

# Michael J Spicuzza

## List of Publications by Year in descending order

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77  
papers

6,125  
citations

109321  
35  
h-index

71685  
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docs citations

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times ranked

4576  
citing authors

#	ARTICLE	IF	CITATIONS
1	An authigenic response to Ediacaran surface oxidation: Remarkable micron-scale isotopic heterogeneity revealed by SIMS. <i>Precambrian Research</i> , 2022, 377, 106676.	2.7	8
2	SIMS matrix effects in oxygen isotope analysis of olivine and pyroxene: Application to Acfer 094 chondrite chondrules and reconsideration of the primitive chondrule minerals (PCM) line. <i>Chemical Geology</i> , 2022, 608, 121016.	3.3	8
3	Tourmaline Reference Materials for the <i>In Situ</i> Analysis of Oxygen and Lithium Isotope Ratio Compositions. <i>Geostandards and Geoanalytical Research</i> , 2021, 45, 97-119.	3.1	10
4	<i>In Situ</i> Oxygen Isotope Determination in Serpentine Minerals by SIMS: Addressing Matrix Effects and Providing New Insights on Serpentinisation at Hole BA1B (Samail ophiolite, Oman). <i>Geostandards and Geoanalytical Research</i> , 2021, 45, 161-187.	3.1	12
5	Deposition or diagenesis? Probing the Ediacaran Shuram excursion in South China by SIMS. <i>Global and Planetary Change</i> , 2021, 206, 103591.	3.5	23
6	Calibration of oxygen isotope fractionation and calcite-corundum thermometry in emery at Naxos, Greece. <i>Journal of Metamorphic Geology</i> , 2020, 38, 53-70.	3.4	6
7	Magnesium isotope analysis of olivine and pyroxene by SIMS: Evaluation of matrix effects. <i>Chemical Geology</i> , 2020, 540, 119482.	3.3	18
8	Storage and Evolution of Laguna del Maule Rhyolites: Insight From Volatile and Trace Element Contents in Melt Inclusions. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB019475.	3.4	9
9	A Nanoscale Record of Impact-Induced Pb Mobility in Lunar Zircon. <i>Microscopy and Microanalysis</i> , 2019, 25, 2448-2449.	0.4	8
10	Extreme oxygen isotope zoning in garnet and zircon from a metachert block in <i>Mã@lange</i> reveals metasomatism at the peak of subduction metamorphism. <i>Geology</i> , 2019, 47, 655-658.	4.4	18
11	Instrumental investigation of oxygen isotopes in human dental enamel from the Bronze Age battlefield site at Tollense, Germany. <i>Journal of Archaeological Science</i> , 2019, 105, 70-80.	2.4	6
12	SIMS analyses of the oldest known assemblage of microfossils document their taxon-correlated carbon isotope compositions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 53-58.	7.1	131
13	SIMS Bias on Isotope Ratios in Ca-Mg-Fe Carbonates (Part III): $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ Matrix Effects Along the Magnesite-Siderite Solid Solution Series. <i>Geostandards and Geoanalytical Research</i> , 2018, 42, 49-76.	3.1	16
14	SIMS microanalysis of the Strelley Pool Formation cherts and the implications for the secular-temporal oxygen-isotope trend of cherts. <i>Precambrian Research</i> , 2018, 304, 125-139.	2.7	16
15	Questioning the biogenicity of Neoproterozoic superheavy pyrite by SIMS. <i>American Mineralogist</i> , 2018, 103, 1362-1400.	1.9	67
16	$\delta^{7}\text{Zn}$ and $\delta^{8}\text{Zn}$ Two Zircon Reference Materials for SIMS $\text{U-Pb}$ Geochronology. <i>Geostandards and Geoanalytical Research</i> , 2018, 42, 431-457.	3.1	32
17	Searching for the Great Oxidation Event in North America: A Reappraisal of the Huronian Supergroup by SIMS Sulfur Four-Isotope Analysis. <i>Astrobiology</i> , 2018, 18, 519-538.	3.0	14
18	In situ $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ microanalysis by SIMS: A method for characterizing the carbonate components of natural and engineered $\text{CO}_2$ -reservoirs. <i>International Journal of Greenhouse Gas Control</i> , 2017, 57, 116-133.	4.6	15

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19	Oxygen isotope systematics in an evolving geothermal system: Coso Hot Springs, California. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 329, 54-68.	2.1	3
20	Ultra-reduced phases in Apollo 16 regolith: Combined field emission electron probe microanalysis and atom probe tomography of submicron Fe-Si grains in Apollo 16 sample 61500. <i>Meteoritics and Planetary Science</i> , 2017, 52, 1941-1962.	1.6	12
21	On the Association between Veining and Index Mineral Distributions in Barrow's Metamorphic Zones, Glen Esk, Scotland. <i>Journal of Petrology</i> , 2017, , .	2.8	2
22	Thermal and chemical evolution in the early Solar System as recorded by FUN CAIs: Part II "Laboratory evaporation of potential CMS-1 precursor material. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 201, 49-64.	3.9	24
23	Oxygen isotope thermometry using quartz inclusions in garnet. <i>Journal of Metamorphic Geology</i> , 2017, 35, 231-252.	3.4	9
24	Zircon M127 " A Homogeneous Reference Material for <sup>41</sup> SIMS <sup>42</sup> U-Pb Geochronology Combined with Hafnium, Oxygen and, Potentially, Lithium Isotope Analysis. <i>Geostandards and Geoanalytical Research</i> , 2016, 40, 457-475.	3.1	49
25	Temporal and compositional evolution of Jorullo volcano, Mexico: Implications for magmatic processes associated with a monogenetic eruption. <i>Chemical Geology</i> , 2016, 434, 62-80.	3.3	28
26	Secondary Ion Mass Spectrometry Bias on Isotope Ratios in Dolomite-Ankerite, Part I: <sup>18</sup> O Matrix Effects. <i>Geostandards and Geoanalytical Research</i> , 2016, 40, 157-172.	3.1	56
27	Secondary Ion Mass Spectrometry Bias on Isotope Ratios in Dolomite-Ankerite, Part II: <sup>13</sup> C Matrix Effects. <i>Geostandards and Geoanalytical Research</i> , 2016, 40, 173-184.	3.1	36
28	Oxygen isotope evolution of the Lake Owyhee volcanic field, Oregon, and implications for the low- <sup>18</sup> O magmatism of the Snake River Plain "Yellowstone hotspot and other low- <sup>18</sup> O large igneous provinces. <i>Contributions To Mineralogy and Petrology</i> , 2016, 171, 1.	3.1	22
29	Carbon and sulfur isotopic signatures of ancient life and environment at the microbial scale: Neoproterozoic shales and carbonates. <i>Geobiology</i> , 2016, 14, 105-128.	2.4	52
30	Oxygen Isotope Evidence for Mn(II)-Catalyzed Recrystallization of Manganite ( <sup>3</sup> MnOOH). <i>Environmental Science &amp; Technology</i> , 2016, 50, 6374-6380.	10.0	29
31	Experimental calibration of silicon and oxygen isotope fractionations between quartz and water at 250 °C by in situ microanalysis of experimental products and application to zoned low <sup>30</sup> Si quartz overgrowths. <i>Chemical Geology</i> , 2016, 421, 127-142.	3.3	35
32	The formation of <sup>56</sup> Fe iron meteorites investigated by the chondrule-bearing Mont Dieu meteorite. <i>Meteoritics and Planetary Science</i> , 2015, 50, 1173-1196.	1.6	41
33	Strain and permeability gradients traced by stable isotope exchange in the Raft River detachment shear zone, Utah. <i>Journal of Structural Geology</i> , 2015, 71, 41-57.	2.3	16
34	Low temperature, non-stoichiometric oxygen-isotope exchange coupled to Fe(II) "goethite interactions. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 160, 38-54.	3.9	27
35	Influence of radiation damage on Late Jurassic zircon from southern China: Evidence from in situ measurements of oxygen isotopes, laser Raman, U-Pb ages, and trace elements. <i>Chemical Geology</i> , 2014, 389, 122-136.	3.3	94
36	Correlated <sup>18</sup> O and [Ti] in lunar zircons: a terrestrial perspective for magma temperatures and water content on the Moon. <i>Contributions To Mineralogy and Petrology</i> , 2014, 167, 1.	3.1	22

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37	Hadean age for a post-magma-ocean zircon confirmed by atom-probe tomography. <i>Nature Geoscience</i> , 2014, 7, 219-223.	12.9	451
38	Lying in wait: deep and shallow evolution of dacite beneath Volc��n de Santa Mar��a, Guatemala. <i>Geological Society Special Publication</i> , 2014, 385, 209-234.	1.3	11
39	Soft X-Ray EPMA Analyses of Extremely Reduced Phases from Apollo 16 Regolith: Problems and Solutions for Sub-Micron Analysis. <i>Microscopy and Microanalysis</i> , 2014, 20, 698-699.	0.4	18
40	Geological Applications of Atom Probe Tomography: New Information from Old Rocks. <i>Microscopy and Microanalysis</i> , 2014, 20, 1678-1679.	0.4	0
41	Texture-specific isotopic compositions in 3.4Gyr old organic matter support selective preservation in cell-like structures. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 112, 66-86.	3.9	87
42	Experimental evaporation of Mg- and Si-rich melts: Implications for the origin and evolution of FUN CAIs. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 123, 368-384.	3.9	39
43	Fall, classification, and exposure history of the Mifflin L5 chondrite. <i>Meteoritics and Planetary Science</i> , 2013, 48, 641-655.	1.6	5
44	The thermal structure of continental crust in active orogens: insight from Miocene eclogite and granulite xenoliths of the Pamir Mountains. <i>Journal of Metamorphic Geology</i> , 2012, 30, 413-434.	3.4	39
45	Contrasting sources and P-T crystallization conditions of epidote-bearing granitic rocks, northeastern Brazil: O, Sr, and Nd isotopes. <i>Lithos</i> , 2011, 121, 189-201.	1.4	24
46	The origin of high $\delta^{18}O$ zircons: marbles, megacrysts, and metamorphism. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 961-974.	3.1	48
47	Oxygen isotope variations of garnets and clinopyroxenes in a layered diamondiferous calcisilicate rock from Kokchetav Massif, Kazakhstan: a window into the geochemical nature of deeply subducted UHPM rocks. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 1079-1092.	3.1	32
48	Multiple origins of zircons in jadeitite. <i>Contributions To Mineralogy and Petrology</i> , 2010, 159, 769-780.	3.1	60
49	The Northwest Africa 1500 meteorite: Not a ureilite, maybe a brachinite. <i>Meteoritics and Planetary Science</i> , 2010, 45, 1906-1928.	1.6	29
50	A single asteroidal source for extraterrestrial Ordovician chromite grains from Sweden and China: High-precision oxygen three-isotope SIMS analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 497-509.	3.9	79
51	Oxygen and iron isotope constraints on near-surface fractionation effects and the composition of lunar mare basalt source regions. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 6249-6262.	3.9	62
52	High precision SIMS oxygen three isotope study of chondrules in LL3 chondrites: Role of ambient gas during chondrule formation. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 6610-6635.	3.9	162
53	Fe, C, and O isotope compositions of banded iron formation carbonates demonstrate a major role for dissimilatory iron reduction in ~2.5Ga marine environments. <i>Earth and Planetary Science Letters</i> , 2010, 294, 8-18.	4.4	220
54	Crystal orientation effects in $\delta^{18}O$ for magnetite and hematite by SIMS. <i>Chemical Geology</i> , 2010, 276, 269-283.	3.3	70

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55	Metasomatic origin of diamonds in the world's largest diamondiferous eclogite. <i>Lithos</i> , 2009, 112, 1014-1024.	1.4	45
56	Fault-related oceanic serpentinization in the Troodos ophiolite, Cyprus: Implications for a fossil oceanic core complex. <i>Earth and Planetary Science Letters</i> , 2009, 282, 34-46.	4.4	20
57	Intratest oxygen isotope variability in the planktonic foraminifer <i>N. pachyderma</i> : Real vs. apparent vital effects by ion microprobe. <i>Chemical Geology</i> , 2009, 258, 327-337.	3.3	138
58	The origin, cooling and alteration of A-type granites in southern Israel (northernmost) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (Arab	1.5	12
59	Zircon oxygen isotopic constraint on the sources of late Mesozoic A-type granites in eastern China. <i>Chemical Geology</i> , 2008, 250, 1-15.	3.3	72
60	Diamondiferous xenoliths from crustal subduction: garnet oxygen isotopes from the Nyurbinskaya pipe, Yakutia. <i>European Journal of Mineralogy</i> , 2008, 20, 375-385.	1.3	32
61	Oxygen isotope constraints on the origin and differentiation of the Moon. <i>Earth and Planetary Science Letters</i> , 2007, 253, 254-265.	4.4	130
62	Zircons from kimberlite: New insights from oxygen isotopes, trace elements, and Ti in zircon thermometry. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 3887-3903.	3.9	147
63	Interrelations between coeval mafic and A-type silicic magmas from composite dykes in a bimodal suite of southern Israel, northernmost Arabianâ€™Nubian Shield: Geochemical and isotope constraints. <i>Lithos</i> , 2007, 97, 336-364.	1.4	59
64	4.4 billion years of crustal maturation: oxygen isotope ratios of magmatic zircon. <i>Contributions To Mineralogy and Petrology</i> , 2005, 150, 561-580.	3.1	970
65	An experimental and theoretical determination of oxygen isotope fractionation in the system magnetite-H <sub>2</sub> O from 300 to 800°C. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 3569-3585.	3.9	43
66	Oxygen isotope compositions and magmatic epidote from two contrasting metaluminous granitoids, NE Brazil. <i>Contributions To Mineralogy and Petrology</i> , 2003, 145, 205-216.	3.1	34
67	Oxygen isotope composition of carbonates, silicates, and oxides in selected carbonatites: constraints on crystallization temperatures of carbonatite magmas. <i>Chemical Geology</i> , 2003, 193, 43-57.	3.3	40
68	Oxygen Isotope Composition of Eclogitic and Peridotitic Garnet Xenocrysts from the La Ceniza Kimberlite, Guaniamo, Venezuela. <i>International Geology Review</i> , 2003, 45, 968-975.	2.1	17
69	Geochemistry of xenolithic eclogites from West Africa, part 2: origins of the high MgO eclogites. <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 4325-4345.	3.9	105
70	Tracking fluid flow during deep crustal anatexis: metasomatism of peridotites (Naxos, Greece). <i>Contributions To Mineralogy and Petrology</i> , 2002, 142, 700-713.	3.1	11
71	Geochemistry of xenolithic eclogites from West Africa, part I: A link between low MgO eclogites and archaic crust formation. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 1499-1527.	3.9	198
72	Oxygen isotope variations in Cr-poor megacrysts from kimberlite. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 4375-4384.	3.9	32

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73	Coesite eclogites from the Roberts Victor kimberlite, South Africa. <i>Lithos</i> , 2000, 54, 23-32.	1.4	67
74	Zircon megacrysts from kimberlite: oxygen isotope variability among mantle melts. <i>Contributions To Mineralogy and Petrology</i> , 1998, 133, 1-11.	3.1	800
75	The rapid heating, defocused beam technique: a CO <sub>2</sub> -laser-based method for highly precise and accurate determination of $\delta^{18}\text{O}$ values of quartz. <i>Chemical Geology</i> , 1998, 144, 195-203.	3.3	86
76	Carbon Isotope Composition of Graphite in Mantle Eclogites. <i>Journal of Geology</i> , 1997, 105, 379-386.	1.4	25
77	UWG-2, a garnet standard for oxygen isotope ratios: Strategies for high precision and accuracy with laser heating. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 5223-5231.	3.9	632