

Michael D Higgins

List of Publications by Year in descending order

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50
papers

2,992
citations

218381

26
h-index

205818

48
g-index

52
all docs

52
docs citations

52
times ranked

1803
citing authors

#	ARTICLE	IF	CITATIONS
1	Measurement of crystal size distributions. <i>American Mineralogist</i> , 2000, 85, 1105-1116.	0.9	539
2	An introduction to the application of X-ray microtomography to the three-dimensional study of igneous rocks. <i>Lithos</i> , 2012, 148, 262-276.	0.6	182
3	Closure in crystal size distributions (CSD), verification of CSD calculations, and the significance of CSD fans. <i>American Mineralogist</i> , 2002, 87, 171-175.	0.9	176
4	Origin of Anorthosite by Textural Coarsening: Quantitative Measurements of a Natural Sequence of Textural Development. <i>Journal of Petrology</i> , 1998, 39, 1307-1323.	1.1	165
5	Crystallization Sequence and Magma Chamber Processes in the Ferrobasaltic Sept Iles Layered Intrusion, Canada. <i>Journal of Petrology</i> , 2010, 51, 1203-1236.	1.1	145
6	Large-scale silicate liquid immiscibility during differentiation of tholeiitic basalt to granite and the origin of the Daly gap. <i>Geology</i> , 2011, 39, 907-910.	2.0	139
7	Magma dynamics beneath Kameni volcano, Thera, Greece, as revealed by crystal size and shape measurements. <i>Journal of Volcanology and Geothermal Research</i> , 1996, 70, 37-48.	0.8	134
8	A crystal size-distribution study of the Kiglapait layered mafic intrusion, Labrador, Canada: evidence for textural coarsening. <i>Contributions To Mineralogy and Petrology</i> , 2002, 144, 314-330.	1.2	114
9	Textural coarsening in igneous rocks. <i>International Geology Review</i> , 2011, 53, 354-376.	1.1	112
10	3D Analysis of Rock Textures: Quantifying Igneous Microstructures. <i>Elements</i> , 2007, 3, 239-245.	0.5	108
11	Differentiation of Tholeiitic Basalt to A-Type Granite in the Sept Iles Layered Intrusion, Canada. <i>Journal of Petrology</i> , 2011, 52, 487-539.	1.1	101
12	Nature of Sub-volcanic Magma Chambers, Deccan Province, India: Evidence from Quantitative Textural Analysis of Plagioclase Megacrysts in the Giant Plagioclase Basalts. <i>Journal of Petrology</i> , 2007, 48, 885-900.	1.1	92
13	The origin of laminated and massive anorthosite, Sept Iles layered intrusion, QuÃ©bec, Canada. <i>Contributions To Mineralogy and Petrology</i> , 1991, 106, 340-354.	1.2	88
14	The Age of the Sept Iles Layered Mafic Intrusion, Canada: Implications For the Late Neoproterozoic/Cambrian History of Southeastern Canada. <i>Journal of Geology</i> , 1998, 106, 421-432.	0.7	85
15	Verification of ideal semi-logarithmic, lognormal or fractal crystal size distributions from 2D datasets. <i>Journal of Volcanology and Geothermal Research</i> , 2006, 154, 8-16.	0.8	82
16	Crystal size distributions and other quantitative textural measurements in lavas and tuff from Egmont volcano (Mt. Taranaki), New Zealand. <i>Bulletin of Volcanology</i> , 1996, 58, 194-204.	1.1	69
17	A new interpretation of the structure of the Sept Iles Intrusive suite, Canada. <i>Lithos</i> , 2005, 83, 199-213.	0.6	55
18	Three generations of anorthosite-mangerite-charnockite-granite (AMCG) magmatism, contact metamorphism and tectonism in the Saguenay-Lac-Saint-Jean region of the Grenville Province, Canada. <i>Precambrian Research</i> , 1996, 79, 327-346.	1.2	53

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19	Three magmatic components in the 1973 eruption of Eldfell volcano, Iceland: Evidence from plagioclase crystal size distribution (CSD) and geochemistry. <i>Journal of Volcanology and Geothermal Research</i> , 2007, 161, 247-260.	0.8	51
20	The age of the Lac-Saint-Jean Anorthosite Complex and associated mafic rocks, Grenville Province, Canada. <i>Canadian Journal of Earth Sciences</i> , 1992, 29, 1412-1423.	0.6	45
21	Origin of megacrysts in granitoids by textural coarsening: a crystal size distribution (CSD) study of microcline in the Cathedral Peak Granodiorite, Sierra Nevada, California. <i>Geological Society Special Publication</i> , 1999, 168, 207-219.	0.8	43
22	The Sept Iles anorthosite complex: field relationships, geochronology, and petrology. <i>Canadian Journal of Earth Sciences</i> , 1981, 18, 561-573.	0.6	33
23	U-Pb zircon age of the southwest lobe of the Havre-Saint-Pierre Anorthosite Complex, Grenville Province, Canada. <i>Canadian Journal of Earth Sciences</i> , 1993, 30, 1453-1457.	0.6	33
24	Quantitative petrological evidence for the origin of K-feldspar megacrysts in dacites from Taapaca volcano, Chile. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 709-723.	1.2	32
25	A fundamental dispute: A discussion of "On some fundamentals of igneous petrology" by Bruce D. Marsh, <i>Contributions to Mineralogy and Petrology</i> (2013) 166: 665-690. <i>Contributions To Mineralogy and Petrology</i> , 2015, 169, 1.	1.2	30
26	What can crystal size distributions and olivine compositions tell us about magma solidification processes inside Kilauea Iki lava lake, Hawaii?. <i>Journal of Volcanology and Geothermal Research</i> , 2011, 208, 136-162.	0.8	29
27	Abundance of Boron in International Geochemical Standards by Prompt-Gamma Neutron Activation Analysis. <i>Geostandards and Geoanalytical Research</i> , 1984, 8, 31-34.	1.7	26
28	Boron cosmochemistry interpreted from abundances in mantle xenoliths. <i>Nature</i> , 1984, 308, 172-173.	13.7	26
29	Crystal structure, mosaicity, and strain analysis of Hawaiian olivines using in situ X-ray diffraction. <i>American Mineralogist</i> , 2011, 96, 486-497.	0.9	19
30	Geochemical constraints on the differentiation processes that were active in the Sept Iles complex. <i>Canadian Journal of Earth Sciences</i> , 1986, 23, 670-681.	0.6	17
31	The Cascadia megathrust earthquake of 1700 may have rejuvenated an isolated basalt volcano in western Canada: Age and petrographic evidence. <i>Journal of Volcanology and Geothermal Research</i> , 2009, 179, 149-156.	0.8	17
32	540-Myr-old anorthosite complex in the Grenville Province of Quebec, Canada. <i>Nature</i> , 1977, 267, 40-41.	13.7	14
33	Trace element geochemistry of the Inyo volcanic chain, California: Evidence for multiple magma sources, magma mixing and post-eruption loss of boron. <i>Journal of Volcanology and Geothermal Research</i> , 1988, 35, 97-110.	0.8	13
34	U-Pb ages of plutonism, wollastonite formation, and deformation in the central part of the Lac-Saint-Jean anorthosite suite. <i>Canadian Journal of Earth Sciences</i> , 2002, 39, 1093-1105.	0.6	13
35	The origin of felsic microgranitoid enclaves: Insights from plagioclase crystal size distributions and thermodynamic models. <i>Lithos</i> , 2015, 239, 33-44.	0.6	10
36	Variation of plagioclase shape with size in intermediate magmas: a window into incipient plagioclase crystallisation. <i>Contributions To Mineralogy and Petrology</i> , 2022, 177, .	1.2	10

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37	Development and emplacement of the Inyo Domes Magmatic Suite, California: Evidence from geological, textural (CSD) and geochemical observations of ash and lava. <i>Journal of Volcanology and Geothermal Research</i> , 2009, 186, 280-292.	0.8	9
38	The Corossol structure: A possible impact crater on the seafloor of the northwestern Gulf of St. Lawrence, Eastern Canada. <i>Meteoritics and Planetary Science</i> , 2013, 48, 2542-2558.	0.7	8
39	The Sept Îles Intrusive Suite, Quebec, Canada. <i>Springer Geology</i> , 2015, , 465-515.	0.2	8
40	Magmatic processes under Quizapu volcano, Chile, identified from geochemical and textural studies. <i>Contributions To Mineralogy and Petrology</i> , 2015, 170, 1.	1.2	8
41	A new locality for primary xenolith-bearing nephelinites in northwestern British Columbia. <i>Canadian Journal of Earth Sciences</i> , 1985, 22, 1556-1559.	0.6	7
42	Light lithophile element (boron, lithium) abundances in the Valles Caldera, New Mexico, VCâ€œ1 core hole. <i>Journal of Geophysical Research</i> , 1988, 93, 6103-6107.	3.3	5
43	Geochemistry and oxygen isotopic composition of the Canton Saint-Onge wollastonite deposit, central Grenville Province, Canada. <i>Canadian Journal of Earth Sciences</i> , 2001, 38, 1129-1140.	0.6	5
44	Quantitative Textural Analysis of Rocks in Layered Mafic Intrusions. <i>Springer Geology</i> , 2015, , 153-181.	0.2	4
45	Comment on Berger A., Herwegh M., Schwarz J.-O., Putlitz B., (2011). Quantitative analysis of crystal/grain sizes and their distributions in 2D and 3D. <i>J. Struct. Geol.</i> 33(12):1751â€œ1763. <i>Journal of Structural Geology</i> , 2012, 40, 54-55.	1.0	2
46	The vesicular Sainte-Sophie dykes: a chemically distinct, near-surface facies of the Grenville Dyke Swarm?. <i>Canadian Journal of Earth Sciences</i> , 2018, 55, 241-251.	0.6	2
47	Chemical and textural diversity of Kameni (Greece) dacites: role of vesiculation in juvenile and mature basal crystal masses. <i>Contributions To Mineralogy and Petrology</i> , 2021, 176, 1.	1.2	2
48	Development of complex, sub-vertical layering in the Cortaderas gabbro intrusion, Central Chile. <i>Lithos</i> , 2019, 340-341, 124-138.	0.6	1
49	Chemical variations within and between the clasts, and the matrix of the Abee enstatite chondrite suggest an impact-based differentiation mechanism. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 220, 71-81.	1.6	0
50	Presentation of the Mineralogical Society of America Award for 2019 to Olivier Namur. <i>American Mineralogist</i> , 2020, 105, 770-770.	0.9	0