

# Christine V Putnis

## List of Publications by Year in descending order

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116  
papers

5,714  
citations

61984

43  
h-index

85541

71  
g-index

119  
all docs

119  
docs citations

119  
times ranked

5126  
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>In situ</i> observations of the occlusion of a clay-sugar compound within calcite. <i>Environmental Science: Nano</i> , 2022, 9, 523-531.	4.3	6
2	Dynamic force spectroscopy for quantifying single-molecule organo-mineral interactions. <i>CrystEngComm</i> , 2021, 23, 11-23.	2.6	8
3	Nanoscale imaging of the simultaneous occlusion of nanoplastics and glyphosate within soil minerals. <i>Environmental Science: Nano</i> , 2021, 8, 2855-2865.	4.3	11
4	Face-Specific Occlusion of Lipid Vesicles within Calcium Oxalate Monohydrate. <i>Crystal Growth and Design</i> , 2021, 21, 2398-2404.	3.0	8
5	Facet-Specific Dissolution-Precipitation at Struvite-Water Interfaces. <i>Crystal Growth and Design</i> , 2021, 21, 4111-4120.	3.0	8
6	Relative rates of fluid advection, elemental diffusion and replacement govern reaction front patterns. <i>Earth and Planetary Science Letters</i> , 2021, 565, 116950.	4.4	7
7	Nanoparticles formed during mineral-fluid interactions. <i>Chemical Geology</i> , 2021, 586, 120614.	3.3	13
8	Molecular Understanding of Humic Acid-Limited Phosphate Precipitation and Transformation. <i>Environmental Science &amp; Technology</i> , 2020, 54, 207-215.	10.0	46
9	Direct imaging of coupled dissolution-precipitation and growth processes on calcite exposed to chromium-rich fluids. <i>Chemical Geology</i> , 2020, 552, 119770.	3.3	15
10	Phosphorylated/Nonphosphorylated Motifs in Amelotin Turn Off/On the Acidic Amorphous Calcium Phosphate-to-Apatite Phase Transformation. <i>Langmuir</i> , 2020, 36, 2102-2109.	3.5	12
11	Dissolution and Precipitation Dynamics at Environmental Mineral Interfaces Imaged by In Situ Atomic Force Microscopy. <i>Accounts of Chemical Research</i> , 2020, 53, 1196-1205.	15.6	33
12	Editorial for Special Issue "Mineral Surface Reactions at the Nanoscale". <i>Minerals (Basel)</i> , 2020, 10, 1-30.	2.0	1
13	Inhibition of Spiral Growth and Dissolution at the Brushite (010) Interface by Chondroitin 4-Sulfate. <i>Journal of Physical Chemistry B</i> , 2019, 123, 845-851.	2.6	7
14	Molecular-Scale Investigations Reveal Noncovalent Bonding Underlying the Adsorption of Environmental DNA on Mica. <i>Environmental Science &amp; Technology</i> , 2019, 53, 11251-11259.	10.0	26
15	Direct Observations of the Occlusion of Soil Organic Matter within Calcite. <i>Environmental Science &amp; Technology</i> , 2019, 53, 8097-8104.	10.0	35
16	Direct Observations of the Coupling between Quartz Dissolution and Mg-Silicate Formation. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 617-625.	2.7	2
17	Underlying Role of Brushite in Pathological Mineralization of Hydroxyapatite. <i>Journal of Physical Chemistry B</i> , 2019, 123, 2874-2881.	2.6	23
18	Humic Acids Limit the Precipitation of Cadmium and Arsenate at the Brushite-Fluid Interface. <i>Environmental Science &amp; Technology</i> , 2019, 53, 194-202.	10.0	25

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19	Timescales of interface-coupled dissolution-precipitation reactions on carbonates. <i>Geoscience Frontiers</i> , 2019, 10, 17-27.	8.4	34
20	Baryte cohesive layers formed on a (010) gypsum surface by a pseudomorphic replacement. <i>European Journal of Mineralogy</i> , 2019, 31, 289-299.	1.3	5
21	Mineral reactivity: from biomineralization and Earth's climate evolution, to CO <sub>2</sub> capture and monument conservation. <i>European Journal of Mineralogy</i> , 2019, 31, 205-207.	1.3	0
22	Direct Observation of Simultaneous Immobilization of Cadmium and Arsenate at the Brushite's Fluid Interface. <i>Environmental Science &amp; Technology</i> , 2018, 52, 3493-3502.	10.0	21
23	Peridotite weathering is the missing ingredient of Earth's continental crust composition. <i>Nature Communications</i> , 2018, 9, 634.	12.8	36
24	Mechanisms of Modulation of Calcium Phosphate Pathological Mineralization by Mobile and Immobile Small-Molecule Inhibitors. <i>Journal of Physical Chemistry B</i> , 2018, 122, 1580-1587.	2.6	20
25	Atomic force microscopy imaging of classical and nonclassical surface growth dynamics of calcium orthophosphates. <i>CrystEngComm</i> , 2018, 20, 2886-2896.	2.6	10
26	Sequestration of Antimony on Calcite Observed by Time-Resolved Nanoscale Imaging. <i>Environmental Science &amp; Technology</i> , 2018, 52, 107-113.	10.0	23
27	Metal Sequestration through Coupled Dissolution-Precipitation at the Brucite's Water Interface. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 346.	2.0	21
28	Interfacial Precipitation of Phosphate on Hematite and Goethite. <i>Minerals (Basel, Switzerland)</i> , 2018, 8, 207.	2.0	25
29	Dynamics and Molecular Mechanism of Phosphate Binding to a Biomimetic Hexapeptide. <i>Environmental Science &amp; Technology</i> , 2018, 52, 10472-10479.	10.0	9
30	The replacement of a carbonate rock by fluorite: Kinetics and microstructure. <i>American Mineralogist</i> , 2017, 102, 126-134.	1.9	25
31	Siderite dissolution coupled to iron oxyhydroxide precipitation in the presence of arsenic revealed by nanoscale imaging. <i>Chemical Geology</i> , 2017, 449, 123-134.	3.3	27
32	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
33	Halide-Dependent Dissolution of Dicalcium Phosphate Dihydrate and Its Modulation by an Organic Ligand. <i>Crystal Growth and Design</i> , 2017, 17, 3868-3876.	3.0	2
34	Energetic Basis for Inhibition of Calcium Phosphate Biomineralization by Osteopontin. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5968-5976.	2.6	11
35	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
36	Imaging Organophosphate and Pyrophosphate Sequestration on Brucite by in Situ Atomic Force Microscopy. <i>Environmental Science &amp; Technology</i> , 2017, 51, 328-336.	10.0	21

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37	Effect of ferrous iron on the nucleation and growth of CaCO <sub>3</sub> in slightly basic aqueous solutions. <i>CrystEngComm</i> , 2017, 19, 447-460.	2.6	19
38	Hydration Effects on the Stability of Calcium Carbonate Pre-Nucleation Species. <i>Minerals (Basel)</i> , 2017, 7, 107-117.	2.0	26
39	Influence of pH and citrate on the formation of oxalate layers on calcite revealed by in situ nanoscale imaging. <i>CrystEngComm</i> , 2017, 19, 3420-3429.	2.6	14
40	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
41	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
42	Exploring the effect of poly(acrylic acid) on pre- and post-nucleation BaSO <sub>4</sub> species: new insights into the mechanisms of crystallization control by polyelectrolytes. <i>CrystEngComm</i> , 2016, 18, 2830-2842.	2.6	24
43	Porosity generated during the fluid-mediated replacement of calcite by fluorite. <i>CrystEngComm</i> , 2016, 18, 6867-6874.	2.6	14
44	In Situ Nanoscale Imaging of Struvite Formation during the Dissolution of Natural Brucite: Implications for Phosphorus Recovery from Wastewaters. <i>Environmental Science &amp; Technology</i> , 2016, 50, 13032-13041.	10.0	65
45	Hydration effects on gypsum dissolution revealed by in situ nanoscale atomic force microscopy observations. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 179, 110-122.	3.9	23
46	The pseudomorphic replacement of marble by apatite: The role of fluid composition. <i>Chemical Geology</i> , 2016, 425, 1-11.	3.3	27
47	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
48	Visualizing Organophosphate Precipitation at the Calcite-Water Interface by in Situ Atomic-Force Microscopy. <i>Environmental Science &amp; Technology</i> , 2016, 50, 259-268.	10.0	15
49	Direct Nanoscale Imaging Reveals the Growth of Calcite Crystals via Amorphous Nanoparticles. <i>Crystal Growth and Design</i> , 2016, 16, 1850-1860.	3.0	89
50	Removal of Fe(II) from groundwater via aqueous portlandite carbonation and calcite-solution interactions. <i>Chemical Engineering Journal</i> , 2016, 283, 404-411.	12.7	17
51	Mechanistic Principles of Barite Formation: From Nanoparticles to Micron-Sized Crystals. <i>Crystal Growth and Design</i> , 2015, 15, 3724-3733.	3.0	43
52	Experimental study of the replacement of calcite by calcium sulphates. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 156, 75-93.	3.9	30
53	In situ Imaging of Interfacial Precipitation of Phosphate on Goethite. <i>Environmental Science &amp; Technology</i> , 2015, 49, 4184-4192.	10.0	56
54	Interactions of arsenic with calcite surfaces revealed by in situ nanoscale imaging. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 159, 61-79.	3.9	60

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55	The influence of pH on barite nucleation and growth. <i>Chemical Geology</i> , 2015, 391, 7-18.	3.3	48
56	Direct nanoscale observations of the coupled dissolution of calcite and dolomite and the precipitation of gypsum. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 1245-1253.	2.8	30
57	Coupled fluctuations in element release during dolomite dissolution. <i>Mineralogical Magazine</i> , 2014, 78, 1355-1362.	1.4	22
58	The effect of a copolymer inhibitor on baryte precipitation. <i>Mineralogical Magazine</i> , 2014, 78, 1423-1430.	1.4	9
59	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
60	Coupled dissolution and precipitation at mineral-fluid interfaces. <i>Chemical Geology</i> , 2014, 383, 132-146.	3.3	290
61	Direct Observations of the Dissolution of Fluorite Surfaces with Different Orientations. <i>Crystal Growth and Design</i> , 2014, 14, 69-77.	3.0	14
62	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
63	The Mineral-Water Interface: Where Minerals React with the Environment. <i>Elements</i> , 2013, 9, 177-182.	0.5	116
64	Selenium incorporation into calcite and its effect on crystal growth: An atomic force microscopy study. <i>Chemical Geology</i> , 2013, 340, 151-161.	3.3	57
65	Influence of chemical and structural factors on the calcite-calcium oxalate transformation. <i>CrystEngComm</i> , 2013, 15, 9968.	2.6	22
66	Direct observations of the influence of solution composition on magnesite dissolution. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 109, 113-126.	3.9	13
67	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
68	Template-Assisted Crystallization of Sulfates onto Calcite: Implications for the Prevention of Salt Damage. <i>Crystal Growth and Design</i> , 2013, 13, 40-51.	3.0	16
69	Coupled Dissolution and Precipitation at the Cerussite-Phosphate Solution Interface: Implications for Immobilization of Lead in Soils. <i>Environmental Science &amp; Technology</i> , 2013, 47, 13502-13510.	10.0	29
70	Dissolution and Carbonation of Portlandite [Ca(OH) <sub>2</sub> ] Single Crystals. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11342-11349.	10.0	105
71	Sequestration of Selenium on Calcite Surfaces Revealed by Nanoscale Imaging. <i>Environmental Science &amp; Technology</i> , 2013, 47, 13469-13476.	10.0	28
72	Mechanism of leached layer formation during chemical weathering of silicate minerals. <i>Geology</i> , 2012, 40, 947-950.	4.4	127

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73	Direct Nanoscale Observations of CO <sub>2</sub> Sequestration during Brucite [Mg(OH) <sub>2</sub> ] Dissolution. <i>Environmental Science &amp; Technology</i> , 2012, 46, 5253-5260.	10.0	97
74	Kinetics of Calcium Phosphate Nucleation and Growth on Calcite: Implications for Predicting the Fate of Dissolved Phosphate Species in Alkaline Soils. <i>Environmental Science &amp; Technology</i> , 2012, 46, 834-842.	10.0	92
75	In situ nanoscale observations of the dissolution of dolomite cleavage surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 80, 1-13.	3.9	53
76	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
77	Direct observations of mineral fluid reactions using atomic force microscopy: the specific example of calcite. <i>Mineralogical Magazine</i> , 2012, 76, 227-253.	1.4	109
78	Direct observations of the modification of calcite growth morphology by Li <sup>+</sup> through selectively stabilizing an energetically unfavourable face. <i>CrystEngComm</i> , 2011, 13, 3962.	2.6	20
79	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
80	Ion-specific effects on the kinetics of mineral dissolution. <i>Chemical Geology</i> , 2011, 281, 364-371.	3.3	64
81	Effect of pH on calcite growth at constant ratio and supersaturation. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 284-296.	3.9	84
82	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
83	Crystal growth of apatite by replacement of an aragonite precursor. <i>Journal of Crystal Growth</i> , 2010, 312, 2431-2440.	1.5	47
84	AFM study of the epitaxial growth of brushite (CaHPO <sub>4</sub> ·2H <sub>2</sub> O) on gypsum cleavage surfaces. <i>American Mineralogist</i> , 2010, 95, 1747-1757.	1.9	19
85	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
86	Interactions between Organophosphonate-Bearing Solutions and (101̄..4) Calcite Surfaces: An Atomic Force Microscopy and First-Principles Molecular Dynamics Study. <i>Crystal Growth and Design</i> , 2010, 10, 3022-3035.	3.0	25
87	The experimental replacement of ilmenite by rutile in HCl solutions. <i>Mineralogical Magazine</i> , 2010, 74, 633-644.	1.4	53
88	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
89	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
90	Reaction induced fracturing during replacement processes. <i>Contributions To Mineralogy and Petrology</i> , 2009, 157, 127-133.	3.1	163

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91	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
92	An atomic force microscopy study of calcite dissolution in saline solutions: The role of magnesium ions. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 3201-3217.	3.9	99
93	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
94	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
95	Interaction between Epsomite Crystals and Organic Additives. <i>Crystal Growth and Design</i> , 2008, 8, 2665-2673.	3.0	23
96	Pseudomorphic replacement of single calcium carbonate crystals by polycrystalline apatite. <i>Mineralogical Magazine</i> , 2008, 72, 77-80.	1.4	42
97	The mechanism and kinetics of DTPA-promoted dissolution of barite. <i>Applied Geochemistry</i> , 2008, 23, 2778-2788.	3.0	60
98	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
99	The effect of fluid composition on the mechanism of the aragonite to calcite transition. <i>Mineralogical Magazine</i> , 2008, 72, 111-114.	1.4	26
100	Macro- to nanoscale study of the effect of aqueous sulphate on calcite growth. <i>Mineralogical Magazine</i> , 2008, 72, 141-144.	1.4	2
101	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
102	An experimental study of the replacement of leucite by analcime. <i>American Mineralogist</i> , 2007, 92, 19-26.	1.9	104
103	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
104	Hematite in porous red-clouded feldspars: Evidence of large-scale crustal fluid-rock interaction. <i>Lithos</i> , 2007, 95, 10-18.	1.4	114
105	In situ AFM study of the dissolution and recrystallization behaviour of polished and stressed calcite surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1728-1738.	3.9	44
106	Interactions between mineral surfaces and dissolved species: From monovalent ions to complex organic molecules. <i>Numerische Mathematik</i> , 2005, 305, 791-825.	1.4	27
107	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
108	Direct observations of pseudomorphism: compositional and textural evolution at a fluid-solid interface. <i>American Mineralogist</i> , 2005, 90, 1909-1912.	1.9	183

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109	Environmentally important, poorly crystalline Fe/Mn hydrous oxides: Ferrihydrate 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
110	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
111	A mechanism of mineral replacement: isotope tracing in the model system KCl-KBr-H <sub>2</sub> O. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 2839-2848.	3.9	99
112	The dissolution rates of natural glasses as a function of their composition at pH 4 and 10.6, and temperatures from 25 to 74°C. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 4843-4858.	3.9	321
113	Base-metals and organic content in stream sediments in the vicinity of a landfill. <i>Applied Geochemistry</i> , 2004, 19, 137-151.	3.0	20
114	The mechanism of fluid infiltration in peridotites at Almklovdalen, western Norway. <i>Geofluids</i> , 2002, 2, 203-215.	0.7	33
115	Ion partitioning and element mobilization during mineral replacement reactions in natural and experimental systems. , 0, , 189-226.		2
116	Crystallization via Nonclassical Pathways: Nanoscale Imaging of Mineral Surfaces. <i>ACS Symposium Series</i> , 0, , 1-35.	0.5	3