

Peter H Molnar

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

117 papers	22,535 citations	61 h-index	118 g-index
118 ext. papers	24,590 ext. citations	9.6 avg, IF	6.85 L-index

#	Paper	IF	Citations
117	Wetter Subtropics Lead to Reduced Pliocene Coastal Upwelling. <i>Paleoceanography and Paleoclimatology</i> , 2021 , 36, e2021PA004243	3.3	1
116	Constraints on the paleoelevation history of the Eastern Cordillera of Colombia from its palynological record 2021 , 17, 1333-1352		1
115	Strain and Velocity Across the Great Basin Derived From 15-ka Fault Slip Rates: Implications for Continuous Deformation and Seismic Hazard in the Walker Lane, California-Nevada, USA. <i>Tectonics</i> , 2021 , 40, e2020TC006389	4.3	1
114	The Brittle-Plastic Transition, Earthquakes, Temperatures, and Strain Rates. <i>Journal of Geophysical Research: Solid Earth</i> , 2020 , 125, e2019JB019335	3.6	11
113	Multiproxy Reduced-Dimension Reconstruction of Pliocene Equatorial Pacific Sea Surface Temperatures. <i>Paleoceanography and Paleoclimatology</i> , 2020 , 35, e2019PA003685	3.3	5
112	Soil and Air Temperature Calibrations Using Branched GDGTs for the Tropical Andes of Colombia: Toward a Pan-Tropical Calibration. <i>Geochemistry, Geophysics, Geosystems</i> , 2020 , 21, e2020GC008941	3.6	8
111	Seismic Moments of Intermediate-Depth Earthquakes Beneath the Hindu Kush: Active Stretching of a Blob of Sinking Thickened Mantle Lithosphere?. <i>Tectonics</i> , 2019 , 38, 1651-1665	4.3	15
110	Widespread and Persistent Deposition of Iron Formations for Two Billion Years. <i>Geophysical Research Letters</i> , 2019 , 46, 3327-3339	4.9	4
109	Lower Mantle Dynamics Perceived With 50 Years of Hindsight From Plate Tectonics. <i>Geochemistry, Geophysics, Geosystems</i> , 2019 , 20, 5619-5649	3.6	4
108	Little Geodetic Evidence for Localized Indian Subduction in the Pamir-Hindu Kush of Central Asia. <i>Geophysical Research Letters</i> , 2019 , 46, 109-118	4.9	18
107	Gravitational Potential Energy per Unit Area as a Constraint on Archean Sea Level. <i>Geochemistry, Geophysics, Geosystems</i> , 2018 , 19, 4063-4095	3.6	3
106	Reconstruction of Indian summer monsoon winds and precipitation over the past 10,000 years using equatorial pacific SST proxy records. <i>Paleoceanography</i> , 2017 , 32, 195-216		14
105	Comment (2) on "Formation of the Isthmus of Panama" by O'Dea. <i>Science Advances</i> , 2017 , 3, e1602320	14.3	21
104	Sea Surface Temperatures in the Eastern Equatorial Pacific and Surface Temperatures in the Eastern Cordillera of Colombia During El Niño: Implications for Pliocene Conditions. <i>Paleoceanography</i> , 2017 , 32, 1309-1314		7
103	Reduced-dimension reconstruction of the equatorial Pacific SST and zonal wind fields over the past 10,000 years using Mg/Ca and alkenone records. <i>Paleoceanography</i> , 2016 , 31, 928-952		15
102	A modeling study of the response of Asian summertime climate to the largest geologic forcings of the past 50 Ma. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 5453-5470	4.4	29
101	Quaternary glaciation and the Great American Biotic Interchange. <i>Geology</i> , 2016 , 44, 375-378	5	39

100	GPS velocities and the construction of the Eastern Cordillera of the Colombian Andes. <i>Geophysical Research Letters</i> , 2016 , 43, 8407-8416	4.9	25
99	Gravitational instability of mantle lithosphere and core complexes. <i>Tectonics</i> , 2015 , 34, 478-487	4.3	7
98	Rheology of the lithosphere beneath the central and western Tien Shan. <i>Journal of Geophysical Research: Solid Earth</i> , 2015 , 120, 3803-3823	3.6	18
97	Subseasonal variations in spatial signatures of ENSO on the Indian summer monsoon from 1901 to 2009. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 8165-8185	4.4	26
96	Mantle dynamics, isostasy, and the support of high terrain. <i>Journal of Geophysical Research: Solid Earth</i> , 2015 , 120, 1932-1957	3.6	81
95	Present-day crustal thinning in the southern and northern Tibetan Plateau revealed by GPS measurements. <i>Geophysical Research Letters</i> , 2015 , 42, 5227-5235	4.9	44
94	An assessment of the mean annual precipitation needed to sustain Lake Sambhar in Rajasthan, India, during mid-Holocene time. <i>Holocene</i> , 2015 , 25, 1923-1934	2.6	3
93	Growth of the Maritime Continent and its possible contribution to recurring Ice Ages. <i>Paleoceanography</i> , 2015 , 30, 196-225		40
92	Effects of a low-viscosity lower crust on topography and gravity at convergent mountain belts during gravitational instability of mantle lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2015 , 120, 537-551	3.6	4
91	Island precipitation enhancement and the diurnal cycle in radiative-convective equilibrium. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015 , 141, 1017-1034	6.4	42
90	A mechanism for freshening the Caribbean Sea in pre-Ice Age time. <i>Paleoceanography</i> , 2014 , 29, 508-517		8
89	Upper mantle seismic anisotropy at a strike-slip boundary: South Island, New Zealand. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 1020-1040	3.6	24
88	Pn anisotropy beneath the South Island of New Zealand and implications for distributed deformation in continental lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 7745-7767	3.6	14
87	The growth of northeastern Tibet and its relevance to large-scale continental geodynamics: A review of recent studies. <i>Tectonics</i> , 2013 , 32, 1358-1370	4.3	245
86	Rayleigh-Taylor instability, lithospheric dynamics, surface topography at convergent mountain belts, and gravity anomalies. <i>Journal of Geophysical Research: Solid Earth</i> , 2013 , 118, 2544-2557	3.6	16
85	Signatures of Tibetan Plateau heating on Indian summer monsoon rainfall variability. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 1170-1178	4.4	47
84	Kinematics of the Pamir and Hindu Kush regions from GPS geodesy. <i>Journal of Geophysical Research: Solid Earth</i> , 2013 , 118, 2408-2416	3.6	82
83	Late Miocene upward and outward growth of eastern Tibet and decreasing monsoon rainfall over the northwestern Indian subcontinent since ~10 Ma. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	29

82	Magnetostratigraphy of the Neogene Chaka basin and its implications for mountain building processes in the north-eastern Tibetan Plateau. <i>Basin Research</i> , 2012 , 24, 31-50	3.2	72
81	Orographic Controls on Climate and Paleoclimate of Asia: Thermal and Mechanical Roles for the Tibetan Plateau. <i>Annual Review of Earth and Planetary Sciences</i> , 2010 , 38, 77-102	15.3	501
80	Partitioning of India-Eurasia convergence in the Pamir-Hindu Kush from GPS measurements. <i>Geophysical Research Letters</i> , 2010 , 37,	4.9	93
79	Lithospheric thinning and localization of deformation during Rayleigh-Taylor instability with nonlinear rheology and implications for intracontinental magmatism. <i>Journal of Geophysical Research</i> , 2010 , 115,		15
78	Comparisons of the kinematics and deep structures of the Zagros and Himalaya and of the Iranian and Tibetan plateaus and geodynamic implications. <i>Reviews of Geophysics</i> , 2010 , 48,	23.1	174
77	Lessons learned from oxygen isotopes in modern precipitation applied to interpretation of speleothem records of paleoclimate from eastern Asia. <i>Earth and Planetary Science Letters</i> , 2010 , 295, 219-230	5.3	185
76	GPS velocity field for the Tien Shan and surrounding regions. <i>Tectonics</i> , 2010 , 29, n/a-n/a	4.3	235
75	Differences in the Indonesian seaway in a coupled climate model and their relevance to Pliocene climate and El Niño. <i>Paleoceanography</i> , 2009 , 24, n/a-n/a		40
74	Localization of shear along a lithospheric strength discontinuity: Application of a continuous deformation model to the boundary between Tibet and the Tarim Basin. <i>Tectonics</i> , 2009 , 28, n/a-n/a	4.3	36
73	Slowing of India's convergence with Eurasia since 20 Ma and its implications for Tibetan mantle dynamics. <i>Tectonics</i> , 2009 , 28, n/a-n/a	4.3	398
72	Far-field lithospheric deformation in Tibet during continental collision. <i>Tectonics</i> , 2009 , 28, n/a-n/a	4.3	84
71	Rayleigh-Taylor instability under a shear stress free top boundary condition and its relevance to removal of mantle lithosphere from beneath the Sierra Nevada. <i>Tectonics</i> , 2008 , 27, n/a-n/a	4.3	10
70	Closing of the Central American Seaway and the Ice Age: A critical review. <i>Paleoceanography</i> , 2008 , 23, n/a-n/a		101
69	Tropical western Pacific warm pool and maritime continent precipitation rates and their contrasting relationships with the Walker Circulation. <i>Journal of Geophysical Research</i> , 2007 , 112,		26
68	Instability of a chemically dense layer heated from below and overlain by a deep less viscous fluid. <i>Journal of Fluid Mechanics</i> , 2007 , 572, 433-469	3.7	31
67	Tropical cooling and the onset of North American glaciation. <i>Climate of the Past</i> , 2007 , 3, 549-557	3.9	31
66	Late Quaternary and present-day rates of slip along the Altyn Tagh Fault, northern margin of the Tibetan Plateau. <i>Tectonics</i> , 2007 , 26, n/a-n/a	4.3	169
65	Early Pliocene (pre-Ice Age) El Niño-like global climate: Which El Niño? 2007 , 3, 337		45

64	Rapid late Miocene rise of the Bolivian Altiplano: Evidence for removal of mantle lithosphere. <i>Earth and Planetary Science Letters</i> , 2006 , 241, 543-556	5.3	282
63	Late Quaternary to decadal velocity fields in Asia. <i>Journal of Geophysical Research</i> , 2005 , 110,		141
62	Thinning and flow of Tibetan crust constrained by seismic anisotropy. <i>Science</i> , 2004 , 305, 233-6	33.3	234
61	GPS measurements from the Ladakh Himalaya, India: Preliminary tests of plate-like or continuous deformation in Tibet. <i>Bulletin of the Geological Society of America</i> , 2004 , 116, 1385-1391	3.9	125
60	The effects of buoyant crust on the gravitational instability of thickened mantle lithosphere at zones of intracontinental convergence. <i>Geophysical Journal International</i> , 2004 , 158, 1134-1150	2.6	55
59	LATE CENOZOIC INCREASE IN ACCUMULATION RATES OF TERRESTRIAL SEDIMENT: How Might Climate Change Have Affected Erosion Rates?. <i>Annual Review of Earth and Planetary Sciences</i> , 2004 , 32, 67-89	15.3	296
58	Continuous deformation of the Tibetan Plateau from global positioning system data. <i>Geology</i> , 2004 , 32, 809	5	1013
57	El Niño tropical climate and teleconnections as a blueprint for pre-Ice Age climates. <i>Paleoceanography</i> , 2002 , 17, 11-1-11-11		113
56	Pn anisotropy and distributed upper mantle deformation associated with a continental transform fault. <i>Geophysical Research Letters</i> , 2002 , 29, 16-1-16-4	4.9	47
55	Increased sedimentation rates and grain sizes 2-4 Myr ago due to the influence of climate change on erosion rates. <i>Nature</i> , 2001 , 410, 891-7	50.4	626
54	Closing of the Indonesian seaway as a precursor to east African aridification around 3-4 million years ago. <i>Nature</i> , 2001 , 411, 157-62	50.4	387
53	Earthquakes. Himalayan seismic hazard. <i>Science</i> , 2001 , 293, 1442-4	33.3	437
52	A constraint on the shear stress at the Pacific-Australian plate boundary from heat flow and seismicity at the Kermadec forearc. <i>Journal of Geophysical Research</i> , 2001 , 106, 6817-6833		50
51	Teleseismic P wave delays and modes of shortening the mantle lithosphere beneath South Island, New Zealand. <i>Journal of Geophysical Research</i> , 2000 , 105, 21615-21631		86
50	Continuous deformation versus faulting through the continental lithosphere of new zealand. <i>Science</i> , 1999 , 286, 516-9	33.3	120
49	Rayleigh-Taylor instability and convective thinning of mechanically thickened lithosphere: effects of non-linear viscosity decreasing exponentially with depth and of horizontal shortening of the layer. <i>Geophysical Journal International</i> , 1998 , 133, 568-584	2.6	113
48	Active Deformation of Asia: From Kinematics to Dynamics. <i>Science</i> , 1997 , 278, 647-650	33.3	379
47	The growth of Rayleigh-Taylor-type instabilities in the lithosphere for various rheological and density structures. <i>Geophysical Journal International</i> , 1997 , 129, 95-112	2.6	137

46	The field of crustal velocity in Asia calculated from Quaternary rates of slip on faults. <i>Geophysical Journal International</i> , 1997 , 130, 551-582	2.6	201
45	Gravitational (Rayleigh-Taylor) instability of a layer with non-linear viscosity and convective thinning of continental lithosphere. <i>Geophysical Journal International</i> , 1997 , 128, 125-150	2.6	309
44	A bound on the rheology of continental lithosphere using very long baseline interferometry: The velocity of south China with respect to Eurasia. <i>Journal of Geophysical Research</i> , 1996 , 101, 545-553		38
43	Relatively recent construction of the Tien Shan inferred from GPS measurements of present-day crustal deformation rates. <i>Nature</i> , 1996 , 384, 450-453	50.4	383
42	Lateral heterogeneity in the upper mantle and SS - S traveltimes intervals for SS rays reflected from the Tibetan Plateau and its surroundings. <i>Earth and Planetary Science Letters</i> , 1995 , 135, 139-148	5.3	21
41	Mantle dynamics, uplift of the Tibetan Plateau, and the Indian Monsoon. <i>Reviews of Geophysics</i> , 1993 , 31, 357	23.1	1321
40	Geological and Geophysical Evidence for Deep Subduction of Continental Crust Beneath the Pamir. <i>Special Paper of the Geological Society of America</i> , 1993 , 1-76		183
39	Detachment of part of the downgoing slab and uplift of the New Hebrides (Vanuatu) Islands. <i>Geophysical Research Letters</i> , 1992 , 19, 1507-1510	4.9	45
38	P-wave residuals at stations in nepal: Evidence for a high velocity region beneath the Karakorum. <i>Geophysical Research Letters</i> , 1991 , 18, 1909-1912	4.9	21
37	Surface uplift, uplift of rocks, and exhumation of rocks. <i>Geology</i> , 1990 , 18, 1173	5	566
36	Gravity anomalies, the deep structure, and dynamic processes beneath the Tien Shan. <i>Earth and Planetary Science Letters</i> , 1990 , 96, 367-383	5.3	98
35	S-wave residuals from earthquakes in the Tibetan region and lateral variations in the upper mantle. <i>Earth and Planetary Science Letters</i> , 1990 , 101, 68-77	5.3	61
34	Source parameters of earthquakes and intraplate deformation beneath the Shillong Plateau and the Northern Indoburman Ranges. <i>Journal of Geophysical Research</i> , 1990 , 95, 12527		157
33	Fault plane solutions of earthquakes and active tectonics of the Tibetan Plateau and its margins. <i>Geophysical Journal International</i> , 1989 , 99, 123-154	2.6	440
32	The Cenozoic and Late Cretaceous evolution of the Indian Ocean Basin: uncertainties in the reconstructed positions of the Indian, African and Antarctic plates. <i>Basin Research</i> , 1988 , 1, 23-40	3.2	54
31	Some simple physical aspects of the support, structure, and evolution of mountain belts. <i>Special Paper of the Geological Society of America</i> , 1988 , 179-208		270
30	Source parameters for 11 earthquakes in the Tien Shan, central Asia, determined by P and SH waveform inversion. <i>Journal of Geophysical Research</i> , 1987 , 92, 12629		115
29	Preliminary conclusions of the Royal Society and Academia Sinica 1985 geotraverse of Tibet. <i>Nature</i> , 1986 , 323, 501-507	50.4	221

28	Gravity anomalies, flexure of the Indian Plate, and the structure, support and evolution of the Himalaya and Ganga Basin. <i>Tectonics</i> , 1985 , 4, 513-538	4.3	307
27	Active faulting and tectonics of Burma and surrounding regions. <i>Journal of Geophysical Research</i> , 1984 , 89, 453		217
26	S-P wave travel time residuals and lateral inhomogeneity in the mantle beneath Tibet and the Himalaya. <i>Journal of Geophysical Research</i> , 1984 , 89, 6911-6917		50
25	Focal depths and fault plane solutions of earthquakes and active tectonics of the Himalaya. <i>Journal of Geophysical Research</i> , 1984 , 89, 6918-6928		150
24	Faulting associated with large earthquakes and the average rate of deformation in central and eastern Asia. <i>Journal of Geophysical Research</i> , 1984 , 89, 6203-6227		344
23	Focal depths and fault plane solutions of earthquakes under the Tibetan Plateau. <i>Journal of Geophysical Research</i> , 1983 , 88, 1180		247
22	Focal depths of intracontinental and intraplate earthquakes and their implications for the thermal and mechanical properties of the lithosphere. <i>Journal of Geophysical Research</i> , 1983 , 88, 4183-4214		811
21	Average regional strain due to slip on numerous faults of different orientations. <i>Journal of Geophysical Research</i> , 1983 , 88, 6430		94
20	Constraints on the structure of the Himalaya from an analysis of gravity anomalies and a flexural model of the lithosphere. <i>Journal of Geophysical Research</i> , 1983 , 88, 8171		300
19	Parallel thrust and normal faulting in Peru and constraints on the state of stress. <i>Earth and Planetary Science Letters</i> , 1981 , 55, 473-481	5.3	236
18	A possible dependence of tectonic strength on the age of the crust in Asia. <i>Earth and Planetary Science Letters</i> , 1981 , 52, 107-114	5.3	129
17	An intermediate depth earthquake beneath Tibet: Source characteristics of the event of September 14, 1976. <i>Journal of Geophysical Research</i> , 1981 , 86, 2863-2876		46
16	Constraints on the seismic wave velocity structure beneath the Tibetan Plateau and their tectonic implications. <i>Journal of Geophysical Research</i> , 1981 , 86, 5937-5962		121
15	Convective instability of a thickened boundary layer and its relevance for the thermal evolution of continental convergent belts. <i>Journal of Geophysical Research</i> , 1981 , 86, 6115-6132		823
14	The uppermost mantle P wave velocities beneath Turkey and Iran. <i>Geophysical Research Letters</i> , 1980 , 7, 77-80	4.9	17
13	Seismicity and fault plane solutions of intermediate depth earthquakes in the Pamir-Hindu Kush Region. <i>Journal of Geophysical Research</i> , 1980 , 85, 1358-1364		55
12	Microearthquake seismicity and fault plane solutions in the Hindu Kush Region and their tectonic implications. <i>Journal of Geophysical Research</i> , 1980 , 85, 1365-1387		142
11	Active faulting and cenozoic tectonics of the Tien Shan, Mongolia, and Baykal Regions. <i>Journal of Geophysical Research</i> , 1979 , 84, 3425-3459		631

10	Subduction of continental lithosphere: Some constraints and uncertainties. <i>Geology</i> , 1979 , 7, 58	5	185
9	Earthquake recurrence intervals and plate tectonics. <i>Bulletin of the Seismological Society of America</i> , 1979 , 69, 115-133	2.3	179
8	Active tectonics of Tibet. <i>Journal of Geophysical Research</i> , 1978 , 83, 5361		533
7	The spectral content of Pamir-Hindu Kush intermediate depth earthquakes: Evidence for a high-Q zone in the upper mantle. <i>Journal of Geophysical Research</i> , 1977 , 82, 2931-2943		17
6	Cenozoic Tectonics of Asia: Effects of a Continental Collision: Features of recent continental tectonics in Asia can be interpreted as results of the India-Eurasia collision. <i>Science</i> , 1975 , 189, 419-26	33.3	3202
5	Distribution of stresses in the descending lithosphere from a global survey of focal-mechanism solutions of mantle earthquakes. <i>Reviews of Geophysics</i> , 1971 , 9, 103	23.1	807
4	Mantle Earthquake Mechanisms and the Sinking of the Lithosphere. <i>Nature</i> , 1969 , 223, 1121-1124	50.4	256
3	Lateral variations of attenuation in the upper mantle and discontinuities in the lithosphere. <i>Journal of Geophysical Research</i> , 1969 , 74, 2648-2682		285
2	Differences between soil and air temperatures: Implications for geological reconstructions of past climate		1
1	Initiation of Clockwise Rotation and Eastward Transport of Southeastern Tibet Inferred from Deflected Fault Traces and GPS Observations. <i>Bulletin of the Geological Society of America</i> ,	3.9	5