

# Peter Reiners

## List of Publications by Year in descending order

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113  
papers

10,351  
citations

34016

52  
h-index

32761

100  
g-index

116  
all docs

116  
docs citations

116  
times ranked

6026  
citing authors

#	ARTICLE	IF	CITATIONS
1	USING THERMOCHRONOLOGY TO UNDERSTAND OROGENIC EROSION. Annual Review of Earth and Planetary Sciences, 2006, 34, 419-466.	4.6	765
2	The pMELTS: A revision of MELTS for improved calculation of phase relations and major element partitioning related to partial melting of the mantle to 3 GPa. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-35.	1.0	670
3	Zircon (U-Th)/He thermochronometry: He diffusion and comparisons with $^{40}\text{Ar}/^{39}\text{Ar}$ dating. Geochimica Et Cosmochimica Acta, 2004, 68, 1857-1887.	1.6	599
4	Helium diffusion in natural zircon: Radiation damage, anisotropy, and the interpretation of zircon (U-Th)/He thermochronology. Numerische Mathematik, 2013, 313, 145-198.	0.7	516
5	Late Cenozoic evolution of the eastern margin of the Tibetan Plateau: Inferences from $^{40}\text{Ar}/^{39}\text{Ar}$ and (U-Th)/He thermochronology. Tectonics, 2002, 21, 1-1-1-20.	1.3	484
6	Zircon (U-Th)/He Thermochronometry. Reviews in Mineralogy and Geochemistry, 2005, 58, 151-179.	2.2	368
7	U-Th zonation-dependent alpha-ejection in (U-Th)/He chronometry. Geochimica Et Cosmochimica Acta, 2005, 69, 3349-3365.	1.6	329
8	Influence of crystal size on apatite (U-Th)/He thermochronology: an example from the Bighorn Mountains, Wyoming. Earth and Planetary Science Letters, 2001, 188, 413-420.	1.8	278
9	Coupled spatial variations in precipitation and long-term erosion rates across the Washington Cascades. Nature, 2003, 426, 645-647.	13.7	276
10	He diffusion and (U-Th)/He thermochronometry of zircon: initial results from Fish Canyon Tuff and Gold Butte. Tectonophysics, 2002, 349, 297-308.	0.9	271
11	Glaciation as a destructive and constructive control on mountain building. Nature, 2010, 467, 313-317.	13.7	219
12	Thermochronologic evidence for plateau formation in central Tibet by 45 Ma. Geology, 2012, 40, 187-190.	2.0	212
13	Incomplete retention of radiation damage in zircon from Sri Lanka. American Mineralogist, 2004, 89, 219-231.	0.9	193
14	Assimilation of felsic crust by basaltic magma: Thermal limits and extents of crustal contamination of mantle-derived magmas. Geology, 1995, 23, 563.	2.0	185
15	Past, Present, and Future of Thermochronology. Reviews in Mineralogy and Geochemistry, 2005, 58, 1-18.	2.2	182
16	Post-orogenic evolution of the Dabie Shan, eastern China, from (U-Th)/He and fission-track thermochronology. Numerische Mathematik, 2003, 303, 489-518.	0.7	170
17	Combined single-grain (U-Th)/He and U/Pb dating of detrital zircons from the Navajo Sandstone, Utah. Geology, 2003, 31, 761.	2.0	163
18	Helium diffusion and (U-Th)/He thermochronometry of titanite. Geochimica Et Cosmochimica Acta, 1999, 63, 3845-3859.	1.6	158

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19	(U-Th)/(He-Pb) double dating of detrital zircons. Numerische Mathematik, 2005, 305, 259-311.	0.7	148
20	Uplift of the western margin of the Andean plateau revealed from canyon incision history, southern Peru. Geology, 2007, 35, 523.	2.0	142
21	Long-term glacial erosion of active mountain belts: Example of the Chugachâ€“St. Elias Range, Alaska. Geology, 2004, 32, 501.	2.0	138
22	Heâ€“Pb double dating of detrital zircons from the Ganges and Indus Rivers: Implication for quantifying sediment recycling and provenance studies. Earth and Planetary Science Letters, 2005, 237, 402-432.	1.8	135
23	Length scales of mantle heterogeneities and their relationship to ocean island basalt geochemistry. Geochimica Et Cosmochimica Acta, 2004, 68, 345-360.	1.6	125
24	Multiple episodes of fast exhumation since Cretaceous in southeast Tibet, revealed by low-temperature thermochronology. Earth and Planetary Science Letters, 2018, 490, 62-76.	1.8	118
25	Late Mesozoic and Cenozoic thermotectonic evolution along a transect from the north China craton through the Qinling orogen into the Yangtze craton, central China. Tectonics, 2006, 25, n/a-n/a.	1.3	101
26	New Insights into Crustal Contributions to Large-volume Rhyolite Generation in the Mid-Tertiary Sierra Madre Occidental Province, Mexico, Revealed by Uâ€“Pb Geochronology. Journal of Petrology, 2008, 49, 47-77.	1.1	101
27	Pulsed exhumation of interior eastern Tibet: Implications for relief generation mechanisms and the origin of high-elevation planation surfaces. Earth and Planetary Science Letters, 2016, 449, 176-185.	1.8	100
28	Eocene Tibetan plateau remnants preserved in the northwest Himalaya. Nature Geoscience, 2009, 2, 364-368.	5.4	98
29	Late Miocene exhumation and uplift of the Washington Cascade Range. Geology, 2002, 30, 767.	2.0	94
30	Effects of Uâ€“Th-rich grain boundary phases on apatite helium ages. Chemical Geology, 2014, 390, 135-151.	1.4	92
31	Shocked Quartz at the Triassic-Jurassic Boundary in Italy. Science, 1992, 255, 443-446.	6.0	86
32	Helium and argon thermochronometry of the Gold Butte block, south Virgin Mountains, Nevada. Earth and Planetary Science Letters, 2000, 178, 315-326.	1.8	85
33	Cenozoic exhumation of the northern Sierra Nevada, California, from (U-Th)/He thermochronology. Bulletin of the Geological Society of America, 2006, 118, 1481-1488.	1.6	83
34	Cenozoic Tectonic Evolution of the Basin and Range Province in Northwestern Nevada. Numerische Mathematik, 2006, 306, 616-654.	0.7	79
35	Laramide exhumation of the Bighorn Mountains, Wyoming: An apatite (U-Th)/He thermochronology study. Geology, 2002, 30, 27.	2.0	78
36	Variable exhumation rates and variable displacement rates: Documenting recent slowing of Himalayan shortening in western Bhutan. Earth and Planetary Science Letters, 2014, 386, 161-174.	1.8	75

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37	Origin of the Blue Ridge escarpment along the passive margin of Eastern North America. Basin Research, 2004, 16, 41-63.	1.3	73
38	Interpreting date–eU correlations in zircon (U-Th)/He datasets: A case study from the Longmen Shan, China. Earth and Planetary Science Letters, 2014, 403, 328-339.	1.8	72
39	Temporal-compositional trends in intraplate basalt eruptions: Implications for mantle heterogeneity and melting processes. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-30.	1.0	71
40	Multimillion year thermal history of a porphyry copper deposit: application of U–Pb, <sup>40</sup> Ar/ <sup>39</sup> Ar and (U–Th)/He chronometers, Bajo de la Alumbrera copper–gold deposit, Argentina. Mineralium Deposita, 2008, 43, 295-314.	1.7	71
41	The contribution of glacial erosion to shaping the hidden landscape of East Antarctica. Nature Geoscience, 2013, 6, 203-207.	5.4	70
42	Geometric analysis of radiation damage connectivity in zircon, and its implications for helium diffusion. American Mineralogist, 2013, 98, 350-360.	0.9	69
43	Thermochronology and landscape evolution. Physics Today, 2009, 62, 31-36.	0.3	68
44	Annealing kinetics of radiation damage in zircon. Geochimica Et Cosmochimica Acta, 2019, 249, 225-246.	1.6	67
45	Topographic relief driven by variations in surface rock density. Nature Geoscience, 2014, 7, 534-540.	5.4	66
46	Young basalts of the central Washington Cascades, flux melting of the mantle, and trace element signatures of primary arc magmas. Contributions To Mineralogy and Petrology, 2000, 138, 249-264.	1.2	64
47	Temporal–compositional trends over short and long time-scales in basalts of the Big Pine Volcanic Field, California. Earth and Planetary Science Letters, 2008, 269, 140-154.	1.8	59
48	Influence of wildfires on apatite and zircon (U-Th)/He ages. Geology, 2003, 31, 1025.	2.0	58
49	Eocene arc-continent collision and crustal consolidation in Kamchatka, Russian Far East. Numerische Mathematik, 2009, 309, 333-396.	0.7	57
50	An Apparatus for High-Precision Helium Diffusion Measurements from Minerals. Analytical Chemistry, 1999, 71, 2059-2061.	3.2	55
51	Long-term tectonothermal history of Laramide basement from zircon–He age–eU correlations. Earth and Planetary Science Letters, 2016, 453, 119-130.	1.8	55
52	Reactive Melt Transport in the Mantle and Geochemical Signatures of Mantle-derived Magmas. Journal of Petrology, 1998, 39, 1039-1061.	1.1	54
53	Nonmonotonic thermal histories and contrasting kinetics of multiple thermochronometers. Geochimica Et Cosmochimica Acta, 2009, 73, 3612-3629.	1.6	50
54	Zircon, titanite, and apatite (U–Th)/He ages and age–eU correlations from the Fennoscandian Shield, southern Sweden. Tectonics, 2017, 36, 1254-1274.	1.3	50

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55	Jurassic-to-present thermal history of the central High Atlas (Morocco) assessed by low-temperature thermochronology. <i>Terra Nova</i> , 2007, 19, 58-64.	0.9	49
56	Linking hematite (U-Th)/He dating with the microtextural record of seismicity in the Wasatch fault damage zone, Utah, USA. <i>Geology</i> , 2015, 43, 771-774.	2.0	48
57	Low-temperature thermochronology of the northern Rocky Mountains, western U.S.A.. <i>Numerische Mathematik</i> , 2012, 312, 145-212.	0.7	47
58	Thermochronologic Approaches to Paleotopography. <i>Reviews in Mineralogy and Geochemistry</i> , 2007, 66, 243-267.	2.2	46
59	Extremely low long-term erosion rates around the Gamburtsev Mountains in interior East Antarctica. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	46
60	From crucible to graben in 2.3 Ma: A high-resolution geochronological study of porphyry life cycles, Boyongan-Bayugo copper-gold deposits, Philippines. <i>Geology</i> , 2012, 40, 471-474.	2.0	43
61	Evidence for Multiple Mechanisms of Crustal Contamination of Magma from Compositionally Zoned Plutons and Associated Ultramafic Intrusions of the Alaska Range. <i>Journal of Petrology</i> , 1996, 37, 261-292.	1.1	40
62	(U-Th)/He geochronology and chemical compositions of diagenetic cement, concretions, and fracture-filling oxide minerals in Mesozoic sandstones of the Colorado Plateau. <i>Bulletin of the Geological Society of America</i> , 2014, 126, 1363-1383.	1.6	40
63	Hematite and Mn oxide (U-Th)/He dates from the Buckskin-Rawhide detachment system, western Arizona: Gaining insights into hematite (U-Th)/He systematics. <i>Numerische Mathematik</i> , 2014, 314, 1373-1435.	0.7	39
64	Low temperature thermochronology of the southern East Greenland continental margin: Evidence from apatite (U-Th)/He and fission track analysis and implications for intermethod calibration. <i>Lithos</i> , 2006, 92, 117-136.	0.6	36
65	Dating young basalt eruptions by (U-Th)/He on xenolithic zircons. <i>Geology</i> , 2007, 35, 17.	2.0	36
66	Unprecedented <sup>34</sup> S enrichment of pyrite formed following microbial sulfate reduction in fractured crystalline rocks. <i>Geobiology</i> , 2018, 16, 556-574.	1.1	34
67	Generation of Forsteritic Olivine (Fo <sub>99</sub> ±8) by Subsolvus Oxidation in Basaltic Flows. <i>Journal of Petrology</i> , 2012, 53, 971-984.	1.1	32
68	Thermochronometric and textural evidence for seismicity via asperity flash heating on exhumed hematite fault mirrors, Wasatch fault zone, UT, USA. <i>Earth and Planetary Science Letters</i> , 2017, 471, 85-93.	1.8	32
69	Rates of sediment recycling beneath the Acapulco trench: Constraints from (U-Th)/He thermochronology. <i>Journal of Geophysical Research</i> , 2004, 109, n/a-n/a.	3.3	31
70	The relationships between tectonics, climate and exhumation in the Central Andes (18°-36°S): Evidence from low-temperature thermochronology. <i>Earth-Science Reviews</i> , 2020, 210, 103276.	4.0	31
71	Timing Constraints of Gold Mineralization along the Carlin Trend Utilizing Apatite Fission-Track, <sup>40</sup> Ar/ <sup>39</sup> Ar, and Apatite (U-Th)/He Methods. <i>Economic Geology</i> , 2003, 98, 1159-1171.	1.8	30
72	Toward Robust Interpretation of Low-Temperature Thermochronometers in Magmatic Terranes. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 3739-3763.	1.0	29

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73	Isotope dilution analysis of Ca and Zr in apatite and zircon (U-Th)/He chronometry. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 1623-1640.	1.0	28
74	Two-phase Neogene extension in the northwestern Basin and Range recorded in a single thermochronology sample. <i>Geology</i> , 2008, 36, 631.	2.0	27
75	Effects of inherited cores and magmatic overgrowths on zircon ( $^{206}\text{Pb}/^{238}\text{U}$ ) ages and age trends from Greater Himalayan sequence rocks, Mount Everest region, Tibet. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 2499-2507.	1.0	26
76	Single-crystal hematite (U-Th)/He dates and fluid inclusions document widespread Cryogenian sand injection in crystalline basement. <i>Earth and Planetary Science Letters</i> , 2018, 500, 145-155.	1.8	26
77	(U-Th)/He chronometry experiences a renaissance. <i>Eos</i> , 2002, 83, 21.	0.1	25
78	Slab window migration and terrane accretion preserved by low-temperature thermochronology of a magmatic arc, northern Antarctic Peninsula. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	25
79	Late Cretaceous-Cenozoic exhumation history of Tiantangzhai region of Dabieshan Orogen: Constraints from (U-Th)/He and fission track analysis. <i>Science Bulletin</i> , 2003, 48, 1151-1156.	1.7	24
80	High-temperature Mars-to-Earth transfer of meteorite ALH84001. <i>Earth and Planetary Science Letters</i> , 2007, 260, 72-85.	1.8	24
81	Synorogenic extension localized by upper-crustal thickening: An example from the Late Cretaceous Nevadaplano. <i>Geology</i> , 2015, 43, 351-354.	2.0	24
82	(U-Th)/He dating of volcanic phenocrysts with high-U-Th inclusions, Jemez Volcanic Field, New Mexico. <i>Chemical Geology</i> , 2006, 227, 223-235.	1.4	23
83	Resolving spatial heterogeneities in exhumation and surface uplift in Timor-Leste: Constraints on deformation processes in young orogens. <i>Tectonics</i> , 2014, 33, 1089-1112.	1.3	21
84	The thermochronologic record of erosion and magmatism in the Canyonlands region of the Colorado Plateau. <i>Numerische Mathematik</i> , 2019, 319, 339-380.	0.7	21
85	Evidence for two shield volcanoes exposed on the island of Kauai, Hawaii. <i>Geology</i> , 1997, 25, 811.	2.0	20
86	Structural and petrologic evolution of the Lihue basin and eastern Kauai, Hawaii. <i>Bulletin of the Geological Society of America</i> , 1999, 111, 674-685.	1.6	20
87	Age and temperature of shock metamorphism of Martian meteorite Los Angeles from (U-Th)/He thermochronometry. <i>Geology</i> , 2004, 32, 677.	2.0	20
88	Relief evolution in northern Corsica (western Mediterranean): Constraints on uplift and erosion on long-term and short-term timescales. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	20
89	Seismicity and the strange rubbing boulders of the Atacama Desert, northern Chile. <i>Geology</i> , 2012, 40, 851-854.	2.0	20
90	Conodont (U-Th)/He thermochronology: Initial results, potential, and problems. <i>Earth and Planetary Science Letters</i> , 2007, 258, 569-580.	1.8	18

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91	Early Mesoproterozoic evolution of midcontinental Laurentia: Defining the geon 14 Baraboo orogeny. <i>Geoscience Frontiers</i> , 2021, 12, 101174.	4.3	18
92	Thermochronological evidence for Mio-Pliocene late orogenic extension in the north-eastern Albanides (Albania). <i>Terra Nova</i> , 2008, 20, 180-187.	0.9	17
93	Climate control on Quaternary coal fires and landscape evolution, Powder River basin, Wyoming and Montana. <i>Geology</i> , 2009, 37, 255-258.	2.0	16
94	Thermochronology of sandstone-hosted secondary Fe- and Mn-oxides near Moab, Utah: Record of paleo- fluid flow along a fault. <i>Bulletin of the Geological Society of America</i> , 2018, 130, 93-113.	1.6	15
95	Rapid Oligocene to Early Miocene Extension Along the Grant Range Detachment System, Nevada, USA: Insights From Multipart Cooling Histories of Footwall Rocks. <i>Tectonics</i> , 2018, 37, 4752-4779.	1.3	15
96	Bayesian Markov-Chain Monte Carlo Inversion of Low-Temperature Thermochronology Around Two 8 m Wide Columbia River Flood Basalt Dikes. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	15
97	Rapid erosion of the central Transantarctic Mountains at the Eocene-Oligocene transition: Evidence from skewed (U-Th)/He date distributions near Beardmore Glacier. <i>Earth and Planetary Science Letters</i> , 2021, 567, 117009.	1.8	15
98	Extraterrestrial dust, the marine lithologic record, and global biogeochemical cycles. <i>Geology</i> , 2018, 46, 863-866.	2.0	14
99	(U-Th)/He ages of phosphates from St. Saverin LL6 chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 100, 282-296.	1.6	13
100	Low-temperature thermochronologic record of Eocene migmatite dome emplacement and late Cenozoic landscape development, Shuswap core complex, British Columbia. <i>Tectonics</i> , 2014, 33, 1616-1635.	1.3	11
101	Thermochronologic perspectives on the deep-time evolution of the deep biosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	11
102	Reconciling regional continuity with local variability in structure, uplift and exhumation of the Timor orogen. <i>Gondwana Research</i> , 2017, 49, 364-386.	3.0	10
103	Hydrothermal events in the Linzizong Group: Implications for Paleogene exhumation and paleoaltimetry of the southern Tibetan Plateau. <i>Earth and Planetary Science Letters</i> , 2022, 583, 117390.	1.8	6
104	Krypton-81 Dating Constrains Timing of Deep Groundwater Flow Activation. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	6
105	Unroofing history of Alabama and Poverty Hills basement blocks, Owens Valley, California, from apatite (U-Th)/He thermochronology. <i>International Geology Review</i> , 2009, 51, 1034-1050.	1.1	5
106	Detrital zircon U-Pb-He double dating: A method of quantifying long- and short-term exhumation rates in collisional orogens. <i>Science China Earth Sciences</i> , 2014, 57, 2702-2711.	2.3	4
107	Error Propagation in the Derivation of Noble Gas Diffusion Parameters for Minerals From Step Heating Experiments. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 3706-3720.	1.0	4
108	Overlapping volcanoes: The origin of Hilo Ridge, Hawaii. <i>Geology</i> , 2000, 28, 547-550.	2.0	3

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109	Geochronological Constraints on the Post-Collisional (150-75 Ma) Thermal Extension in the Dabieshan Orogen, Central China. <i>Gondwana Research</i> , 2001, 4, 829-831.	3.0	2
110	Application of the (U <sup>4</sup> Th)/He Thermochronometry to the Tectono-Thermal Evolution of Sedimentary Basins: A Case History of Well KQ1 in the Tarim Basin. <i>Chinese Journal of Geophysics</i> , 2009, 52, 803-813.	0.2	2
111	Lithosphere today .... <i>Nature</i> , 2011, 472, 420-421.	13.7	1
112	Paleotopography in the western U.S. Cordillera. <i>Numerische Mathematik</i> , 2012, 312, 81-89.	0.7	1
113	(U <sup>4</sup> Th)/He and <sup>4</sup> He/ <sup>3</sup> He Thermochronology of Secondary Oxides in Faults and Fractures: A Regional Perspective From Southeastern Arizona. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009905.	1.0	1