Andrew G Stack

List of Publications by Year
in descending order

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84 papers	2,511 citations	159585 30 h-index	233421 45 g-index
85 all docs	85 docs citations	85 times ranked	2686 citing authors

#	Article	IF	Citations
1	Molecular Structure of Adsorbed Water Phases in Silica Nanopores. Journal of Physical Chemistry C, 2022, 126, 2885-2895.	3.1	8
2	Frustrated Coulombic and Cation Size Effects on Nanoscale Boehmite Aggregation: A Tumbler Small- and Ultra-Small-Angle Neutron Scattering Study. Journal of Physical Chemistry C, 2022, 126, 4391-4414.	3.1	4
3	Radiolysis and Radiation-Driven Dynamics of Boehmite Dissolution Observed by In Situ Liquid-Phase TEM. Environmental Science & Technology, 2022, 56, 5029-5036.	10.0	8
4	Solution and Interface Structure and Dynamics in Geochemistry: Gateway to Link Elementary Processes to Mineral Nucleation and Growth. Crystal Growth and Design, 2022, 22, 853-870.	3.0	8
5	Improving Rare-Earth Mineral Separation with Insights from Molecular Recognition: Functionalized Hydroxamic Acid Adsorption onto BastnÃsite and Calcite. Langmuir, 2022, 38, 5439-5453.	3.5	6
6	The â€œgood,â€•the â€œbad,â€•and the â€œhiddenâ€•in neutron scattering and molecular dynamics of ionic aqueous solutions. Journal of Chemical Physics, 2022, 156, .	3.0	6
7	Numerical Study of Mineral Nucleation and Growth on a Substrate. ACS Earth and Space Chemistry, 2022, 6, 1655-1665.	2.7	6
8	Micro-continuum approach for mineral precipitation. Scientific Reports, 2021, 11, 3495.	3.3	12
9	Long-Term ¹³C Uptake by ¹²C-Enriched Calcite. ACS Earth and Space Chemistry, 2021, 5, 998-1005.	2.7	7
10	Influence of microstructure on replacement and porosity generation during experimental dolomitization of limestones. Geochimica Et Cosmochimica Acta, 2021, 303, 137-158.	3.9	14
11	Density Functional Tight-Binding Simulations Reveal the Presence of Surface Defects on the Quartz (101)â€"Water Interface. Journal of Physical Chemistry C, 2021, 125, 16246-16255.	3.1	4
12	Opposing Effects of Impurity Ion Sr²⁺ on the Heterogeneous Nucleation and Growth of Barite (BaSO₄). Crystal Growth and Design, 2021, 21, 5828-5839.	3.0	17
13	Local molecular environment drives speciation and reactivity of ion complexes in concentrated salt solution. Journal of Molecular Liquids, 2021, 340, 116898.	4.9	8
14	Moving beyond the Solvent-Tip Approximation to Determine Site-Specific Variations of Interfacial Water Structure through 3D Force Microscopy. Journal of Physical Chemistry C, 2021, 125, 1282-1291.	3.1	31
15	Studies of Mineral Nucleation and Growth Across Multiple Scales: Review of the Current State of Research Using the Example of Barite (BaSO₄). ACS Earth and Space Chemistry, 2021, 5, 3338-3361.	2.7	15
16	A Molecular-Scale Approach to Rare-Earth Beneficiation: Thinking Small to Avoid Large Losses. IScience, 2020, 23, 101435.	4.1	13
17	Pb Sorption at the Barite (001)â€"Water Interface. Journal of Physical Chemistry C, 2020, 124, 22035-22045.	3.1	9
18	Molecular Recognition at Mineral Interfaces: Implications for the Beneficiation of Rare Earth Ores. ACS Applied Materials & Interfaces, 2020, 12, 16327-16341.	8.0	20

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19	Water Uptake by Silica Nanopores: Impacts of Surface Hydrophilicity and Pore Size. Journal of Physical Chemistry C, 2020, 124, 15188-15194.	3.1	18
20	Ultra-efficient polymer binder for silicon anode in high-capacity lithium-ion batteries. Nano Energy, 2020, 73, 104804.	16.0	57
21	Hydration structure and water exchange kinetics at xenotimeâ€“water interfaces: implications for rare earth minerals separation. Physical Chemistry Chemical Physics, 2020, 22, 7719-7727.	2.8	10
22	Grain detachment and transport clogging during mineral dissolution in carbonate rocks with permeable grain boundaries. Geochimica Et Cosmochimica Acta, 2020, 280, 202-220.	3.9	10
23	Controls of Microstructure and Chemical Reactivity on the Replacement of Limestone by Fluorite Studied Using Spatially Resolved Small Angle X-ray and Neutron Scattering. ACS Earth and Space Chemistry, 2019, 3, 1998-2016.	2.7	10
24	Resolving local configurational contributions to X-ray and neutron radial distribution functions within solutions of concentrated electrolytes â€“ a case study of concentrated NaOH. Physical Chemistry Chemical Physics, 2019, 21, 6828-6838.	2.8	14
25	Adsorption mechanism of alkyl hydroxamic acid onto bastnÃsite: Fundamental steps toward rational collector design for rare earth elements. Journal of Colloid and Interface Science, 2019, 553, 210-219.	9.4	47
26	Countercations Control Local Specific Bonding Interactions and Nucleation Mechanisms in Concentrated Water-in-Salt Solutions. Journal of Physical Chemistry Letters, 2019, 10, 3318-3325.	4.6	19
27	Organicâ€“mineral interfacial chemistry drives heterogeneous nucleation of Sr-rich (Ba <sub> <i>x</i>) Tj ETQq1 1 0.784314 rgBT /Ov the National Academy of Sciences of the United States of America, 2019, 116, 13221-13226.	7.1	45
28	Simultaneous Adsorption and Incorporation of Sr²⁺ at the Barite (001)â€“Water Interface. Journal of Physical Chemistry C, 2019, 123, 1194-1207.	3.1	21
29	Solvent-pore interactions in the Eagle Ford shale formation. Fuel, 2019, 238, 298-311.	6.4	40
30	Geochemical Evidence for Rare-Earth Element Mobilization during Kaolin Diagenesis. ACS Earth and Space Chemistry, 2018, 2, 506-520.	2.7	9
31	Free-Energy Landscape of the Dissolution of Gibbsite at High pH. Journal of Physical Chemistry Letters, 2018, 9, 1809-1814.	4.6	25
32	Investigating calcite growth rates using a quartz crystal microbalance with dissipation (QCM-D). Geochimica Et Cosmochimica Acta, 2018, 222, 269-283.	3.9	19
33	Coupled Multimodal Dynamics of Hydrogen-Containing Ion Networks in Water-Deficient, Sodium Hydroxide-Aluminate Solutions. Journal of Physical Chemistry B, 2018, 122, 12097-12106.	2.6	12
34	Effects of Ionic Strength, Salt, and pH on Aggregation of Boehmite Nanocrystals: Tumbler Small-Angle Neutron and X-ray Scattering and Imaging Analysis. Langmuir, 2018, 34, 15839-15853.	3.5	25
35	In Situ ²⁷Al NMR Spectroscopy of Aluminate in Sodium Hydroxide Solutions above and below Saturation with Respect to Gibbsite. Inorganic Chemistry, 2018, 57, 11864-11873.	4.0	33
36	Decoding Oxyanion Aqueous Solvation Structure: A Potassium Nitrate Example at Saturation. Journal of Physical Chemistry B, 2018, 122, 7584-7589.	2.6	14

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37	Unraveling the Effects of Strontium Incorporation on Barite Growthâ€"In Situ and Ex Situ Observations Using Multiscale Chemical Imaging. Crystal Growth and Design, 2018, 18, 5521-5533.	3.0	23
38	Mineralâ€"Water Interface Structure of Xenotime (YPO4) {100}. Journal of Physical Chemistry C, 2018, 122, 20232-20243.	3.1	10
39	Synthesis and structure of synthetically pure and deuterated amorphous (basic) calcium carbonates. Chemical Communications, 2017, 53, 2942-2945.	4.1	28
40	A comparative study of surface energies and water adsorption on Ce-bastnÃsite, La-bastnÃsite, and calcite via density functional theory and water adsorption calorimetry. Physical Chemistry Chemical Physics, 2017, 19, 7820-7832.	2.8	30
41	Uncovering the Atomistic Mechanism for Calcite Step Growth. Angewandte Chemie - International Edition, 2017, 56, 8464-8467.	13.8	39
42	Hydration Structure of the Barite (001)â€"Water Interface: Comparison of X-ray Reflectivity with Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2017, 121, 12236-12248.	3.1	38
43	Wellbore Cement Porosity Evolution in Response to Mineral Alteration during CO2 Flooding. Environmental Science & Technology, 2017, 51, 692-698.	10.0	17
44	Uncovering the Atomistic Mechanism for Calcite Step Growth. Angewandte Chemie, 2017, 129, 8584-8587.	2.0	6
45	Heterogeneous Nucleation and Growth of Barium Sulfate at Organicâ€"Water Interfaces: Interplay between Surface Hydrophobicity and Ba²⁺ Adsorption. Langmuir, 2016, 32, 5277-5284.	3.5	53
46	Precise determination of water exchanges on a mineral surface. Physical Chemistry Chemical Physics, 2016, 18, 28819-28828.	2.8	20
47	Extraction of organic compounds from representative shales and the effect on porosity. Journal of Natural Gas Science and Engineering, 2016, 35, 646-660.	4.4	40
48	Crystal Structures, Surface Stability, and Water Adsorption Energies of La-BastnÃsite via Density Functional Theory and Experimental Studies. Journal of Physical Chemistry C, 2016, 120, 16767-16781.	3.1	28
49	The dynamic nature of crystal growth in pores. Scientific Reports, 2016, 6, 33086.	3.3	54
50	Internal Domains of Natural Porous Media Revealed: Critical Locations for Transport, Storage, and Chemical Reaction. Environmental Science & Technology, 2016, 50, 2811-2829.	10.0	76
51	5. Precipitation in Pores: A Geochemical Frontier. , 2015, , 165-190.		1
52	Growth Kinetics and Morphology of Barite Crystals Derived from Face-Specific Growth Rates. Crystal Growth and Design, 2015, 15, 2064-2071.	3.0	53
53	Geochemical reaction mechanism discovery from molecular simulation. Environmental Chemistry, 2015, 12, 20.	1.5	11
54	Precipitation in Pores: A Geochemical Frontier. Reviews in Mineralogy and Geochemistry, 2015, 80, 165-190.	4.8	42

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55	Next generation models of carbonate mineral growth and dissolution. , 2014, 4, 278-288.		18
56	Effect of Strong Acid Functional Groups on Electrode Rise Potential in Capacitive Mixing by Double Layer Expansion. Environmental Science & Technology, 2014, 48, 14041-14048.	10.0	47
57	Chlorite topography and dissolution of the interlayer studied with atomic force microscopy. American Mineralogist, 2014, 99, 128-138.	1.9	10
58	Magnesite Step Growth Rates as a Function of the Aqueous Magnesium:Carbonate Ratio. Crystal Growth and Design, 2014, 14, 6033-6040.	3.0	28
59	Pore-Size-Dependent Calcium Carbonate Precipitation Controlled by Surface Chemistry. Environmental Science & Technology, 2014, 48, 6177-6183.	10.0	69
60	Virtual Probes of Mineral-Water Interfaces: The More Flops, the Better!. Elements, 2013, 9, 211-216.	0.5	14
61	Multi-scale characterization of pore evolution in a combustion metamorphic complex, Hatrurim basin, Israel: Combining (ultra) small-angle neutron scattering and image analysis. Geochimica Et Cosmochimica Acta, 2013, 121, 339-362.	3.9	42
62	Direct Imaging of Nanoscale Dissolution of Dicalcium Phosphate Dihydrate by an Organic Ligand: Concentration Matters. Environmental Science & Technology, 2013, 47, 13365-13374.	10.0	38
63	CO₂ Sorption to Subsingle Hydration Layer Montmorillonite Clay Studied by Excess Sorption and Neutron Diffraction Measurements. Environmental Science & Technology, 2013, 47, 205-211.	10.0	96
64	Upscaling Calcite Growth Rates from the Mesoscale to the Macroscale. Environmental Science & Technology, 2013, 47, 7555-7562.	10.0	42
65	Calcite Growth Rates As a Function of Aqueous Calcium-to-Carbonate Ratio, Saturation Index, and Inhibitor Concentration: Insight into the Mechanism of Reaction and Poisoning by Strontium. Crystal Growth and Design, 2012, 12, 3540-3548.	3.0	66
66	Accurate Rates of the Complex Mechanisms for Growth and Dissolution of Minerals Using a Combination of Rare-Event Theories. Journal of the American Chemical Society, 2012, 134, 11-14.	13.7	127
67	Interaction force measurement between E. coli cells and nanoparticles immobilized surfaces by using AFM. Colloids and Surfaces B: Biointerfaces, 2011, 82, 316-324.	5.0	70
68	Growth Rate of Calcite Steps As a Function of Aqueous Calcium-to-Carbonate Ratio: Independent Attachment and Detachment of Calcium and Carbonate Ions. Crystal Growth and Design, 2010, 10, 1409-1413.	3.0	95
69	Adhesion of <i>Shewanella oneidensis</i> MR-1 to Iron (Oxy)(Hydr)Oxides: Microcolony Formation and Isotherm. Environmental Science & Technology, 2010, 44, 1602-1609.	10.0	16
70	Self-Assembled Monolayers as Templates for Heme Crystallization. Crystal Growth and Design, 2010, 10, 798-805.	3.0	19
71	Long-Range Electron Transfer across Cytochromeâ^'Hematite (Î±-Fe2O3) Interfaces. Journal of Physical Chemistry C, 2009, 113, 2096-2103.	3.1	24
72	Molecular Dynamics Simulations of Solvation and Kink Site Formation at the {001} Bariteâ^'Water Interface. Journal of Physical Chemistry C, 2009, 113, 2104-2110.	3.1	47

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73	Dissolution Morphology of Iron (Oxy)(Hydr)Oxides Exposed to the Dissimilatory Iron-Reducing Bacterium<i>Shewanella oneidensis</i>MR-1. Geomicrobiology Journal, 2009, 26, 83-92.	2.0	9
74	Structure and Dynamics of Water on Aqueous Barium Ion and the {001} Barite Surface. Journal of Physical Chemistry C, 2007, 111, 16387-16391.	3.1	34
75	Molecular Dynamics Calculation of the Activation Volume for Water Exchange on Li+. Journal of the American Chemical Society, 2006, 128, 14778-14779.	13.7	30
76	Modeling Water Exchange on an Aluminum Polyoxocation. Journal of Physical Chemistry B, 2005, 109, 23771-23775.	2.6	20
77	The Growth Morphology of the {100} Surface of KDP (Archerite) on the Molecular Scale. Journal of Physical Chemistry B, 2004, 108, 18284-18290.	2.6	22
78	Adatom Fe(III) on the hematite surface: Observation of a key reactive surface species. Geochemical Transactions, 2004, 5, 1.	0.7	44
79	Reaction of hydroquinone with hematite. Journal of Colloid and Interface Science, 2004, 274, 433-441.	9.4	35
80	Reaction of hydroquinone with hematite. Journal of Colloid and Interface Science, 2004, 274, 442-450.	9.4	24
81	Pyromorphite Growth on Lead-Sulfide Surfaces. Environmental Science & Technology, 2004, 38, 5529-5534.	10.0	22
82	Response to comment on â€œPoint of zero charge of a corundum-water interface probed with optical second harmonic generation (SHG) and atomic force microscopy (AFM): new approaches to oxide surface chargeâ€ Geochimica Et Cosmochimica Acta, 2003, 67, 321-322.	3.9	8
83	The structure of hematite (Î±-Fe2O3) (001) surfaces in aqueous media: scanning tunneling microscopy and resonant tunneling calculations of coexisting O and Fe terminations. Geochimica Et Cosmochimica Acta, 2003, 67, 985-1000.	3.9	125
84	Point of zero charge of a corundum-water interface probed with optical second harmonic generation (SHG) and atomic force microscopy (AFM): New approaches to oxide surface charge. Geochimica Et Cosmochimica Acta, 2001, 65, 3055-3063.	3.9	77