Jaupart Claude

List of Publications by Year
in descending order

169 papers	13,338 citations	20817 60 h-index	24258 110 g-index
178 all docs	178 docs citations	178 times ranked	6516 citing authors

#	Article	IF	Citations
1	Seismic tremor reveals active trans-crustal magmatic system beneath Kamchatka volcanoes. Science Advances, 2022, 8, eabj1571.	10.3	13
2	Interactive simulation of plume and pyroclastic volcanic ejections. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 2022, 5, 1-15.	1.6	0
3	Lithosphere, Continental: Thermal Structure. Encyclopedia of Earth Sciences Series, 2021, , 872-884.	0.1	1
4	Radiogenic Heat Production in the Continental Crust. Encyclopedia of Earth Sciences Series, 2021, , 1298-1303.	0.1	0
5	Energy Budget of the Earth. Encyclopedia of Earth Sciences Series, 2021, , 361-368.	0.1	1
6	Episodicity and Migration of Low Frequency Earthquakes Modeled With Fast Fluid Pressure Transients in the Permeable Subduction Interface. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021894.	3.4	13
7	Heat flow constraints on the mafic character of Archean continental crust. Earth and Planetary Science Letters, 2021, 571, 117091.	4.4	12
8	Energy Budget of the Earth. Encyclopedia of Earth Sciences Series, 2020, , 1-9.	0.1	0
9	Radiogenic Heat Production in the Continental Crust. Encyclopedia of Earth Sciences Series, 2020, , 1-7.	0.1	0
10	Convection in an internally heated stratified heterogeneous reservoir. Journal of Fluid Mechanics, 2019, 870, 67-105.	3.4	13
11	Geochemical evidence for high volatile fluxes from the mantle at the end of the Archaean. Nature, 2019, 575, 485-488.	27.8	20
12	The Formation of Continental Crust from a Physics Perspective. Geochemistry International, 2018, 56, 1289-1321.	0.7	0
13	Lowâ€Frequency Earthquakes and Pore Pressure Transients in Subduction Zones. Geophysical Research Letters, 2018, 45, 11,083.	4.0	29
14	Fundamentals of laminar free convection in internally heated fluids at values of the Rayleighâ€“Roberts number up to. Journal of Fluid Mechanics, 2018, 846, 966-998.	3.4	14
15	Postemplacement dynamics of basaltic intrusions in the continental crust. Journal of Geophysical Research: Solid Earth, 2017, 122, 966-987.	3.4	11
16	Breathing of the Nevado del Ruiz volcano reservoir, Colombia, inferred from repeated seismic tomography. Scientific Reports, 2017, 7, 46094.	3.3	49
17	The Sudbury Huronian heat flow anomaly, Ontario, Canada. Precambrian Research, 2017, 295, 187-202.	2.7	2
18	The Earthâ€™s mantle in a microwave oven: thermal convection driven by a heterogeneous distribution of heat sources. Experiments in Fluids, 2017, 58, 1.	2.4	7

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19	The fate of mafic and ultramafic intrusions in the continental crust. Earth and Planetary Science Letters, 2016, 453, 131-140.	4.4	13
20	Radiogenic heat production in the continental crust. Lithos, 2016, 262, 398-427.	1.4	102
21	The feeder system of the Toba supervolcano from the slab to the shallow reservoir. Nature Communications, 2016, 7, 12228.	12.8	47
22	Microwave-heating laboratory experiments for planetary mantle convection. Journal of Fluid Mechanics, 2015, 777, 50-67.	3.4	19
23	Microwave-based, internally-heated convection: New perspectives for the heterogeneous case. AIP Conference Proceedings, 2015, , .	0.4	1
24	Heat Flow and Thermal Structure of the Lithosphere. , 2015, , 217-253.		32
25	Temperatures, Heat, and Energy in the Mantle of the Earth. , 2015, , 223-270.		79
26	Post-orogenic thermal evolution of newborn Archean continents. Earth and Planetary Science Letters, 2015, 432, 36-45.	4.4	16
27	The building and stabilization of an Archean Craton in the Superior Province, Canada, from a heat flow perspective. Journal of Geophysical Research: Solid Earth, 2014, 119, 9130-9155.	3.4	38
28	Constraints on Crustal Heat Production from Heat Flow Data. , 2014, , 53-73.		25
29	The impact of a volcanic edifice on intrusive and eruptive activity. Earth and Planetary Science Letters, 2014, 408, 1-8.	4.4	59
30	Generation of continental rifts, basins, and swells by lithosphere instabilities. Journal of Geophysical Research: Solid Earth, 2013, 118, 3080-3100.	3.4	34
31	Radiogenic heat production, thermal regime and evolution of continental crust. Tectonophysics, 2013, 609, 524-534.	2.2	125
32	Microwave-based laboratory experiments for internally-heated mantle convection. AIP Conference Proceedings, 2013, , .	0.4	10
33	The instability of continental passive margins and its effect on continental topography and heat flow. Journal of Geophysical Research: Solid Earth, 2013, 118, 1817-1836.	3.4	16
34	Geoneutrinos and the energy budget of the Earth. Journal of Geodynamics, 2012, 54, 43-54.	1.6	27
35	A lithospheric instability origin for the Cameroon Volcanic Line. Earth and Planetary Science Letters, 2012, 335-336, 80-87.	4.4	66
36	The initiation of subduction by crustal extension at a continental margin. Geophysical Journal International, 2012, 188, 779-797.	2.4	14

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37	The next-generation liquid-scintillator neutrino observatory LENA. Astroparticle Physics, 2012, 35, 685-732.	4.3	181
38	Temperature and rheological properties of the mantle beneath the North American craton from an analysis of heat flux and seismic data. Journal of Geophysical Research, 2011, 116, .	3.3	22
39	Rise of volcanic plumes to the stratosphere aided by penetrative convection above large lava flows. Earth and Planetary Science Letters, 2011, 301, 171-178.	4.4	36
40	Magma expansion and fragmentation in a propagating dyke. Earth and Planetary Science Letters, 2011, 301, 146-152.	4.4	24
41	Folding in regions of extension. Geophysical Journal International, 2011, 185, 1120-1134.	2.4	10
42	Two models for the formation of magma reservoirs by small increments. Tectonophysics, 2011, 500, 34-49.	2.2	28
43	Conditions for the arrest of a vertical propagating dyke. Bulletin of Volcanology, 2011, 73, 191-204.	3.0	89
44	On the relationship between cycles of eruptive activity and growth of a volcanic edifice. Journal of Volcanology and Geothermal Research, 2010, 194, 150-164.	2.1	35
45	Low heat flux and large variations of lithospheric thickness in the Canadian Shield. Journal of Geophysical Research, 2010, 115, .	3.3	36
46	The chemical composition of the Earth: Enstatite chondrite models. Earth and Planetary Science Letters, 2010, 293, 259-268.	4.4	363
47	Thermal regime of the lithosphere in the Canadian ShieldThis article is one of a series of papers published in this Special Issue on the themeLithoprobe â€" parameters, processes, and the evolution of a continent.. Canadian Journal of Earth Sciences, 2010, 47, 389-408.	1.3	20
48	Thermal evolution of cratonic roots. Lithos, 2009, 109, 47-60.	1.4	78
49	Dynamics of magma flow near the vent: Implications for dome eruptions. Earth and Planetary Science Letters, 2009, 279, 185-196.	4.4	24
50	Enhanced crustal geo-neutrino production near the Sudbury Neutrino Observatory, Ontario, Canada. Earth and Planetary Science Letters, 2009, 288, 301-308.	4.4	22
51	Dike propagation through layered rocks. Journal of Geophysical Research, 2009, 114, .	3.3	69
52	Magma degassing and intermittent lava dome growth. Geophysical Research Letters, 2008, 35, .	4.0	37
53	Secular cooling and thermal structure of continental lithosphere. Earth and Planetary Science Letters, 2007, 257, 83-96.	4.4	38
54	Thermal evolution of the Earth: Secular changes and fluctuations of plate characteristics. Earth and Planetary Science Letters, 2007, 260, 465-481.	4.4	174

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55	Temperatures, Heat and Energy in the Mantle of the Earth. , 2007, , 253-303.		77
56	Transient geotherms in Archean continental lithosphere: New constraints on thickness and heat production of the subcontinental lithospheric mantle. Journal of Geophysical Research, 2007, 112, .	3.3	51
57	Instability of a chemically dense layer heated from below and overlain by a deep less viscous fluid. Journal of Fluid Mechanics, 2007, 572, 433-469.	3.4	35
58	Heat Flow and Thermal Structure of the Lithosphere. , 2007, , 217-251.		27
59	Heat Flow and Thermal Structure of the Lithosphere. , 2007, , 217-251.		72
60	Temperatures, Heat and Energy in the Mantle of the Earth. , 2007, , 253-303.		86
61	Crustal heat production in the Superior Province, Canadian Shield, and in North America inferred from heat flow data. Journal of Geophysical Research, 2006, 111, .	3.3	63
62	Upper mantle velocity-temperature conversion and composition determined from seismic refraction and heat flow. Journal of Geophysical Research, 2006, 111, .	3.3	29
63	Archean thermal regime and stabilization of the cratons. Geophysical Monograph Series, 2006, , 61-73.	0.1	17
64	Variations of strength and localized deformation in cratons: The 1.9ÂGa Kapuskasing uplift, Superior Province, Canada. Earth and Planetary Science Letters, 2006, 249, 216-228.	4.4	20
65	Ultra-rapid formation of large volumes of evolved magma. Earth and Planetary Science Letters, 2006, 250, 38-52.	4.4	47
66	Some consequences of volcanic edifice destruction for eruption conditions. Journal of Volcanology and Geothermal Research, 2005, 145, 68-80.	2.1	59
67	Heat flow, thermal regime, and elastic thickness of the lithosphere in the Trans-Hudson Orogen. Canadian Journal of Earth Sciences, 2005, 42, 517-532.	1.3	25
68	Caldera formation by magma withdrawal from a reservoir beneath a volcanic edifice. Earth and Planetary Science Letters, 2005, 230, 273-287.	4.4	34
69	Penetration of mantle plumes through depleted lithosphere. Journal of Geophysical Research, 2005, 110, .	3.3	24
70	Lithospheric structure of the Canadian Shield inferred from inversion of surface-wave dispersion with thermodynamic a priori constraints. Geological Society Special Publication, 2004, 239, 175-194.	1.3	25
71	Likelihood of basaltic eruptions as a function of volatile content and volcanic edifice size. Journal of Volcanology and Geothermal Research, 2004, 137, 201-217.	2.1	23
72	Variations of surface heat flow and lithospheric thermal structure beneath the North American craton. Earth and Planetary Science Letters, 2004, 223, 65-65.	4.4	1

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73	Heat flow and deep lithospheric thermal structure at Lac de Gras, Slave Province, Canada. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	31
74	Heat flow in the Nipigon arm of the Keweenawan rift, northwestern Ontario, Canada. Geophysical Research Letters, 2004, 31, .	4.0	15
75	Marginal stability of thick continental lithosphere. Geophysical Research Letters, 2004, 31, .	4.0	15
76	Nonequilibrium temperatures and cooling rates in thick continental lithosphere. Geophysical Research Letters, 2004, 31, .	4.0	20
77	Variations of surface heat flow and lithospheric thermal structure beneath the North American craton. Earth and Planetary Science Letters, 2004, 223, 65-77.	4.4	152
78	Magma storage and horizontal dyke injection beneath a volcanic edifice. Earth and Planetary Science Letters, 2004, 221, 245-262.	4.4	143
79	Laminar starting plumes in high-Prandtl-number fluids. Journal of Fluid Mechanics, 2003, 478, 287-298.	3.4	76
80	Magma chamber behavior beneath a volcanic edifice. Journal of Geophysical Research, 2003, 108, .	3.3	100
81	Ascent and emplacement of buoyant magma bodies in brittle-ductile upper crust. Journal of Geophysical Research, 2003, 108, .	3.3	122
82	Heat flow in the western Superior Province of the Canadian shield. Geophysical Research Letters, 2003, 30, .	4.0	20
83	Temperatures at the base of the Laurentide Ice Sheet inferred from borehole temperature data. Geophysical Research Letters, 2003, 30, .	4.0	27
84	Constraints on Crustal Heat Production from Heat Flow Data. , 2003, , 65-84.		59
85	Surface heat flow, crustal temperatures and mantle heat flow in the Proterozoic Trans-Hudson Orogen, Canadian Shield. Journal of Geophysical Research, 2002, 107, ETG 7-1-ETG 7-19.	3.3	53
86	Simultaneous inversion of gravity and heat flow data: constraints on thermal regime, rheology and evolution of the Canadian Shield crustâ˜†. Journal of Geodynamics, 2002, 34, 11-30.	1.6	13
87	The distributions of slip rate and ductile deformation in a strike-slip shear zone. Geophysical Journal International, 2002, 148, 179-192.	2.4	11
88	Marginal stability of atmospheric eruption columns and pyroclastic flow generation. Journal of Geophysical Research, 2001, 106, 21785-21798.	3.3	34
89	Ascent and decompression of viscous vesicular magma in a volcanic conduit. Journal of Geophysical Research, 2001, 106, 16223-16240.	3.3	32
90	What the mantle sees: The Effects of continents on mantle heat flow. Geophysical Monograph Series, 2000, , 95-112.	0.1	7

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91	Heat flow and deep thermal structure near the southeastern edge of the Canadian Shield. Canadian Journal of Earth Sciences, 2000, 37, 399-414.	1.3	84
92	Lithosphere structure beneath the Phanerozoic intracratonic basins of North America. Earth and Planetary Science Letters, 2000, 178, 139-149.	4.4	63
93	The effect of edifice load on magma ascent beneath a volcano. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 1515-1532.	3.4	160
94	Low mantle heat flow at the edge of the North American Continent, Voisey Bay, Labrador. Geophysical Research Letters, 2000, 27, 823-826.	4.0	45
95	The thermal structure and thickness of continental roots. Lithos, 1999, 48, 93-114.	1.4	286
96	The generation of gas overpressure in volcanic eruptions. Earth and Planetary Science Letters, 1999, 166, 57-70.	4.4	71
97	On causal links between flood basalts and continental breakup. Earth and Planetary Science Letters, 1999, 166, 177-195.	4.4	659
98	Heat flow in the Trans-Hudson Orogen of the Canadian Shield: Implications for Proterozoic continental growth. Journal of Geophysical Research, 1999, 104, 29007-29024.	3.3	47
99	The thermal structure and thickness of continental roots. Developments in Geotectonics, 1999, , 93-114.	0.3	13
100	Constraints on cooling rates and permeabilities of pumice in an explosive eruption jet from colour and magnetic mineralogy. Journal of Volcanology and Geothermal Research, 1998, 86, 79-91.	2.1	56
101	Large-scale crustal heterogeneities and lithospheric strength in cratons. Earth and Planetary Science Letters, 1998, 164, 205-219.	4.4	59
102	Dike propagation through an elastic plate. Journal of Geophysical Research, 1998, 103, 18295-18314.	3.3	35
103	Heat flow and thickness of the lithosphere in the Canadian Shield. Journal of Geophysical Research, 1998, 103, 15269-15286.	3.3	167
104	The size distribution of pyroclasts and the fragmentation sequence in explosive volcanic eruptions. Journal of Geophysical Research, 1998, 103, 29759-29779.	3.3	143
105	Gas loss from magmas through conduit walls during eruption. Geological Society Special Publication, 1998, 145, 73-90.	1.3	70
106	Expansion and quenching of vesicular magma fragments in Plinian eruptions. Journal of Geophysical Research, 1997, 102, 12187-12203.	3.3	56
107	Lava flow shapes and dimensions as reflections of magma system conditions. Journal of Volcanology and Geothermal Research, 1997, 78, 31-50.	2.1	30
108	Physical models of volcanic eruptions. Chemical Geology, 1996, 128, 217-227.	3.3	55

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109	High heat flow in the trans-Hudson Orogen, Central Canadian Shield. Geophysical Research Letters, 1996, 23, 3027-3030.	4.0	32
110	The production of chemically stratified and adcumulate plutonic igneous rocks. Mineralogical Magazine, 1996, 60, 99-114.	1.4	57
111	Degassing during magma ascent in the Mule Creek vent (USA). Bulletin of Volcanology, 1996, 58, 117-130.	3.0	169
112	Fragmentation of magma during Plinian volcanic eruptions. Bulletin of Volcanology, 1996, 58, 144-162.	3.0	193
113	Simple fluid dynamic models of volcanic rift zones. Earth and Planetary Science Letters, 1995, 136, 223-240.	4.4	30
114	Heat flow variations in the Grenville Province, Canada. Earth and Planetary Science Letters, 1995, 136, 447-460.	4.4	45
115	Dynamics of differentiation in magma reservoirs. Journal of Geophysical Research, 1995, 100, 17615-17636.	3.3	113
116	On the effect of continents on mantle convection. Journal of Geophysical Research, 1995, 100, 24217-24238.	3.3	115
117	Chapter 11a. PHYSICAL ASPECTS OF MAGMA DEGASSING I. Experimental and theoretical constraints on vesiculation. , 1994, , 413-446.		44
118	Influence of cooling on lava-flow dynamics: Comment and Reply. Geology, 1994, 22, 93.	4.4	8
119	Reply [to â€œComment on â€˜Compositional convection in a reactive crystalline mush and melt differentiationâ€™ by Stephen Tait and Claude Jaupartâ€]. Journal of Geophysical Research, 1994, 99, 11919-11921.	3.3	0
120	On the vesicularity of pumice. Journal of Geophysical Research, 1994, 99, 15633.	3.3	126
121	Onset of thermal convection in fluids with temperature-dependent viscosity: Application to the oceanic mantle. Journal of Geophysical Research, 1994, 99, 19853-19866.	3.3	207
122	Heat flow, gravity and structure of the Abitibi belt, Superior Province, Canada: Implications for mantle heat flow. Earth and Planetary Science Letters, 1994, 122, 103-123.	4.4	68
123	On the variations of flow rate in non-explosive lava eruptions. Earth and Planetary Science Letters, 1993, 114, 505-516.	4.4	87
124	Thermal convection in lava lakes. Geophysical Research Letters, 1993, 20, 1827-1830.	4.0	62
125	Transient high-Rayleigh-number thermal convection with large viscosity variations. Journal of Fluid Mechanics, 1993, 253, 141.	3.4	336
126	Influence of cooling on lava-flow dynamics. Geology, 1993, 21, 335.	4.4	70

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127	Compositional convection in a reactive crystalline mush and melt differentiation. Journal of Geophysical Research, 1992, 97, 6735-6756.	3.3	220
128	Steady-state operation of Stromboli volcano, Italy: constraints on the feeding system. Bulletin of Volcanology, 1992, 54, 535-541.	3.0	75
129	The planform of compositional convection and chimney formation in a mushy layer. Nature, 1992, 359, 406-408.	27.8	86
130	New Experiments on Compositional Convection. , 1992, , 155-158.		1
131	Convection and Macrosegregation in Magma Chambers. , 1992, , 241-260.		2
132	Gas content, eruption rate and instabilities of eruption regime in silicic volcanoes. Earth and Planetary Science Letters, 1991, 102, 413-429.	4.4	398
133	Heat flow and structure of the lithosphere in the Eastern Canadian Shield. Journal of Geophysical Research, 1991, 96, 19941-19963.	3.3	147
134	Effects of compressibility on the flow of lava. Bulletin of Volcanology, 1991, 54, 1-9.	3.0	14
135	CHAPTER 8. DYNAMICS OF ERUPTIVE PHENOMENA. , 1990, , 213-238.		13
136	CHAPTER 5. PHYSICAL PROCESSES IN THE EVOLUTION OF MAGMAS. , 1990, , 125-152.		4
137	Dynamics of degassing at Kilauea Volcano, Hawaii. Journal of Geophysical Research, 1990, 95, 2793-2809.	3.3	149
138	Compositional convection in viscous melts. Nature, 1989, 338, 571-574.	27.8	87
139	The generation and collapse of a foam layer at the roof of a basaltic magma chamber. Journal of Fluid Mechanics, 1989, 203, 347-380.	3.4	269
140	Pressure, gas content and eruption periodicity of a shallow, crystallising magma chamber. Earth and Planetary Science Letters, 1989, 92, 107-123.	4.4	435
141	New heat flow density and radiogenic heat production data in the Canadian Shield and the Quebec Appalachians. Canadian Journal of Earth Sciences, 1989, 26, 845-852.	1.3	48
142	Laboratory models of Hawaiian and Strombolian eruptions. Nature, 1988, 331, 58-60.	27.8	292
143	The flow of gas and lava: A review of dynamic models for volcanic eruptions. Chemical Geology, 1988, 70, 38.	3.3	1
144	Thermal control on post-orogenic extension in collision belts. Earth and Planetary Science Letters, 1988, 89, 48-62.	4.4	103

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145	The vertical distribution of radiogenic heat production in the Precambrian crust of Norway and Sweden: Geothermal implications. Geophysical Research Letters, 1987, 14, 260-263.	4.0	100
146	A thermal model for the distribution in space and time of the Himalayan granites. Earth and Planetary Science Letters, 1987, 84, 87-99.	4.4	62
147	The kinetics of nucleation and crystal growth and scaling laws for magmatic crystallization. Contributions To Mineralogy and Petrology, 1987, 96, 24-34.	3.1	95
148	Towards Scaling Laws for the Interpretation of Igneous Structures. , 1987, , 327-347.		2
149	Characteristic Dimensions and Times for Dynamic Crystallization. , 1987, , 613-639.		7
150	The stagnant bottom layer of convecting magma chambers. Earth and Planetary Science Letters, 1986, 80, 183-199.	4.4	85
151	On the interaction between convection and crystallization in cooling magma chambers. Earth and Planetary Science Letters, 1986, 77, 345-361.	4.4	165
152	Separated twoâ€phase flow and basaltic eruptions. Journal of Geophysical Research, 1986, 91, 12842-12860.	3.3	211
153	On the thermal structure of the southern Tibetan crust. Geophysical Journal International, 1985, 81, 131-155.	2.4	44
154	Continental tectonics and continental kinetics. Earth and Planetary Science Letters, 1985, 74, 171-186.	4.4	33
155	Heat focussing, granite genesis and inverted metamorphic gradients in continental collision zones. Earth and Planetary Science Letters, 1985, 73, 385-397.	4.4	106
156	Convective instabilities in a variable viscosity fluid cooled from above. Physics of the Earth and Planetary Interiors, 1985, 39, 14-32.	1.9	66
157	High heat flow in southern Tibet. Nature, 1984, 307, 32-36.	27.8	155
158	Stagnant layers at the bottom of convecting magma chambers. Nature, 1984, 308, 535-538.	27.8	44
159	Nucleation, crystal growth and the thermal regime of cooling magmas. Journal of Geophysical Research, 1984, 89, 10161-10177.	3.3	118
160	Horizontal heat transfer due to radioactivity contrasts: causes and consequences of the linear heat flow relation. Geophysical Journal International, 1983, 75, 411-435.	2.4	70
161	The effects of alteration and the interpretation of heat flow and radioactivity dataâ€”a reply to R.U.M. Rao. Earth and Planetary Science Letters, 1983, 62, 430-438.	4.4	7
162	A detailed study of the distribution of heat flow and radioactivity in New Hampshire (U.S.A.). Earth and Planetary Science Letters, 1982, 59, 267-287.	4.4	59

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163	Eruption at Le Piton de la Fournaise volcano on 3 February 1981. Nature, 1982, 297, 395-397.	27.8	31
164	Heat flow studies: Constraints on the distribution of uranium, thorium and potassium in the continental crust. Earth and Planetary Science Letters, 1981, 52, 328-344.	4.4	87
165	Oceans and continents: Similarities and differences in the mechanisms of heat loss. Journal of Geophysical Research, 1981, 86, 11535-11552.	3.3	349
166	Oscillatory zoning: a pathological case of crystal growth. Nature, 1981, 294, 223-228.	27.8	232
167	The heat flow through oceanic and continental crust and the heat loss of the Earth. Reviews of Geophysics, 1980, 18, 269-311.	23.0	1,078
168	Measuring Heat Flux and Structure Functions of Temperature Fluctuations with an Acoustic Doppler Sodar. Journal of Applied Meteorology, 1980, 19, 199-205.	1.1	80
169	The impact of vent geometry on the growth of lava domes. Geophysical Journal International, 0, , .	2.4	5