Allen K Mcnamara

List of Publications by Year
in descending order

44	3,570	147566	288905
papers	citations	31 h-index	40 g-index

45	45	45	1652
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermochemical structures beneath Africa and the Pacific Ocean. Nature, 2005, 437, 1136-1139.	13.7	394
2	Structure and Dynamics of Earth's Lower Mantle. Science, 2008, 320, 626-628.	6.0	356
3	Continent-sized anomalous zones with low seismic velocity at the base of Earth's mantle. Nature Geoscience, 2016, 9, 481-489.	5.4	279
4	A benchmark study on mantle convection in a 3â€Ð spherical shell using CitcomS. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	254
5	Thermochemical structures within a spherical mantle: Superplumes or piles?. Journal of Geophysical Research, 2004, 109, .	3.3	210
6	Tracking deep mantle reservoirs with ultra-low velocity zones. Earth and Planetary Science Letters, 2010, 299, 1-9.	1.8	187
7	Deformation of (Mg,Fe)SiO3 Post-Perovskite and D'' Anisotropy. Science, 2007, 316, 1729-1732.	6.0	139
8	Development of anisotropic structure in the Earth's lower mantle by solid-state convection. Nature, 2002, 416, 310-314.	13.7	137
9	Chemical complexity of hotspots caused by cycling oceanic crust through mantle reservoirs. Nature Geoscience, 2014, 7, 366-370.	5.4	130
10	A review of large low shear velocity provinces and ultra low velocity zones. Tectonophysics, 2019, 760, 199-220.	0.9	116
11	Synthetic tomography of plume clusters and thermochemical piles. Earth and Planetary Science Letters, 2009, 278, 152-162.	1.8	107
12	Mega ultra low velocity zone and mantle flow. Earth and Planetary Science Letters, 2013, 364, 59-67.	1.8	90
13	Localization of dislocation creep in the lower mantle: implications for the origin of seismic anisotropy. Earth and Planetary Science Letters, 2001, 191, 85-99.	1.8	82
14	Tomographic filtering of geodynamic models: Implications for model interpretation and large-scale mantle structure. Journal of Geophysical Research, 2007, 112, .	3.3	77
15	Coreâ€“mantle boundary topography as a possible constraint on lower mantle chemistry and dynamics. Earth and Planetary Science Letters, 2010, 289, 232-241.	1.8	60
16	The difficulty for subducted oceanic crust to accumulate at the Earth's coreâ€mantle boundary. Journal of Geophysical Research: Solid Earth, 2013, 118, 1807-1816.	1.4	60
17	West African proximity of the Avalon terrane in the latest Precambrian. Bulletin of the Geological Society of America, 2001, 113, 1161-1170.	1.6	59
18	Modeling lower mantle anisotropy development in a subducting slab. Earth and Planetary Science Letters, 2006, 245, 302-314.	1.8	57

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19	Deformation in the lowermost mantle: From polycrystal plasticity to seismic anisotropy. Earth and Planetary Science Letters, 2011, 306, 33-45.	1.8	54
20	Development of finite strain in the convecting lower mantle and its implications for seismic anisotropy. Journal of Geophysical Research, 2003, 108, .	3.3	52
21	Cooling of the Earth: A parameterized convection study of whole versus layered models. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	1.0	51
22	The influence of thermochemical convection on the fixity of mantle plumes. Earth and Planetary Science Letters, 2004, 222, 485-500.	1.8	51
23	The anisotropic and rheological structure of the oceanic upper mantle from a simple model of plate shear. Geophysical Journal International, 2004, 158, 287-296.	1.0	50
24	A strong lateral shear velocity gradient and anisotropy heterogeneity in the lowermost mantle beneath the southern Pacific. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	50
25	Degree-one mantle convection: Dependence on internal heating and temperature-dependent rheology. Geophysical Research Letters, 2005, 32, .	1.5	49
26	Supercontinent formation from stochastic collision and mantle convection models. Gondwana Research, 2009, 15, 267-275.	3.0	46
27	Compositionally-distinct ultra-low velocity zones on Earthâ€™s core-mantle boundary. Nature Communications, 2017, 8, 177.	5.8	45
28	Influence of thermochemical piles on topography at Earth's coreâ€“mantle boundary. Earth and Planetary Science Letters, 2007, 261, 443-455.	1.8	38
29	Synthetic seismic anisotropy models within a slab impinging on the coreâ€“mantle boundary. Geophysical Journal International, 2014, 199, 164-177.	1.0	34
30	Deep mantle plumes and convective upwelling beneath the Pacific Ocean. Earth and Planetary Science Letters, 2010, 294, 143-151.	1.8	33
31	Episodic entrainment of deep primordial mantle material into ocean island basalts. Nature Communications, 2015, 6, 8937.	5.8	32
32	Implications of lower-mantle structural heterogeneity for the existence and nature of whole-mantle plumes. , 2007, , 79-101.		30
33	Seismic evidence for a chemically distinct thermochemical reservoir in Earth's deep mantle beneath Hawaii. Earth and Planetary Science Letters, 2015, 426, 143-153.	1.8	29
34	Global scale models of the mantle flow field predicted by synthetic tomography models. Physics of the Earth and Planetary Interiors, 2010, 182, 129-138.	0.7	27
35	Intermittent and lateral varying ULVZ structure at the northeastern margin of the Pacific LLSVP. Journal of Geophysical Research: Solid Earth, 2017, 122, 1198-1220.	1.4	24
36	Dynamical investigation of a thickening ice-shell: Implications for the icy moon Europa. Icarus, 2019, 329, 251-269.	1.1	20

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37	The influence of deep mantle compositional heterogeneity on Earth's thermal evolution. Earth and Planetary Science Letters, 2018, 500, 86-96.	1.8	19
38	Material transport across Europa's ice shell. Geophysical Research Letters, 2015, 42, 4288-4293.	1.5	17
39	Fine-Scale Ultra-Low Velocity Zone Layering at the Core-Mantle Boundary and Superplumes. , 2007, , 139-158.		10
40	Evolving morphology of crustal accumulations in Earth's lowermost mantle. Earth and Planetary Science Letters, 2022, 577, 117265.	1.8	9
41	Earthâ€™s Structure, Lower Mantle. Encyclopedia of Earth Sciences Series, 2020, , 1-8.	0.1	1
42	Earthâ€™s Structure, Lower Mantle. Encyclopedia of Earth Sciences Series, 2021, , 176-183.	0.1	0
43	Earthâ€™s Lower Mantle, Structure. Encyclopedia of Earth Sciences Series, 2020, , 1-8.	0.1	0
44	Mobile mantle could explain volcanic hotspot locations. Nature, 2022, 603, 796-797.	13.7	0