

Donald J Depaolo

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

5,265
citations

94433

37
h-index

144013

57
g-index

60
all docs

60
docs citations

60
times ranked

4899
citing authors

#	ARTICLE	IF	CITATIONS
1	Sr isotope evolution of seawater: the role of tectonics. <i>Earth and Planetary Science Letters</i> , 1992, 109, 11-23.	4.4	440
2	Isotope fractionation by chemical diffusion between molten basalt and rhyolite. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 3905-3923.	3.9	401
3	Isotopic fractionation of water during evaporation. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	365
4	A model for the origin of large silicic magma chambers: precursors of caldera-forming eruptions. <i>Bulletin of Volcanology</i> , 2003, 65, 363-381.	3.0	363
5	Surface kinetic model for isotopic and trace element fractionation during precipitation of calcite from aqueous solutions. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 1039-1056.	3.9	356
6	Ca isotopes in carbonate sediment and pore fluid from ODP Site 807A: The $\text{Ca}^{2+}(\text{aq})$ calcite equilibrium fractionation factor and calcite recrystallization rates in Pleistocene sediments. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 2524-2546.	3.9	265
7	The mineral dissolution rate conundrum: Insights from reactive transport modeling of U isotopes and pore fluid chemistry in marine sediments. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 337-363.	3.9	234
8	Analysis of the global distribution of water isotopes using the NCAR atmospheric general circulation model. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	174
9	Numerical models for diagenesis and the Neogene Sr isotopic evolution of seawater from DSDP Site 590B. <i>Earth and Planetary Science Letters</i> , 1987, 83, 27-38.	4.4	156
10	Sr isotopes and pore fluid chemistry in carbonate sediment of the Ontong Java Plateau: Calcite recrystallization rates and evidence for a rapid rise in seawater Mg over the last 10 million years. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 3883-3904.	3.9	152
11	Stable calcium isotopic composition of meteorites and rocky planets. <i>Earth and Planetary Science Letters</i> , 2010, 289, 457-466.	4.4	148
12	The influence of kinetics on the oxygen isotope composition of calcium carbonate. <i>Earth and Planetary Science Letters</i> , 2013, 375, 349-360.	4.4	143
13	Diagenesis and Sr isotopic evolution of seawater using data from DSDP 590B and 575. <i>Earth and Planetary Science Letters</i> , 1988, 90, 382-394.	4.4	131
14	General model for calcite growth kinetics in the presence of impurity ions. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 115, 100-114.	3.9	115
15	Evaluation of mineral reactive surface area estimates for prediction of reactivity of a multi-mineral sediment. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 188, 310-329.	3.9	108
16	Isotopic evolution of Mauna Loa and the chemical structure of the Hawaiian plume. <i>Geochemistry, Geophysics, Geosystems</i> , 2001, 2, n/a-n/a.	2.5	95
17	Geochemical structure of the Hawaiian plume: Sr, Nd, and Os isotopes in the 2.8 km HSDP-2 section of Mauna Kea volcano. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	2.5	93
18	Ion desolvation as a mechanism for kinetic isotope fractionation in aqueous systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 18689-18694.	7.1	92

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19	Evaluation of accessible mineral surface areas for improved prediction of mineral reaction rates in porous media. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 205, 31-49.	3.9	79
20	Uranium isotope fractionation by abiotic reductive precipitation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 8688-8693.	7.1	76
21	GEOLOGY: Deep Origin of Hotspots—the Mantle Plume Model. <i>Science</i> , 2003, 300, 920-921.	12.6	73
22	Kinetic Fractionation of Non-Traditional Stable Isotopes by Diffusion and Crystal Growth Reactions. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 85-125.	4.8	68
23	Kinetic and equilibrium Ca isotope effects in high-T rocks and minerals. <i>Earth and Planetary Science Letters</i> , 2019, 517, 71-82.	4.4	59
24	Influence of liquid structure on diffusive isotope separation in molten silicates and aqueous solutions. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 3103-3118.	3.9	57
25	Calcium isotope evidence for suppression of carbonate dissolution in carbonate-bearing organic-rich sediments. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 7081-7098.	3.9	56
26	Calcium Isotopic Compositions of Sixteen <sc>USGS</sc> Reference Materials. <i>Geostandards and Geoanalytical Research</i> , 2017, 41, 93-106.	3.1	55
27	Water isotopes during the Last Glacial Maximum: New general circulation model calculations. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	54
28	Horizontal and vertical zoning of heterogeneities in the Hawaiian mantle plume from the geochemistry of consecutive postshield volcano pairs: Kohala—Mahukona and Mauna Kea—Hualalai. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	2.5	54
29	Rates of CO ₂ Mineralization in Geological Carbon Storage. <i>Accounts of Chemical Research</i> , 2017, 50, 2075-2084.	15.6	54
30	Isotopic effects in fracture-dominated reactive fluid—rock systems. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1077-1096.	3.9	50
31	Fracture Evolution in Multimineral Systems: The Role of Mineral Composition, Flow Rate, and Fracture Aperture Heterogeneity. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 112-124.	2.7	49
32	Isotopic and Geochemical Tracers for U(VI) Reduction and U Mobility at an in Situ Recovery U Mine. <i>Environmental Science & Technology</i> , 2015, 49, 5939-5947.	10.0	47
33	Effect of paleoseawater composition on hydrothermal exchange in midocean ridges. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 12413-12418.	7.1	47
34	Liquid composition-dependence of calcium isotope fractionation during diffusion in molten silicates. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 7341-7359.	3.9	46
35	Assimilation of preexisting Pleistocene intrusions at Long Valley by periodic magma recharge accelerates rhyolite generation: rethinking the remelting model. <i>Contributions To Mineralogy and Petrology</i> , 2014, 167, 1.	3.1	44
36	Potassium and Calcium Isotopic Fractionation by Plants (Soybean [<i>Glycine max</i>], Rice [<i>Oryza</i>])	2.7	41

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37	Seawater Chemistry Through Phanerozoic Time. Annual Review of Earth and Planetary Sciences, 2019, 47, 197-224.	11.0	38
38	Supercritical CO ₂ uptake by nonswelling phyllosilicates. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 873-878.	7.1	37
39	Diffusion of multi-isotopic chemical species in molten silicates. Geochimica Et Cosmochimica Acta, 2014, 139, 313-326.	3.9	34
40	Additive effects of acidification and mineralogy on calcium isotopes in Triassic/Jurassic boundary limestones. Geochemistry, Geophysics, Geosystems, 2017, 18, 113-124.	2.5	33
41	Ca, Sr, O and D isotope approach to defining the chemical evolution of hydrothermal fluids: Example from Long Valley, CA, USA. Geochimica Et Cosmochimica Acta, 2013, 122, 209-225.	3.9	32
42	Ca isotopes record rapid crystal growth in volcanic and subvolcanic systems. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 20315-20321.	7.1	32
43	Can metamorphic reactions proceed faster than bulk strain?. Contributions To Mineralogy and Petrology, 2004, 146, 657-670.	3.1	29
44	Ti-in-quartz: Evaluating the role of kinetics in high temperature crystal growth experiments. Geochimica Et Cosmochimica Acta, 2020, 281, 149-167.	3.9	22
45	Reconstructing the oxygen isotope composition of late Cambrian and Cretaceous hydrothermal vent fluid. Geochimica Et Cosmochimica Acta, 2013, 123, 440-458.	3.9	21
46	Mineralization of carbon dioxide sequestered in volcanogenic sandstone reservoir rocks. International Journal of Greenhouse Gas Control, 2013, 18, 315-328.	4.6	16
47	The Role of Reactive Transport Modeling in Geologic Carbon Storage. Elements, 2019, 15, 93-98.	0.5	16
48	Calcium Isotopes as Tracers of Biogeochemical Processes. Advances in Isotope Geochemistry, 2012, , 105-124.	1.4	15
49	Equilibrium calcite-fluid Sr/Ca partition coefficient from marine sediment and pore fluids. Geochimica Et Cosmochimica Acta, 2020, 289, 33-46.	3.9	14
50	Se Isotopes as Groundwater Redox Indicators: Detecting Natural Attenuation of Se at an in Situ Recovery U Mine. Environmental Science & Technology, 2016, 50, 10833-10842.	10.0	13
51	The seawater Sr/Ca ratio in the past 50 Myr from bulk carbonate sediments corrected for diagenesis. Earth and Planetary Science Letters, 2020, 530, 115949.	4.4	13
52	CO ₂ mineralization in volcanogenic sandstones: geochemical characterization of the Etchegoin formation, San Joaquin Basin. , 2015, 5, 622-644.		12
53	Sustainable carbon emissions: The geologic perspective. MRS Energy & Sustainability, 2015, 2, 1.	3.0	11
54	High-temperature kinetic isotope fractionation of calcium in epidotes from modern and ancient seafloor hydrothermal systems. Earth and Planetary Science Letters, 2020, 535, 116101.	4.4	11

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55	Radiogenic ⁴⁰ Ca in Seawater: Implications for Modern and Ancient Ca Cycles. ACS Earth and Space Chemistry, 2021, 5, 2481-2492.	2.7	9
56	Isotopic Studies of Contaminant Transport at the Hanford Site, Washington. Vadose Zone Journal, 2007, 6, 1018-1030.	2.2	8
57	Isotopic Fractionation of Potassium by Diffusion in Methanol. ACS Omega, 2019, 4, 9497-9501.	3.5	5
58	Opportunities for large-scale CO ₂ disposal in coastal marine volcanic basins based on the geology of northeast Hawaii. International Journal of Greenhouse Gas Control, 2021, 110, 103396.	4.6	4