Timothy Grove

List of Publications by Year
in descending order

163 papers	21,011 citations	8181 76 h-index	9589 142 g-index
168 all docs	168 docs citations	168 times ranked	7067 citing authors

#	Article	IF	Citations
1	Experimental investigations of the role of H2O in calc-alkaline differentiation and subduction zone magmatism. Contributions To Mineralogy and Petrology, 1993, 113, 143-166.	3.1	1,252
2	The influence of water on melting of mantle peridotite. Contributions To Mineralogy and Petrology, 1998, 131, 323-346.	3.1	631
3	The role of H2O during crystallization of primitive arc magmas under uppermost mantle conditions and genesis of igneous pyroxenites: an experimental study. Contributions To Mineralogy and Petrology, 2001, 141, 643-658.	3.1	626
4	Fractional crystallization and mantle-melting controls on calc-alkaline differentiation trends. Contributions To Mineralogy and Petrology, 2003, 145, 515-533.	3.1	623
5	Experimental and natural partitioning of Th, U, Pb and other trace elements between garnet, clinopyroxene and basaltic melts. Chemical Geology, 1994, 117, 149-166.	3.3	589
6	The Role of H₂O in Subduction Zone Magmatism. Annual Review of Earth and Planetary Sciences, 2012, 40, 413-439.	11.0	472
7	The role of an H2O-rich fluid component in the generation of primitive basaltic andesites and andesites from the Mt. Shasta region, N California. Contributions To Mineralogy and Petrology, 2002, 142, 375-396.	3.1	431
8	The influence of H2O on mantle wedge melting. Earth and Planetary Science Letters, 2006, 249, 74-89.	4.4	406
9	Primary magmas of midâ€ocean ridge basalts 1. Experiments and methods. Journal of Geophysical Research, 1992, 97, 6885-6906.	3.3	403
10	Fractionation of pyroxene-phyric MORB at low pressure: An experimental study. Contributions To Mineralogy and Petrology, 1983, 84, 293-309.	3.1	398
11	Origin of calc-alkaline series lavas at Medicine Lake Volcano by fractionation, assimilation and mixing. Contributions To Mineralogy and Petrology, 1982, 80, 160-182.	3.1	388
12	Thermal and Magmatic Evolution of the Moon. Reviews in Mineralogy and Geochemistry, 2006, 60, 365-518.	4.8	372
13	Rare earth element diffusion in diopside: influence of temperature, pressure, and ionic radius, and an elastic model for diffusion in silicates. Contributions To Mineralogy and Petrology, 2001, 141, 687-703.	3.1	355
14	Primary magmas of midâ€ocean ridge basalts 2. Applications. Journal of Geophysical Research, 1992, 97, 6907-6926.	3.3	351
15	Temperatures and H2O contents of low-MgO high-alumina basalts. Contributions To Mineralogy and Petrology, 1993, 113, 167-184.	3.1	347
16	Coupled CaAl-NaSi diffusion in plagioclase feldspar: Experiments and applications to cooling rate speedometry. Geochimica Et Cosmochimica Acta, 1984, 48, 2113-2121.	3.9	323
17	Phase equilibrium controls on the tholeiitic versus calcâ€alkaline differentiation trends. Journal of Geophysical Research, 1984, 89, 3253-3274.	3.3	319
18	Experimental petrology of normal MORB near the Kane Fracture Zone: 22ï¿½?25ï¿½ N, mid-Atlantic ridge. Contributions To Mineralogy and Petrology, 1987, 96, 121-139.	3.1	291

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19	The evolution of young silicic lavas at Medicine Lake Volcano, California: Implications for the origin of compositional gaps in calc-alkaline series lavas. Contributions To Mineralogy and Petrology, 1986, 92, 281-302.	3.1	276
20	Partitioning of moderately siderophile elements among olivine, silicate melt, and sulfide melt: Constraints on core formation in the Earth and Mars. Geochimica Et Cosmochimica Acta, 1997, 61, 1829-1846.	3.9	244
21	The influence of water on the petrogenesis of subductionrelated igneous rocks. Nature, 1993, 365, 332-334.	27.8	240
22	Mantle melting as a function of water content beneath back-arc basins. Journal of Geophysical Research, 2006, 111, .	3.3	240
23	Emplacement conditions of komatiite magmas from the 3.49 Ga Komati Formation, Barberton Greenstone Belt, South Africa. Earth and Planetary Science Letters, 1997, 150, 303-323.	4.4	239
24	Experimental constraints on the generation of FeTi basalts, andesites, and rhyodacites at the Galapagos Spreading Center, 85Â°W and 95Â°W. Journal of Geophysical Research, 1989, 94, 9251-9274.	3.3	236
25	Thermal evolution of the Earth as recorded by komatiites. Earth and Planetary Science Letters, 2004, 219, 173-187.	4.4	234
26	Rare earth element diffusion in a natural pyrope single crystal at 2.8ÂGPa. Contributions To Mineralogy and Petrology, 2002, 142, 416-424.	3.1	232
27	Experiments and models of anhydrous, basaltic olivine-plagioclase-augite saturated melts from 0.001 to 10 kbar. Contributions To Mineralogy and Petrology, 1996, 124, 1-18.	3.1	219
28	Oxygen isotope evidence for slab melting in modern and ancient subduction zones. Earth and Planetary Science Letters, 2005, 235, 480-496.	4.4	217
29	Fractionation of Mid-Ocean Ridge Basalt (MORB). Geophysical Monograph Series, 0, , 281-310.	0.1	216
30	Hornblende gabbro sill complex at Onion Valley, California, and a mixing origin for the Sierra Nevada batholith. Contributions To Mineralogy and Petrology, 1996, 126, 81-108.	3.1	214
31	High pressure phase relations of primitive high-alumina basalts from Medicine Lake volcano, northern California. Contributions To Mineralogy and Petrology, 1991, 108, 253-270.	3.1	212
32	Primitive basalts and andesites from the Mt. Shasta region, N. California: products of varying melt fraction and water content. Contributions To Mineralogy and Petrology, 1994, 118, 111-129.	3.1	204
33	The effect of H2O on the olivine liquidus of basaltic melts: experiments and thermodynamic models. Contributions To Mineralogy and Petrology, 2008, 155, 417-432.	3.1	195
34	Petrogenesis of Andesites. Annual Review of Earth and Planetary Sciences, 1986, 14, 417-454.	11.0	194
35	Mantle Melting as a Function of Water Content beneath the Mariana Arc. Journal of Petrology, 2010, 51, 1711-1738.	2.8	193
36	Magmatic processes that generated the rhyolite of Glass Mountain, Medicine Lake volcano, N. California. Contributions To Mineralogy and Petrology, 1997, 127, 205-223.	3.1	188

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37	Magnesian andesite and dacite lavas from Mt. Shasta, northern California: products of fractional crystallization of H2O-rich mantle melts. Contributions To Mineralogy and Petrology, 2005, 148, 542-565.	3.1	177
38	Experiments on liquid immiscibility along tholeiitic liquid lines of descent. Contributions To Mineralogy and Petrology, 2012, 164, 27-44.	3.1	177
39	Geochemical evidence for magmatic water within Mars from pyroxenes in the Shergotty meteorite. Nature, 2001, 409, 487-490.	27.8	176
40	Kinematic variables and water transport control the formation and location of arc volcanoes. Nature, 2009, 459, 694-697.	27.8	174
41	The early differentiation history of Mars from 182W-142Nd isotope systematics in the SNC meteorites. Geochimica Et Cosmochimica Acta, 2005, 69, 4557-4571.	3.9	173
42	Harzburgite melting with and without H2O: Experimental data and predictive modeling. Journal of Geophysical Research, 2004, 109, .	3.3	171
43	Experimental investigations of low-Ca pyroxene stability and olivine-pyroxene-liquid equilibria at 1-atm in natural basaltic and andesitic liquids. Contributions To Mineralogy and Petrology, 1989, 103, 287-305.	3.1	168
44	Sulfur saturation limits in silicate melts and their implications for core formation scenarios for terrestrial planets. American Mineralogist, 2002, 87, 227-237.	1.9	164
45	The production of Barberton komatiites in an Archean Subduction Zone. Geophysical Research Letters, 2001, 28, 2513-2516.	4.0	159
46	The beginnings of hydrous mantle wedge melting. Contributions To Mineralogy and Petrology, 2012, 163, 669-688.	3.1	156
47	Amphibole stability in primitive arc magmas: effects of temperature, H2O content, and oxygen fugacity. Contributions To Mineralogy and Petrology, 2012, 164, 317-339.	3.1	152
48	Oxygen fugacity, temperature reproducibility, and H2O contents of nominally anhydrous piston-cylinder experiments using graphite capsules. American Mineralogist, 2008, 93, 1838-1844.	1.9	148
49	Trace element mineral/melt partitioning for basaltic and basaltic andesitic melts: An experimental and laser ICP-MS study with application to the oxidation state of mantle source regions. Earth and Planetary Science Letters, 2014, 392, 265-278.	4.4	148
50	Re-examination of the lunar magma ocean cumulate overturn hypothesis: melting or mixing is required. Earth and Planetary Science Letters, 2002, 196, 239-249.	4.4	142
51	Petrology of Medicine Lake Highland volcanics: Characterization of endmembers of magma mixing. Contributions To Mineralogy and Petrology, 1982, 80, 147-159.	3.1	141
52	Assimilation of granite by basaltic magma at Burnt Lava flow, Medicine Lake volcano, northern California: Decoupling of heat and mass transfer. Contributions To Mineralogy and Petrology, 1988, 99, 320-343.	3.1	139
53	Use of FePt alloys to eliminate the iron loss problem in 1 atmosphere gas mixing experiments: Theoretical and practical considerations. Contributions To Mineralogy and Petrology, 1982, 78, 298-304.	3.1	138
54	Constraints on the composition and petrogenesis of the Martian crust. Journal of Geophysical Research, 2003, 108, .	3.3	138

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55	Wetting of mantle olivine by sulfide melt: implications for Re/Os ratios in mantle peridotite and late-stage core formation. Earth and Planetary Science Letters, 1999, 169, 147-163.	4.4	137
56	Partitioning of rare earth elements between clinopyroxene and silicate melt Crystal-chemical controls. Geochimica Et Cosmochimica Acta, 1995, 59, 1951-1962.	3.9	134
57	An experimental study on the effect of temperature and melt composition on the partitioning of nickel between olivine and silicate melt. Geochimica Et Cosmochimica Acta, 1990, 54, 1255-1265.	3.9	133
58	Helium solubility in olivine and implications for high 3He/4He in ocean island basalts. Nature, 2005, 437, 1140-1143.	27.8	125
59	A subduction origin for komatiites and cratonic lithospheric mantle. South African Journal of Geology, 2004, 107, 107-118.	1.2	118
60	Silica and volatile-element metasomatism of Archean mantle: a xenolith-scale example from the Kaapvaal Craton. Contributions To Mineralogy and Petrology, 2005, 150, 251-267.	3.1	114
61	Mineral/melt partitioning of trace elements during hydrous peridotite partial melting. Contributions To Mineralogy and Petrology, 2003, 145, 391-405.	3.1	107
62	Crystallization of the lunar magma ocean and the primordial mantle-crust differentiation of the Moon. Geochimica Et Cosmochimica Acta, 2018, 234, 50-69.	3.9	102
63	Corrections and further discussion of the primary magmas of midâ€ocean ridge basalts, 1 and 2. Journal of Geophysical Research, 1993, 98, 22339-22347.	3.3	100
64	Water (hydrogen) in the lunar mantle: Results from petrology and magma ocean modeling. Earth and Planetary Science Letters, 2011, 307, 173-179.	4.4	99
65	A Long-Lived Lunar Core Dynamo. Science, 2012, 335, 453-456.	12.6	94
66	Lithium isotope fractionation in the southern Cascadia subduction zone. Earth and Planetary Science Letters, 2006, 250, 428-443.	4.4	92
67	Hot, shallow mantle melting under the Cascades volcanic arc. Geology, 2001, 29, 631.	4.4	90
68	Experimental constraints on the origin of lunar high-Ti ultramafic glasses. Geochimica Et Cosmochimica Acta, 1997, 61, 1315-1327.	3.9	88
69	Sulfurâ€induced greenhouse warming on early Mars. Journal of Geophysical Research, 2008, 113, .	3.3	86
70	Phase equilibria of the Shergotty meteorite: Constraints on preâ€eruptive water contents of martian magmas and fractional crystallization under hydrous conditions. Meteoritics and Planetary Science, 2001, 36, 793-806.	1.6	83
71	Early petrologic processes on the ureilite parent body. Meteoritics and Planetary Science, 2003, 38, 95-108.	1.6	83
72	Magmatic effects of the lunar late heavy bombardment. Earth and Planetary Science Letters, 2004, 222, 17-27.	4.4	82

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73	Melt/harzburgite reaction in the petrogenesis of tholeiitic magma from Kilauea volcano, Hawaii. Contributions To Mineralogy and Petrology, 1998, 131, 1-12.	3.1	81
74	Phase equilibrium investigations of the Adirondack class basalts from the Gusev plains, Gusev crater, Mars. Meteoritics and Planetary Science, 2007, 42, 131-148.	1.6	81
75	An Ancient Core Dynamo in Asteroid Vesta. Science, 2012, 338, 238-241.	12.6	81
76	Diffusive fractionation of trace elements during production and transport of melt in Earthâ€™s upper mantle. Earth and Planetary Science Letters, 2002, 198, 93-112.	4.4	80
77	Phase equilibria of ultramafic compositions on Mercury and the origin of the compositional dichotomy. Earth and Planetary Science Letters, 2013, 363, 50-60.	4.4	78
78	Melting processes and mantle sources of lavas on Mercury. Earth and Planetary Science Letters, 2016, 439, 117-128.	4.4	77
79	Experimental and petrological constraints on lunar differentiation from the Apollo 15 green picritic glasses. Meteoritics and Planetary Science, 2003, 38, 515-527.	1.6	76
80	Uranium and thorium diffusion in diopside. Earth and Planetary Science Letters, 1998, 160, 505-519.	4.4	75
81	Origin of lunar feldspathic rocks. Earth and Planetary Science Letters, 1973, 20, 325-336.	4.4	74
82	Uâ€“Th dating of single zircons from young granitoid xenoliths: new tools for understanding volcanic processes. Earth and Planetary Science Letters, 2000, 183, 291-302.	4.4	73
83	Library of Experimental Phase Relations (LEPR): A database and Web portal for experimental magmatic phase equilibria data. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	72
84	Ureilite smelting. Meteoritics, 1993, 28, 629-636.	1.4	71
85	Melt generation, crystallization, and extraction beneath segmented oceanic transform faults. Journal of Geophysical Research, 2009, 114, .	3.3	71
86	Compositional and kinetic controls on liquid immiscibility in ferrobasaltâ€“rhyolite volcanic and plutonic series. Geochimica Et Cosmochimica Acta, 2013, 113, 79-93.	3.9	71
87	Controls on the stability and composition of amphibole in the Earthâ€™s mantle. Contributions To Mineralogy and Petrology, 2016, 171, 1.	3.1	71
88	A two-billion-year history for the lunar dynamo. Science Advances, 2017, 3, e1700207.	10.3	71
89	Two Contrasting H2O-rich Components in Primary Melt Inclusions from Mount Shasta. Journal of Petrology, 2010, 51, 1571-1595.	2.8	68
90	Origin of titaniferous lunar basalts. Geochimica Et Cosmochimica Acta, 1975, 39, 1219-1235.	3.9	67

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91	Origin of lunar ultramafic green glasses: constraints from phase equilibrium studies. Geochimica Et Cosmochimica Acta, 2000, 64, 2339-2350.	3.9	66
92	Lunar Mare Volcanism: Where Did the Magmas Come From?. Elements, 2009, 5, 29-34.	0.5	66
93	Corrections to expressions for calculating mineral components in ?Origin of calc-alkaline series lavas at medicine lake volcano by fractionation, assimilation and mixing? and ?Experimental petrology of normal MORB near the kane fracture zone: 22ï¿½-25ï¿½N, mid-atlantic ridge?. Contributions To Mineralogy and Petrology, 1993, 114, 422-424.	3.1	65
94	Melt Production Beneath Mt. Shasta from Boron Data in Primitive Melt Inclusions. Science, 2001, 293, 281-283.	12.6	64
95	Persistence and origin of the lunar core dynamo. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8453-8458.	7.1	64
96	Melting the hydrous, subarc mantle: the origin of primitive andesites. Contributions To Mineralogy and Petrology, 2015, 170, 1.	3.1	64
97	Along-Arc Variations in the Pre-Eruptive H2O Contents of Mariana Arc Magmas Inferred from Fractionation Paths. Journal of Petrology, 2011, 52, 257-278.	2.8	62
98	Postâ€1,000â€year volcanism at Medicine Lake Volcano, Cascade Range, northern California. Journal of Geophysical Research, 1990, 95, 19693-19704.	3.3	60
99	Evidence for deep melting of hydrous metasomatized mantle: Pliocene high-potassium magmas from the Sierra Nevadas. Journal of Geophysical Research, 2003, 108, .	3.3	60
100	A melting model for variably depleted and enriched lherzolite in the plagioclase and spinel stability fields. Journal of Geophysical Research, 2012, 117, .	3.3	60
101	Depths and temperatures of <10.5â€‰Ma mantle melting and the lithosphereâ€asthenosphere boundary below southern Oregon and northern California. Geochemistry, Geophysics, Geosystems, 2013, 14, 864-879.	2.5	56
102	How partial melts of mafic lower crust affect ascending magmas at oceanic ridges. Contributions To Mineralogy and Petrology, 2008, 156, 49-71.	3.1	54
103	Mantle melting beneath the Tibetan Plateau: Experimental constraints on ultrapotassic magmatism. Journal of Geophysical Research, 2008, 113, .	3.3	54
104	Mantle dynamics beneath the Pacific Northwest and the generation of voluminous backâ€arc volcanism. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	54
105	Origin of compositional zonation (highâ€alumina basalt to basaltic andesite) in the Giant Crater Lava Field, Medicine Lake Volcano, northern California. Journal of Geophysical Research, 1991, 96, 21819-21842.	3.3	53
106	The effect of oxygen fugacity on the partitioning of nickel and cobalt between olivine, silicate melt, and metal. Geochimica Et Cosmochimica Acta, 1992, 56, 3733-3743.	3.9	53
107	Origin of lunar highâ€titanium ultramafic glasses: Constraints from phase relations and dissolution kinetics of clinopyroxeneâ€ilmenite cumulates. Meteoritics and Planetary Science, 2000, 35, 783-794.	1.6	53
108	Constraints on the pre-metamorphic trace element composition of Barberton komatiites from ion probe analyses of preserved clinopyroxene. Contributions To Mineralogy and Petrology, 2003, 144, 383-396.	3.1	52

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109	Textural equilibria of iron sulfide liquids in partly molten silicate aggregates and their relevance to core formation scenarios. Journal of Geophysical Research, 2000, 105, 13555-13567.	3.3	51
110	Early hydrous melting and degassing of the Martian interior. Journal of Geophysical Research, 2006, 111, .	3.3	51
111	Experimental and major element constraints on the evolution of lavas from Lihir Island, Papua New Guinea. Contributions To Mineralogy and Petrology, 1990, 104, 722-734.	3.1	50
112	Melts of garnet lherzolite: experiments, models and comparison to melts of pyroxenite and carbonated lherzolite. Contributions To Mineralogy and Petrology, 2013, 166, 887-910.	3.1	50
113	The Giant Crater Lava Field: Geology and geochemistry of a compositionally zoned, highâ€alumina basalt to basaltic andesite eruption at Medicine Lake Volcano, California. Journal of Geophysical Research, 1991, 96, 21843-21863.	3.3	48
114	Evidence of hydrous differentiation and crystal accumulation in the low-MgO, high-Al2O3 Lake Basalt from Medicine Lake volcano, California. Contributions To Mineralogy and Petrology, 1995, 121, 201-216.	3.1	46
115	Experimental investigation of the influence of oxygen fugacity on the source depths for high titanium lunar ultramafic magmas. Geochimica Et Cosmochimica Acta, 2012, 79, 1-19.	3.9	46
116	AuPdFe ternary solution model and applications to understanding the fO2 of hydrous, high-pressure experiments. Contributions To Mineralogy and Petrology, 2010, 160, 631-643.	3.1	44
117	Melting systematics in midâ€ocean ridge basalts: Application of a plagioclaseâ€spinel melting model to global variations in major element chemistry and crustal thickness. Journal of Geophysical Research: Solid Earth, 2015, 120, 4863-4886.	3.4	43
118	The Chemical Composition of Mercury. , 2018, , 30-51.		43
119	Experimental constraints on melt generation in the mantle wedge. Geophysical Monograph Series, 2003, , 107-134.	0.1	41
120	Eruptive history and tectonic setting of Medicine Lake Volcano, a large rear-arc volcano in the southern Cascades. Journal of Volcanology and Geothermal Research, 2008, 177, 313-328.	2.1	41
121	Magnetic fidelity of lunar samples and implications for an ancient core dynamo. Earth and Planetary Science Letters, 2012, 337-338, 93-103.	4.4	41
122	Melting of the primitive martian mantle at 0.5â€"2.2 GPa and the origin of basalts and alkaline rocks on Mars. Earth and Planetary Science Letters, 2015, 427, 83-94.	4.4	41
123	Absarokites from the western Mexican Volcanic Belt: constraints on mantle wedge conditions. Contributions To Mineralogy and Petrology, 2003, 146, 10-27.	3.1	39
124	Segregating gas from melt: an experimental study of the Ostwald ripening of vapor bubbles in magmas. Contributions To Mineralogy and Petrology, 2011, 161, 331-347.	3.1	38
125	Late Holocene hydrous mafic magmatism at the Paint Pot Crater and Callahan flows, Medicine Lake Volcano, N. California and the influence of H2O in the generation of silicic magmas. Contributions To Mineralogy and Petrology, 2000, 138, 1-16.	3.1	36
126	Magnetism of a very young lunar glass. Journal of Geophysical Research E: Planets, 2015, 120, 1720-1735.	3.6	36

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127	Origin of calc-alkaline series lavas at Medicine Lake volcano by fractionation, assimilation and mixing: Corrections and clarifications. Contributions To Mineralogy and Petrology, 1983, 82, 407-408.	3.1	33
128	The origin of high-Mg magmas in Mt Shasta and Medicine Lake volcanoes, Cascade Arc (California): higher and lower than mantle oxygen isotope signatures attributed to current and past subduction. Contributions To Mineralogy and Petrology, 2011, 162, 945-960.	3.1	31
129	H2O-rich mantle melting near the slabâ€“wedge interface. Contributions To Mineralogy and Petrology, 2019, 174, 1.	3.1	31
130	Magmatic processes that produced lunar fire fountains. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	30
131	Straddling the tholeiitic/calc-alkaline transition: the effects of modest amounts of water on magmatic differentiation at Newberry Volcano, Oregon. Contributions To Mineralogy and Petrology, 2014, 168, 1.	3.1	30
132	Widespread production of silica- and alkali-rich melts at the onset of planetesimal melting. Geochimica Et Cosmochimica Acta, 2020, 277, 334-357.	3.9	26
133	Experimental petrology of the Apollo 15 group A green glasses: Melting primordial lunar mantle and magma ocean cumulate assimilation. Geochimica Et Cosmochimica Acta, 2013, 106, 216-230.	3.9	24
134	Controlledâ€atmosphere thermal demagnetization and paleointensity analyses of extraterrestrial rocks. Geochemistry, Geophysics, Geosystems, 2014, 15, 2733-2743.	2.5	23
135	Incremental melting in the ureilite parent body: Initial composition, melting temperatures, and melt compositions. Meteoritics and Planetary Science, 2020, 55, 832-856.	1.6	22
136	Structural characterization of labradorite-bytownite plagioclase from volcanic, plutonic and metamorphic environments. Contributions To Mineralogy and Petrology, 1977, 64, 273-302.	3.1	21
137	Experimental constraints on ureilite petrogenesis. Geochimica Et Cosmochimica Acta, 2006, 70, 1291-1308.	3.9	21
138	Experiments on meltâ€“rock reaction in the shallow mantle wedge. Contributions To Mineralogy and Petrology, 2016, 171, 1.	3.1	20
139	Magmatic processes leading to compositional diversity in igneous rocks: Bowen (1928) revisited. Numerische Mathematik, 2018, 318, 1-28.	1.4	20
140	182Hfâ€“182W chronometry and early differentiation of the ureilite parent body. Earth and Planetary Science Letters, 2009, 288, 611-618.	4.4	19
141	Formation of primitive achondrites by partial melting of alkali-undepleted planetesimals in the inner solar system. Geochimica Et Cosmochimica Acta, 2020, 277, 358-376.	3.9	19
142	Pyroxene-melt equilibria: an updated model. Contributions To Mineralogy and Petrology, 1988, 100, 361-373.	3.1	18
143	Hydrous komatiites from Commondale, South Africa: An experimental study. Earth and Planetary Science Letters, 2009, 284, 199-207.	4.4	18
144	Effects of melt density on magma mixing in calc-alkaline series lavas. Nature, 1983, 305, 416-418.	27.8	15

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145	Origin of lunar high-titanium ultramafic glasses: A hybridized source?. Earth and Planetary Science Letters, 2008, 268, 182-189.	4.4	13
146	Trace element abundances of high-MgO glasses from Kilauea, Mauna Loa and Haleakala volcanoes, Hawaii. Contributions To Mineralogy and Petrology, 1998, 131, 13-21.	3.1	12
147	Origin of Primitive Tholeiitic and Calcâ€Alkaline Basalts at Newberry Volcano, Oregon. Geochemistry, Geophysics, Geosystems, 2018, 19, 1360-1377.	2.5	11
148	Introduction to Special Section on Open Magmatic Systems. Journal of Geophysical Research, 1986, 91, 5887-5889.	3.3	10
149	The effect of metal composition on Feâ€"Ni partition behavior between olivine and FeNi-metal, FeNi-carbide, FeNi-sulfide at elevated pressure. Chemical Geology, 2005, 221, 207-224.	3.3	10
150	Origins of Major Element, Trace Element, and Isotope Garnet Signatures in Midâ€Ocean Ridge Basalts. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019612.	3.4	10
151	High-magnesian andesite from Mount Shasta: A product of magma mixing and contamination, not a primitive melt: COMMENT AND REPLY: COMMENT. Geology, 2007, 35, e147-e147.	4.4	8
152	Chapter 5.4 Volcanology of the Barberton Greenstone Belt, South Africa: Inflation and Evolution of Flow Fields. Neoproterozoic-Cambrian Tectonics, Global Change and Evolution: A Focus on South Western Gondwana, 2007, 15, 527-570.	0.2	8
153	Grove et al. reply. Nature, 2010, 468, E7-E8.	27.8	8
154	Exsolution in Metamorphic Bytownite. , 1976, , 266-272.		7
155	<i>ReversePetrogen</i>: A Multiphase Dry Reverse Fractional Crystallizationâ€Mantle Melting Thermobarometer Applied to 13,589 Midâ€Ocean Ridge Basalt Glasses. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021292.	3.4	7
156	Reply to â€˜Comment on â€œThe beginnings of hydrous mantle wedge meltingâ€• by Till et al.â€™ by Stalder. Contributions To Mineralogy and Petrology, 2012, 164, 1073-1076.	3.1	5
157	MAGMARS: A Melting Model for the Martian Mantle and FeOâ€Rich Peridotite. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006985.	3.6	5
158	Reply to â€˜Comment on â€œThe beginnings of hydrous mantle wedge meltingâ€• by Till et al.â€™ by Green, Rosenthal and Kovacs. Contributions To Mineralogy and Petrology, 2012, 164, 1083-1085.	3.1	4
159	Melting the Earth's Upper Mantle. , 2015, , 35-47.		4
160	Gabbros from Mare Crisium: An analysis of the Luna 24 soil. Geophysical Research Letters, 1977, 4, 493-496.	4.0	3
161	Experimental petrology of the Mars Pathfinder rock composition: Constraints on the interpretation of Martian reflectance spectra. Journal of Geophysical Research, 2008, 113, .	3.3	1
162	Citation for Presentation of the 2005 F.W. Clarke Award to James A. Van Orman. Geochimica Et Cosmochimica Acta, 2007, 71, S19.	3.9	0

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163	Acceptance of the 2014 V.M. Goldschmidt Award of the Gochemical Society by Timothy L. Grove. Geochimica Et Cosmochimica Acta, 2015, 159, 300.	3.9	0