List of Publications by Year in descending order

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#	Article	lF	CITATIONS
1	Bending-related faulting and mantle serpentinization at the Middle America trench. Nature, 2003, 425, 367-373.	27.8	828
2	Subduction erosion along the Middle America convergent margin. Nature, 2000, 404, 748-752.	27.8	494
3	Magnetic anomaly interpretation across the southern central Andes (32°-34°S): The role of the Juan Fernández Ridge in the late Tertiary evolution of the margin. Journal of Geophysical Research, 2001, 106, 6325-6345.	3.3	323
4	Generic model of subduction erosion. Geology, 2004, 32, 913.	4.4	312
5	Quaternary convergent margin tectonics of Costa Rica, segmentation of the Cocos Plate, and Central American volcanism. Tectonics, 2000, 19, 314-334.	2.8	276
6	Relationship between bend-faulting at trenches and intermediate-depth seismicity. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	256
7	Revised tectonic boundaries in the Cocos Plate off Costa Rica: Implications for the segmentation of the convergent margin and for plate tectonic models. Journal of Geophysical Research, 2001, 106, 19207-19220.	3.3	253
8	Fluid expulsion related to mud extrusion off Costa Rica—A window to the subducting slab. Geology, 2004, 32, 201.	4.4	221
9	Sequential faulting explains the asymmetry and extension discrepancy of conjugate margins. Nature, 2010, 468, 294-299.	27.8	192
10	Subduction erosion and basal friction along the sediment-starved convergent margin off Antofagasta, Chile. Journal of Geophysical Research, 2003, 108, .	3.3	174
11	Geophysical evidence for hydration of the crust and mantle of the Nazca plate during bending at the north Chile trench. Geology, 2004, 32, 549.	4.4	162
12	Hydrogeological system of erosional convergent margins and its influence on tectonics and interplate seismogenesis. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	159
13	Tectonic control of the subducting Juan Fernández Ridge on the Andean margin near Valparaiso, Chile. Tectonics, 1997, 16, 474-488.	2.8	153
14	Structure of oceanic crust and serpentinization at subduction trenches. , 2018, 14, 395-418.		146
15	The Challenger–Juan FernÃ;ndez–Maipo major tectonic transition of the Nazca–Andean subduction system at 33–34°S: geodynamic evidence and implications. Journal of South American Earth Sciences, 2002, 15, 23-38.	1.4	143
16	Crustal types and Tertiary tectonic evolution of the Alborán sea, western Mediterranean. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	143
17	Passive and active seismological study of bending-related faulting and mantle serpentinization at the Middle America trench. Earth and Planetary Science Letters, 2007, 258, 528-542.	4.4	136
18	Drowned 14-m.yold Galápagos archipelago off the coast of Costa Rica: Implications for tectonic and evolutionary models. Geology, 1999, 27, 499.	4.4	133

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19	Mechanisms of extension at nonvolcanic margins: Evidence from the Galicia interior basin, west of Iberia. Journal of Geophysical Research, 2003, 108, .	3.3	133
20	Fluid seepage at the continental margin offshore Costa Rica and southern Nicaragua. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	123
21	Fast rates of subduction erosion along the Costa Rica Pacific margin: Implications for nonsteady rates of crustal recycling at subduction zones. Journal of Geophysical Research, 2003, 108, .	3.3	115
22	The rift to drift transition at non-volcanic margins: Insights from numerical modelling. Earth and Planetary Science Letters, 2006, 244, 458-473.	4.4	111
23	Heat flow and bending-related faulting at subduction trenches: Case studies offshore of Nicaragua and Central Chile. Earth and Planetary Science Letters, 2005, 236, 238-248.	4.4	108
24	A cross section of the convergent Pacific margin of Nicaragua. Tectonics, 2000, 19, 335-357.	2.8	101
25	Tsunamigenic slope failure along the Middle America Trench in two tectonic settings. Marine Geology, 2004, 203, 303-317.	2.1	99
26	Interplate patchiness and subduction-erosion mechanisms: Evidence from depth-migrated seismic images at the central Ecuador convergent margin. Geology, 2006, 34, 997.	4.4	98
27	Contemporaneous mass extinctions, continental flood basalts, and â€~impact signals': are mantle plume-induced lithospheric gas explosions the causal link?. Earth and Planetary Science Letters, 2004, 217, 263-284.	4.4	88
28	Tectonic structure of the convergent Pacific margin offshore Costa Rica from multichannel seismic reflection data. Tectonics, 1996, 15, 54-66.	2.8	85
29	Crustal structure across the Pacific margin of Nicaragua:evidence for ophiolitic basement and a shallow mantle sliver. Geophysical Journal International, 2000, 141, 759-777.	2.4	84
30	Structure and tectonics of the erosional convergent margin off Antofagasta, north Chile (23°30′S). Journal of Geophysical Research, 2005, 110, .	3.3	78
31	The 3-D geometry of detachment faulting at mid-ocean ridges. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	76
32	Subducting seamounts control interplate coupling and seismic rupture in the 2014 Iquique earthquake area. Nature Communications, 2015, 6, 8267.	12.8	76
33	Fault-controlled hydration of the upper mantle during continentalÂrifting. Nature Geoscience, 2016, 9, 384-388.	12.9	75
34	Long-term subduction-erosion along the Guatemalan margin of the Middle America Trench. Geology, 2004, 32, 617.	4.4	74
35	Intra-arc extension in Central America: Links between plate motions, tectonics, volcanism, and geochemistry. Earth and Planetary Science Letters, 2008, 272, 365-371.	4.4	74
36	Active tectonics of the Calabrian subduction revealed by new multi-beam bathymetric data and high-resolution seismic profiles in the Ionian Sea (Central Mediterranean). Earth and Planetary Science Letters, 2017, 461, 61-72.	4.4	73

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37	Seismic evidence of exhumed mantle rock basement at the Gorringe Bank and the adjacent Horseshoe and Tagus abyssal plains (SW Iberia). Earth and Planetary Science Letters, 2013, 365, 120-131.	4.4	71
38	Nonlinear variations of the physical properties along the southern Ecuador subduction channel: Results from depth-migrated seismic data. Earth and Planetary Science Letters, 2008, 267, 453-467.	4.4	70
39	Heat flow over the descending Nazca plate in central Chile, 32°S to 41°S: observations from ODP Leg 202 and the occurrence of natural gas hydrates. Earth and Planetary Science Letters, 2003, 213, 285-298.	4.4	68
40	Crustal deformation dynamics and stress evolution during seamount subduction: Highâ€resolution 3â€D numerical modeling. Journal of Geophysical Research: Solid Earth, 2016, 121, 6880-6902.	3.4	68
41	The nature and distribution of bottom simulating reflectors at the Costa Rican convergent margin. Geophysical Journal International, 1998, 133, 219-229.	2.4	67
42	Detachment faulting at ocean core complexes. Geology, 1999, 27, 983.	4.4	65
43	Upper-plate rigidity determines depth-varying rupture behaviour of megathrust earthquakes. Nature, 2019, 576, 96-101.	27.8	65
44	Thermal regime of the Costa Rican convergent margin: 2. Thermal models of the shallow Middle America subduction zone offshore Costa Rica. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	63
45	The West Melilla cold water coral mounds, Eastern Alboran Sea: Morphological characterization and environmental context. Deep-Sea Research Part II: Topical Studies in Oceanography, 2014, 99, 316-326.	1.4	63
46	Seismic structure of the Central Tyrrhenian basin: Geophysical constraints on the nature of the main crustal domains. Journal of Geophysical Research: Solid Earth, 2014, 119, 52-70.	3.4	62
47	Gravity and multichannel seismic reflection constraints on the lithospheric structure of the Canary Swell. Marine Geophysical Researches, 1995, 17, 519-534.	1.2	60
48	Fluid accumulation along the Costa Rica subduction thrust and development of the seismogenic zone. Journal of Geophysical Research: Solid Earth, 2015, 120, 67-86.	3.4	60
49	Tectonic Processes along the Chile Convergent Margin. Frontiers in Earth Sciences, 2006, , 91-121.	0.1	56
50	The Alboran volcanic-arc modulated the Messinian faunal exchange and salinity crisis. Scientific Reports, 2018, 8, 13015.	3.3	54
51	Active tectonics of the South Chilean marine fore arc (35°S–40°S). Tectonics, 2011, 30, .	2.8	52
52	Seismic images and magnetic signature of the Late Jurassic to Early Cretaceous Africa-Eurasia plate boundary off SW Iberia. Geophysical Journal International, 2004, 158, 554-568.	2.4	50
53	Reflective oceanic crust formed at a fast-spreading center in the Pacific. Geology, 1997, 25, 499.	4.4	49
54	The continentâ€ocean transition on the northwestern <scp>S</scp> outh <scp>C</scp> hina <scp>S</scp> ea. Basin Research, 2017, 29, 73-95.	2.7	49

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55	Multifrequency geoacoustic imaging of fluid escape structures offshore Costa Rica: Implications for the quantification of seep processes. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	47
56	Birth of an intraoceanic spreading center. Geology, 2008, 36, 767.	4.4	47
57	The complex 3-D transition from continental crust to backarc magmatism and exhumed mantle in the Central Tyrrhenian basin. Geophysical Journal International, 2015, 203, 63-78.	2.4	44
58	Mantle exhumation and sequence of magmatic events in the Magnaghi–Vavilov Basin (Central) Tj ETQqO 0 0 r 2016, 689, 133-142.	gBT /Over 2.2	lock 10 Tf 50 43
59	Micro-seismicity in the Gulf of Cadiz: Is there a link between micro-seismicity, high magnitude earthquakes and active faults?. Tectonophysics, 2017, 717, 226-241.	2.2	42
60	Submarine slope failures along the convergent continental margin of the Middle America Trench. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	41
61	Earlyâ€stage rifting of the northern Tyrrhenian Sea Basin: Results from a combined wideâ€angle and multichannel seismic study. Geochemistry, Geophysics, Geosystems, 2013, 14, 3032-3052.	2.5	41
62	Seismic boundaries of the eastern Central Atlantic Mesozoic crust from multichannel seismic data. Bulletin of the Geological Society of America, 1992, 104, 1340-1349.	3.3	39
63	The crustal structure of the Canary Basin: Accretion processes at slow spreading centers. Journal of Geophysical Research, 1997, 102, 10185-10201.	3.3	39
64	Seismic evidence of tectonic control on the depth of water influx into incoming oceanic plates at subduction trenches. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	38
65	High density of structurally controlled, shallow to deep water fluid seep indicators imaged offshore Costa Rica. Geochemistry, Geophysics, Geosystems, 2013, 14, 519-539.	2.5	38
66	Compressional tectonic inversion of the Algero-Balearic basin: Latemost Miocene to present oblique convergence at the Palomares margin (Western Mediterranean). Tectonics, 2015, 34, 1516-1543.	2.8	37
67	Shear heating reconciles thermal models with the metamorphic rock record of subduction. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11706-11711.	7.1	36
68	Seismic structure of an oceanic core complex at the Midâ€Atlantic Ridge, 22°19′N. Journal of Geophysical Research, 2010, 115, .	3.3	32
69	The structure of Cretaceous oceanic crust of the NW Pacific: Constraints on processes at fast spreading centers. Journal of Geophysical Research, 1999, 104, 629-644.	3.3	31
70	Thermal regime of the Costa Rican convergent margin: 1. Alongâ€strike variations in heat flow from probe measurements and estimated from bottomâ€simulating reflectors. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	31
71	The Crustal Domains of the Alboran Basin (Western Mediterranean). Tectonics, 2018, 37, 3352-3377.	2.8	30
72	Overriding plate structure of the Nicaragua convergent margin: Relationship to the seismogenic zone of the 1992 tsunami earthquake. Geochemistry, Geophysics, Geosystems, 2013, 14, 3436-3461.	2.5	29

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73	Recent inversion of the Tyrrhenian Basin. Geology, 2020, 48, 123-127.	4.4	25
74	9. The Nicaragua Convergent Margin. , 2007, , 257-287.		24
75	Earthquake crisis unveils the growth of an incipient continental fault system. Nature Communications, 2019, 10, 3482.	12.8	24
76	Active Tectonics of the North Chilean Marine Forearc and Adjacent Oceanic Nazca Plate. Tectonics, 2018, 37, 4194-4211.	2.8	23
77	Seismic Oceanography in the Tyrrhenian Sea: Thermohaline Staircases, Eddies, and Internal Waves. Journal of Geophysical Research: Oceans, 2017, 122, 8503-8523.	2.6	22
78	Understanding the 3D Formation of a Wide Rift: The Central South China Sea Rift System. Tectonics, 2020, 39, e2019TC006040.	2.8	21
79	Convergent Margin Structure in High-Quality Geophysical Images and Current Kinematic and Dynamic Models. Frontiers in Earth Sciences, 2009, , 137-157.	0.1	21
80	Interplate seismicity at the CRISP drilling site: The 2002 Mw 6.4 Osa Earthquake at the southeastern end of the Middle America Trench. Geochemistry, Geophysics, Geosystems, 2014, 15, 3035-3050.	2.5	20
81	TOMO3D: 3-D joint refraction and reflection traveltime tomography parallel code for active-source seismic data—synthetic test. Geophysical Journal International, 2015, 203, 158-174.	2.4	20
82	Geomorphology and Neogene tectonic evolution of the Palomares continental margin (Western) Tj ETQq0 0 0	rgBT /Over 2 : 2	lock 10 Tf 50
83	Crustal structure of the propagating TAMMAR ridge segment on the Mid-Atlantic Ridge, 21.5°N. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	19
84	Crustal thinning in the northern Tyrrhenian Rift: Insights from multichannel and wideâ€angle seismic data across the basin. Journal of Geophysical Research: Solid Earth, 2014, 119, 1655-1677.	3.4	19
85	Fineâ€scale thermohaline ocean structure retrieved with 2â€D prestack fullâ€waveform inversion of multichannel seismic data: Application to the Gulf of Cadiz (SW Iberia). Journal of Geophysical Research: Oceans, 2016, 121, 5452-5469.	2.6	19
86	Influence of Incoming Plate Relief on Overriding Plate Deformation and Earthquake Nucleation: Cocos Ridge Subduction (Costa Rica). Tectonics, 2019, 38, 4360-4377.	2.8	19
87	Evidence for fluid circulation, overpressure and tectonic style along the Southern Chilean margin. Tectonophysics, 2007, 429, 183-200.	2.2	18
88	Structure of the mantle beneath the <scp>A</scp> lboran <scp>B</scp> asin from magnetotelluric soundings. Geochemistry, Geophysics, Geosystems, 2015, 16, 4261-4274.	2.5	18
89	Extensional tectonics during the Tyrrhenian backâ€arc basin formation and a new morphoâ€ŧectonic map. Basin Research, 2021, 33, 138-158.	2.7	18
90	The evolution of the westernmost Mediterranean basins. Earth-Science Reviews, 2021, 214, 103445.	9.1	18

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91	A recent phase of accretion along the southern Costa Rican subduction zone. Earth and Planetary Science Letters, 2016, 443, 204-215.	4.4	17
92	Waveform-Preserving Processing Flow of Multichannel Seismic Reflection Data for Adjoint-State Full-Waveform Inversion of Ocean Thermohaline Structure. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 1615-1625.	6.3	17
93	Enhanced Mantle Upwelling/Melting Caused Segment Propagation, Oceanic Core Complex Die Off, and the Death of a Transform Fault: The Midâ€Atlantic Ridge at 21.5°N. Journal of Geophysical Research: Solid Earth, 2018, 123, 941-956.	3.4	17
94	Does permanent extensional deformation in lower forearc slopes indicate shallow plate-boundary rupture?. Earth and Planetary Science Letters, 2018, 489, 17-27.	4.4	17
95	The Lithospheric Structure of the Gibraltar Arc System From Wideâ€Angle Seismic Data. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019854.	3.4	16
96	Scale- and parameter-adaptive model-based gradient pre-conditioner for elastic full-waveform inversion. Geophysical Journal International, 2014, 198, 1130-1142.	2.4	15
97	Comparative study of objective functions to overcome noise and bandwidth limitations in full waveform inversion. Geophysical Journal International, 2015, 203, 632-645.	2.4	15
98	Geometry of extensional faults developed at slow-spreading centres from pre-stack depth migration of seismic reflection data in the Central Atlantic (Canary Basin). Geophysical Journal International, 2004, 159, 591-606.	2.4	14
99	Styles and Productivity of Mud Diapirism along the Middle American Margin. , 2005, , 49-76.		14
100	Fluid seepage and mound formation offshore Costa Rica revealed by deep-towed sidescan sonar and sub-bottom profiler data. Marine Geology, 2009, 266, 172-181.	2.1	13
101	Spatial variations of magmatic crustal accretion during the opening of the Tyrrhenian backâ€arc from wideâ€angle seismic velocity models and seismic reflection images. Basin Research, 2018, 30, 124-141.	2.7	13
102	Gas Hydrates Along the Peru and Middle America Trench Systems. Geophysical Monograph Series, 2013, , 257-271.	0.1	12
103	The Seismogenic Zone Experiment. Oceanography, 2006, 19, 28-38.	1.0	11
104	Appraisal of Instantaneous Phase-Based Functions in Adjoint Waveform Inversion. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 5185-5197.	6.3	11
105	Full-waveform inversion of short-offset, band-limited seismic data in the Alboran Basin (SE Iberia). Solid Earth, 2019, 10, 1833-1855.	2.8	11
106	Large slip, long duration, and moderate shaking of the Nicaragua 1992 tsunami earthquake caused by low near-trench rock rigidity. Science Advances, 2021, 7, .	10.3	11
107	Quaternary Seismostratigraphy and Tectonosedimentary Evolution of the North Tunisian Continental Margin. Tectonics, 2020, 39, e2020TC006243.	2.8	10
108	The continent-to-ocean transition in the Iberia Abyssal Plain. Geology, 2022, 50, 615-619.	4.4	10

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109	Detachment and steep normal faulting in Atlantic oceanic crust west of Africa. Geology, 1996, 24, 811.	4.4	9
110	Neogene collision and deformation of convergent margins along the backbone of the Americas. , 2009, , .		8
111	A new autoregressive moving average modeling of H/V spectral ratios to estimate the ground resonance frequency. Engineering Geology, 2021, 280, 105957.	6.3	8
112	Origin of water layer multiple phases with anomalously high amplitude in near-seafloor wide-angle seismic recordings. Geophysical Journal International, 2014, 196, 243-252.	2.4	7
113	The Structure of the Continentâ€Ocean Transition in the Gulf of Lions From Joint Refraction and Reflection Travelâ€Time Tomography. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021711.	3.4	7
114	Glacial-aged development of the Tunisian Coral Mound Province controlled by glacio-eustatic oscillations and changes in surface productivity. Marine Geology, 2022, 446, 106772.	2.1	7
115	Seismicity and Noise Recorded by Passive Seismic Monitoring of Drilling Operations Offshore the Eastern Canary Islands. Seismological Research Letters, 2019, , .	1.9	6
116	The Rift and Continentâ€Ocean Transition Structure Under the Tagus Abyssal Plain West of the Iberia. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022629.	3.4	6
117	Pre-Permian sedimentary basins in the North Sea: images from reprocessed and pre-stack depth migrated MONA LISA data. Marine and Petroleum Geology, 2002, 19, 519-526.	3.3	5
118	Drilling the Seismogenic Zone of an Erosional Convergent Margin: IODP Costa Rica Seismogenesis Project CRISP. Scientific Drilling, 0, Speciallssue, 51-54.	0.6	4
119	Anisotropic P-wave travel-time tomography implementing Thomsen's weak approximation in TOMO3D. Solid Earth, 2019, 10, 1857-1876.	2.8	3
120	Downward continuation of marine seismic reflection data: an undervalued tool to improve velocity models. Geophysical Journal International, 2022, 230, 831-848.	2.4	3
121	An Overview of the Role of Long-Term Tectonics and Incoming Plate Structure on Segmentation of Submarine Mass Wasting Phenomena Along the Middle America Trench. , 2012, , 391-402.		2
122	Active Tectonics of the North Tunisian Continental Margin. Tectonics, 2022, 41, .	2.8	2
123	Megaâ€Đepressions on the Cocos Ridge: Links Between Volcanism, Faults, Hydrothermal Circulation, and Dissolution. Geochemistry, Geophysics, Geosystems, 2022, 23, .	2.5	2
124	Reply to A. Glikson's comment on â€~Contemporaneous mass extinctions, continental flood basalts, and â€~impact signals': Are mantle plume-induced lithospheric gas explosions the causal link?' [EPSL 217 (200 263–285]. Earth and Planetary Science Letters, 2005, 236, 938-941.)4).4	1
125	The Potential of Discontinuous Galerkin Methods for Full Waveform Tomography. , 2010, , .		1
126	Characterization of Submarine Landslide Complexes Offshore Costa Rica: An Evolutionary Model Related to Seamount Subduction. Advances in Natural and Technological Hazards Research, 2014, , 381-390.	1.1	1

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127	Toward a Practical Appraisal for Waveform Tomography of Band- and Offset-Limited Marine Seismic Data. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-14.	6.3	1
128	A first appraisal of the seismogenic and tsunamigenic potential of the largest fault systems in the westernmost Mediterranean. Marine Geology, 2022, 445, 106749.	2.1	1
129	Focusing on proto-seismogenic zone of erosional convergent margin. Eos, 2004, 85, 70.	0.1	0
130	Scale- and parameter-adaptive power model-based gradient preconditioner for multi-shooting elastic full-waveform inversion. , 2013, , .		0
131	Characterization of thermohaline staircases in the Tyrrhenian Sea using stochastic heterogeneity mapping. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
132	Appraisal of Joint Refraction and Reflection Travel-time Tomography in the Context of Weathering Correction. , 2010, , .		0
133	Data-driven Layer-stripping Strategy for 3-D Joint Refraction and Reflection Travel-time Tomography. , 2015, , .		0