Magali Billen

List of Publications by Year
in descending order

42 papers	2,338 citations	279701 23 h-index	289141 40 g-index
47 all docs	47 docs citations	47 times ranked	1529 citing authors

#	Article	IF	Citations
1	On the Implementation and Usability of Crystal Preferred Orientation Evolution in Geodynamic Modeling. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009846.	1.0	2
2	Deep slab seismicity limited by rate of deformation in the transition zone. Science Advances, 2020, 6, eaaz7692.	4.7	19
3	Intermediateâ€Depth Earthquakes Controlled by Incoming Plate Hydration Along Bendingâ€Related Faults. Geophysical Research Letters, 2019, 46, 3688-3697.	1.5	30
4	Decoupling of plate-asthenosphere motion caused by non-linear viscosity during slab folding in the transition zone. Physics of the Earth and Planetary Interiors, 2018, 281, 17-30.	0.7	24
5	A discontinuous Galerkin method with a bound preserving limiter for the advection of non-diffusive fields in solid Earth geodynamics. Physics of the Earth and Planetary Interiors, 2017, 263, 23-37.	0.7	20
6	Coupled effects of phase transitions and rheology in 2â€Ð dynamical models of subduction. Journal of Geophysical Research: Solid Earth, 2017, 122, 5813-5830.	1.4	22
7	Insights Into the Causes of Arc Rifting From 2â€Ð Dynamic Models of Subduction. Geophysical Research Letters, 2017, 44, 10,948.	1.5	6
8	The effects of phase transitions and compositional layering in two-dimensional kinematic models of subduction. Journal of Geodynamics, 2016, 100, 159-174.	0.7	33
9	Along-strike variation in subducting plate velocity induced by along-strike variation in overriding plate structure: Insights from 3D numerical models. Journal of Geodynamics, 2016, 100, 175-183.	0.7	7
10	Influence of cratonic lithosphere on the formation and evolution of flat slabs: Insights from 3â€<scp>D</scp> timeâ€dependent modeling. Geochemistry, Geophysics, Geosystems, 2015, 16, 2933-2948.	1.0	32
11	Double dip. Nature Geoscience, 2015, 8, 428-429.	5.4	3
12	Lateral migration of a foundering high-density root: Insights from numerical modeling applied to the southern Sierra Nevada. Lithos, 2014, 189, 77-88.	0.6	5
13	Non-steady-state subduction and trench-parallel flow induced by overriding plate structure. Earth and Planetary Science Letters, 2014, 401, 227-235.	1.8	24
14	Three-dimensional numerical models of flat slab subduction and the Denali fault driving deformation in south-central Alaska. Earth and Planetary Science Letters, 2013, 376, 29-42.	1.8	73
15	Influence of geometry and eclogitization on oceanic plateau subduction. Earth and Planetary Science Letters, 2013, 363, 34-43.	1.8	69
16	Dynamics of outerâ€rise faulting in oceanicâ€continental subduction systems. Geochemistry, Geophysics, Geosystems, 2013, 14, 2310-2327.	1.0	65
17	Visualization and multivariate clustering of scattered moment tensors. Information Visualization, 2012, 11, 43-59.	1.2	1
18	The role of rheology and slab shape on rapid mantle flow: Threeâ€dimensional numerical models of the Alaska slab edge. Journal of Geophysical Research, 2012, 117, .	3.3	80

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19	Rapid weakening of subducting plates from trench-parallel estimates of flexural rigidity. Physics of the Earth and Planetary Interiors, 2012, 196-197, 1-13.	0.7	19
20	Origin of localized fast mantle flow velocity in numerical models of subduction. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	13
21	The role of the overriding plate thermal state on slab dip variability and on the occurrence of flat subduction. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	65
22	Sensitivity of the shortâ€•to intermediateâ€wavelength geoid to rheologic structure in subduction zones. Journal of Geophysical Research, 2012, 117, .	3.3	12
23	Visualizing Strain Anisotropy in Mantle Flow Fields. Computer Graphics Forum, 2011, 30, 2301-2313.	1.8	1
24	Distance field computation for geological slab surface data sets. Computing and Visualization in Science, 2011, 14, 143-156.	1.2	0
25	Reconciling surface plate motions with rapid three-dimensional mantle flow around a slab edge. Nature, 2010, 465, 338-341.	13.7	204
26	Threeâ€dimensionality of slab detachment due to ridgeâ€trench collision: Laterally simultaneous boudinage versus tear propagation. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	129
27	Slab dynamics in the transition zone. Physics of the Earth and Planetary Interiors, 2010, 183, 296-308.	0.7	65
28	Mantle transition zone structure along a profile in the SW Pacific: thermal and compositional variations. Geophysical Journal International, 2009, 176, 113-125.	1.0	47
29	Soaking slabs. Nature Geoscience, 2009, 2, 744-746.	5.4	4
30	Dynamics and implications of slab detachment due to ridgeâ€trench collision. Journal of Geophysical Research, 2009, 114, .	3.3	68
31	Rheologic controls on the dynamics of slab detachment. Tectonophysics, 2009, 464, 60-69.	0.9	130
32	Interactive Visualization to Advance Earthquake Simulation. Pure and Applied Geophysics, 2008, 165, 621-633.	0.8	8
33	A geoscience perspective on immersive 3D gridded data visualization. Computers and Geosciences, 2008, 34, 1056-1072.	2.0	96
34	Modeling the Dynamics of Subducting Slabs. Annual Review of Earth and Planetary Sciences, 2008, 36, 325-356.	4.6	212
35	Rheologic controls on slab dynamics. Geochemistry, Geophysics, Geosystems, 2007, 8, .	1.0	166
36	Constraints on subducting plate strength within the Kermadec trench. Journal of Geophysical Research, 2005, 110, .	3.3	77

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37	Newtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiation. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	37
38	Correction to â€œNewtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiationâ€• Geophysical Research Letters, 2005, 32, .	1.5	0
39	Lithospheric instability in obliquely convergent margins: San Gabriel Mountains, southern California. Journal of Geophysical Research, 2004, 109, .	3.3	23
40	Multiscale dynamics of the Tonga-Kermadec subduction zone. Geophysical Journal International, 2003, 153, 359-388.	1.0	139
41	A low viscosity wedge in subduction zones. Earth and Planetary Science Letters, 2001, 193, 227-236.	1.8	227
42	Morphology and origin of the Osbourn Trough. Journal of Geophysical Research, 2000, 105, 13481-13489.	3.3	81