

Andrew Putnis

List of Publications by Year in descending order

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249
papers

13,800
citations

18482

62
h-index

33894

99
g-index

257
all docs

257
docs citations

257
times ranked

9178
citing authors

#	ARTICLE	IF	CITATIONS
1	Mineral replacement reactions: from macroscopic observations to microscopic mechanisms. <i>Mineralogical Magazine</i> , 2002, 66, 689-708.	1.4	944
2	The mechanism of reequilibration of solids in the presence of a fluid phase. <i>Journal of Solid State Chemistry</i> , 2007, 180, 1783-1786.	2.9	328
3	Coupled dissolution and precipitation at mineral-fluid interfaces. <i>Chemical Geology</i> , 2014, 383, 132-146.	3.3	290
4	Molecular-scale mechanisms of crystal growth in barite. <i>Nature</i> , 1998, 395, 483-486.	27.8	211
5	Mechanism and kinetics of pseudomorphic mineral replacement reactions: A case study of the replacement of pentlandite by violarite. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 1945-1969.	3.9	193
6	Aqueous corrosion of borosilicate glass under acidic conditions: A new corrosion mechanism. <i>Journal of Non-Crystalline Solids</i> , 2010, 356, 1458-1465.	3.1	190
7	Replacement Processes in the Earth's Crust. <i>Elements</i> , 2010, 6, 159-164.	0.5	175
8	Direct observation of heavy metal-mineral association from the Clark Fork River Superfund Complex: Implications for metal transport and bioavailability. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 1651-1663.	3.9	169
9	The replacement of plagioclase feldspars by albite: observations from hydrothermal experiments. <i>Contributions To Mineralogy and Petrology</i> , 2010, 159, 43-59.	3.1	169
10	Direct imaging of nanoscale magnetic interactions in minerals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 16556-16561.	7.1	165
11	Fluid supersaturation and crystallization in porous media. <i>Geological Magazine</i> , 1995, 132, 1-13.	1.5	163
12	Why Mineral Interfaces Matter. <i>Science</i> , 2014, 343, 1441-1442.	12.6	159
13	A TEM study of samples from acid mine drainage systems: metal-mineral association with implications for transport. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 3395-3406.	3.9	156
14	Interaction of Calcium Carbonates with Lead in Aqueous Solutions. <i>Environmental Science & Technology</i> , 2003, 37, 3351-3360.	10.0	155
15	Nucleation, growth, and zoning phenomena in crystallizing (Ba,Sr)CO ₃ , Ba(SO ₄ ,CrO ₄), (Ba,Sr)SO ₄ , and (Cd,Ca)CO ₃ solid solutions from aqueous solutions. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 3383-3397.	3.9	143
16	Twin formation and structural modulations in orthorhombic and tetragonal YBa ₂ (Cu _{1-x} Co _x) ₃ O _{7-δ} . <i>Philosophical Magazine Letters</i> , 1989, 60, 241-248.	1.2	135
17	ALBITIZATION OF GRANITIC ROCKS: THE MECHANISM OF REPLACEMENT OF OLIGOCLASE BY ALBITE. <i>Canadian Mineralogist</i> , 2008, 46, 1401-1415.	1.0	130
18	Experimentally produced oscillatory zoning in the (Ba, Sr)SO ₄ solid solution. <i>Nature</i> , 1992, 358, 743-745.	27.8	129

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19	The role of background electrolytes on the kinetics and mechanism of calcite dissolution. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 1256-1267.	3.9	128
20	Mechanism of leached layer formation during chemical weathering of silicate minerals. <i>Geology</i> , 2012, 40, 947-950.	4.4	127
21	Effect of Secondary Phase Formation on the Carbonation of Olivine. <i>Environmental Science & Technology</i> , 2010, 44, 6503-6509.	10.0	126
22	The Complex Hydrothermal History of Granitic Rocks: Multiple Feldspar Replacement Reactions under Subsolidus Conditions. <i>Journal of Petrology</i> , 2009, 50, 967-987.	2.8	125
23	Distribution of halogens between fluid and apatite during fluid-mediated replacement processes. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 170, 225-246.	3.9	120
24	Nano-cluster composite structure of calcitic sponge spicules—A case study of basic characteristics of biominerals. <i>Journal of Inorganic Biochemistry</i> , 2006, 100, 88-96.	3.5	118
25	A model of the OH positions in olivine, derived from infrared-spectroscopic investigations. <i>Physics and Chemistry of Minerals</i> , 1983, 9, 57-60.	0.8	115
26	Hematite in porous red-clouded feldspars: Evidence of large-scale crustal fluid—rock interaction. <i>Lithos</i> , 2007, 95, 10-18.	1.4	114
27	Electron petrography of shock-produced veins in the Tenham chondrite. <i>Contributions To Mineralogy and Petrology</i> , 1979, 71, 211-218.	3.1	111
28	Planar OH-bearing defects in mantle olivine. <i>Nature</i> , 1987, 328, 143-145.	27.8	111
29	Mineral precipitation and dissolution in aqueous solution: in-situ microscopic observations on barite (001) with atomic force microscopy. <i>Chemical Geology</i> , 1998, 151, 143-160.	3.3	111
30	Crystallization of solid solutions from aqueous solutions in a porous medium: zoning in (Ba, ₂) ₂ Ti ₂ O ₇ / Overclock 10 Tf 50 302 108	1.5	108
31	Off-axis electron holography of magnetic nanowires and chains, rings, and planar arrays of magnetic nanoparticles. <i>Microscopy Research and Technique</i> , 2004, 64, 390-402.	2.2	106
32	The effect of cation:anion ratio in solution on the mechanism of barite growth at constant supersaturation: Role of the desolvation process on the growth kinetics. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 5168-5179.	3.9	105
33	Dissolution and Carbonation of Portlandite [Ca(OH) ₂] Single Crystals. <i>Environmental Science & Technology</i> , 2013, 47, 11342-11349.	10.0	105
34	Structural states of Mg-cordierite I: Order parameters from synchrotron X-ray and NMR data. <i>Physics and Chemistry of Minerals</i> , 1987, 14, 446-454.	0.8	102
35	The effect of specific background electrolytes on water structure and solute hydration: Consequences for crystal dissolution and growth. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 4476-4487.	3.9	102
36	Transient Porosity Resulting from Fluid—Mineral Interaction and its Consequences. <i>Reviews in Mineralogy and Geochemistry</i> , 2015, 80, 1-23.	4.8	102

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37	Environmentally important, poorly crystalline Fe/Mn hydrous oxides: Ferrihydrite and a possibly new vernadite-like mineral from the Clark Fork River Superfund Complex. <i>American Mineralogist</i> , 2005, 90, 718-724.	1.9	101
38	Neutron powder diffraction study of the $\text{Fe}_{1/2}\text{Zn}_{1/2}$ kermanite-gehlenite solid solution series. <i>Physics and Chemistry of Minerals</i> , 1992, 19, 185.	0.8	99
39	High-pressure (Mg, Fe) $_2$ SiO $_4$ phases in the Tenham chondritic meteorite. <i>Nature</i> , 1979, 280, 217-218.	27.8	96
40	The role of magnesium in the growth of calcite: An AFM study. <i>Chemical Geology</i> , 2010, 271, 52-58.	3.3	96
41	Biomimetic control of crystal assembly by growth in an organic hydrogel network. <i>American Mineralogist</i> , 2003, 88, 647-652.	1.9	94
42	Kinetics of Calcium Phosphate Nucleation and Growth on Calcite: Implications for Predicting the Fate of Dissolved Phosphate Species in Alkaline Soils. <i>Environmental Science & Technology</i> , 2012, 46, 834-842.	10.0	92
43	Barite scale formation and dissolution at high ionic strength studied with atomic force microscopy. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2001, 191, 201-214.	4.7	89
44	A kinetic study of the exsolution of pentlandite (Ni, Fe) $_9$ S $_8$ from the monosulfide solid solution (Fe, Ni) $_9$ S $_8$. <i>Contributions To Mineralogy and Petrology</i> , 1998, 120, 107-115.	1.9	88
45	The mechanism of cation and oxygen isotope exchange in alkali feldspars under hydrothermal conditions. <i>Contributions To Mineralogy and Petrology</i> , 2009, 157, 65-76.	3.1	86
46	Observation of nano-clustered calcite growth via a transient phase mediated by organic polyanions: A close match for biomineralization. <i>American Mineralogist</i> , 2005, 90, 1213-1217.	1.9	84
47	Effect of pH on calcite growth at constant ratio and supersaturation. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 284-296.	3.9	84
48	Crystalline diamond growth in thin films deposited from a CH $_4$ /Ar rf plasma. <i>Applied Physics Letters</i> , 1989, 55, 634-635.	3.3	83
49	The distortion index in anhydrous Mg-Cordierite. <i>Contributions To Mineralogy and Petrology</i> , 1980, 74, 135-141.	3.1	80
50	Determination of the mechanism of cation ordering in magnesioferrite (MgFe $_2$ O $_4$) from the time- and temperature-dependence of magnetic susceptibility. <i>Physics and Chemistry of Minerals</i> , 1999, 26, 322-332.	0.8	74
51	The composition of solid solutions crystallising from aqueous solutions: the influence of supersaturation and growth mechanisms. <i>Chemical Geology</i> , 2000, 168, 195-210.	3.3	72
52	Mineral replacement reactions in solid solution-aqueous solution systems: Volume changes, reactions paths and end-points using the example of model salt systems. <i>Numerische Mathematik</i> , 2011, 311, 211-236.	1.4	72
53	Experimental study of the aragonite to calcite transition in aqueous solution. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6211-6224.	3.9	72
54	3. Mineral Replacement Reactions. , 2009, , 87-124.		71

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55	Posner's cluster revisited: direct imaging of nucleation and growth of nanoscale calcium phosphate clusters at the calcite-water interface. <i>CrystEngComm</i> , 2012, 14, 6252.	2.6	71
56	Dissolution of barite by a chelating ligand: An atomic force microscopy study. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 4623-4632.	3.9	70
57	Molecular-scale surface processes during the growth of calcite in the presence of manganese. <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 3177-3189.	3.9	70
58	Computer simulations of water interactions with low-coordinated forsterite surface sites: Implications for the origin of water in the inner solar system. <i>Earth and Planetary Science Letters</i> , 2010, 300, 11-18.	4.4	68
59	The role of grain boundaries and transient porosity in rocks as fluid pathways for reaction front propagation. <i>Earth and Planetary Science Letters</i> , 2014, 386, 64-74.	4.4	68
60	Control of silicate weathering by interface-coupled dissolution-precipitation processes at the mineral-solution interface. <i>Geology</i> , 2016, 44, 567-570.	4.4	68
61	Al,Si ordering on cordierite using μ magic angle spinning? NMR. <i>Physics and Chemistry of Minerals</i> , 1985, 12, 211-216.	0.8	67
62	The kinetics of barite dissolution and precipitation in water and sodium chloride brines at 44 \pm 85 \AA $^{\circ}\text{C}$. <i>Geochimica Et Cosmochimica Acta</i> , 1993, 57, 2161-2168.	3.9	65
63	Polycrystalline apatite synthesized by hydrothermal replacement of calcium carbonates. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 3486-3500.	3.9	65
64	Ion-specific effects on the kinetics of mineral dissolution. <i>Chemical Geology</i> , 2011, 281, 364-371.	3.3	64
65	Textural Evolution of Plagioclase Feldspar across a Shear Zone: Implications for Deformation Mechanism and Rock Strength. <i>Journal of Petrology</i> , 2014, 55, 1457-1477.	2.8	62
66	Al, Si ordering in cordierite using μ magic angle spinning? NMR. <i>Physics and Chemistry of Minerals</i> , 1985, 12, 217-222.	0.8	61
67	The mechanism and kinetics of DTPA-promoted dissolution of barite. <i>Applied Geochemistry</i> , 2008, 23, 2778-2788.	3.0	60
68	Intragranular replacement of chlorapatite by hydroxy-fluor-apatite during metasomatism. <i>Lithos</i> , 2009, 112, 236-246.	1.4	60
69	The kinetics of nucleation of solid solutions from aqueous solutions: a new model for calculating non-equilibrium distribution coefficients. <i>Geochimica Et Cosmochimica Acta</i> , 2002, 66, 185-192.	3.9	59
70	Experimental investigations into the silicification of olivine: Implications for the reaction mechanism and acid neutralization. <i>American Mineralogist</i> , 2011, 96, 1503-1511.	1.9	58
71	Disequilibrium metamorphism of stressed lithosphere. <i>Earth-Science Reviews</i> , 2016, 154, 1-13.	9.1	58
72	Anion Rotation and Cation Diffusion in Low-Temperature Sodium Orthophosphate: μ Results from Solid-State NMR. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6808-6816.	2.5	57

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73	Specific effects of background electrolytes on the kinetics of step propagation during calcite growth. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 3803-3814.	3.9	57
74	The effect of barium on calcite {104} surfaces during growth. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 2965-2972.	3.9	56
75	Transformation of pentlandite to violarite under mild hydrothermal conditions. <i>American Mineralogist</i> , 2006, 91, 706-709.	1.9	56
76	An Atomic Force Microscopy study of the growth of calcite in the presence of sodium sulfate. <i>Chemical Geology</i> , 2008, 253, 243-251.	3.3	56
77	In situ Imaging of Interfacial Precipitation of Phosphate on Goethite. <i>Environmental Science & Technology</i> , 2015, 49, 4184-4192.	10.0	56
78	Enthalpy effects associated with Al/Si ordering in anhydrous Mg-cordierite. <i>Geochimica Et Cosmochimica Acta</i> , 1983, 47, 899-906.	3.9	54
79	Metastable phenomena on calcite {101̄,4} surfaces growing from Sr ₂ +Ca ²⁺ +CO ₃ ²⁻ aqueous solutions. <i>Chemical Geology</i> , 2003, 193, 93-107.	3.3	54
80	Modelling the effects of salt solutions on the hydration of calcium ions. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 7772-7785.	2.8	54
81	A spinel to $\hat{2}$ -phase transformation mechanism in (Mg,Fe) ₂ SiO ₄ . <i>Nature</i> , 1982, 296, 729-731.	27.8	53
82	Twinning in tetragonal leucite. <i>Physics and Chemistry of Minerals</i> , 1988, 16, 298.	0.8	53
83	The experimental replacement of ilmenite by rutile in HCl solutions. <i>Mineralogical Magazine</i> , 2010, 74, 633-644.	1.4	53
84	In situ nanoscale observations of the dissolution of dolomite cleavage surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 80, 1-13.	3.9	53
85	The Magnetic Properties and Crystal Chemistry of Oxide Spinel Solid Solutions. <i>Surveys in Geophysics</i> , 1998, 19, 461-520.	4.6	52
86	An Atomic Force Microscopy Study of the Growth of a Calcite Surface as a Function of Calcium/Total Carbonate Concentration Ratio in Solution at Constant Supersaturation. <i>Crystal Growth and Design</i> , 2009, 9, 4344-4350.	3.0	52
87	Elucidation of the mechanism and kinetics of the silicon, aluminum ordering process in synthetic magnesium cordierite by silicon-29 magic angle spinning NMR spectroscopy. <i>Journal of the American Chemical Society</i> , 1986, 108, 3218-3223.	13.7	49
88	Metastability in diffusing-reacting systems. <i>Journal of Crystal Growth</i> , 1994, 142, 225-235.	1.5	48
89	Magnetic properties of the magnetite-spinel solid solution; Curie temperatures, magnetic susceptibilities, and cation ordering. <i>American Mineralogist</i> , 1996, 81, 375-384.	1.9	48
90	An atomic force microscopy and molecular simulations study of the inhibition of barite growth by phosphonates. <i>Surface Science</i> , 2004, 553, 61-74.	1.9	48

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91	Mechanism of hydrothermal alteration of natural self-irradiated and synthetic crystalline titanate-based pyrochlore. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 3311-3322.	3.9	48
92	Zircon coronas around Fe-Ti oxides: a physical reference frame for metamorphic and metasomatic reactions. <i>Contributions To Mineralogy and Petrology</i> , 2008, 156, 517-527.	3.1	48
93	The influence of pH on barite nucleation and growth. <i>Chemical Geology</i> , 2015, 391, 7-18.	3.3	48
94	Kinetics and mineralogical analysis of copper dissolution from a bornite/chalcopyrite composite sample in ferric-chloride and methanesulfonic-acid solutions. <i>Hydrometallurgy</i> , 2019, 188, 140-156.	4.3	48
95	Crystal growth of apatite by replacement of an aragonite precursor. <i>Journal of Crystal Growth</i> , 2010, 312, 2431-2440.	1.5	47
96	Supersaturation functions in binary solid solution-aqueous solution systems. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 1601-1608.	3.9	46
97	Kinetics of crystal nucleation in ionic solutions: Electrostatics and hydration forces. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 469-481.	3.9	46
98	Factors controlling the kinetics of crystallization: supersaturation evolution in a porous medium. Application to barite crystallization. <i>Geological Magazine</i> , 1990, 127, 485-495.	1.5	45
99	The Efficiency of a DTPA-Based Solvent in the Dissolution of Barium Sulfate Scale Deposits. , 1995, , .		45
100	Nanoscale growth of solids crystallising from multicomponent aqueous solutions. <i>Surface Science</i> , 2003, 545, L767-L773.	1.9	45
101	Experimental observation of an interface-controlled pseudomorphic replacement reaction in a natural crystalline pyrochlore. <i>American Mineralogist</i> , 2005, 90, 1683-1687.	1.9	45
102	Structural states of Mg cordierite III: Infrared spectroscopy and the nature of the hexagonal-modulated transition. <i>Physics and Chemistry of Minerals</i> , 1989, 16, 365.	0.8	44
103	Nanoscale phenomena during the growth of solid solutions on calcite {101 ⁴ } surfaces. <i>Chemical Geology</i> , 2006, 225, 322-335.	3.3	44
104	Crystallisation of sodium sulfate: supersaturation and metastable phases. <i>Environmental Geology</i> , 2007, 52, 329-337.	1.2	44
105	Mechanistic Principles of Barite Formation: From Nanoparticles to Micron-Sized Crystals. <i>Crystal Growth and Design</i> , 2015, 15, 3724-3733.	3.0	43
106	Direct Observation of Spiral Growth, Particle Attachment, and Morphology Evolution of Hydroxyapatite. <i>Crystal Growth and Design</i> , 2016, 16, 4509-4518.	3.0	43
107	Pseudomorphic replacement of single calcium carbonate crystals by polycrystalline apatite. <i>Mineralogical Magazine</i> , 2008, 72, 77-80.	1.4	42
108	An atomic force microscopy study of the dissolution of calcite in the presence of phosphate ions. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 117, 115-128.	3.9	42

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109	Order-modulated structures and the thermodynamics of cordierite reactions. <i>Nature</i> , 1980, 287, 128-131.	27.8	41
110	Thermodynamics of mixing and ordering in pyrope â€” grossular solid solution. <i>Mineralogical Magazine</i> , 2004, 68, 101-121.	1.4	41
111	Kinetic study of chalcopyrite dissolution with iron(III) chloride in methanesulfonic acid. <i>Minerals Engineering</i> , 2018, 125, 66-74.	4.3	40
112	Ionic conductivity and pressure dependence of trigonal-to-cubic phase transition in lithium sodium sulphate. <i>Solid State Ionics</i> , 2001, 143, 285-296.	2.7	39
113	Effects of nanoscale exsolution in hematiteâ€”ilmenite on the acquisition of stable natural remanent magnetization. <i>Earth and Planetary Science Letters</i> , 2004, 224, 461-475.	4.4	39
114	Hydrothermal replacement of Aragonite by Calcite: interplay between replacement, fracturing and growth. <i>European Journal of Mineralogy</i> , 2013, 25, 123-136.	1.3	39
115	A raman spectroscopic study of Al-Si ordering in synthetic magnesium cordierite. <i>Physics and Chemistry of Minerals</i> , 1984, 10, 256-260.	0.8	38
116	Si,Al ordering in leucite by high-resolution ²⁷ Al MAS NMR spectroscopy. <i>Physics and Chemistry of Minerals</i> , 1989, 16, 591-598.	0.8	38
117	Tweed microstructures: Experimental observations and some theoretical models. <i>Phase Transitions</i> , 1994, 48, 85-105.	1.3	38
118	Low-temperature aqueous alteration of crystalline pyrochlore: correspondence between nature and experiment. <i>Mineralogical Magazine</i> , 2004, 68, 905-922.	1.4	38
119	Selective attachment of monovalent background electrolyte ions and growth inhibitors to polar steps on sulfates as studied by molecular simulations and AFM observations. <i>Molecular Simulation</i> , 2002, 28, 607-632.	2.0	37
120	Crystal growth and dissolution processes at the calciteâ€”water interface in the presence of zinc ions. <i>Journal of Crystal Growth</i> , 2005, 273, 535-545.	1.5	37
121	Concentric zoning patterns in crystallizing (Cd,Ca)CO ₃ solid solutions from aqueous solutions. <i>Mineralogical Magazine</i> , 1999, 63, 331-343.	1.4	36
122	Metamorphic Processes and Seismicity: the Bergen Arcs as a Natural Laboratory. <i>Journal of Petrology</i> , 2017, 58, 1871-1898.	2.8	36
123	Peridotite weathering is the missing ingredient of Earthâ€™s continental crust composition. <i>Nature Communications</i> , 2018, 9, 634.	12.8	36
124	Title is missing!. <i>Aquatic Geochemistry</i> , 2000, 6, 133-146.	1.3	35
125	Nanoscale observations of the effect of cobalt on calcite growth and dissolution. <i>Journal of Crystal Growth</i> , 2004, 267, 288-300.	1.5	34
126	Nanoscale observations of the epitaxial growth of hashemite on barite (001). <i>Surface Science</i> , 2005, 590, 212-223.	1.9	34

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127	The description of Al, Si ordering in aluminosilicates using the cluster variation method. <i>American Mineralogist</i> , 1999, 84, 311-324.	1.9	33
128	Complex replacement patterns in garnets from Bergen Arcs eclogites: A combined EBSD and analytical TEM study. <i>Chemie Der Erde</i> , 2008, 68, 177-191.	2.0	32
129	Coupled mass transfer through a fluid phase and volume preservation during the hydration of granulite: An example from the Bergen Arcs, Norway. <i>Lithos</i> , 2015, 236-237, 245-255.	1.4	32
130	An investigation of the phase transitions in bornite (Cu ₅ FeS ₄) using neutron diffraction and differential scanning calorimetry. <i>American Mineralogist</i> , 1998, 83, 1231-1239.	1.9	31
131	In situ atomic force microscope observations of a dissolution–crystallisation reaction: the phosgenite–cerussite transformation. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 215-221.	3.9	31
132	Phase transition behaviour and equilibrium phase relations in the fast-ion conductor system Na ₃ PO ₄ –Na ₂ SO ₄ . <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 3252-3259.	2.8	31
133	Periodic precipitation pattern formation in hydrothermally treated metamict zircon. <i>American Mineralogist</i> , 2004, 89, 1341-1347.	1.9	31
134	The growth mechanisms of solid solutions crystallising from aqueous solutions. <i>Chemical Geology</i> , 2004, 204, 145-161.	3.3	31
135	Thermodynamics of pyrope–majorite, Mg ₃ Al ₂ Si ₃ O ₁₂ –Mg ₄ Si ₄ O ₁₂ , solid solution from atomistic model calculations. <i>Molecular Simulation</i> , 2006, 32, 85-99.	2.0	31
136	The dehydration kinetics and microtexture of analcime from two parageneses. <i>American Mineralogist</i> , 1995, 80, 268-279.	1.9	31
137	Experimental hydrothermal alteration of crystalline and radiation-damaged pyrochlore. <i>Journal of Nuclear Materials</i> , 2005, 344, 17-23.	2.7	30
138	Crystal Growth and Dissolution of Calcite in the Presence of Fluoride Ions: An Atomic Force Microscopy Study. <i>Crystal Growth and Design</i> , 2010, 10, 60-69.	3.0	30
139	The mechanism of the hydrothermal alteration of cerium- and plutonium-doped zirconolite. <i>Journal of Nuclear Materials</i> , 2011, 410, 10-23.	2.7	30
140	Experimental study of the replacement of calcite by calcium sulphates. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 156, 75-93.	3.9	30
141	Valence state mapping and quantitative electron spectroscopic imaging of exsolution in titanohematite by energy-filtered TEM. <i>Physics and Chemistry of Minerals</i> , 2001, 28, 119-129.	0.8	29
142	Epitaxial growth of celestite on barite (001) face at a molecular scale. <i>Surface Science</i> , 2005, 581, 225-235.	1.9	29
143	Coupled Dissolution and Precipitation at the Cerussite-Phosphate Solution Interface: Implications for Immobilization of Lead in Soils. <i>Environmental Science & Technology</i> , 2013, 47, 13502-13510.	10.0	29
144	The mechanism of exsolution of hematite from iron-bearing rutile. <i>Physics and Chemistry of Minerals</i> , 1978, 3, 183-197.	0.8	28

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145	Sector trilling in cordierite and equilibrium overstepping in metamorphism. Contributions To Mineralogy and Petrology, 1986, 93, 265-272.	3.1	28
146	Planar and line defects in the sapphirine polytypes. Physics and Chemistry of Minerals, 1988, 15, 548-558.	0.8	27
147	Where on Earth has our water come from?. Chemical Communications, 2010, 46, 8923.	4.1	27
148	Forming Cohesive Calcium Oxalate Layers on Marble Surfaces for Stone Conservation. Crystal Growth and Design, 2014, 14, 3910-3917.	3.0	27
149	The pseudomorphic replacement of marble by apatite: The role of fluid composition. Chemical Geology, 2016, 425, 1-11.	3.3	27
150	The microtexture of analcime phenocrysts in igneous rocks. European Journal of Mineralogy, 1994, 6, 627-632.	1.3	27
151	The effect of fluid composition on the mechanism of the aragonite to calcite transition. Mineralogical Magazine, 2008, 72, 111-114.	1.4	26
152	Processes of oxidation and HCl-leaching of Tellnes ilmenite. Hydrometallurgy, 2011, 109, 194-201.	4.3	26
153	Barite nucleation kinetics and the effect of additives. European Journal of Mineralogy, 1990, 2, 495-502.	1.3	26
154	Observations on coexisting pyrrhotite phases by transmission electron microscopy. Contributions To Mineralogy and Petrology, 1975, 52, 307-313.	3.1	25
155	Characterization of local atomic environment and quantitative determination of changes in site occupancies during the formation of ordered synthetic cordierite by ²⁹ Si and ²⁷ Al magic-angle spinning n.m.r. spectroscopy. Journal of the Chemical Society Chemical Communications, 1983, , 556.	2.0	25
156	Interactions between Organophosphonate-Bearing Solutions and (101̄..4) Calcite Surfaces: An Atomic Force Microscopy and First-Principles Molecular Dynamics Study. Crystal Growth and Design, 2010, 10, 3022-3035.	3.0	25
157	The replacement of a carbonate rock by fluorite: Kinetics and microstructure. American Mineralogist, 2017, 102, 126-134.	1.9	25
158	Interfacial Precipitation of Phosphate on Hematite and Goethite. Minerals (Basel, Switzerland), 2018, 8, 207.	2.0	25
159	Stress orientationâ€“dependent reactions during metamorphism. Geology, 2019, 47, 151-154.	4.4	25
160	Static lattice energy calculations of mixing and ordering enthalpy in binary carbonate solid solutions. Chemical Geology, 2006, 225, 304-313.	3.3	24
161	Mechanisms of Metasomatism and Metamorphism on the Local Mineral Scale: The Role of Dissolution-Reprecipitation During Mineral Re-equilibration. Lecture Notes in Earth System Sciences, 2013, , 141-170.	0.6	24
162	Exploring the effect of poly(acrylic acid) on pre- and post-nucleation BaSO ₄ species: new insights into the mechanisms of crystallization control by polyelectrolytes. CrystEngComm, 2016, 18, 2830-2842.	2.6	24

#	ARTICLE	IF	CITATIONS
163	Magnetic properties of the magnetite-spinel solid solution; saturation magnetization and cation distributions. <i>American Mineralogist</i> , 1995, 80, 213-221.	1.9	23
164	Symplectite formation in the presence of a reactive fluid: insights from hydrothermal experiments. <i>Journal of Metamorphic Geology</i> , 2017, 35, 281-299.	3.4	23
165	Laterally resolved EELS for ELNES mapping of the Fe L _{2,3} - and O K-edge. <i>Ultramicroscopy</i> , 2003, 96, 573-582.	1.9	22
166	Strain-Induced Segmentation of Magnesian Calcite Thin Films Growing on a Calcite Substrate. <i>Crystal Growth and Design</i> , 2010, 10, 4319-4326.	3.0	22
167	Influence of chemical and structural factors on the calcite→calcium oxalate transformation. <i>CrystEngComm</i> , 2013, 15, 9968.	2.6	22
168	Surface-specific measurements of olivine dissolution by phase-shift interferometry. <i>American Mineralogist</i> , 2014, 99, 377-386.	1.9	22
169	Nucleation of solid solutions crystallizing from aqueous solutions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003, 361, 615-632.	3.4	21
170	Formation of Mg-rich Olivine Pseudomorphs in Serpentinized Dunite from the Mesoarchean Nuasahi Massif, Eastern India: Insights into the Evolution of Fluid Composition at the Mineral→Fluid Interface. <i>Journal of Petrology</i> , 2016, 57, 3-26.	2.8	21
171	Imaging Organophosphate and Pyrophosphate Sequestration on Brucite by in Situ Atomic Force Microscopy. <i>Environmental Science & Technology</i> , 2017, 51, 328-336.	10.0	21
172	Direct Observation of Simultaneous Immobilization of Cadmium and Arsenate at the Brushite→Fluid Interface. <i>Environmental Science & Technology</i> , 2018, 52, 3493-3502.	10.0	21
173	Heterojunction diodes formed using thin-film C containing polycrystalline diamond and Si. <i>IEEE Electron Device Letters</i> , 1990, 11, 33-35.	3.9	20
174	Analytical transmission electron microscopy of oscillatory zoned grandite garnets. <i>Contributions To Mineralogy and Petrology</i> , 2001, 141, 358-366.	3.1	20
175	Direct observation of spinodal decomposition in the magnetite-hercynite system by susceptibility measurements and transmission electron microscopy. <i>American Mineralogist</i> , 2005, 90, 1278-1283.	1.9	20
176	Direct observations of the modification of calcite growth morphology by Li ⁺ through selectively stabilizing an energetically unfavourable face. <i>CrystEngComm</i> , 2011, 13, 3962.	2.6	20
177	Sharpened interface. <i>Nature Materials</i> , 2015, 14, 261-262.	27.5	20
178	In-situ neutron diffraction study of non-convergent cation ordering in the (Fe ₃ O ₄) _(1-x) (MgAl ₂ O ₄) _x spinel solid solution. <i>American Mineralogist</i> , 1999, 84, 555-563.	1.9	20
179	AFM study of the epitaxial growth of brushite (CaHPO ₄ ·2H ₂ O) on gypsum cleavage surfaces. <i>American Mineralogist</i> , 2010, 95, 1747-1757.	1.9	19
180	Mass transfer and trace element redistribution during hydration of granulites in the Bergen Arcs, Norway. <i>Lithos</i> , 2016, 262, 1-10.	1.4	19

#	ARTICLE	IF	CITATIONS
181	Oxygen isotope analysis of olivine by ion microprobe: Matrix effects and applications to a serpentinised dunite. <i>Chemical Geology</i> , 2018, 499, 126-137.	3.3	19
182	The microstructure of inclusions in nanocrystalline carbon films deposited at low temperature. <i>Diamond and Related Materials</i> , 1994, 3, 1048-1055.	3.9	18
183	High-resolution and energy-filtered TEM of the interface between hematite and ilmenite exsolution lamellae: Relevance to the origin of lamellar magnetism. <i>American Mineralogist</i> , 2004, 88, 1190-1196.	1.9	18
184	Infrared spectroscopy of superionic conductor LiNaSO ₄ : Vibrational modes and thermodynamics. <i>Solid State Ionics</i> , 2006, 177, 37-43.	2.7	18
185	The application of Lorentz transmission electron microscopy to the study of lamellar magnetism in hematite-ilmenite. <i>American Mineralogist</i> , 2009, 94, 262-269.	1.9	18
186	Textural and chemical evolution of pyroxene during hydration and deformation: A consequence of retrograde metamorphism. <i>Lithos</i> , 2018, 296-299, 245-264.	1.4	18
187	An AFM study on ferroelastic domains in lead phosphate., <i>Journal of Physics Condensed Matter</i> , 1997, 9, 8397-8405.	1.8	17
188	Calculation of the configurational entropy of Al, Si in layer silicates using the cluster variation method. <i>Physics and Chemistry of Minerals</i> , 1998, 26, 135-148.	0.8	17
189	Transmission electron microscope study of compact Type A calcium-aluminum-rich inclusions from CV3 chondrites: Clues to their origin. <i>Meteoritics and Planetary Science</i> , 1998, 33, 75-87.	1.6	17
190	Microstructurally controlled trace element (Zr, U-Pb) concentrations in metamorphic rutile: An example from the amphibolites of the Bergen Arcs. <i>Journal of Metamorphic Geology</i> , 2020, 38, 103-127.	3.4	17
191	Calculation of the probability distribution of basic clusters involved in cluster-variation approximations to the Ising model. <i>Physical Review B</i> , 1997, 56, 11493-11502.	3.2	16
192	Lamellar magnetism: effects of interface versus exchange interactions of nanoscale exsolutions in the ilmenite-hematite system. <i>Journal of Physics: Conference Series</i> , 2005, 17, 154-167.	0.4	16
193	Influence of temperature and Cl on the hydrothermal replacement of calcite by apatite and the development of porous microstructures. <i>American Mineralogist</i> , 2013, 98, 1516-1525.	1.9	16
194	Replacement reactions of copper sulphides at moderate temperature in acidic solutions. <i>Ore Geology Reviews</i> , 2020, 123, 103569.	2.7	16
195	Microscopic and spectroscopic investigation of the calcite surface interacted with Hg(II) in aqueous solutions. <i>Mineralogical Magazine</i> , 2003, 67, 1193-1204.	1.4	16
196	DISSOLUTION OF URANYL-OXIDE-HYDROXY-HYDRATE MINERALS. I. CURITE. <i>Canadian Mineralogist</i> , 2006, 44, 415-431.	1.0	16
197	Interaction between exsolution microstructures and magnetic properties of the magnetite-spinel solid solution. <i>American Mineralogist</i> , 1997, 82, 131-142.	1.9	15
198	Comment: Supersaturation in binary solid solution-Aqueous solution systems: (Comment on) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 72 T <i>Numerische Mathematik</i> , 2007, 307, 1034-1045.	1.4	15

#	ARTICLE	IF	CITATIONS
199	Visualizing Organophosphate Precipitation at the Calcite-Water Interface by in Situ Atomic-Force Microscopy. <i>Environmental Science & Technology</i> , 2016, 50, 259-268.	10.0	15
200	The kinetics of dehydration and order-disorder of molecular H ₂ O in Mg-cordierite. <i>European Journal of Mineralogy</i> , 1989, 1, 193-202.	1.3	15
201	Fluid-Mineral Interactions: Controlling Coupled Mechanisms of Reaction, Mass Transfer and Deformation. <i>Journal of Petrology</i> , 2021, 62, .	2.8	15
202	The Control of Solution Composition on Ligand-Promoted Dissolution: DTPA-Barite Interactions. <i>Crystal Growth and Design</i> , 2009, 9, 5266-5272.	3.0	14
203	Pseudomorphic replacement of diopside during interaction with (Ni,Mg)Cl ₂ aqueous solutions: Implications for the Ni-enrichment mechanism in talc- and serpentine-type phases. <i>Chemical Geology</i> , 2014, 380, 27-40.	3.3	14
204	Porosity generated during the fluid-mediated replacement of calcite by fluorite. <i>CrystEngComm</i> , 2016, 18, 6867-6874.	2.6	14
205	In Situ Atomic Force Microscopy Imaging of Octacalcium Phosphate Crystallization and Its Modulation by Amelogenin's C-Terminus. <i>Crystal Growth and Design</i> , 2017, 17, 2194-2202.	3.0	14
206	The transformation behaviour of bornite. <i>Contributions To Mineralogy and Petrology</i> , 1976, 55, 311-315.	3.1	13
207	Electron microscope study of phase transformations in cubanite. <i>Physics and Chemistry of Minerals</i> , 1977, 1, 335-349.	0.8	13
208	Monazite as a monitor for melt-rock interaction during cooling and exhumation. <i>Journal of Metamorphic Geology</i> , 2019, 37, 415-438.	3.4	13
209	Phase transitions in between 1.5 K and 850 K: an infrared spectroscopic study. <i>Journal of Physics Condensed Matter</i> , 1998, 10, 11811-11827.	1.8	12
210	A triclinic phase of relaxor La-modified Pb(Zr _{0.65} Ti _{0.35})O ₃ and its structure at 40 K by high-resolution neutron diffraction. <i>Journal of Applied Physics</i> , 2001, 90, 6321-6326.	2.5	12
211	Preservation of granulite in a partially eclogitized terrane: Metastable phenomena or local pressure variations?. <i>Lithos</i> , 2021, 400-401, 106413.	1.4	12
212	Chemistry and microstructure of orthoamphiboles from cordierite-amphibole rocks at Outokumpu, North Karelia, Finland. <i>Mineralogical Magazine</i> , 1982, 45, 55-62.	1.4	11
213	A mechanism for pyroxene-pyroxenoid and pyroxenoid-pyroxenoid transformations. <i>Physics and Chemistry of Minerals</i> , 1984, 10, 236-243.	0.8	11
214	Ontogeny of baryte crystals grown in a porous medium. <i>Mineralogical Magazine</i> , 1992, 56, 587-598.	1.4	11
215	Alkali retention in hot coal slag under controlled oxidizing gas atmospheres (air-CO ₂). <i>Fuel Processing Technology</i> , 2000, 68, 57-73.	7.2	11
216	Structural discontinuities in plagioclase and constraints on mixing properties of the low series: a computational study. <i>Mineralogical Magazine</i> , 2001, 65, 1-31.	1.4	11

#	ARTICLE	IF	CITATIONS
217	Temperature-Dependent Fractionation of Particulate Matter and Sulfates from a Hot Flue Gas in Pressurized Pulverized Coal Combustion (PPCC). <i>Energy & Fuels</i> , 2000, 14, 806-815.	5.1	10
218	Replacement and ion exchange reactions of scolecite in a high pH aqueous solution. <i>European Journal of Mineralogy</i> , 2014, 26, 61-69.	1.3	10
219	The transformation behaviour of metal-enriched chalcopyrite. <i>Contributions To Mineralogy and Petrology</i> , 1976, 58, 127-136.	3.1	9
220	The effect of a copolymer inhibitor on baryte precipitation. <i>Mineralogical Magazine</i> , 2014, 78, 1423-1430.	1.4	9
221	Blaubleibender covellite and its relationship to normal covellite. <i>Contributions To Mineralogy and Petrology</i> , 1977, 60, 209-217.	3.1	8
222	Ferroelastic domains in lead phosphate-arsenate: An afm, X-ray diffraction, tem and Raman study. <i>Phase Transitions</i> , 2000, 71, 243-270.	1.3	8
223	A two-dimensional spin model of Al/Si order in feldspars: visualization of short-range and long-range order. <i>European Journal of Mineralogy</i> , 2001, 13, 273-288.	1.3	8
224	Apatite and monazite: An effective duo to unravel superimposed fluid-flow and deformation events in reactivated shear zones. <i>Lithos</i> , 2020, 376-377, 105752.	1.4	8
225	Thermal decomposition and cation mobility in bornite. <i>Economic Geology</i> , 1976, 71, 1058-1059.	3.8	7
226	Oxidation phenomena in pleonaste bearing titanomagnetites. <i>Contributions To Mineralogy and Petrology</i> , 1979, 69, 355-359.	3.1	7
227	Nanoscale Observations of Magnesite Growth in Chloride- And Sulfate-Rich Solutions. <i>Environmental Science & Technology</i> , 2013, 47, 130722083055001.	10.0	7
228	A potentiometric study of the performance of a commercial copolymer in the precipitation of scale forming minerals. <i>CrystEngComm</i> , 2016, 18, 5744-5753.	2.6	7
229	Mineral Surface Rearrangement at High Temperatures: Implications for Extraterrestrial Mineral Grain Reactivity. <i>ACS Earth and Space Chemistry</i> , 2017, 1, 113-121.	2.7	7
230	Order/disorder phase transition in cordierite and its possible relationship to the development of symplectite reaction textures in granulites. <i>Petrology</i> , 2007, 15, 427-440.	0.9	6
231	Effects of kinetics and mechanisms of crystal growth on ion-partitioning in solid solution "aqueous solution (SS "AS) systems. , 0, , 43-64.		5
232	Mineralogical problems in advanced power systems: The contribution of slag and gaseous chemical species to the fly ash. <i>European Journal of Mineralogy</i> , 2000, 12, 639-650.	1.3	4
233	The role of reacting solution and temperature on compositional evolution during harzburgite alteration: Constraints from the Mesoarchean Nuasahi Massif (eastern India). <i>Lithos</i> , 2016, 256-257, 228-242.	1.4	4
234	Metamorphic Differentiation via Enhanced Dissolution along High Permeability Zones. <i>Journal of Petrology</i> , 2021, 61, .	2.8	4

#	ARTICLE	IF	CITATIONS
235	Solid State NMR Spectroscopy and Phase Transitions in Minerals. , 1988, , 325-358.		4
236	Principles of Solid State NMR Spectroscopy and Applications to Determining Local Order in Minerals. , 1999, , 389-425.		4
237	Monte Carlo simulation of mixing in Ca ₃ Fe ₂ Ge ₃ O ₁₂ –Ca ₄ Ge ₄ O ₁₂ garnets and implications for the thermodynamic stability of pyrope–majorite solid solution. Physics and Chemistry of Minerals, 2006, 33, 533-544.	0.8	3
238	Timescales of geological processes: Preface. Geoscience Frontiers, 2019, 10, 1-3.	8.4	3
239	Macro- to nanoscale study of the effect of aqueous sulphate on calcite growth. Mineralogical Magazine, 2008, 72, 141-144.	1.4	2
240	Halide-Dependent Dissolution of Dicalcium Phosphate Dihydrate and Its Modulation by an Organic Ligand. Crystal Growth and Design, 2017, 17, 3868-3876.	3.0	2
241	Effect of multistage solution–mineral contact in in-situ recovery for low-grade natural copper samples: Extraction, acid consumption, gangue-mineral changes and precipitation. Minerals Engineering, 2020, 159, 106616.	4.3	2
242	Mineral Surface Science: Principles, Applications and Case Studies. , 1999, , 595-628.		2
243	Staringite discredited. Mineralogical Magazine, 1994, 58, 271-277.	1.4	2
244	Transformation processes in minerals II: structural phase transitions. , 0, , 387-452.		1
245	New developments in mineral surface sciences. Journal of Mineralogical and Petrological Sciences, 2003, 98, 9-18.	0.9	1
246	1. Transient Porosity Resulting from Fluid–Mineral Interaction and its Consequences. , 2015, , 1-24.		1
247	Comparative analysis of copper dissolution and mineral transformations in coarse chalcopyrite for different oxidant/lixiviant systems at elevated temperature (110–170°C). Hydrometallurgy, 2021, , 4.3 105700.		1
248	Metasomatic Formation and Replacement of Apatite (Bamble Sector, South Norway). , 2012, , 163-170.		0
249	Acceptance of the 2020 Roebling Medal of the Mineralogical Society of America. American Mineralogist, 2021, 106, 849-850.	1.9	0