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	A low viscosity wedge in subduction zones. Earth and Planetary Science Letters, 2001, 193, 227-236.	1.8	227
2	Modeling the Dynamics of Subducting Slabs. Annual Review of Earth and Planetary Sciences, 2008, 36, 325-356.	4.6	212
3	Reconciling surface plate motions with rapid three-dimensional mantle flow around a slab edge. Nature, 2010, 465, 338-341.	13.7	204
4	Rheologic controls on slab dynamics. Geochemistry, Geophysics, Geosystems, 2007, 8, .	1.0	166
5	Multiscale dynamics of the Tonga-Kermadec subduction zone. Geophysical Journal International, 2003, 153, 359-388.	1.0	139
6	Rheologic controls on the dynamics of slab detachment. Tectonophysics, 2009, 464, 60-69.	0.9	130
7	Threeâ€dimensionality of slab detachment due to ridgeâ€trench collision: Laterally simultaneous boudinage versus tear propagation. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	129
8	A geoscience perspective on immersive 3D gridded data visualization. Computers and Geosciences, 2008, 34, 1056-1072.	2.0	96
9	Morphology and origin of the Osbourn Trough. Journal of Geophysical Research, 2000, 105, 13481-13489.	3.3	81
10	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
11	Constraints on subducting plate strength within the Kermadec trench. Journal of Geophysical Research, 2005, 110, .	3.3	77
12	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
13	Influence of geometry and eclogitization on oceanic plateau subduction. Earth and Planetary Science Letters, 2013, 363, 34-43.	1.8	69
14	Dynamics and implications of slab detachment due to ridgeâ€trench collision. Journal of Geophysical Research, 2009, 114, .	3.3	68
15	Slab dynamics in the transition zone. Physics of the Earth and Planetary Interiors, 2010, 183, 296-308.	0.7	65
16	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
17	Dynamics of outerâ€rise faulting in oceanicâ€continental subduction systems. Geochemistry, Geophysics, Geosystems, 2013, 14, 2310-2327.	1.0	65
18	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

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19	Newtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiation. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	37
20	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
21	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
22	IntermediateâEDepth Earthquakes Controlled by Incoming Plate Hydration Along Bendingâ€Related Faults. Geophysical Research Letters, 2019, 46, 3688-3697.	1.5	30
23	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
24	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
25	Lithospheric instability in obliquely convergent margins: San Gabriel Mountains, southern California. Journal of Geophysical Research, 2004, 109, .	3.3	23
26	Coupled effects of phase transitions and rheology in 2â€D dynamical models of subduction. Journal of Geophysical Research: Solid Earth, 2017, 122, 5813-5830.	1.4	22
27	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
28	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
29	Deep slab seismicity limited by rate of deformation in the transition zone. Science Advances, 2020, 6, eaaz7692.	4.7	19
30	Origin of localized fast mantle flow velocity in numerical models of subduction. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	13
31	Sensitivity of the shortâ€to intermediateâ€wavelength geoid to rheologic structure in subduction zones. Journal of Geophysical Research, 2012, 117, .	3.3	12
32	Interactive Visualization to Advance Earthquake Simulation. Pure and Applied Geophysics, 2008, 165, 621-633.	0.8	8
33	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
34	Insights Into the Causes of Arc Rifting From 2â€D Dynamic Models of Subduction. Geophysical Research Letters, 2017, 44, 10,948.	1.5	6
35	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
36	Soaking slabs. Nature Geoscience, 2009, 2, 744-746.	5.4	4

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37	Double dip. Nature Geoscience, 2015, 8, 428-429.	5.4	3
38	On the Implementation and Usability of Crystal Preferred Orientation Evolution in Geodynamic Modeling. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009846.	1.0	2
39	Visualizing Strain Anisotropy in Mantle Flow Fields. Computer Graphics Forum, 2011, 30, 2301-2313.	1.8	1
40	Visualization and multivariate clustering of scattered moment tensors. Information Visualization, 2012, 11, 43-59.	1.2	1
41	Correction to â€œNewtonian versus non-Newtonian upper mantle viscosity: Implications for subduction initiationâ€• Geophysical Research Letters, 2005, 32, .	1.5	0
42	Distance field computation for geological slab surface data sets. Computing and Visualization in Science, 2011, 14, 143-156.	1.2	0