Maxim D Ballmer

List of Publications by Year
in descending order

39	1,598	331259	301761
papers	citations	21 h-index	39 g-index

69	69	69	1478
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ponded melt at the boundary between the lithosphere and asthenosphere. Nature Geoscience, 2013, 6, 1041-1044.	5.4	144
2	Persistence of strong silica-enriched domains in the Earthâ€™s lower mantle. Nature Geoscience, 2017, 10, 236-240.	5.4	138
3	Compositional mantle layering revealed by slab stagnation at ~1000-km depth. Science Advances, 2015, 1, e1500815.	4.7	122
4	Spatial and temporal variability in Hawaiian hotspot volcanism induced by small-scale convection. Nature Geoscience, 2011, 4, 457-460.	5.4	105
5	Nonâ€hotspot volcano chains originating from smallâ€scale sublithospheric convection. Geophysical Research Letters, 2007, 34, .	1.5	96
6	Double layering of a thermochemical plume in the upper mantle beneath Hawaii. Earth and Planetary Science Letters, 2013, 376, 155-164.	1.8	76
7	Intraplate volcanism with complex ageâ€distance patterns: A case for smallâ€scale sublithospheric convection. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	64
8	Plutonicâ€Squishy Lid: A New Global Tectonic Regime Generated by Intrusive Magmatism on Earthâ€Like Planets. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008756.	1.0	61
9	Reconciling magmaâ€ocean crystallization models with the presentâ€day structure of the Earth's mantle. Geochemistry, Geophysics, Geosystems, 2017, 18, 2785-2806.	1.0	58
10	Compositional layering within the large low shearâ€wave velocity provinces in the lower mantle. Geochemistry, Geophysics, Geosystems, 2016, 17, 5056-5077.	1.0	54
11	Meltâ€“crystal density crossover in a deep magma ocean. Earth and Planetary Science Letters, 2019, 516, 202-211.	1.8	54
12	Small-scale sublithospheric convection reconciles geochemistry and geochronology of â€˜Superplumeâ€™ volcanism in the western and south Pacific. Earth and Planetary Science Letters, 2010, 290, 224-232.	1.8	49
13	Global observations of reflectors in the mid-mantle with implications for mantle structure and dynamics. Nature Communications, 2018, 9, 385.	5.8	47
14	Non-hotspot volcano chains produced by migration of shear-driven upwelling toward the East Pacific Rise. Geology, 2013, 41, 479-482.	2.0	45
15	Geochemical variation at the Hawaiian hot spot caused by upper mantle dynamics and melting of a heterogeneous plume. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	35
16	Intraplate volcanism at the edges of the <scp>C</scp>olorado <scp>P</scp>lateau sustained by a combination of triggered edgeâ€driven convection and shearâ€driven upwelling. Geochemistry, Geophysics, Geosystems, 2015, 16, 366-379.	1.0	35
17	Modeling Craton Destruction by Hydrationâ€Induced Weakening of the Upper Mantle. Journal of Geophysical Research: Solid Earth, 2017, 122, 7449-7466.	1.4	30
18	Intraplate volcanism due to convective instability of stagnant slabs in the mantle transition zone. Geochemistry, Geophysics, Geosystems, 2015, 16, 538-551.	1.0	29

#	Article	IF	Citations
19	The evolution and distribution of recycled oceanic crust in the Earth's mantle: Insight from geodynamic models. Earth and Planetary Science Letters, 2020, 537, 116171.	1.8	29
20	The influence of bulk composition on the long-term interior-atmosphere evolution of terrestrial exoplanets. Astronomy and Astrophysics, 2020, 643, A44.	2.1	28
21	A poorly mixed mantle transition zone and its thermal state inferred from seismic waves. Nature Geoscience, 2021, 14, 949-955.	5.4	25
22	Geochemical variations at intraplate hot spots caused by variable melting of a veined mantle plume. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	1.0	20
23	New constraints on the origin of the Hawaiian swell from wavelet analysis of the geoid to topography ratio. Earth and Planetary Science Letters, 2012, 359-360, 40-54.	1.8	20
24	The Thermoâ€Chemical Evolution of Mars With a Strongly Stratified Mantle. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006613.	1.5	20
25	Variable dynamic styles of primordial heterogeneity preservation in the Earth's lower mantle. Earth and Planetary Science Letters, 2020, 536, 116160.	1.8	18
26	Mantle Melting and Intraplate Volcanism Due to Selfâ€Buoyant Hydrous Upwellings From the Stagnant Slab That Are Conveyed by Smallâ€Scale Convection. Geochemistry, Geophysics, Geosystems, 2019, 20, 4972-4997.	1.0	17
27	The role of edge-driven convection in the generation of volcanism â€“ Part 1: A 2D systematic study. Solid Earth, 2021, 12, 613-632.	1.2	16
28	Coreâ€Exsolved SiO₂ Dispersal in the Earth's Mantle. Journal of Geophysical Research: Solid Earth, 2018, 123, 176-188.	1.4	14
29	Primordial Earth Mantle Heterogeneity Caused by the Moon-forming Giant Impact?. Astrophysical Journal, 2019, 887, 211.	1.6	14
30	Hotspots, Large Igneous Provinces, and Melting Anomalies. , 2015, , 393-459.		13
31	Melting in the FeO SiO 2 system to deep lower-mantle pressures: Implications for subducted Banded Iron Formations. Earth and Planetary Science Letters, 2016, 440, 56-61.	1.8	13
32	Constraints on volumes and patterns of asthenospheric melt from the spaceâ€time distribution of seamounts. Geophysical Research Letters, 2017, 44, 7203-7210.	1.5	8
33	Constraints on the composition and temperature of LLSVPs from seismic properties of lower mantle minerals. Earth and Planetary Science Letters, 2021, 554, 116685.	1.8	7
34	Geochemical variations at ridge-centered hotspots caused by variable melting of a veined mantle plume. Earth and Planetary Science Letters, 2013, 371-372, 191-202.	1.8	5
35	Timescales of chemical equilibrium between the convecting solid mantle and over- and underlying magma oceans. Solid Earth, 2021, 12, 421-437.	1.2	5
36	Geodynamic and Isotopic Constraints on the Genesis of Kimberlites, Lamproites and Related Magmas From the Finnish Segment of the Karelian Craton. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	4

#	Article	IF	Citations
37	Small-Scale Convection in the Earth's Mantle. , 2017, , .		3
38	Evidence of Volatileâ€Induced Melting in the Northeast Asian Upper Mantle. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022167.	1.4	3
39	Evidence for melt leakage from the Hawaiian plume above the mantle transition zone. Physics of the Earth and Planetary Interiors, 2021, 321, 106813.	0.7	2