Dave R Stegman

List of Publications by Year
in descending order

34 papers	2,840 citations	257450 24 h-index	395702 33 g-index
35 all docs	35 docs citations	35 times ranked	2210 citing authors

#	Article	IF	Citations
1	Evolution and diversity of subduction zones controlled by slab width. Nature, 2007, 446, 308-311.	27.8	494
2	Influence of trench width on subduction hinge retreat rates in 3-D models of slab rollback. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	276
3	Indian and African plate motions driven by the push force of the RÃ©union plume head. Nature, 2011, 475, 47-52.	27.8	242
4	An early lunar core dynamo driven by thermochemical mantle convection. Nature, 2003, 421, 143-146.	27.8	177
5	Global trench migration velocities and slab migration induced upper mantle volume fluxes: Constraints to find an Earth reference frame based on minimizing viscous dissipation. Earth-Science Reviews, 2008, 88, 118-144.	9.1	167
6	Subduction dynamics and the origin of Andean orogeny and the Bolivian orocline. Nature, 2011, 480, 83-86.	27.8	152
7	A regime diagram for subduction styles from 3-D numerical models of free subduction. Tectonophysics, 2010, 483, 29-45.	2.2	149
8	Upper plate controls on deep subduction, trench migrations and deformations at convergent margins. Tectonophysics, 2010, 483, 80-92.	2.2	126
9	Origin of Columbia River flood basalt controlled by propagating rupture of the Farallon slab. Nature, 2012, 482, 386-389.	27.8	123
10	Segmentation of the Farallon slab. Earth and Planetary Science Letters, 2011, 311, 1-10.	4.4	108
11	Cenozoic Tectonics of Western North America Controlled by Evolving Width of Farallon Slab. Science, 2010, 329, 316-319.	12.6	81
12	Episodicity in back-arc tectonic regimes. Physics of the Earth and Planetary Interiors, 2008, 171, 265-279.	1.9	79
13	The convergence history of India-Eurasia records multiple subduction dynamics processes. Science Advances, 2020, 6, eaaz8681.	10.3	68
14	Bifurcation of the Yellowstone plume driven by subduction-induced mantle flow. Nature Geoscience, 2013, 6, 395-399.	12.9	66
15	Competing influences of plate width and far-field boundary conditions on trench migration and morphology of subducted slabs in the upper mantle. Tectonophysics, 2010, 483, 46-57.	2.2	58
16	Influence of lateral slab edge distance on plate velocity, trench velocity, and subduction partitioning. Journal of Geophysical Research, 2011, 116, .	3.3	55
17	Implications of a longâ€lived basal magma ocean in generating Earth's ancient magnetic field. Geochemistry, Geophysics, Geosystems, 2013, 14, 4735-4742.	2.5	53
18	Plumeâ€“slab interaction: The Samoaâ€“Tonga system. Physics of the Earth and Planetary Interiors, 2014, 232, 1-14.	1.9	49

#	Article	IF	Citations
19	A model comparison study of large-scale mantleâ€“lithosphere dynamics driven by subduction. Physics of the Earth and Planetary Interiors, 2008, 171, 224-234.	1.9	43
20	Interactions of 3D mantle flow and continental lithosphere near passive margins. Tectonophysics, 2010, 483, 20-28.	2.2	39
21	The strength of gravitational core-mantle coupling. Geophysical Research Letters, 2014, 41, 3786-3792.	4.0	38
22	Western U.S. seismic anisotropy revealing complex mantle dynamics. Earth and Planetary Science Letters, 2018, 500, 156-167.	4.4	33
23	The influence of spreading rate and permeability on melt focusing beneath mid-ocean ridges. Physics of the Earth and Planetary Interiors, 2020, 304, 106486.	1.9	28
24	Effects of depth-dependent viscosity and plate motions on maintaining a relatively uniform mid-ocean ridge basalt reservoir in whole mantle flow. Journal of Geophysical Research, 2002, 107, ETG 5-1.	3.3	25
25	Origin of ice diapirism, true polar wander, subsurface ocean, and tiger stripes of Enceladus driven by compositional convection. Icarus, 2009, 202, 669-680.	2.5	21
26	Mechanism for generating stagnant slabs in 3-D spherical mantle convection models at Earth-like conditions. Physics of the Earth and Planetary Interiors, 2010, 183, 341-352.	1.9	21
27	Formation and Stability of Sameâ€Dip Double Subduction Systems. Journal of Geophysical Research: Solid Earth, 2019, 124, 7387-7412.	3.4	16
28	Thermal and magnetic evolution of a crystallizing basal magma ocean in Earth's mantle. Earth and Planetary Science Letters, 2020, 534, 116085.	4.4	13
29	A geochemical evaluation of potential magma ocean dynamics using a parameterized model for perovskite crystallization. Earth and Planetary Science Letters, 2014, 392, 154-165.	4.4	11
30	The subduction dichotomy of strong plates and weak slabs. Solid Earth, 2017, 8, 339-350.	2.8	10
31	Stirring in 3-d spherical models of convection in the Earth's mantle. Philosophical Magazine, 2006, 86, 3175-3204.	1.6	6
32	A regime diagram of mobile lid convection with plate-like behavior. Physics of the Earth and Planetary Interiors, 2015, 241, 65-76.	1.9	6
33	Influence of continental growth on midâ€ocean ridge depth. Geochemistry, Geophysics, Geosystems, 2016, 17, 4425-4437.	2.5	5
34	Mantle Dynamics â€“ A Case Study. Lecture Notes in Earth Sciences, 2009, , 139-181.	0.5	0