C Lithgow-Bertelloni, Carolina Lithgow-

List of Publications by Year
in descending order

76 papers	6,652 citations	94381 37 h-index	88593 70 g-index
77 all docs	77 docs citations	77 times ranked	3955 citing authors

#	Article	IF	Citations
1	The dynamics of Cenozoic and Mesozoic plate motions. Reviews of Geophysics, 1998, 36, 27-78.	9.0	558
2	Thermodynamics of mantle minerals - I. Physical properties. Geophysical Journal International, 2005, 162, 610-632.	1.0	492
3	Thermodynamics of mantle minerals - II. Phase equilibria. Geophysical Journal International, 2011, 184, 1180-1213.	1.0	475
4	Dynamic topography, plate driving forces and the African superswell. Nature, 1998, 395, 269-272.	13.7	466
5	A geodynamic model of mantle density heterogeneity. Journal of Geophysical Research, 1993, 98, 21895-21909.	3.3	411
6	How Mantle Slabs Drive Plate Tectonics. Science, 2002, 298, 207-209.	6.0	389
7	The effect of bulk composition and temperature on mantle seismic structure. Earth and Planetary Science Letters, 2008, 275, 70-79.	1.8	314
8	Mineralogy and elasticity of the oceanic upper mantle: Origin of the low-velocity zone. Journal of Geophysical Research, 2005, 110, .	3.3	249
9	Time Scales and Heterogeneous Structure in Geodynamic Earth Models. Science, 1998, 280, 91-95.	6.0	212
10	Coupling of South American and African Plate Motion and Plate Deformation. Science, 1998, 279, 60-63.	6.0	200
11	Viscosity jump in Earthâ€™s mid-mantle. Science, 2015, 350, 1349-1352.	6.0	178
12	Influence of continental roots and asthenosphere on plate-mantle coupling. Geophysical Research Letters, 2006, 33, .	1.5	175
13	Cenozoic subsidence and uplift of continents from time-varying dynamic topography. Geology, 1997, 25, 735.	2.0	137
14	Geophysics of Chemical Heterogeneity in the Mantle. Annual Review of Earth and Planetary Sciences, 2012, 40, 569-595.	4.6	129
15	Cenozoic plate driving forces. Geophysical Research Letters, 1995, 22, 1317-1320.	1.5	115
16	Influence of phase transformations on lateral heterogeneity and dynamics in Earth's mantle. Earth and Planetary Science Letters, 2007, 263, 45-55.	1.8	115
17	The temporal evolution of plate driving forces: Importance of â€œslab suctionâ€•versus â€œslab pullâ€• during the Cenozoic. Journal of Geophysical Research, 2004, 109, .	3.3	113
18	Origin of the lithospheric stress field. Journal of Geophysical Research, 2004, 109, .	3.3	111

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19	Reconciling strong slab pull and weak plate bending: The plate motion constraint on the strength of mantle slabs. Earth and Planetary Science Letters, 2008, 272, 412-421.	1.8	110
20	Great earthquakes and slab pull: interaction between seismic coupling and plateâ€“slab coupling. Earth and Planetary Science Letters, 2004, 218, 109-122.	1.8	102
21	Toroidalâ€poloidal partitioning of plate motions since 120 MA. Geophysical Research Letters, 1993, 20, 375-378.	1.5	93
22	Correlation of seismic and petrologic thermometers suggests deep thermal anomalies beneath hotspots. Earth and Planetary Science Letters, 2007, 264, 308-316.	1.8	82
23	Plate motion changes, the Hawaiian-Emperor bend, and the apparent success and failure of geodynamic models. Earth and Planetary Science Letters, 1996, 137, 19-27.	1.8	79
24	Faster seafloor spreading and lithosphere production during the mid-Cenozoic. Geology, 2007, 35, 29.	2.0	77
25	An Explanation for Earth's Long-Term Rotational Stability. Science, 1997, 275, 372-375.	6.0	76
26	Phase stability and shear softening inCaSiO3perovskite at high pressure. Physical Review B, 2007, 75, .	1.1	74
27	Tectonic and dynamic controls on the topography and subsidence of the Argentine Pampas: The role of the flat slab. Earth and Planetary Science Letters, 2010, 295, 187-194.	1.8	68
28	Iceland, the Farallon slab, and dynamic topography of the North Atlantic. Geology, 2004, 32, 177.	2.0	64
29	Influence of Peruvian flat-subduction dynamics on the evolution of western Amazonia. Earth and Planetary Science Letters, 2014, 404, 250-260.	1.8	59
30	The effects of lithospheric thickness and density structure on Earth's stress field. Geophysical Journal International, 2012, 188, 1-17.	1.0	50
31	Dynamic topography in South America. Journal of South American Earth Sciences, 2013, 43, 127-144.	0.6	49
32	Dynamic uplift during slab flattening. Earth and Planetary Science Letters, 2015, 425, 34-43.	1.8	49
33	A plate tectonic mechanism for methane hydrate release along subduction zones. Earth and Planetary Science Letters, 2005, 236, 691-704.	1.8	45
34	Inferring the thermochemical structure of the upper mantle from seismic data. Geophysical Journal International, 2009, 179, 1169-1185.	1.0	45
35	Estimates of the transition zone temperature in a mechanically mixed upper mantle. Earth and Planetary Science Letters, 2009, 277, 244-252.	1.8	43
36	The importance of slab pull and a global asthenosphere to plate motions. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	39

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37	Global reconstructions of Cenozoic seafloor ages: Implications for bathymetry and sea level. Earth and Planetary Science Letters, 2006, 243, 552-564.	1.8	38
38	Petrological interpretation of deep crustal intrusive bodies beneath oceanic hotspot provinces. Geochemistry, Geophysics, Geosystems, 2013, 14, 604-619.	1.0	38
39	The dynamic life of an oceanic plate. Tectonophysics, 2019, 760, 107-135.	0.9	33
40	Why is Africa rifting?. Geological Society Special Publication, 2016, 420, 11-30.	0.8	32
41	The EChO science case. Experimental Astronomy, 2015, 40, 329-391.	1.6	31
42	Constraining the Volume of Earth's Early Oceans With a Temperatureâ€Dependent Mantle Water Storage Capacity Model. AGU Advances, 2021, 2, e2020AV000323.	2.3	30
43	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.	3.3	29
44	Plume generation in natural thermal convection at high Rayleigh and Prandtl numbers. Journal of Fluid Mechanics, 2001, 434, 1-21.	1.4	28
45	The dynamical control of subduction parameters on surface topography. Geochemistry, Geophysics, Geosystems, 2017, 18, 1661-1687.	1.0	28
46	Thermal expansivity, heat capacity and bulk modulus of the mantle. Geophysical Journal International, 2021, 228, 1119-1149.	1.0	27
47	Modification of the lithospheric stress field by lateral variations in plateâ€mantle coupling. Geophysical Research Letters, 2009, 36, .	1.5	23
48	Extrinsic Elastic Anisotropy in a Compositionally Heterogeneous Earth's Mantle. Journal of Geophysical Research: Solid Earth, 2019, 124, 1671-1687.	1.4	23
49	Abrupt upper-plate tilting during slab-transition-zone collision. Tectonophysics, 2018, 746, 199-211.	0.9	21
50	On the relative temperatures of Earthâ€™s volcanic hotspots and mid-ocean ridges. Science, 2022, 375, 57-61.	6.0	21
51	Thermodynamics of the Earth's Mantle. Reviews in Mineralogy and Geochemistry, 2010, 71, 465-484.	2.2	19
52	Energetics, equation of state, and elasticity of NAL phase: Potential host for alkali and aluminum in the lower mantle. Geophysical Research Letters, 2012, 39, .	1.5	19
53	Gravity observations and 3D structure of the Earth. Comptes Rendus - Geoscience, 2006, 338, 992-1001.	0.4	18
54	Oceanic plateau of the Hawaiian mantle plume head subducted to the uppermost lower mantle. Science, 2020, 370, 983-987.	6.0	18

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55	Slab pull, slab weakening, and their relation to deep intra-slab seismicity. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	16
56	Stress changes in the Costa Rica subduction zone due to the 1999 Mw=6.9 Quepos earthquake. Earth and Planetary Science Letters, 2005, 230, 97-112.	1.8	15
57	Temperature and velocity measurements of a rising thermal plume. Geochemistry, Geophysics, Geosystems, 2015, 16, 579-599.	1.0	15
58	Joint mineral physics and seismic wave traveltime analysis of upper mantle temperature. Geology, 2009, 37, 363-366.	2.0	14
59	Exhumation of a collisional orogen: A perspective from the North American Grenville Province. , 2004, , 391-410.		12
60	Thrust initiation and its control on tectonic wedge geometry: An insight from physical and numerical models. Journal of Structural Geology, 2014, 67, 37-49.	1.0	11
61	Numerical calculations of two-dimensional large Prandtl number convection in a box. Journal of Fluid Mechanics, 2013, 729, 584-602.	1.4	10
62	Constraining the source of mantle plumes. Earth and Planetary Science Letters, 2016, 435, 55-63.	1.8	7
63	Mantle Influence on Andean and Pre-Andean Topography. Springer Earth System Sciences, 2018, , 363-385.	0.1	5
64	Orphaning Regimes: The Missing Link Between Flattened and Penetrating Slab Morphologies. Frontiers in Earth Science, 2020, 8, .	0.8	5
65	Mantle convection and plate motion history: Toward general circulation models. Geophysical Monograph Series, 2000, , 289-307.	0.1	4
66	Triggered seismicity associated with the 1990 Nicoya, Costa Rica, <i>M</i>_{<i>w</i>} = 7.0 earthquake. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	3
67	Reply to comment on â€œdynamic topography in South Americaâ€•by Hechenleitnera, Fiorelli, Larrovere, Grellet-Tinnera, and Carignano. Journal of South American Earth Sciences, 2014, 50, 95-96.	0.6	3
68	The coupled effects of mantle mixing and a water-dependent viscosity on the surface ocean. Earth and Planetary Science Letters, 2020, 530, 115881.	1.8	3
69	Dynamics and excess temperature of a plume throughout its life cycle. Geophysical Journal International, 2016, 205, 1574-1588.	1.0	2
70	Driving Forces: Slab Pull, Ridge Push. Encyclopedia of Earth Sciences Series, 2016, , 193-196.	0.1	1
71	Water storage capacity of the martian mantle through time. Icarus, 2022, 385, 115113.	1.1	1
72	The Dynamic Structure of the Deep Earth: An Interdisciplinary Approach. Eos, 2004, 85, 153.	0.1	0

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73	Thank You to Our 2019 Reviewers. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009007.	1.0	0
74	Thank You to Our 2020 Reviewers. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009697.	1.0	0
75	MohoroviÄ‡ Discontinuity (Moho). , 2014, , 1-7.		0
76	Thank You to Our 2021 Reviewers. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	0