

Laurent G J MontÃ©si

List of Publications by Year in descending order

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64
papers

1,873
citations

304743

22
h-index

276875

41
g-index

71
all docs

71
docs citations

71
times ranked

2081
citing authors

#	ARTICLE	IF	CITATIONS
1	Microtomography of Partially Molten Rocks: Three-Dimensional Melt Distribution in Mantle Peridotite. <i>Science</i> , 2011, 332, 88-91.	12.6	134
2	Grain size evolution and the rheology of ductile shear zones: from laboratory experiments to postseismic creep. <i>Earth and Planetary Science Letters</i> , 2003, 211, 97-110.	4.4	123
3	A unified description of localization for application to large-scale tectonics. <i>Journal of Geophysical Research</i> , 2002, 107, ECV 1-1.	3.3	109
4	Fabric development as the key for forming ductile shear zones and enabling plate tectonics. <i>Journal of Structural Geology</i> , 2013, 50, 254-266.	2.3	102
5	Experimental quantification of permeability of partially molten mantle rock. <i>Earth and Planetary Science Letters</i> , 2014, 388, 273-282.	4.4	99
6	Clues to the lithospheric structure of Mars from wrinkle ridge sets and localization instability. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	95
7	Corona structures driven by plume–lithosphere interactions and evidence for ongoing plume activity on Venus. <i>Nature Geoscience</i> , 2020, 13, 547-554.	12.9	90
8	Shear-enhanced compaction and permeability reduction: Triaxial extension tests on porous sandstone. <i>Mechanics of Materials</i> , 1997, 25, 199-214.	3.2	83
9	Controls of shear zone rheology and tectonic loading on postseismic creep. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	75
10	Mantle flow and melting underneath oblique and ultraslow mid-ocean ridges. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	64
11	Spreading rate dependence of gravity anomalies along oceanic transform faults. <i>Nature</i> , 2007, 448, 183-187.	27.8	63
12	New geophysical insight into the origin of the Denali volcanic gap. <i>Geophysical Journal International</i> , 0, 182, 613-630.	2.4	63
13	Strain weakening enables continental plate tectonics. <i>Tectonophysics</i> , 2014, 631, 189-196.	2.2	60
14	Generation of permeability barriers during melt extraction at mid-ocean ridges. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	2.5	53
15	Controls on melt migration and extraction at the ultraslow Southwest Indian Ridge 10°–16°E. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	44
16	Fault reactivation and selective abandonment in the oceanic lithosphere. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	42
17	A constitutive model for layer development in shear zones near the brittle-ductile transition. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	34
18	Estimates of olivine–basaltic melt electrical conductivity using a digital rock physics approach. <i>Earth and Planetary Science Letters</i> , 2015, 432, 332-341.	4.4	33

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19	The dynamic life of an oceanic plate. <i>Tectonophysics</i> , 2019, 760, 107-135.	2.2	33
20	A probabilistic damage model of stress-induced permeability anisotropy during cataclastic flow. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	30
21	Accommodation of lithospheric shortening on Mercury from altimetric profiles of ridges and lobate scarps measured during MESSENGER flybys 1 and 2. <i>Icarus</i> , 2010, 209, 247-255.	2.5	29
22	Melt extraction pathways at segmented oceanic ridges: Application to the East Pacific Rise at the Siqueiros transform. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	27
23	Formation of ridges on Europa above crystallizing water bodies inside the ice shell. <i>Icarus</i> , 2014, 237, 190-201.	2.5	24
24	Cracking of lithosphere north of the Galapagos triple junction. <i>Geology</i> , 2008, 36, 339.	4.4	22
25	Spacing of faults at the scale of the lithosphere and localization instability: 1. Theory. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	20
26	Faulting and volcanism in the axial valley of the slow-spreading center of the Mariana back arc basin from Wadatumi side-scan sonar images. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	2.5	20
27	Hydration adjacent to a deeply subducting slab: The roles of nominally anhydrous minerals and migrating fluids. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 5753-5770.	3.4	17
28	Three-dimensional flow in the subslab mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 3989-4008.	2.5	17
29	Slip-rate-dependent melt extraction at oceanic transform faults. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 401-419.	2.5	17
30	Distributed deformation ahead of the Cocos-Nazca Rift at the Galapagos triple junction. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	2.5	16
31	Spacing of faults at the scale of the lithosphere and localization instability: 2. Application to the Central Indian Basin. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	15
32	Effects of stress on the anisotropic development of permeability during mechanical compaction of porous sandstones. <i>Geological Society Special Publication</i> , 2002, 200, 119-136.	1.3	13
33	Effects of regional slope on viscous flows: a preliminary study of lava terrace emplacement at submarine volcanic rift zones. <i>Journal of Volcanology and Geothermal Research</i> , 2003, 119, 145-159.	2.1	13
34	Evaluating geodynamic models for sub-slab anisotropy: Effects of olivine fabric type. , 2017, 13, 247-259.		13
35	Deflection of mantle flow beneath subducting slabs and the origin of subslab anisotropy. <i>Geophysical Research Letters</i> , 2014, 41, 6734-6742.	4.0	12
36	The impact of a pressurized regional sea or global ocean on stresses on Enceladus. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1258-1275.	3.6	12

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37	The Growth of Europa's Icy Shell: Convection and Crystallization. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006677.	3.6	12
38	Concentric dikes on the flanks of Pavonis Mons: Implications for the evolution of martian shield volcanoes and mantle plumes. , 2001, , .		11
39	Postseismic deformation and the strength of ductile shear zones. <i>Earth, Planets and Space</i> , 2004, 56, 1135-1142.	2.5	11
40	Geodynamic Models of Melt Generation and Extraction at Mid-Ocean Ridges. <i>Oceanography</i> , 2012, 25, 78-88.	1.0	11
41	Experimental evidence for melt partitioning between olivine and orthopyroxene in partially molten harzburgite. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 5776-5793.	3.4	11
42	Deformation-aided segregation of Fe-S liquid from olivine under deep Earth conditions: Implications for core formation in the early solar system. <i>Physics of the Earth and Planetary Interiors</i> , 2017, 263, 38-54.	1.9	11
43	The recent history of the Galapagos triple junction preserved on the Pacific plate. <i>Earth and Planetary Science Letters</i> , 2013, 371-372, 6-15.	4.4	10
44	A Bayesian approach to infer interior mass anomalies from the gravity data of celestial bodies. <i>Geophysical Journal International</i> , 2020, 220, 1687-1699.	2.4	9
45	Effects of Heat-Producing Elements on the Stability of Deep Mantle Thermochemical Piles. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008895.	2.5	9
46	Solving the Mascon Mystery. <i>Science</i> , 2013, 340, 1535-1536.	12.6	8
47	Fault-bound valley associated with the Rembrandt basin on Mercury. <i>Geophysical Research Letters</i> , 2016, 43, 11,536.	4.0	8
48	The Generation of Barriers to Melt Ascent in the Martian Lithosphere. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 47-66.	3.6	8
49	Melt Focusing Along Permeability Barriers at Subduction Zones and the Location of Volcanic Arcs. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009253.	2.5	8
50	Along-strike variation in subducting plate velocity induced by along-strike variation in overriding plate structure: Insights from 3D numerical models. <i>Journal of Geodynamics</i> , 2016, 100, 175-183.	1.6	7
51	Transient rifting north of the Galápagos Triple Junction. <i>Earth and Planetary Science Letters</i> , 2011, 307, 461-469.	4.4	6
52	The scientific rationale for deployment of a long-lived geophysical network on the Moon. , 2021, 53, .		4
53	Effective seismic wave velocities and attenuation in partially molten rocks. <i>Earth and Planetary Science Letters</i> , 2021, 572, 117117.	4.4	3
54	Geoscientists, Who Have Documented the Rapid and Accelerating Climate Crisis for Decades, Are Now Pleading for Immediate Collective Action. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL096644.	4.0	3

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55	Coulomb stress transfer and modeled permanent vertical surface deformation from the August 2011, Mineral, Virginia, earthquake. , 2015, , .		2
56	MeltMigrator: A MATLAB-based software for modeling three-dimensional melt migration and crustal thickness variations at mid-ocean ridges following a rules-based approach. Geochemistry, Geophysics, Geosystems, 2017, 18, 445-456.	2.5	2
57	The Science Case for Io Exploration. , 2021, 53, .		1
58	Barriers to Melt Ascent in the Lithosphere of Io With Applications to Heat Pipe Formation. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	1
59	In Appreciation of Our 2019 Peer Reviewers. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006420.	3.6	0
60	Venus Corona and Tessera Explorer (VeCaTEx). , 2021, 53, .		0
61	The Venus Strategic Plan. , 2021, 53, .		0
62	Recommendations for Addressing Priority Io Science in the Next Decade. , 2021, 53, .		0
63	Thank You to Our 2020 Peer Reviewers. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006865.	3.6	0
64	In Recognition of Our 2021 Peer Reviewers. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	0