Samuel Howell

List of Publications by Year
in descending order

36 papers	1,471 citations	361388 20 h-index	395678 33 g-index
40 all docs	40 docs citations	40 times ranked	1447 citing authors

#	Article	IF	Citations
1	Role of melt supply in oceanic detachment faulting and formation of megamullions. Geology, 2008, 36, 455.	4.4	245
2	Implications of grain size evolution on the seismic structure of the oceanic upper mantle. Earth and Planetary Science Letters, 2009, 282, 178-189.	4.4	118
3	NASAâ€™s Europa Clipperâ€”a mission to a potentially habitable ocean world. Nature Communications, 2020, 11, 1311.	12.8	110
4	The structure of oceanic core complexes controlled by the depth distribution of magmaÂemplacement. Nature Geoscience, 2010, 3, 491-495.	12.9	104
5	Magmatic and tectonic extension at midâ€ocean ridges: 1. Controls on fault characteristics. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	100
6	Magmatic and tectonic extension at midâ€ocean ridges: 2. Origin of axial morphology. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	66
7	Sensitivity of seafloor bathymetry to climate-driven fluctuations in mid-ocean ridge magma supply. Science, 2015, 350, 310-313.	12.6	65
8	Mantle flow and melting underneath oblique and ultraslow midâ€ocean ridges. Geophysical Research Letters, 2007, 34, .	4.0	64
9	Spreading rate dependence of gravity anomalies along oceanic transform faults. Nature, 2007, 448, 183-187.	27.8	63
10	Band Formation and Oceanâ€Surface Interaction on Europa and Ganymede. Geophysical Research Letters, 2018, 45, 4701-4709.	4.0	54
11	The Likely Thickness of Europaâ€™s Icy Shell. Planetary Science Journal, 2021, 2, 129.	3.6	45
12	Controls on melt migration and extraction at the ultraslow Southwest Indian Ridge 10Â°â€“16Â°E. Journal of Geophysical Research, 2011, 116, .	3.3	44
13	Melting systematics in midâ€ocean ridge basalts: Application of a plagioclaseâ€spinel melting model to global variations in major element chemistry and crustal thickness. Journal of Geophysical Research: Solid Earth, 2015, 120, 4863-4886.	3.4	43
14	Topographic controls on dike injection in volcanic rift zones. Earth and Planetary Science Letters, 2006, 246, 188-196.	4.4	42
15	Can Earth-like plate tectonics occur in ocean world ice shells?. Icarus, 2019, 322, 69-79.	2.5	33
16	Magmatic and tectonic extension at the Chile Ridge: Evidence for mantle controls on ridge segmentation. Geochemistry, Geophysics, Geosystems, 2016, 17, 2354-2373.	2.5	28
17	The origin of the asymmetry in the Iceland hotspot along the Mid-Atlantic Ridge from continental breakup to present-day. Earth and Planetary Science Letters, 2014, 392, 143-153.	4.4	27
18	Focusing of upward fluid migration beneath volcanic arcs: Effect of mineral grain size variation in the mantle wedge. Geochemistry, Geophysics, Geosystems, 2015, 16, 3905-3923.	2.5	26

#	Article	IF	Citations
19	Seafloor expression of oceanic detachment faulting reflects gradients in mid-ocean ridge magma supply. Earth and Planetary Science Letters, 2019, 516, 176-189.	4.4	25
20	Rapid rotation of normal faults due to flexural stresses: An explanation for the global distribution of normal fault dips. Journal of Geophysical Research: Solid Earth, 2014, 119, 3722-3739.	3.4	22
21	The role of elasticity in simulating long-term tectonic extension. Geophysical Journal International, 2016, 205, 728-743.	2.4	21
22	Magmatic Focusing to Midâ€Ocean Ridges: The Role of Grainâ€Size Variability and Nonâ€Newtonian Viscosity. Geochemistry, Geophysics, Geosystems, 2017, 18, 4342-4355.	2.5	21
23	Grainâ€size dynamics beneath midâ€ocean ridges: Implications for permeability and melt extraction. Geochemistry, Geophysics, Geosystems, 2015, 16, 925-946.	2.5	20
24	The vertical fingerprint of earthquake cycle loading in southern California. Nature Geoscience, 2016, 9, 611-614.	12.9	19
25	Grain-size distribution in the mantle wedge of subduction zones. Journal of Geophysical Research, 2011, 116, .	3.3	15
26	A Recipe for the Geophysical Exploration of Enceladus. Planetary Science Journal, 2021, 2, 157.	3.6	14
27	Response to Comment on â€œSensitivity of seafloor bathymetry to climate-driven fluctuations in mid-ocean ridge magma supplyâ€. Science, 2016, 352, 1405-1405.	12.6	9
28	Controls on Midâ€ocean Ridge Normal Fault Seismicity Across Spreading Rates From Rateâ€andâ€State Friction Models. Journal of Geophysical Research: Solid Earth, 2018, 123, 6719-6733.	3.4	6
29	Causes of Oceanic Crustal Thickness Oscillations Along a 74â€M Midâ€Atlantic Ridge Flow Line. Geochemistry, Geophysics, Geosystems, 2019, 20, 6123-6139.	2.5	6
30	Predicting Rates and Distribution of Carbonate Melting in Oceanic Upper Mantle: Implications for Seismic Structure and Global Carbon Cycling. Geophysical Research Letters, 2018, 45, 6944-6953.	4.0	4
31	Response to Comment on â€œSensitivity of seafloor bathymetry to climate-driven fluctuations in mid-ocean ridge magma supplyâ€. Science, 2016, 353, 229-229.	12.6	3
32	MeltMigrator: A MATLABâ€based software for modeling threeâ€dimensional melt migration and crustal thickness variations at midâ€ocean ridges following a rulesâ€based approach. Geochemistry, Geophysics, Geosystems, 2017, 18, 445-456.	2.5	2
33	Finding order in chaos: Quantitative predictors of chaos terrain morphology on Europa. Geophysical Research Letters, 0, , .	4.0	2
34	Resurfacing: An Approach to Planetary Protection for Geologically Active Ocean Worlds. Planetary Science Journal, 2022, 3, 108.	3.6	1
35	A miniature research vessel: A small-scale ocean-exploration demonstration of geophysical methods. The Leading Edge, 2014, 33, 1408-1409.	0.7	0
36	Camilla: A centaur reconnaissance and impact mission concept. Planetary and Space Science, 2018, 164, 184-193.	1.7	0