

C Lithgow-Bertelloni, Carolina Lithgow

List of Publications by Year in descending order

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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	On the relative temperatures of Earth's volcanic hotspots and mid-ocean ridges. <i>Science</i> , 2022, 375, 57-61.	6.0	21
2	Thank You to Our 2021 Reviewers. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	0
3	Water storage capacity of the martian mantle through time. <i>Icarus</i> , 2022, 385, 115113.	1.1	1
4	Thank You to Our 2020 Reviewers. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009697.	1.0	0
5	Constraining the Volume of Earth's Early Oceans With a Temperature-Dependent Mantle Water Storage Capacity Model. <i>AGU Advances</i> , 2021, 2, e2020AV000323.	2.3	30
6	Thermal expansivity, heat capacity and bulk modulus of the mantle. <i>Geophysical Journal International</i> , 2021, 228, 1119-1149.	1.0	27
7	The coupled effects of mantle mixing and a water-dependent viscosity on the surface ocean. <i>Earth and Planetary Science Letters</i> , 2020, 530, 115881.	1.8	3
8	Orphaning Regimes: The Missing Link Between Flattened and Penetrating Slab Morphologies. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	5
9	Oceanic plateau of the Hawaiian mantle plume head subducted to the uppermost lower mantle. <i>Science</i> , 2020, 370, 983-987.	6.0	18
10	Thank You to Our 2019 Reviewers. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009007.	1.0	0
11	Extrinsic Elastic Anisotropy in a Compositionally Heterogeneous Earth's Mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 1671-1687.	1.4	23
12	The dynamic life of an oceanic plate. <i>Tectonophysics</i> , 2019, 760, 107-135.	0.9	33
13	Mantle Influence on Andean and Pre-Andean Topography. <i>Springer Earth System Sciences</i> , 2018, , 363-385.	0.1	5
14	Abrupt upper-plate tilting during slab-transition-zone collision. <i>Tectonophysics</i> , 2018, 746, 199-211.	0.9	21
15	The dynamical control of subduction parameters on surface topography. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1661-1687.	1.0	28
16	Why is Africa rifting?. <i>Geological Society Special Publication</i> , 2016, 420, 11-30.	0.8	32
17	Dynamics and excess temperature of a plume throughout its life cycle. <i>Geophysical Journal International</i> , 2016, 205, 1574-1588.	1.0	2
18	Constraining the source of mantle plumes. <i>Earth and Planetary Science Letters</i> , 2016, 435, 55-63.	1.8	7

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19	Driving Forces: Slab Pull, Ridge Push. Encyclopedia of Earth Sciences Series, 2016, , 193-196.	0.1	1
20	The EChO science case. Experimental Astronomy, 2015, 40, 329-391.	1.6	31
21	Dynamic uplift during slab flattening. Earth and Planetary Science Letters, 2015, 425, 34-43.	1.8	49
22	Viscosity jump in Earth's mid-mantle. Science, 2015, 350, 1349-1352.	6.0	178
23	Temperature and velocity measurements of a rising thermal plume. Geochemistry, Geophysics, Geosystems, 2015, 16, 579-599.	1.0	15
24	Reply to comment on "dynamic topography in South America" by Hechenleitner, Fiorelli, Larrovere, Grellet-Tinnera, and Carignano. Journal of South American Earth Sciences, 2014, 50, 95-96.	0.6	3
25	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
26	Influence of Peruvian flat-subduction dynamics on the evolution of western Amazonia. Earth and Planetary Science Letters, 2014, 404, 250-260.	1.8	59
27	Mohorovičić Discontinuity (Moho)., 2014, , 1-7.		0
28	Numerical calculations of two-dimensional large Prandtl number convection in a box. Journal of Fluid Mechanics, 2013, 729, 584-602.	1.4	10
29	Petrological interpretation of deep crustal intrusive bodies beneath oceanic hotspot provinces. Geochemistry, Geophysics, Geosystems, 2013, 14, 604-619.	1.0	38
30	Dynamic topography in South America. Journal of South American Earth Sciences, 2013, 43, 127-144.	0.6	49
31	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
32	The importance of slab pull and a global asthenosphere to plate motions. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	39
33	Geophysics of Chemical Heterogeneity in the Mantle. Annual Review of Earth and Planetary Sciences, 2012, 40, 569-595.	4.6	129
34	The effects of lithospheric thickness and density structure on Earth's stress field. Geophysical Journal International, 2012, 188, 1-17.	1.0	50
35	Thermodynamics of mantle minerals - II. Phase equilibria. Geophysical Journal International, 2011, 184, 1180-1213.	1.0	475
36	Thermodynamics of the Earth's Mantle. Reviews in Mineralogy and Geochemistry, 2010, 71, 465-484.	2.2	19

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37	Tectonic and dynamic controls on the topography and subsidence of the Argentine Pampas: The role of the flat slab. <i>Earth and Planetary Science Letters</i> , 2010, 295, 187-194.	1.8	68
38	Inferring the thermochemical structure of the upper mantle from seismic data. <i>Geophysical Journal International</i> , 2009, 179, 1169-1185.	1.0	45
39	Estimates of the transition zone temperature in a mechanically mixed upper mantle. <i>Earth and Planetary Science Letters</i> , 2009, 277, 244-252.	1.8	43
40	Triggered seismicity associated with the 1990 Nicoya, Costa Rica, $M_w = 7.0$ earthquake. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	3
41	Modification of the lithospheric stress field by lateral variations in plate-mantle coupling. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	23
42	Joint mineral physics and seismic wave traveltime analysis of upper mantle temperature. <i>Geology</i> , 2009, 37, 363-366.	2.0	14
43	Reconciling strong slab pull and weak plate bending: The plate motion constraint on the strength of mantle slabs. <i>Earth and Planetary Science Letters</i> , 2008, 272, 412-421.	1.8	110
44	The effect of bulk composition and temperature on mantle seismic structure. <i>Earth and Planetary Science Letters</i> , 2008, 275, 70-79.	1.8	314
45	Time variability in Cenozoic reconstructions of mantle heat flow: Plate tectonic cycles and implications for Earth's thermal evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 14266-14271.	3.3	29
46	Faster seafloor spreading and lithosphere production during the mid-Cenozoic. <i>Geology</i> , 2007, 35, 29.	2.0	77
47	Phase stability and shear softening in CaSiO_3 perovskite at high pressure. <i>Physical Review B</i> , 2007, 75, .	1.1	74
48	Influence of phase transformations on lateral heterogeneity and dynamics in Earth's mantle. <i>Earth and Planetary Science Letters</i> , 2007, 263, 45-55.	1.8	115
49	Correlation of seismic and petrologic thermometers suggests deep thermal anomalies beneath hotspots. <i>Earth and Planetary Science Letters</i> , 2007, 264, 308-316.	1.8	82
50	Influence of continental roots and asthenosphere on plate-mantle coupling. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	175
51	Global reconstructions of Cenozoic seafloor ages: Implications for bathymetry and sea level. <i>Earth and Planetary Science Letters</i> , 2006, 243, 552-564.	1.8	38
52	Gravity observations and 3D structure of the Earth. <i>Comptes Rendus - Geoscience</i> , 2006, 338, 992-1001.	0.4	18
53	Thermodynamics of mantle minerals - I. Physical properties. <i>Geophysical Journal International</i> , 2005, 162, 610-632.	1.0	492
54	Stress changes in the Costa Rica subduction zone due to the 1999 $M_w=6.9$ Quepos earthquake. <i>Earth and Planetary Science Letters</i> , 2005, 230, 97-112.	1.8	15

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55	A plate tectonic mechanism for methane hydrate release along subduction zones. <i>Earth and Planetary Science Letters</i> , 2005, 236, 691-704.	1.8	45
56	Mineralogy and elasticity of the oceanic upper mantle: Origin of the low-velocity zone. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	249
57	Slab pull, slab weakening, and their relation to deep intra-slab seismicity. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	16
58	Exhumation of a collisional orogen: A perspective from the North American Grenville Province. , 2004, , 391-410.		12
59	Origin of the lithospheric stress field. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	111
60	The Dynamic Structure of the Deep Earth: An Interdisciplinary Approach. <i>Eos</i> , 2004, 85, 153.	0.1	0
61	The temporal evolution of plate driving forces: Importance of "slab suction" versus "slab pull" during the Cenozoic. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	113
62	Great earthquakes and slab pull: interaction between seismic coupling and plate "slab coupling. <i>Earth and Planetary Science Letters</i> , 2004, 218, 109-122.	1.8	102
63	Iceland, the Farallon slab, and dynamic topography of the North Atlantic. <i>Geology</i> , 2004, 32, 177.	2.0	64
64	How Mantle Slabs Drive Plate Tectonics. <i>Science</i> , 2002, 298, 207-209.	6.0	389
65	Plume generation in natural thermal convection at high Rayleigh and Prandtl numbers. <i>Journal of Fluid Mechanics</i> , 2001, 434, 1-21.	1.4	28
66	Mantle convection and plate motion history: Toward general circulation models. <i>Geophysical Monograph Series</i> , 2000, , 289-307.	0.1	4
67	Dynamic topography, plate driving forces and the African superswell. <i>Nature</i> , 1998, 395, 269-272.	13.7	466
68	Coupling of South American and African Plate Motion and Plate Deformation. <i>Science</i> , 1998, 279, 60-63.	6.0	200
69	The dynamics of Cenozoic and Mesozoic plate motions. <i>Reviews of Geophysics</i> , 1998, 36, 27-78.	9.0	558
70	Time Scales and Heterogeneous Structure in Geodynamic Earth Models. <i>Science</i> , 1998, 280, 91-95.	6.0	212
71	Cenozoic subsidence and uplift of continents from time-varying dynamic topography. <i>Geology</i> , 1997, 25, 735.	2.0	137
72	An Explanation for Earth's Long-Term Rotational Stability. <i>Science</i> , 1997, 275, 372-375.	6.0	76

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73	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
74	Cenozoic plate driving forces. Geophysical Research Letters, 1995, 22, 1317-1320.	1.5	115
75	Toroidalâ€poloidal partitioning of plate motions since 120 MA. Geophysical Research Letters, 1993, 20, 375-378.	1.5	93
76	A geodynamic model of mantle density heterogeneity. Journal of Geophysical Research, 1993, 98, 21895-21909.	3.3	411