

Laetitia Le Pourhiet

List of Publications by Year in descending order

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62
papers

3,248
citations

201674

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155660

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87
docs citations

87
times ranked

2690
citing authors

#	ARTICLE	IF	CITATIONS
1	Aegean tectonics: Strain localisation, slab tearing and trench retreat. <i>Tectonophysics</i> , 2013, 597-598, 1-33.	2.2	419
2	A thermomechanical model of exhumation of high pressure (HP) and ultra-high pressure (UHP) metamorphic rocks in Alpine-type collision belts. <i>Tectonophysics</i> , 2001, 342, 113-136.	2.2	254
3	The North Cycladic Detachment System. <i>Earth and Planetary Science Letters</i> , 2010, 289, 87-104.	4.4	187
4	HP-UHP exhumation during slow continental subduction: Self-consistent thermodynamically and thermomechanically coupled model with application to the Western Alps. <i>Earth and Planetary Science Letters</i> , 2008, 271, 63-74.	4.4	167
5	Burial and exhumation in a subduction wedge: Mutual constraints from thermomechanical modeling and natural P - T data (Schistes Lustrés, western Alps). <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	145
6	The geological signature of a slab tear below the Aegean. <i>Tectonophysics</i> , 2015, 659, 166-182.	2.2	135
7	Plume head-lithosphere interactions near intra-continental plate boundaries. <i>Tectonophysics</i> , 2007, 434, 15-38.	2.2	129
8	Thermal imprint of rift-related processes in orogens as recorded in the Pyrenees. <i>Earth and Planetary Science Letters</i> , 2014, 408, 296-306.	4.4	110
9	A scalable, matrix-free multigrid preconditioner for finite element discretizations of heterogeneous Stokes flow. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 290, 496-523.	6.6	104
10	Mantle instability beneath the Sierra Nevada Mountains in California and Death Valley extension. <i>Earth and Planetary Science Letters</i> , 2006, 251, 104-119.	4.4	97
11	Benchmarking numerical models of brittle thrust wedges. <i>Journal of Structural Geology</i> , 2016, 92, 140-177.	2.3	81
12	Rifting through a stack of inhomogeneous thrusts (the dipping pie concept). <i>Tectonics</i> , 2004, 23, n/a-n/a.	2.8	74
13	Post-orogenic extension and metamorphic core complexes in a heterogeneous crust: the role of crustal layering inherited from collision. Application to the Cyclades (Aegean domain). <i>Geophysical Journal International</i> , 2011, 184, 611-625.	2.4	71
14	Mechanisms of margin inversion in the external Western Alps: Implications for crustal rheology. <i>Tectonophysics</i> , 2012, 560-561, 62-83.	2.2	67
15	Kinematic interpretation of the 3D shapes of metamorphic core complexes. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	61
16	pTatin3D: High-Performance Methods for Long-Term Lithospheric Dynamics. , 2014, , .		61
17	Rheological and geodynamic controls on the mechanisms of subduction and HP/UHP exhumation of crustal rocks during continental collision: Insights from numerical models. <i>Tectonophysics</i> , 2014, 631, 212-250.	2.2	54
18	Geometry and kinematics of Mykonos detachment, Cyclades, Greece: Evidence for slip at shallow dip. <i>Tectonics</i> , 2010, 29, n/a-n/a.	2.8	53

#	ARTICLE	IF	CITATIONS
19	Granite intrusion in a metamorphic core complex: The example of the Mykonos laccolith (Cyclades), Tj ETQq1 1 0.784314 rgBT /Overloc	2.2	52
20	Continental break-up of the South China Sea stalled by far-field compression. Nature Geoscience, 2018, 11, 605-609.	12.9	52
21	Tectonic slicing of subducting oceanic crust along plate interfaces: Numerical modeling. Geochemistry, Geophysics, Geosystems, 2015, 16, 3505-3531.	2.5	46
22	A genetic link between transform and hyper-extended margins. Earth and Planetary Science Letters, 2017, 465, 184-192.	4.4	43
23	Plume-induced continental rifting and break-up in ultra-slow extension context: Insights from 3D numerical modeling. Tectonophysics, 2018, 746, 121-137.	2.2	42
24	Segmentation and kinematics of the North Americaâ€Caribbean plate boundary offshore Hispaniola. Terra Nova, 2015, 27, 467-478.	2.1	41
25	Epeirogenic transients related to mantle lithosphere removal in the southern Sierra Nevada region, California: Part II. Implications of rock uplift and basin subsidence relations. , 2013, 9, 394-425.		38
26	Epeirogenic transients related to mantle lithosphere removal in the southern Sierra Nevada region, California, part I: Implications of thermomechanical modeling. , 2012, 8, 1286-1309.		37
27	Role of rift maturity on the architecture and shortening distribution in mountain belts. Earth and Planetary Science Letters, 2019, 512, 89-99.	4.4	37
28	Mechanical basis for slip along lowâ€Angle normal faults. Geophysical Research Letters, 2012, 39, .	4.0	33
29	Buoyancy and localizing properties of continental mantle lithosphere: Insights from thermomechanical models of the eastern Gulf of Aden. Geochemistry, Geophysics, Geosystems, 2013, 14, 2800-2817.	2.5	30
30	Topographic and Tectonic Evolution of Mountain Belts Controlled by Salt Thickness and Rift Architecture. Tectonics, 2020, 39, e2019TC005903.	2.8	28
31	The Benefits of Using a Consistent Tangent Operator for Viscoelastoplastic Computations in Geodynamics. Geochemistry, Geophysics, Geosystems, 2018, 19, 4904-4924.	2.5	25
32	Formation of metamorphic core complex in inherited wedges: A thermomechanical modelling study. Earth and Planetary Science Letters, 2011, 309, 249-257.	4.4	24
33	New structural data on Late Paleozoic tectonics in the Kyrgyz Tien Shan (Central Asian Orogenic) Tj ETQq1 1 0.784314 rgBT /Overloc	6.0	24
34	Transfer zones in Mediterranean back-arc regions and tear faults. Bulletin - Societie Geologique De France, 2021, 192, 11.	2.2	24
35	Crustal structure and gravity anomalies beneath the Rif, northern Morocco: implications for the current tectonics of the Alboran region. Geophysical Journal International, 2015, 202, 640-652.	2.4	23
36	Towards subduction inception along the inverted North African margin of Algeria? Insights from thermo-mechanical models. Earth and Planetary Science Letters, 2018, 501, 13-23.	4.4	23

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37	Modes of Propagation of Continental Breakup and Associated Oblique Rift Structures. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019906.	3.4	23
38	Rheological implications of extensional detachments: Mediterranean and numerical insights. Earth-Science Reviews, 2016, 161, 233-258.	9.1	22
39	Links between long-term and short-term rheology of the lithosphere: Insights from strike-slip fault modelling. Tectonophysics, 2014, 631, 146-159.	2.2	21
40	Role of tectonic burial and temperature on the inversion of inherited extensional basins during collision. Geological Magazine, 2016, 153, 811-826.	1.5	20
41	Seismic hazard of the western Makran subduction zone: Insight from mechanical modelling and inferred frictional properties. Earth and Planetary Science Letters, 2021, 562, 116789.	4.4	20
42	Toward Robust and Predictive Geodynamic Modeling: The Way Forward in Frictional Plasticity. Geophysical Research Letters, 2020, 47, e2019GL086027.	4.0	19
43	A continuum mechanics approach to quantify brittle strain on weak faults: application to the extensional reactivation of shallow dipping discontinuities. Geophysical Journal International, 2011, 184, 1-11.	2.4	18
44	Controlling factors for differential subsidence in the Sonoma Foreland Basin (Early Triassic, western) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.5	18
45	Finite Thickness of Shear Bands in Frictional Viscoplasticity and Implications for Lithosphere Dynamics. Geochemistry, Geophysics, Geosystems, 2019, 20, 5598-5616.	2.5	18
46	Initial crustal thickness geometry controls on the extension in a back arc domain: Case of the Gulf of Corinth. Tectonics, 2003, 22, n/a-n/a.	2.8	17
47	Strain localization due to structural softening during pressure sensitive rate independent yielding. Bulletin - Societe Geologique De France, 2013, 184, 357-371.	2.2	16
48	New parametric implementation of metamorphic reactions limited by water content, impact on exhumation along detachment faults. Lithos, 2015, 236-237, 287-298.	1.4	16
49	The deep structure and reactivation of the Kyrgyz Tien Shan: Modelling the past to better constrain the present. Tectonophysics, 2018, 746, 530-548.	2.2	15
50	Lithospheric convective instability could induce creep along part of the San Andreas fault. Geology, 2013, 41, 999-1002.	4.4	13
51	Impact of range-parallel sediment transport on 2D thermo-mechanical models of mountain belts: Application to the Kyrgyz Tien Shan. Terra Nova, 2018, 30, 279-288.	2.1	13
52	Initiation, geometry and mechanics of brittle faulting in exhuming metamorphic rocks: insights from the northern Cycladic islands (Aegean, Greece). Bulletin - Societe Geologique De France, 2013, 184, 383-403.	2.2	12
53	Influence of basement heterogeneity on the architecture of low subsidence rate Paleozoic intracratonic basins (Reggane, Ahnet, Mouydir and Illizi basins, Hoggar Massif). Solid Earth, 2018, 9, 1239-1275.	2.8	12
54	Does interseismic strain localization near strike-slip faults result from boundary conditions or rheological structure?. Geophysical Journal International, 2014, 197, 50-62.	2.4	10

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55	Interactions of plutons and detachments: a comparison of Aegean and Tyrrhenian granitoids. <i>Solid Earth</i> , 2021, 12, 1357-1388.	2.8	9
56	Strain localisation in mechanically layered rocks beneath detachment zones: insights from numerical modelling. <i>Solid Earth</i> , 2013, 4, 135-152.	2.8	8
57	Effective rheology of a two-phase subduction shear zone: Insights from numerical simple shear experiments and implications for subduction zone interfaces. <i>Earth and Planetary Science Letters</i> , 2021, 566, 116913.	4.4	7
58	3D modelling of rifting through a pre-existing stack of nappes in the Gulf of Corinth (Greece): a mixed analogue/numerical approach. <i>Geological Society Special Publication</i> , 2006, 253, 233-252.	1.3	6
59	Rifting through a heterogeneous crust: insights from analogue models and application to the Gulf of Corinth. <i>Geological Society Special Publication</i> , 2006, 253, 213-231.	1.3	6
60	Control of inherited accreted lithospheric heterogeneity on the architecture and the low, long-term subsidence rate of intracratonic basins. <i>Bulletin - Societe Geologique De France</i> , 2021, 192, 15.	2.2	6
61	Rate and State Friction as a Spatially Regularized Transient Viscous Flow Law. <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, .	3.4	6
62	The topographic signature of temperature-controlled rheological transitions in an accretionary prism. <i>Solid Earth</i> , 2022, 13, 535-551.	2.8	5