Eric H Oelkers

List of Publications by Year
in descending order

218 papers	19,144 citations	10351 72 h-index	12910 131 g-index
226 all docs	226 docs citations	226 times ranked	11239 citing authors

#	Article	IF	Citations
1	SUPCRT92: A software package for calculating the standard molal thermodynamic properties of minerals, gases, aqueous species, and reactions from 1 to 5000 bar and 0 to 1000Â°C. Computers and Geosciences, 1992, 18, 899-947.	2.0	2,224
2	The rainbow vent fluids (36Â°14â€²N, MAR): the influence of ultramafic rocks and phase separation on trace metal content in Mid-Atlantic Ridge hydrothermal fluids. Chemical Geology, 2002, 184, 37-48.	1.4	584
3	Rapid carbon mineralization for permanent disposal of anthropogenic carbon dioxide emissions. Science, 2016, 352, 1312-1314.	6.0	565
4	Mineral Carbonation of CO2. Elements, 2008, 4, 333-337.	0.5	474
5	Calculation of the thermodynamic properties of aqueous species at high pressures and temperatures. Effective electrostatic radii, dissociation constants and standard partial molal properties to 1000 Â°C and 5 kbar. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 803-826.	1.7	454
6	The effect of aluminum, pH, and chemical affinity on the rates of aluminosilicate dissolution reactions. Geochimica Et Cosmochimica Acta, 1994, 58, 2011-2024.	1.6	433
7	General kinetic description of multioxide silicate mineral and glass dissolution. Geochimica Et Cosmochimica Acta, 2001, 65, 3703-3719.	1.6	430
8	The mechanism, rates and consequences of basaltic glass dissolution: I. An experimental study of the dissolution rates of basaltic glass as a function of aqueous Al, Si and oxalic acid concentration at 25Â°C and pH = 3 and 11. Geochimica Et Cosmochimica Acta, 2001, 65, 3671-3681.	1.6	408
9	Mechanism, rates, and consequences of basaltic glass dissolution: II. An experimental study of the dissolution rates of basaltic glass as a function of pH and temperature. Geochimica Et Cosmochimica Acta, 2003, 67, 3817-3832.	1.6	390
10	The dissolution rates of natural glasses as a function of their composition at pH 4 and 10.6, and temperatures from 25 to 74Â°C. Geochimica Et Cosmochimica Acta, 2004, 68, 4843-4858.	1.6	321
11	Direct evidence of the feedback between climate and weathering. Earth and Planetary Science Letters, 2009, 277, 213-222.	1.8	310
12	Carbon dioxide storage through mineral carbonation. Nature Reviews Earth & Environment, 2020, 1, 90-102.	12.2	307
13	Mineral sequestration of carbon dioxide in basalt: A pre-injection overview of the CarbFix project. International Journal of Greenhouse Gas Control, 2010, 4, 537-545.	2.3	294
14	Experimental study of anorthite dissolution and the relative mechanism of feldspar hydrolysis. Geochimica Et Cosmochimica Acta, 1995, 59, 5039-5053.	1.6	232
15	Magnesite growth rates as a function of temperature and saturation state. Geochimica Et Cosmochimica Acta, 2009, 73, 5646-5657.	1.6	216
16	Are quartz dissolution rates proportional to B.E.T. surface areas?. Geochimica Et Cosmochimica Acta, 2001, 65, 1059-1070.	1.6	213
17	Experimental study of K-feldspar dissolution rates as a function of chemical affinity at 150Â°C and pH 9. Geochimica Et Cosmochimica Acta, 1994, 58, 4549-4560.	1.6	211
18	An experimental study of illite dissolution kinetics as a function of ph from 1.4 to 12.4 and temperature from 5 to 50Â°C. Geochimica Et Cosmochimica Acta, 2003, 67, 3583-3594.	1.6	206

#	Article	IF	Citations
19	Carbon Storage in Basalt. Science, 2014, 344, 373-374.	6.0	202
20	Carbon Dioxide Sequestration A Solution to a Global Problem. Elements, 2008, 4, 305-310.	0.5	198
21	An experimental study of calcite and limestone dissolution rates as a function of pH from â^'1 to 3 and temperature from 25 to 80Â°C. Chemical Geology, 1998, 151, 199-214.	1.4	197
22	The effect of crystallinity on dissolution rates and CO2 consumption capacity of silicates. Geochimica Et Cosmochimica Acta, 2006, 70, 858-870.	1.6	178
23	An experimental study of enstatite dissolution rates as a function of pH, temperature, and aqueous Mg and Si concentration, and the mechanism of pyroxene/pyroxenoid dissolution. Geochimica Et Cosmochimica Acta, 2001, 65, 1219-1231.	1.6	172
24	The influence of terrigenous particulate material dissolution on ocean chemistry and global element cycles. Chemical Geology, 2015, 395, 50-66.	1.4	170
25	An experimental study of forsterite dissolution rates as a function of temperature and aqueous Mg and Si concentrations. Chemical Geology, 2001, 175, 485-494.	1.4	166
26	An experimental study of crystalline basalt dissolution from 2 â©½ pH â©½ 11 and temperatures from 5 to 75 Â°C. Geochimica Et Cosmochimica Acta, 2011, 75, 5496-5509.	1.6	158
27	An experimental study of the dissolution stoichiometry and rates of a natural monazite as a function of temperature from 50 to 230 Â°C and pH from 1.5 to 10. Chemical Geology, 2002, 191, 73-87.	1.4	157
28	Triple-ion anions and polynuclear complexing in supercritical electrolyte solutions. Geochimica Et Cosmochimica Acta, 1990, 54, 727-738.	1.6	154
29	Kinetics and mechanism of natural fluorapatite dissolution at 25Â°C and pH from 3 to 12. Geochimica Et Cosmochimica Acta, 2007, 71, 5901-5912.	1.6	149
30	Calculation of the thermodynamic and transport properties of aqueous species at high pressures and temperatures: Aqueous tracer diffusion coefficients of ions to 1000Â°C and 5 kb. Geochimica Et Cosmochimica Acta, 1988, 52, 63-85.	1.6	145
31	Experimental determination of the dissolution rates of calcite, aragonite, and bivalves. Chemical Geology, 2005, 216, 59-77.	1.4	144
32	Phosphate Mineral Reactivity and Global Sustainability. Elements, 2008, 4, 83-87.	0.5	138
33	Experimental determination of synthetic NdPO4 monazite end-member solubility in water from 21Â°C to 300Â°C: implications for rare earth element mobility in crustal fluids. Geochimica Et Cosmochimica Acta, 2004, 68, 2207-2221.	1.6	130
34	Phosphates and Nuclear Waste Storage. Elements, 2008, 4, 113-116.	0.5	129
35	An experimental study of dolomite dissolution rates as a function of pH from â^'0.5 to 5 and temperature from 25 to 80Â°C. Chemical Geology, 1999, 157, 13-26.	1.4	123
36	Can Dawsonite Permanently Trap CO2?. Environmental Science & Technology, 2005, 39, 8281-8287.	4.6	123

#	Article	IF	Citations
37	The effect of particulate dissolution on the neodymium (Nd) isotope and Rare Earth Element (REE) composition of seawater. Earth and Planetary Science Letters, 2013, 369-370, 138-147.	1.8	122
38	An experimental study of the dissolution mechanism and rates of muscovite. Geochimica Et Cosmochimica Acta, 2008, 72, 4948-4961.	1.6	119
39	Olivine dissolution rates: A critical review. Chemical Geology, 2018, 500, 1-19.	1.4	114
40	Calculation of activity coefficients and degrees of formation of neutral ion pairs in supercritical electrolyte solutions. Geochimica Et Cosmochimica Acta, 1991, 55, 1235-1251.	1.6	113
41	The surface chemistry of multi-oxide silicates. Geochimica Et Cosmochimica Acta, 2009, 73, 4617-4634.	1.6	110
42	Surface reaction versus diffusion control of mineral dissolution and growth rates in geochemical processes. Chemical Geology, 1989, 78, 357-380.	1.4	109
43	How do mineral coatings affect dissolution rates? An experimental study of coupled CaCO3 dissolutionâ€"CdCO3 precipitation. Geochimica Et Cosmochimica Acta, 2005, 69, 5459-5476.	1.6	109
44	An experimental study of magnesite precipitation rates at neutral to alkaline conditions and 100â€"200Â°C as a function of pH, aqueous solution composition and chemical affinity. Geochimica Et Cosmochimica Acta, 2012, 83, 93-109.	1.6	105
45	Role of river-suspended material in the global carbon cycle. Geology, 2006, 34, 49.	2.0	103
46	The CarbFix Pilot Projectâ€"Storing carbon dioxide in basalt. Energy Procedia, 2011, 4, 5579-5585.	1.8	101
47	Isotopic fractionation during congruent dissolution, precipitation and at equilibrium: Evidence from Mg isotopes. Geochimica Et Cosmochimica Acta, 2012, 92, 170-183.	1.6	101
48	Summary of the Apparent Standard Partial Molal Gibbs Free Energies of Formation of Aqueous Species, Minerals, and Gases at Pressures 1 to 5000 Bars and Temperatures 25 to 1000â€‰Â°C. Journal of Physical and Chemical Reference Data, 1995, 24, 1401-1560.	1.9	100
49	Permanent Carbon Dioxide Storage into Basalt: The CarbFix Pilot Project, Iceland. Energy Procedia, 2009, 1, 3641-3646.	1.8	99
50	The effect of fluoride on the dissolution rates of natural glasses at pH 4 and 25Â°C. Geochimica Et Cosmochimica Acta, 2004, 68, 4571-4582.	1.6	96
51	The geology and water chemistry of the Hellisheidi, SW-Iceland carbon storage site. International Journal of Greenhouse Gas Control, 2013, 12, 399-418.	2.3	96
52	Solving the carbon-dioxide buoyancy challenge: The design and field testing of a dissolved CO2 injection system. International Journal of Greenhouse Gas Control, 2015, 37, 213-219.	2.3	96
53	Experimental studies of halite dissolution kinetics, 1 The effect of saturation state and the presence of trace metals. Chemical Geology, 1997, 137, 201-219.	1.4	93
54	Magnesium isotope fractionation during hydrous magnesium carbonate precipitation with and without cyanobacteria. Geochimica Et Cosmochimica Acta, 2012, 76, 161-174.	1.6	93

#	Article	IF	Citations
55	The chemistry and saturation states of subsurface fluids during the in situ mineralisation of CO2 and H2S at the CarbFix site in SW-Iceland. International Journal of Greenhouse Gas Control, 2017, 58, 87-102.	2.3	93
56	Kinetic and thermodynamic properties of moganite, a novel silica polymorph. Geochimica Et Cosmochimica Acta, 1997, 61, 1193-1204.	1.6	92
57	Dissolution of basalts and peridotite in seawater, in the presence of ligands, and CO2: Implications for mineral sequestration of carbon dioxide. Geochimica Et Cosmochimica Acta, 2011, 75, 5510-5525.	1.6	92
58	Does organic acid adsorption affect alkali-feldspar dissolution rates?. Chemical Geology, 1998, 151, 235-245.	1.4	90
59	Do clay mineral dissolution rates reach steady state?. Geochimica Et Cosmochimica Acta, 2005, 69, 1997-2006.	1.6	90
60	The dissolution kinetics and apparent solubility of natural apatite in closed reactors at temperatures from 5 to 50ÂÂ°C and pH from 1 to 6. Chemical Geology, 2007, 244, 554-568.	1.4	87
61	Surface charge and zeta-potential of metabolically active and dead cyanobacteria. Journal of Colloid and Interface Science, 2008, 323, 317-325.	5.0	87
62	Chemical evolution of the Mt. Hekla, Iceland, groundwaters: A natural analogue for CO2 sequestration in basaltic rocks. Applied Geochemistry, 2009, 24, 463-474.	1.4	87
63	The effect of pH, grain size, and organic ligands on biotite weathering rates. Geochimica Et Cosmochimica Acta, 2015, 164, 127-145.	1.6	86
64	Using Mg Isotopes to Trace Cyanobacterially Mediated Magnesium Carbonate Precipitation in Alkaline Lakes. Aquatic Geochemistry, 2013, 19, 1-24.	1.5	85
65	The control of carbonate mineral Mg isotope composition by aqueous speciation: Theoretical and experimental modeling. Chemical Geology, 2016, 445, 120-134.	1.4	84
66	Ocean margins: The missing term in oceanic element budgets?. Eos, 2011, 92, 217-218.	0.1	80
67	The Dissolution Rates of SiO₂ Nanoparticles As a Function of Particle Size. Environmental Science & Technology, 2012, 46, 4909-4915.	4.6	80
68	The rapid and cost-effective capture and subsurface mineral storage of carbon and sulfur at the CarbFix2 site. International Journal of Greenhouse Gas Control, 2018, 79, 117-126.	2.3	80
69	CarbFix2: CO2 and H2S mineralization during 3.5â€¯years of continuous injection into basaltic rocks at more than 250â€¯Â°C. Geochimica Et Cosmochimica Acta, 2020, 279, 45-66.	1.6	79
70	Inter-mineral Mg isotope fractionation during hydrothermal ultramafic rock alteration â€“ Implications for the global Mg-cycle. Earth and Planetary Science Letters, 2014, 392, 166-176.	1.8	78
71	Using stable Mg isotopes to distinguish dolomite formation mechanisms: A case study from the Peru Margin. Chemical Geology, 2014, 385, 84-91.	1.4	76
72	Do carbonate precipitates affect dissolution kinetics? 1: Basaltic glass. Chemical Geology, 2011, 284, 306-316.	1.4	74

#	Article	IF	Citations
73	Experimental investigation of the effect of dissolution on sandstone permeability, porosity, and reactive surface area. Geochimica Et Cosmochimica Acta, 2004, 68, 805-817.	1.6	72
74	An experimental study of basaltic glassâ€"H2Oâ€"CO2 interaction at 22 and 50Â°C: Implications for subsurface storage of CO2. Geochimica Et Cosmochimica Acta, 2014, 126, 123-145.	1.6	72
75	Reaction path modelling of in-situ mineralisation of CO2 at the CarbFix site at Hellisheidi, SW-Iceland. Geochimica Et Cosmochimica Acta, 2018, 220, 348-366.	1.6	72
76	Solubility of the hydrated Mg-carbonates nesquehonite and dypingite from 5 to 35â€¯Â°C: Implications for CO2 storage and the relative stability of Mg-carbonates. Chemical Geology, 2019, 504, 123-135.	1.4	70
77	Experimental determination of plagioclase dissolution rates as a function of its composition and pH at 22Â°C. Geochimica Et Cosmochimica Acta, 2014, 139, 154-172.	1.6	69
78	Experimental studies of REE fractionation during waterâ€"mineral interactions: REE release rates during apatite dissolution from pH 2.8 to 9.2. Chemical Geology, 2005, 222, 168-182.	1.4	68
79	An experimental study of the interaction of basaltic riverine particulate material and seawater. Geochimica Et Cosmochimica Acta, 2012, 77, 108-120.	1.6	68
80	Rapid CO2 mineralisation into calcite at the CarbFix storage site quantified using calcium isotopes. Nature Communications, 2019, 10, 1983.	5.8	68
81	Water: Is There a Global Crisis?. Elements, 2011, 7, 157-162.	0.5	67
82	Riverine particulate material dissolution as a significant flux of strontium to the oceans. Earth and Planetary Science Letters, 2012, 355-356, 51-59.	1.8	66
83	The surface chemistry and structure of acid-leached albite: New insights on the dissolution mechanism of the alkali feldspars. Geochimica Et Cosmochimica Acta, 1997, 61, 3013-3018.	1.6	65
84	An experimental study of calcite dissolution rates at acidic conditions and 25 Â°C in the presence of NaPO3 and MgCl2. Chemical Geology, 2002, 190, 291-302.	1.4	64
85	Experimental determination of barite dissolution and precipitation rates as a function of temperature and aqueous fluid composition. Geochimica Et Cosmochimica Acta, 2016, 194, 193-210.	1.6	64
86	An experimental study of the reactive surface area of the Fontainebleau sandstone as a function of porosity, permeability, and fluid flow rate. Geochimica Et Cosmochimica Acta, 1999, 63, 3525-3534.	1.6	63
87	Calculation of the transport properties of aqueous species at pressures to 5 KB and temperatures to 1000ï¿½C. Journal of Solution Chemistry, 1989, 18, 601-640.	0.6	62
88	Dissolution rates of talc as a function of solution composition, pH and temperature. Geochimica Et Cosmochimica Acta, 2007, 71, 3446-3457.	1.6	62
89	The role of riverine particulate material on the global cycles of the elements. Applied Geochemistry, 2011, 26, S365-S369.	1.4	62
90	Calculation of the thermodynamic and transport properties of aqueous species at high pressures and temperatures: dissociation constants for supercritical alkali metal halides at temperatures from 400 to 800.degree.C and pressures from 500 to 4000 bar. The Journal of Physical Chemistry, 1988, 92, 1631-1639.	2.9	58

#	Article	IF	Citations
91	Experimental study of kyanite dissolution rates as a function of chemical affinity and solution composition. Geochimica Et Cosmochimica Acta, 1999, 63, 785-797.	1.6	58
92	Making diagenesis obey thermodynamics and kinetics: the case of quartz cementation in sandstones from offshore mid-Norway. Applied Geochemistry, 2000, 15, 295-309.	1.4	56
93	Speciation of tin (Sn2+ and Sn4+) in aqueous Cl solutions from 25Â°C to 350Â°C: an in situ EXAFS study. Chemical Geology, 2000, 167, 169-176.	1.4	56
94	Fluorapatite surface composition in aqueous solution deduced from potentiometric, electrokinetic, and solubility measurements, and spectroscopic observations. Geochimica Et Cosmochimica Acta, 2007, 71, 5888-5900.	1.6	55
95	Precipitation of Iron and Aluminum Phosphates Directly from Aqueous Solution as a Function of Temperature from 50 to 200 Â°C. Crystal Growth and Design, 2009, 9, 5197-5205.	1.4	55
96	The experimental determination of REE partition coefficients in the water-calcite system. Chemical Geology, 2017, 462, 30-43.	1.4	55
97	High reactivity of deep biota under anthropogenic CO2 injection into basalt. Nature Communications, 2017, 8, 1063.	5.8	55
98	Evaluation and refinement of thermodynamic databases for mineral carbonation. Energy Procedia, 2018, 146, 81-91.	1.8	54
99	Calculation of diffusion coefficients for aqueous organic species at temperatures from 0 to 350 Â°C. Geochimica Et Cosmochimica Acta, 1991, 55, 3515-3529.	1.6	53
100	Rapid solubility and mineral storage of CO2 in basalt. Energy Procedia, 2014, 63, 4561-4574.	1.8	52
101	Carbon sequestration via enhanced weathering of peridotites and basalts in seawater. Applied Geochemistry, 2018, 91, 197-207.	1.4	52
102	A brief history of CarbFix: Challenges and victories of the projectâ€™s pilot phase. Energy Procedia, 2018, 146, 103-114.	1.8	52
103	Can accurate kinetic laws be created to describe chemical weathering?. Comptes Rendus - Geoscience, 2012, 344, 568-585.	0.4	51
104	Experimental determination of Li isotope behaviour during basalt weathering. Chemical Geology, 2019, 517, 34-43.	1.4	50
105	Does temperature or runoff control the feedback between chemical denudation and climate? Insights from NE Iceland. Geochimica Et Cosmochimica Acta, 2013, 107, 65-81.	1.6	49
106	Aqueous speciation of yttrium at temperatures from 25 to 340Â°C at Psat: an in situ EXAFS study. Chemical Geology, 1998, 151, 29-39.	1.4	47
107	An experimental study of the effect of aqueous fluoride on quartz and alkali-feldspar dissolution rates. Chemical Geology, 2004, 205, 155-167.	1.4	47
108	Do photosynthetic bacteria have a protective mechanism against carbonate precipitation at their surfaces?. Geochimica Et Cosmochimica Acta, 2010, 74, 1329-1337.	1.6	47

#	Article	IF	Citations
109	Do carbonate precipitates affect dissolution kinetics?. Chemical Geology, 2013, 337-338, 56-66.	1.4	47
110	Calculation of dissociation constants and the relative stabilities of polynuclear clusters of 1:1 electrolytes in hydrothermal solutions at supercritical pressures and temperatures. Geochimica Et Cosmochimica Acta, 1993, 57, 2673-2697.	1.6	45
111	An experimental study of dolomite dissolution rates at 80ÂÂ°C as a function of chemical affinity and solution composition. Chemical Geology, 2007, 242, 509-517.	1.4	45
112	Quantifying the impact of riverine particulate dissolution in seawater on ocean chemistry. Earth and Planetary Science Letters, 2014, 395, 91-100.	1.8	45
113	Interdiffusion with multiple precipitation/dissolution reactions: Transient model and the steady-state limit. Geochimica Et Cosmochimica Acta, 1986, 50, 1951-1966.	1.6	44
114	The effect of aqueous sulphate on basaltic glass dissolution rates. Chemical Geology, 2010, 277, 345-354.	1.4	44
115	Do organic ligands affect calcite dissolution rates?. Geochimica Et Cosmochimica Acta, 2011, 75, 1799-1813.	1.6	43
116	Experimental determination of the solubility product of dolomite at 50â€“253â€¯Â°C. Geochimica Et Cosmochimica Acta, 2018, 224, 262-275.	1.6	43
117	Novel laboratory investigation of huff-n-puff gas injection for shale oils under realistic reservoir conditions. Fuel, 2021, 284, 118950.	3.4	43
118	Antimony transport in hydrothermal solutions: an EXAFS study of antimony(V) complexation in alkaline sulfide and sulfideâ€“chloride brines at temperatures from 25Â°C to 300Â°C at Psat. Chemical Geology, 2000, 167, 161-167.	1.4	42
119	Spatial and temporal variations of base cation release from chemical weathering on a hillslope scale. Chemical Geology, 2016, 441, 1-13.	1.4	41
120	The effect of permafrost, vegetation, and lithology on Mg and Si isotope composition of the Yenisey River and its tributaries at the end of the spring flood. Geochimica Et Cosmochimica Acta, 2016, 191, 32-46.	1.6	41
121	The role of silicate surfaces on calcite precipitation kinetics. Geochimica Et Cosmochimica Acta, 2014, 135, 231-250.	1.6	40
122	An Experimental Investigation of the Effect ofBacillus megateriumon Apatite Dissolution. Geomicrobiology Journal, 2006, 23, 177-182.	1.0	39
123	Experimental quantification of the effect of Mg on calciteâ€“aqueous fluid oxygen isotope fractionation. Chemical Geology, 2012, 310-311, 97-105.	1.4	39
124	Riverine particulate material dissolution in seawater and its implications for the global cycles of the elements. Comptes Rendus - Geoscience, 2012, 344, 646-651.	0.4	39
125	Dissolution rates of actinolite and chlorite from a whole-rock experimental study of metabasalt dissolution from 2 â‰ pH â‰ 12 at 25 Â°C. Chemical Geology, 2014, 390, 100-108.	1.4	39
126	The direct precipitation of rhabdophane (REEPO4Â·nH2O) nano-rods from acidic aqueous solutions at 5â€“100ÂÂ°C. Journal of Nanoparticle Research, 2011, 13, 4049-4062.	0.8	38

#	Article	IF	Citations
127	The efficient long-term inhibition of forsterite dissolution by common soil bacteria and fungi at Earth surface conditions. Geochimica Et Cosmochimica Acta, 2015, 168, 222-235.	1.6	38
128	An EXAFS spectroscopic study of aqueous antimony(III)-chloride complexation at temperatures from 25 to 250Â°C. Chemical Geology, 1998, 151, 21-27.	1.4	37
129	An experimental study of magnesite dissolution rates at neutral to alkaline conditions and 150 and 200Â°C as a function of pH, total dissolved carbonate concentration, and chemical affinity. Geochimica Et Cosmochimica Acta, 2010, 74, 6344-6356.	1.6	37
130	Experimental determination of rhyolitic glass dissolution rates at 40â€“200Â°C and 2<pH<10.1. Geochimica Et Cosmochimica Acta, 2013, 100, 251-263.	1.6	37
131	Experimental determination of aqueous sodium-acetate dissociation constants at temperatures from 20 to 240Â°C. Chemical Geology, 1998, 151, 69-84.	1.4	36
132	Dissolution of diopside and basaltic glass: the effect of carbonate coating. Mineralogical Magazine, 2008, 72, 135-139.	0.6	36
133	Biotite surface chemistry as a function of aqueous fluid composition. Geochimica Et Cosmochimica Acta, 2014, 128, 58-70.	1.6	35
134	Do organic ligands affect forsterite dissolution rates?. Applied Geochemistry, 2013, 39, 69-77.	1.4	33
135	An experimental study of the dissolution rates of Nd-britholite, an apatite-structured actinide-bearing waste storage host analogue. Journal of Nuclear Materials, 2006, 354, 14-27.	1.3	31
136	The temporal evolution of magnesium isotope fractionation during hydromagnesite dissolution, precipitation, and at equilibrium. Geochimica Et Cosmochimica Acta, 2018, 226, 36-49.	1.6	31
137	Does the presence of heterotrophic bacterium Pseudomonas reactans affect basaltic glass dissolution rates?. Chemical Geology, 2012, 296-297, 1-18.	1.4	30
138	Convective mixing fingers and chemistry interaction in carbon storage. International Journal of Greenhouse Gas Control, 2017, 58, 52-61.	2.3	30
139	Ca and Mg isotope fractionation during the stoichiometric dissolution of dolomite at temperatures from 51 to 126 Â°C and 5 bars CO2 pressure. Chemical Geology, 2017, 467, 76-88.	1.4	30
140	The rapid resetting of the Ca isotopic signatures of calcite at ambient temperature during its congruent dissolution, precipitation, and at equilibrium. Chemical Geology, 2019, 512, 1-10.	1.4	30
141	A comprehensive and internally consistent mineral dissolution rate database: Part I: Primary silicate minerals and glasses. Chemical Geology, 2022, 597, 120807.	1.4	30
142	Phosphate mineral reactivity: from global cycles to sustainable development. Mineralogical Magazine, 2008, 72, 337-340.	0.6	29
143	Direct evidence of the feedback between climate and nutrient, major, and trace element transport to the oceans. Geochimica Et Cosmochimica Acta, 2015, 166, 249-266.	1.6	29
144	The experimental determination of equilibrium Si isotope fractionation factors among H4SiO4o, H3SiO4âˆ’ and amorphous silica (SiO2Â·0.32 H2O) at 25 and 75 Â°C using the three-isotope method. Geochimica Et Cosmochimica Acta, 2019, 255, 49-68.	1.6	28

#	Article	IF	Citations
145	An experimental study of basaltâ€"seawaterâ€"CO2 interaction at 130ÂÂ°C. Geochimica Et Cosmochimica Acta, 2021, 308, 21-41.	1.6	28
146	Experimental determination of struvite dissolution and precipitation rates as a function of pH. Applied Geochemistry, 2011, 26, 921-928.	1.4	27
147	Dawsonite formation in the Beier Sag, Hailar Basin, NE China tuff: A natural analog for mineral carbon storage. Applied Geochemistry, 2014, 48, 155-167.	1.4	27
148	The continuous re-equilibration of carbon isotope compositions of hydrous Mg carbonates in the presence of cyanobacteria. Chemical Geology, 2015, 404, 41-51.	1.4	27
149	An integrated evaluation of enhanced oil recovery and geochemical processes for carbonated water injection in carbonate rocks. Journal of Petroleum Science and Engineering, 2019, 181, 106188.	2.1	27
150	Using stable Mg isotope signatures to assess the fate of magnesium during the in situ mineralisation of CO2 and H2S at the CarbFix site in SW-Iceland. Geochimica Et Cosmochimica Acta, 2019, 245, 542-555.	1.6	27
151	The impact of damming on riverine fluxes to the ocean: A case study from Eastern Iceland.. Water Research, 2017, 113, 124-138.	5.3	26
152	On the interpretation of closed system mineral dissolution experiments: comment on â€œMechanism of kaolinite dissolution at room temperature and pressure part II: kinetic studyâ€•by Huertas et al. (1999). Geochimica Et Cosmochimica Acta, 2001, 65, 4429-4432.	1.6	25
153	Mineral precipitation rates during the complete evaporation of the Merouane Chott ephemeral lake. Geochimica Et Cosmochimica Acta, 2008, 72, 1583-1597.	1.6	24
154	Assessing dolomite surface reactivity at temperatures from 40 to 120 Â°C by hydrothermal atomic force microscopy. Geochimica Et Cosmochimica Acta, 2017, 199, 130-142.	1.6	24
155	Dissolution rates of crystalline basalt at pH 4 and 10 and 25-75Â°C. Mineralogical Magazine, 2008, 72, 155-158.	0.6	23
156	The experimental determination of hydromagnesite precipitation rates at 22.5â€"75Â°C. Mineralogical Magazine, 2014, 78, 1405-1416.	0.6	21
157	Monitoring permanent CO2 storage by in situ mineral carbonation using a reactive tracer technique. Energy Procedia, 2014, 63, 4180-4185.	1.8	21
158	Coupled alkali feldspar dissolution and secondary mineral precipitation in batch systems: 5. Results of K-feldspar hydrolysis experiments. Diqiu Huaxue, 2015, 34, 1-12.	0.5	21
159	The geology and hydrology of the CarbFix2 site, SW-Iceland. Energy Procedia, 2018, 146, 146-157.	1.8	21
160	Stable and radiogenic strontium isotope fractionation during hydrothermal seawater-basalt interaction. Geochimica Et Cosmochimica Acta, 2018, 240, 131-151.	1.6	21
161	Magnesium isotope fractionation during hydrothermal seawater-basalt interaction. Geochimica Et Cosmochimica Acta, 2020, 272, 21-35.	1.6	21
162	6. The Link Between Mineral Dissolution/Precipitation Kinetics and Solution Chemistry. , 2009, , 207-258.		20

#	Article	IF	Citations
163	An experimental study of hydroxylbastnasite solubility in aqueous solutions at 25 Â°C. Chemical Geology, 2016, 430, 70-77.	1.4	20
164	An experimental study of gypsum dissolution coupled to CaCO3 precipitation and its application to carbon storage. Chemical Geology, 2019, 525, 447-461.	1.4	20
165	The effect of dissolved sulphate on calcite precipitation kinetics and consequences for subsurface CO2 storage. Energy Procedia, 2011, 4, 5037-5043.	1.8	19
166	The chemistry and potential reactivity of the CO2-H2S charged injected waters at the basaltic CarbFix2 site, Iceland. Energy Procedia, 2018, 146, 121-128.	1.8	19
167	Magnesium and carbon isotope fractionation during hydrated Mg-carbonate mineral phase transformations. Geochimica Et Cosmochimica Acta, 2021, 293, 507-524.	1.6	18
168	Experimental studies of halite dissolution kinetics: II. The effect of the presence of aqueous trace anions and K3Fe(CN)6. Chemical Geology, 1997, 143, 17-26.	1.4	16
169	The chemistry and element fluxes of the July 2011 MÃºlakvÃsl and KaldakvÃsl glacial floods, Iceland. Journal of Volcanology and Geothermal Research, 2014, 273, 41-57.	0.8	16
170	The chemical composition of rivers and snow affected by the 2014/2015 BÃ¡rÃ°arbunga eruption, Iceland. Journal of Volcanology and Geothermal Research, 2016, 316, 101-119.	0.8	16
171	The surface area and reactivity of granitic soils: I. Dissolution rates of primary minerals as a function of depth and age deduced from field observations. Geoderma, 2015, 237-238, 21-35.	2.3	15
172	Experimental determination of Ni isotope fractionation during Ni adsorption from an aqueous fluid onto calcite surfaces. Geochimica Et Cosmochimica Acta, 2020, 273, 26-36.	1.6	15
173	Nickel isotope fractionation as a function of carbonate growth rate during Ni coprecipitation with calcite. Geochimica Et Cosmochimica Acta, 2021, 299, 184-198.	1.6	15
174	Does variscite control phosphate availability in acidic natural waters? An experimental study of variscite dissolution rates. Geochimica Et Cosmochimica Acta, 2011, 75, 416-426.	1.6	14
175	An Improved Understanding About CO2 EOR and CO2 Storage in Liquid-Rich Shale Reservoirs. , 2019, , .		14
176	The effect of aqueous sulphate on basaltic glass dissolution rates. Mineralogical Magazine, 2008, 72, 39-41.	0.6	13
177	Does runoff or temperature control chemical weathering rates?. Applied Geochemistry, 2011, 26, S346-S349.	1.4	13
178	Experimental determination of the complexation of strontium and cesium with acetate in high-temperature aqueous solutions. Geochimica Et Cosmochimica Acta, 2001, 65, 3955-3964.	1.6	12
179	An Analysis of the Roles of Stress, Temperature, and pH in Chemical Compaction of Sandstones: Discussion. Journal of Sedimentary Research, 2004, 74, 447-449.	0.8	12
180	Mineralization potential of water-dissolved CO2 and H2S injected into basalts as function of temperature: Freshwater versus Seawater. International Journal of Greenhouse Gas Control, 2021, 109, 103357.	2.3	12

#	Article	IF	Citations
181	1. Thermodynamic Databases for Water-Rock Interaction. , 2009, , 1-46.		11
182	On the effect of aqueous Ca on magnesite growth â€“ Insight into trace element inhibition of carbonate mineral precipitation. Geochimica Et Cosmochimica Acta, 2016, 178, 195-209.	1.6	11
183	An experimental study of sepiolite dissolution rates and mechanisms at 25â€¯Â°C. Geochimica Et Cosmochimica Acta, 2020, 270, 296-312.	1.6	11
184	Impact of in-situ gas liberation for enhanced oil recovery and CO₂ storage in liquid-rich shale reservoirs. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 0, , 1-21.	1.2	11
185	A pre-injection assessment of CO2 and H2S mineralization reactions at the Nesjavellir (Iceland) geothermal storage site. International Journal of Greenhouse Gas Control, 2022, 115, 103610.	2.3	11
186	Dissolution rate of antigorite from a whole-rock experimental study of serpentinite dissolution from 2<pH<9 at 25Â°C: Implications for carbon mitigation via enhanced serpentinite weathering. Applied Geochemistry, 2015, 61, 259-271.	1.4	10
187	Retrieval and interpretation of precipitation rates generated from the composition of the Merouane Chott ephemeral lake. Journal of Geochemical Exploration, 2006, 88, 284-287.	1.5	9
188	The feedback between climate and weathering. Mineralogical Magazine, 2008, 72, 317-320.	0.6	9
189	Geochemistry and Behavior of Trace Elements During the Complete Evaporation of the Merouane Chott Ephemeral Lake: Southeast Algeria. Aquatic Geochemistry, 2011, 17, 51-70.	1.5	9
190	Kinetic and Thermodynamic Controls of Divalent Metals Isotope Composition in Carbonate: Experimental Investigations and Applications. Procedia Earth and Planetary Science, 2014, 10, 168-172.	0.6	9
191	Experimental study of epidote dissolution rates from pH 2 to 11 and temperatures from 25 to 200â€¯Â°C. Geochimica Et Cosmochimica Acta, 2021, 294, 70-88.	1.6	9
192	The role of fluid chemistry on permeability evolution in granite: Applications to natural and anthropogenic systems. Earth and Planetary Science Letters, 2021, 553, 116641.	1.8	9
193	The effect of the 2002 glacial flood on dissolved and suspended chemical fluxes in the SkaftÃ¡ river, Iceland. Journal of Volcanology and Geothermal Research, 2015, 301, 253-276.	0.8	8
194	Carbon sequestration potential of altered mafic reservoirs. Energy Procedia, 2018, 146, 68-73.	1.8	8
195	Characterizing fluid flow paths in the Hellisheidi geothermal field using detailed fault mapping and stress-dependent permeability. Geothermics, 2021, 94, 102127.	1.5	8
196	A Raman Spectrographic and Potentiometric Study of Aqueous Lithium and Potassium Acetate Complexation at Temperatures from 20 to 200 â˜C. Journal of Solution Chemistry, 2005, 34, 881-898.	0.6	7
197	An experimental study of tremolite dissolution rates as a function of pH and temperature: Implications for tremolite toxicity and its use in carbon storage. Mineralogical Magazine, 2014, 78, 1449-1464.	0.6	7
198	Dawsonite and ankerite formation in the LDX-1 structure, Yinggehai basin, South China sea: An analogy for carbon mineralization in subsurface sandstone aquifers. Applied Geochemistry, 2020, 120, 104663.	1.4	7

#	Article	IF	Citations
199	Siderite nucleation pathways as a function of aqueous solution saturation state at 25ÂÂ°C. Chemical Geology, 2021, 559, 119947.	1.4	7
200	An experimental study of lake water-sediment interaction rates. Comptes Rendus - Geoscience, 2010, 342, 126-135.	0.4	6
201	Pollution from the 2014â€“15 BÃ¡rÃ°arbunga eruption monitored by snow cores from the VatnajÃ¶kull glacier, Iceland. Journal of Volcanology and Geothermal Research, 2017, 347, 371-396.	0.8	6
202	The temporal evolution of the carbon isotope composition of calcite in the presence of cyanobacteria. Chemical Geology, 2021, 584, 120556.	1.4	6
203	Extreme silicon isotope fractionation due to Si organic complexation: Implications for silica biomineralization. Earth and Planetary Science Letters, 2020, 541, 116287.	1.8	6
204	Is silt the most influential soil grain size fraction?. Applied Geochemistry, 2011, 26, S119-S122.	1.4	5
205	Enhancement of cyanobacterial growth by riverine particulate material. Chemical Geology, 2019, 525, 143-167.	1.4	5
206	Geochemistry of crustal fluids: an Andalusian perspective. Chemical Geology, 2002, 190, 1-11.	1.4	4
207	Variscite dissolution rates in aqueous solution: does variscite control the availability of phosphate in acidic natural waters?. Mineralogical Magazine, 2008, 72, 349-351.	0.6	4
208	On the colorimetric measurement of aqueous Si in the presence of organic ligands and common pH buffering agents. Mineralogical Magazine, 2014, 78, 1431-1436.	0.6	4
209	Non-stoichiometric dissolution of sepiolite. Energy Procedia, 2018, 146, 74-80.	1.8	4
210	Rates of carbon and oxygen isotope exchange between calcite and fluid at chemical equilibrium. Geochimica Et Cosmochimica Acta, 2022, 335, 369-382.	1.6	4
211	Geochemistry of crustal fluids: a Tyrolean perspective. Chemical Geology, 1998, 151, 1-9.	1.4	3
212	An experimental study of sepiolite dissolution and growth rates as function of the aqueous solution saturation state at 60ÂÂ°C. Geochimica Et Cosmochimica Acta, 2021, 315, 276-294.	1.6	3
213	Macro- to nanoscale study of the effect of aqueous sulphate on calcite growth. Mineralogical Magazine, 2008, 72, 141-144.	0.6	2
214	Nanoanalytical Identification of Siderite Dissolution-Coupled Pb Removal Mechanisms from Oxic and Anoxic Aqueous Solutions. ACS Earth and Space Chemistry, 2020, 4, 1966-1977.	1.2	2
215	The effect of the 2014-15 BÃ¡rÃ°arbunga volcanic eruption on chemical denudation rates and the CO2 budget. Energy Procedia, 2018, 146, 53-58.	1.8	1
216	Citation for the 2018 C.C. Patterson Award to Sigurdur R. Gislason. Geochimica Et Cosmochimica Acta, 2019, 246, 585-590.	1.6	0

#	Article	IF	Citations
217	Water-CO2-rock interaction during carbon sequestration. , 0, , 325-344.		0
218	Le potentiel du stockage gÃ©ologique du CO2 par minÃ©ralisation. Annales Des Mines - ResponsabilitÃ© Et Environnement, 2022, NÂ° 105, 57-62.	0.1	0