

# Maxim D Ballmer

## List of Publications by Year in descending order

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39  
papers

1,598  
citations

331259

21  
h-index

301761

39  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1478  
citing authors

#	ARTICLE	IF	CITATIONS
1	Geodynamic and Isotopic Constraints on the Genesis of Kimberlites, Lamproites and Related Magmas From the Finnish Segment of the Karelian Craton. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	4
2	Constraints on the composition and temperature of LLSVPs from seismic properties of lower mantle minerals. <i>Earth and Planetary Science Letters</i> , 2021, 554, 116685.	1.8	7
3	Timescales of chemical equilibrium between the convecting solid mantle and over- and underlying magma oceans. <i>Solid Earth</i> , 2021, 12, 421-437.	1.2	5
4	The role of edge-driven convection in the generation of volcanism – Part 1: A 2D systematic study. <i>Solid Earth</i> , 2021, 12, 613-632.	1.2	16
5	The Thermochemical Evolution of Mars With a Strongly Stratified Mantle. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006613.	1.5	20
6	Evidence of Volatile-Induced Melting in the Northeast Asian Upper Mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022167.	1.4	3
7	Evidence for melt leakage from the Hawaiian plume above the mantle transition zone. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 321, 106813.	0.7	2
8	A poorly mixed mantle transition zone and its thermal state inferred from seismic waves. <i>Nature Geoscience</i> , 2021, 14, 949-955.	5.4	25
9	The evolution and distribution of recycled oceanic crust in the Earth's mantle: Insight from geodynamic models. <i>Earth and Planetary Science Letters</i> , 2020, 537, 116171.	1.8	29
10	Variable dynamic styles of primordial heterogeneity preservation in the Earth's lower mantle. <i>Earth and Planetary Science Letters</i> , 2020, 536, 116160.	1.8	18
11	Plutonic-Squishy Lid: A New Global Tectonic Regime Generated by Intrusive Magmatism on Earth-Like Planets. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008756.	1.0	61
12	The influence of bulk composition on the long-term interior-atmosphere evolution of terrestrial exoplanets. <i>Astronomy and Astrophysics</i> , 2020, 643, A44.	2.1	28
13	Mantle Melting and Intraplate Volcanism Due to Self-Buoyant Hydrous Upwellings From the Stagnant Slab That Are Conveyed by Small-Scale Convection. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 4972-4997.	1.0	17
14	Melt-crystal density crossover in a deep magma ocean. <i>Earth and Planetary Science Letters</i> , 2019, 516, 202-211.	1.8	54
15	Primordial Earth Mantle Heterogeneity Caused by the Moon-forming Giant Impact?. <i>Astrophysical Journal</i> , 2019, 887, 211.	1.6	14
16	Global observations of reflectors in the mid-mantle with implications for mantle structure and dynamics. <i>Nature Communications</i> , 2018, 9, 385.	5.8	47
17	Core-Exsolved SiO <sub>2</sub> Dispersal in the Earth's Mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 176-188.	1.4	14
18	Persistence of strong silica-enriched domains in the Earth's lower mantle. <i>Nature Geoscience</i> , 2017, 10, 236-240.	5.4	138

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19	Reconciling magmaâ€œcean crystallization models with the presentâ€œday structure of the Earth's mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2785-2806.	1.0	58
20	Constraints on volumes and patterns of asthenospheric melt from the spaceâ€œtime distribution of seamounts. <i>Geophysical Research Letters</i> , 2017, 44, 7203-7210.	1.5	8
21	Modeling Craton Destruction by Hydrationâ€œInduced Weakening of the Upper Mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 7449-7466.	1.4	30
22	Small-Scale Convection in the Earth's Mantle. , 2017, , .		3
23	Compositional layering within the large low shearâ€œwave velocity provinces in the lower mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 5056-5077.	1.0	54
24	Melting in the FeO SiO <sub>2</sub> system to deep lower-mantle pressures: Implications for subducted Banded Iron Formations. <i>Earth and Planetary Science Letters</i> , 2016, 440, 56-61.	1.8	13
25	Compositional mantle layering revealed by slab stagnation at ~1000-km depth. <i>Science Advances</i> , 2015, 1, e1500815.	4.7	122
26	Intraplate volcanism at the edges of the Colorado Plateau sustained by a combination of triggered edgeâ€œdriven convection and shearâ€œdriven upwelling. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 366-379.	1.0	35
27	Hotspots, Large Igneous Provinces, and Melting Anomalies. , 2015, , 393-459.		13
28	Intraplate volcanism due to convective instability of stagnant slabs in the mantle transition zone. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 538-551.	1.0	29
29	Ponded melt at the boundary between the lithosphere and asthenosphere. <i>Nature Geoscience</i> , 2013, 6, 1041-1044.	5.4	144
30	Non-hotspot volcano chains produced by migration of shear-driven upwelling toward the East Pacific Rise. <i>Geology</i> , 2013, 41, 479-482.	2.0	45
31	Double layering of a thermochemical plume in the upper mantle beneath Hawaii. <i>Earth and Planetary Science Letters</i> , 2013, 376, 155-164.	1.8	76
32	Geochemical variations at ridge-centered hotspots caused by variable melting of a veined mantle plume. <i>Earth and Planetary Science Letters</i> , 2013, 371-372, 191-202.	1.8	5
33	New constraints on the origin of the Hawaiian swell from wavelet analysis of the geoid to topography ratio. <i>Earth and Planetary Science Letters</i> , 2012, 359-360, 40-54.	1.8	20
34	Geochemical variations at intraplate hot spots caused by variable melting of a veined mantle plume. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	1.0	20
35	Spatial and temporal variability in Hawaiian hotspot volcanism induced by small-scale convection. <i>Nature Geoscience</i> , 2011, 4, 457-460.	5.4	105
36	Small-scale sublithospheric convection reconciles geochemistry and geochronology of â€œSuperplumeâ€œ™ volcanism in the western and south Pacific. <i>Earth and Planetary Science Letters</i> , 2010, 290, 224-232.	1.8	49

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37	Intraplate volcanism with complex age–distance patterns: A case for small-scale sublithospheric convection. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	64
38	Geochemical variation at the Hawaiian hot spot caused by upper mantle dynamics and melting of a heterogeneous plume. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	35
39	Non-hotspot volcano chains originating from small-scale sublithospheric convection. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	96