citations	162 times ranked	6242 citing authors

#	Article	IF	Citations
1	The effects of plate interface rheology on subduction kinematics and dynamics. Geophysical Journal International, 2022, 230, 796-812.	2.4	16
2	Thank You to Our 2021 Peer Reviewers. AGU Advances, 2022, 3, .	5.4	0
3	Deformation Memory in the Lithosphere: A Comparison of Damageâ€dependent Weakening and Grainâ€Size Sensitive Rheologies. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020335.	3.4	10
4	Thank You to Our 2020 Reviewers. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009697.	2.5	0
5	Confronting Racism to Advance Our Science. AGU Advances, 2021, 2, e2020AV000296.	5.4	1
6	Thank You to Our 2020 Peer Reviewers. AGU Advances, 2021, 2, e2021AV000426.	5.4	0
7	Spatial Characteristics of Recycled and Primordial Reservoirs in the Deep Mantle. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009525.	2.5	20
8	Mantle plumes and their role in Earth processes. Nature Reviews Earth & Environment, 2021, 2, 382-401.	29.7	78
9	Multiscale, radially anisotropic shear wave imaging of the mantle underneath the contiguous United States through joint inversion of USArray and global data sets. Geophysical Journal International, 2021, 226, 1730-1746.	2.4	12
10	Mountain building, mantle convection, and supercontinents: revisited. Earth and Planetary Science Letters, 2021, 564, 116905.	4.4	20
11	The Role of Sediment Accretion and Buoyancy on Subduction Dynamics and Geometry. Geophysical Research Letters, 2021, 48, e2021GL096266.	4.0	8
12	Tectonic Inheritance During Plate Boundary Evolution in Southern California Constrained From Seismic Anisotropy. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC010099.	2.5	3
13	Dynamic slab segmentation due to brittleâ€“ductile damage in the outer rise. Nature, 2021, 599, 245-250.	27.8	41
14	Ancient helium and tungsten isotopic signatures preserved in mantle domains least modified by crustal recycling. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30993-31001.	7.1	41
15	Topographic expressions of mantle dynamics in the Mediterranean. Earth-Science Reviews, 2020, 209, 103327.	9.1	33
16	Presentâ€Day Crustal Vertical Velocity Field for the Contiguous United States. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020066.	3.4	9
17	Imaging the Tectonic Grain of the Northern Cordillera Orogen Using Transportable Array Receiver Functions. Seismological Research Letters, 2020, 91, 3086-3105.	1.9	12
18	Thank You to Our 2019 Reviewers. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009007.	2.5	0

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19	Thank You to Our 2019 Reviewers. AGU Advances, 2020, 1, e2020AV000181.	5.4	0
20	New Opportunities to Study Earthquake Precursors. Seismological Research Letters, 2020, 91, 2444-2447.	1.9	27
21	Seismic Anisotropy. Encyclopedia of Earth Sciences Series, 2020, , 1-11.	0.1	0
22	Role of dynamic topography in sustaining the Nile River over 30 million years. Nature Geoscience, 2019, 12, 1012-1017.	12.9	48
23	Thank You to Our 2018 Peer Reviewers. Geochemistry, Geophysics, Geosystems, 2019, 20, 4593-4598.	2.5	0
24	Convection in Thin Shells of Icy Satellites: Effects of Latitudinal Surface Temperature Variations. Journal of Geophysical Research E: Planets, 2019, 124, 2029-2053.	3.6	7
25	Relationships Between Olivine CPO and Deformation Parameters in Naturally Deformed Rocks and Implications for Mantle Seismic Anisotropy. Geochemistry, Geophysics, Geosystems, 2019, 20, 3469-3494.	2.5	39
26	Role of strain-dependent weakening memory on the style of mantle convection and plate boundary stability. Geophysical Journal International, 2019, 218, 601-618.	2.4	9
27	Upper mantle seismic anisotropy as a constraint for mantle flow and continental dynamics of the North American plate. Earth and Planetary Science Letters, 2019, 514, 143-155.	4.4	21
28	Global Travel Time Data Set From Adaptive Empirical Wavelet Construction. Geochemistry, Geophysics, Geosystems, 2019, 20, 2175-2198.	2.5	7
29	Slab flattening and the rise of the Eastern Cordillera, Colombia. Earth and Planetary Science Letters, 2019, 512, 100-110.	4.4	31
30	Present-day uplift of the European Alps: Evaluating mechanisms and models of their relative contributions. Earth-Science Reviews, 2019, 190, 589-604.	9.1	82
31	Evidence for a deep mantle source for EM and HIMU domains from integrated geochemical and geophysical constraints. Earth and Planetary Science Letters, 2018, 484, 154-167.	4.4	40
32	Slab interactions in 3-D subduction settings: The Philippine Sea Plate region. Earth and Planetary Science Letters, 2018, 489, 72-83.	4.4	40
33	A comparison of lithospheric thickness models. Tectonophysics, 2018, 746, 325-338.	2.2	69
34	Dynamics of the Ryukyu/Izu-Bonin-Marianas double subduction system. Tectonophysics, 2018, 746, 229-238.	2.2	54
35	Stress change before and after the 2011 M9 Tohoku-oki earthquake. Earth and Planetary Science Letters, 2018, 504, 174-184.	4.4	22
36	Sediment control on subduction plate speeds. Earth and Planetary Science Letters, 2018, 502, 166-173.	4.4	71

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37	Geochemistry and Distribution of Recycled Domains in the Mantle Inferred From Nd and Pb Isotopes in Oceanic Hot Spots: Implications for Storage in the Large Low Shear Wave Velocity Provinces. Geochemistry, Geophysics, Geosystems, 2018, 19, 3496-3519.	2.5	29
38	Mantle Flow and Deforming Continents: From Indiaâ€Asia Convergence to Pacific Subduction. Tectonics, 2018, 37, 2887-2914.	2.8	72
39	Primordial helium entrained by the hottest mantle plumes. Nature, 2017, 542, 340-343.	27.8	88
40	Initiation of the Andean orogeny by lower mantle subduction. Earth and Planetary Science Letters, 2017, 463, 189-201.	4.4	84
41	Superweak asthenosphere in light of upper mantle seismic anisotropy. Geochemistry, Geophysics, Geosystems, 2017, 18, 1986-2003.	2.5	32
42	Transient slab flattening beneath Colombia. Geophysical Research Letters, 2017, 44, 6616-6623.	4.0	56
43	Impact of the lithosphere on dynamic topography: Insights from analogue modeling. Geophysical Research Letters, 2017, 44, 2693-2702.	4.0	8
44	Resolving depth-dependent subduction zone viscosity and afterslip from postseismic displacements following the 2011 Tohoku-oki, Japan earthquake. Earth and Planetary Science Letters, 2017, 459, 279-290.	4.4	103
45	The effect of a power-law mantle viscosity on trench retreat rate. Geophysical Journal International, 2017, 208, 491-507.	2.4	27
46	What allows seismic events to grow big?: Insights from b-value and fault roughness analysis in laboratory stick-slip experiments. Geology, 2017, 45, 815-818.	4.4	113
47	Banda Arc Experimentâ€"Transitions in the Banda Arcâ€Australian Continental Collision. Seismological Research Letters, 2016, 87, 1417-1423.	1.9	14
48	Azimuthal seismic anisotropy in the Earth's upper mantle and the thickness of tectonic plates. Geophysical Journal International, 2016, 207, 901-933.	2.4	77
49	Long-term, deep-mantle support of the Ethiopia-Yemen Plateau. Tectonics, 2016, 35, 469-488.	2.8	49
50	Coseismic deformation due to the 2011 Tohoku-oki earthquake: influence of 3-D elastic structure around Japan. Earth, Planets and Space, 2016, 68, .	2.5	19
51	Isostasy, flexure, and dynamic topography. Tectonophysics, 2016, 683, 255-271.	2.2	48
52	On the influence of the asthenospheric flow on the tectonics and topography at a collision-subduction transition zones: Comparison with the eastern Tibetan margin. Journal of Geodynamics, 2016, 100, 184-197.	1.6	36
53	Universal Quake Statistics: From Compressed Nanocrystals to Earthquakes. Scientific Reports, 2015, 5, 16493.	3.3	104
54	Appreciation of peer reviewers for 2014. Geochemistry, Geophysics, Geosystems, 2015, 16, 2473-2479.	2.5	0

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55	Toward a generalized plate motion reference frame. Geophysical Research Letters, 2015, 42, 3188-3196.	4.0	63
56	Thermal structure, radial anisotropy, and dynamics of oceanic boundary layers. Geophysical Research Letters, 2015, 42, 9740-9749.	4.0	32
57	Trench migration and overriding plate stress in dynamic subduction models. Geophysical Journal International, 2015, 201, 172-192.	2.4	93
58	Overriding plate thickness control on subducting plate curvature. Geophysical Research Letters, 2015, 42, 3802-3810.	4.0	32
59	Anomalously fast convergence of India and Eurasia caused by double subduction. Nature Geoscience, 2015, 8, 475-478.	12.9	197
60	Western US intermountain seismicity caused by changes in upper mantle flow. Nature, 2015, 524, 458-461.	27.8	41
61	A Comparison of Seismicity Characteristics and Fault Structure Between Stickâ€“Slip Experiments and Nature. Pure and Applied Geophysics, 2015, 172, 2247-2264.	1.9	34
62	Hot upwelling conduit beneath the Atlas Mountains, Morocco. Geophysical Research Letters, 2014, 41, 8037-8044.	4.0	15
63	Reactivated lithospheric-scale discontinuities localize dynamic uplift of the Moroccan Atlas Mountains: REPLY. Geology, 2014, 42, e338-e338.	4.4	0
64	Off-fault damage and acoustic emission distributions during the evolution of structurally complex faults over series of stick-slip events. Geophysical Journal International, 2014, 197, 1705-1718.	2.4	22
65	Static and dynamic support of western United States topography. Earth and Planetary Science Letters, 2014, 402, 234-246.	4.4	61
66	Reactivated lithospheric-scale discontinuities localize dynamic uplift of the Moroccan Atlas Mountains. Geology, 2014, 42, 35-38.	4.4	50
67	Mantle dynamics in the Mediterranean. Reviews of Geophysics, 2014, 52, 283-332.	23.0	394
68	Isostasy, dynamic topography, and the elevation of the Apennines of Italy. Earth and Planetary Science Letters, 2014, 407, 163-174.	4.4	91
69	Seismological observations in Northwestern South America: Evidence for two subduction segments, contrasting crustal thicknesses and upper mantle flow. Tectonophysics, 2014, 637, 57-67.	2.2	39
70	Origin of azimuthal seismic anisotropy in oceanic plates and mantle. Earth and Planetary Science Letters, 2014, 401, 236-250.	4.4	79
71	Seismic event distributions and off-fault damage during frictional sliding of saw-cut surfaces with pre-defined roughness. Geophysical Journal International, 2014, 196, 612-625.	2.4	31
72	Innovative direct nanoparticle dispersion injection into injection molding processing. Journal of Applied Polymer Science, 2014, 131, n/a-n/a.	2.6	2

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73	Dehydration melting at the top of the lower mantle. Science, 2014, 344, 1265-1268.	12.6	263
74	Savani: A variable resolution wholeâ€mantle model of anisotropic shear velocity variations based on multiple data sets. Journal of Geophysical Research: Solid Earth, 2014, 119, 3006-3034.	3.4	194
75	Seismic anisotropy and slab dynamics from SKS splitting recorded in Colombia. Geophysical Research Letters, 2014, 41, 8775-8783.	4.0	25
76	Constraints on the tectonic evolution of the westernmost Mediterranean and northwestern Africa from shear wave splitting analysis. Earth and Planetary Science Letters, 2013, 375, 234-243.	4.4	51
77	Mantle convection in the Middle East: Reconciling Afar upwelling, Arabia indentation and Aegean trench rollback. Earth and Planetary Science Letters, 2013, 375, 254-269.	4.4	147
78	Mountain building and mantle dynamics. Tectonics, 2013, , n/a-n/a.	2.8	1
79	Mountain building and mantle dynamics. Tectonics, 2013, 32, 80-93.	2.8	91
80	Dynamics of the North American continent. Geophysical Journal International, 2013, 194, 651-669.	2.4	44
81	Acoustic emissions document stress changes over many seismic cycles in stickâ€slip experiments. Geophysical Research Letters, 2013, 40, 2049-2054.	4.0	198
82	Kinematics of rotating panels of Eâ€“W faults in the San Andreas system: what can we tell from geodesy?. Geophysical Journal International, 2013, 194, 1295-1301.	2.4	17
83	Structure beneath the Alboran from geodynamic flow models and seismic anisotropy. Journal of Geophysical Research: Solid Earth, 2013, 118, 4265-4277.	3.4	31
84	Passive margins getting squeezed in the mantle convection vice. Tectonics, 2013, 32, 1559-1570.	2.8	25
85	Subduction to the lower mantle â€“ a comparison between geodynamic and tomographic models. Solid Earth, 2012, 3, 415-432.	2.8	41
86	The role of slabs and oceanic plate geometry in the net rotation of the lithosphere, trench motions, and slab return flow. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	26
87	Mantle flow deflected by interactions between subducted slabs and cratonic keels. Nature Geoscience, 2012, 5, 726-730.	12.9	51
88	Shallow lithospheric contribution to mantle plumes revealed by integrating seismic and geochemical data. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	15
89	On recent seismic tomography for the western United States. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	57
90	On the role of slab pull in the Cenozoic motion of the Pacific plate. Geophysical Research Letters, 2012, 39, .	4.0	62

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91	On the relationship between azimuthal anisotropy from shear wave splitting and surface wave tomography. Journal of Geophysical Research, 2012, 117, .	3.3	104
92	Identifying fault heterogeneity through mapping spatial anomalies in acoustic emission statistics. Journal of Geophysical Research, 2012, 117, .	3.3	112
93	Coâ€seismic deformation of deep slabs based on summed CMT data. Journal of Geophysical Research, 2012, 117, .	3.3	9
94	Bending stress and dissipation in subducted lithosphere. Journal of Geophysical Research, 2012, 117, .	3.3	46
95	On the role of anisotropic viscosity for plate-scale flow. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	12
96	Vertical coherence in mantle heterogeneity from global seismic data. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	7
97	Radial anisotropy in the European mantle: Tomographic studies explored in terms of mantle flow. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	9
98	Mantle conveyor beneath the Tethyan collisional belt. Earth and Planetary Science Letters, 2011, 310, 453-461.	4.4	163
99	Seismic Anisotropy. Encyclopedia of Earth Sciences Series, 2011, , 1070-1081.	0.1	2
100	Quantifying focal mechanism heterogeneity for fault zones in central and southern California. Geophysical Journal International, 2010, 183, 433-450.	2.4	45
101	Shaping mobile belts by small-scale convection. Nature, 2010, 465, 602-605.	27.8	208
102	Effects of lateral viscosity variations on the geoid. Geophysical Research Letters, 2010, 37, .	4.0	68
103	Where is the real transform boundary in California?. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	41
104	Global slab deformation and centroid moment tensor constraints on viscosity. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	39
105	Mantle structure and dynamic topography in the Mediterranean Basin. Geophysical Research Letters, 2010, 37, .	4.0	75
106	Mantle dynamics and seismic anisotropy. Earth and Planetary Science Letters, 2010, 297, 341-354.	4.4	356
107	Subduction-triggered magmatic pulses: A new class of plumes?. Earth and Planetary Science Letters, 2010, 299, 54-68.	4.4	211
108	Global scale models of the mantle flow field predicted by synthetic tomography models. Physics of the Earth and Planetary Interiors, 2010, 182, 129-138.	1.9	27

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109	Fine-Scale Modeling of Global Plate Tectonics. Science, 2010, 329, 1020-1021.	12.6	3
110	Reliability of mantle tomography models assessed by spectral element simulation. Geophysical Journal International, 2009, 177, 125-144.	2.4	21
111	Patterns of co-seismic strain computed from southern California focal mechanisms. Geophysical Journal International, 2009, 177, 1015-1036.	2.4	29
112	Past and present seafloor age distributions and the temporal evolution of plate tectonic heat transport. Earth and Planetary Science Letters, 2009, 278, 233-242.	4.4	50
113	Lithospheric stress-states predicted from long-term tectonic models: Influence of rheology and possible application to Taiwan. Journal of Asian Earth Sciences, 2009, 36, 119-134.	2.3	24
114	Generation of plateâ€like behavior and mantle heterogeneity from a spherical, viscoplastic convection model. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	91
115	Numerical simulations of texture development and associated rheological anisotropy in regions of complex mantle flow. Geophysical Research Letters, 2009, 36, .	4.0	42
116	New Software Framework to Share Research Tools. Eos, 2009, 90, 104-104.	0.1	14
117	A Review of the Role of Subduction Dynamics for Regional and Global Plate Motions. Frontiers in Earth Sciences, 2009, , 3-34.	0.1	39
118	Azimuthal seismic anisotropy constrains net rotation of the lithosphere. Geophysical Research Letters, 2008, 35, .	4.0	41
119	Recent extension driven by mantle upwelling beneath the Admiralty Mountains (East Antarctica). Tectonics, 2008, 27, .	2.8	54
120	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
121	From passive continental margin to mountain belt: Insights from analytical and numerical models and application to Taiwan. Physics of the Earth and Planetary Interiors, 2008, 171, 235-251.	1.9	89
122	Radial seismic anisotropy as a constraint for upper mantle rheology. Earth and Planetary Science Letters, 2008, 267, 213-227.	4.4	107
123	Trench migration, net rotation and slabâ€“mantle coupling. Earth and Planetary Science Letters, 2008, 271, 233-240.	4.4	164
124	The mechanics of continental transforms: An alternative approach with applications to the San Andreas system and the tectonics of California. Earth and Planetary Science Letters, 2008, 274, 380-391.	4.4	17
125	Correction to â€œAzimuthal seismic anisotropy constrains net rotation of the lithosphereâ€• Geophysical Research Letters, 2008, 35, .	4.0	3
126	Time variability in Cenozoic reconstructions of mantle heat flow: Plate tectonic cycles and implications for Earth's thermal evolution. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14266-14271.	7.1	29

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127	Predicting trench and plate motion from the dynamics of a strong slab. Earth and Planetary Science Letters, 2007, 257, 29-36.	4.4	89
128	Stochastic analysis of shear-wave splitting length scales. Earth and Planetary Science Letters, 2007, 259, 526-540.	4.4	17
129	Mantle plumes: Dynamic models and seismic images. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	92
130	Effects of elasticity on the Rayleigh-Taylor instability: implications for large-scale geodynamics. Geophysical Journal International, 2007, 168, 843-862.	2.4	88
131	Length scales, patterns and origin of azimuthal seismic anisotropy in the upper mantle as mapped by Rayleigh waves. Geophysical Journal International, 2007, 171, 451-462.	2.4	25
132	On the relevance of Born theory in global seismic tomography. Geophysical Research Letters, 2006, 33, .	4.0	57
133	Three-dimensional instantaneous mantle flow induced by subduction. Geophysical Research Letters, 2006, 33, .	4.0	136
134	Mantle flow under the western United States from shear wave splitting. Earth and Planetary Science Letters, 2006, 247, 235-251.	4.4	79
135	Statistical properties of seismic anisotropy predicted by upper mantle geodynamic models. Journal of Geophysical Research, 2006, 111, .	3.3	135
136	On the effect of temperature and strain-rate dependent viscosity on global mantle flow, net rotation, and plate-driving forces. Geophysical Journal International, 2006, 167, 943-957.	2.4	136
137	Constraints on fault slip rates of the southern California plate boundary from GPS velocity and stress inversions. Geophysical Journal International, 2005, 160, 634-650.	2.4	127
138	The dynamics of subduction and trench migration for viscosity stratification. Geophysical Journal International, 2005, 160, 761-775.	2.4	115
139	Comparison of azimuthal seismic anisotropy from surface waves and finite strain from global mantle-circulation models. Geophysical Journal International, 2003, 155, 696-714.	2.4	132
140	Triggering of the 1999MW7.1 Hector Mine earthquake by aftershocks of the 1992MW7.3 Landers earthquake. Journal of Geophysical Research, 2002, 107, ESE 6-1-ESE 6-13.	3.3	189
141	A comparison of tomographic and geodynamic mantle models. Geochemistry, Geophysics, Geosystems, 2002, 3, n/a-n/a.	2.5	418
142	Predicting plate velocities with mantle circulation models. Geochemistry, Geophysics, Geosystems, 2001, 2, n/a-n/a.	2.5	120
143	History of subduction and back-arc extension in the Central Mediterranean. Geophysical Journal International, 2001, 145, 809-820.	2.4	565
144	Thermal constraints on the survival of primitive blobs in the lower mantle. Earth and Planetary Science Letters, 1999, 171, 351-365.	4.4	131

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145	The development of slabs in the upper mantle: Insights from numerical and laboratory experiments. Journal of Geophysical Research, 1999, 104, 15207-15226.	3.3	124
146	On the Elastic and Viscous Properties of Media Containing Strongly Interacting In-plane Cracks. Pure and Applied Geophysics, 1998, 151, 1-16.	1.9	32
147	Earthquake recurrence-time variations with and without fault-zone interactions. Geophysical Journal International, 1998, 135, 165-176.	2.4	10
148	The Dynamics of Double Slab Subduction. Geophysical Journal International, 0, , ggw496.	2.4	24
149	A mixed, unified forward/inverse framework for earthquake problems: Fault implementation and coseismic slip estimate. Geophysical Journal International, 0, , .	2.4	1
150	Plumeâ€slab interactions can shut off subduction. Geophysical Research Letters, 0, , .	4.0	2