

Christine A Orme

List of Publications by Year in descending order

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84
papers

4,793
citations

109321

35
h-index

106344

65
g-index

90
all docs

90
docs citations

90
times ranked

5220
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation of chiral morphologies through selective binding of amino acids to calcite surface steps. <i>Nature</i> , 2001, 411, 775-779.	27.8	621
2	Stable and unstable growth in molecular beam epitaxy. <i>Physical Review Letters</i> , 1994, 72, 116-119.	7.8	468
3	Thermodynamics of Calcite Growth: Baseline for Understanding Biomineral Formation. , 1998, 282, 724-727.		448
4	Molecular modulation of calcium oxalate crystallization by osteopontin and citrate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 1811-1815.	7.1	258
5	Ultralow Density, Monolithic WS ₂ , MoS ₂ , and MoS ₂ /Graphene Aerogels. <i>ACS Nano</i> , 2015, 9, 4698-4705.	14.6	159
6	Large scale surface structure formed during GaAs (001) homoepitaxy. <i>Applied Physics Letters</i> , 1994, 64, 860-862.	3.3	138
7	Acceleration of Calcite Kinetics by Abalone Nacre Proteins. <i>Advanced Materials</i> , 2005, 17, 2678-2683.	21.0	123
8	Influence of Chromium and Molybdenum on the Corrosion of Nickel-Based Alloys. <i>Corrosion</i> , 2006, 62, 491-500.	1.1	119
9	Modulation of Calcium Oxalate Monohydrate Crystallization by Citrate through Selective Binding to Atomic Steps. <i>Journal of the American Chemical Society</i> , 2005, 127, 9036-9044.	13.7	117
10	Hollow Gold-Silver Double-Shell Nanospheres: Structure, Optical Absorption, and Surface-Enhanced Raman Scattering. <i>Journal of Physical Chemistry C</i> , 2008, 112, 6319-6329.	3.1	114
11	Macroscopic 3D Nanographene with Dynamically Tunable Bulk Properties. <i>Advanced Materials</i> , 2012, 24, 5083-5087.	21.0	111
12	Raman spectroscopy of DNA packaging in individual human sperm cells distinguishes normal from abnormal cells. <i>Journal of Biophotonics</i> , 2009, 2, 322-332.	2.3	102
13	Dissolution at the Nanoscale: Self-Preservation of Biominerals. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 2697-2701.	13.8	98
14	Dynamics of Biomineral Formation at the Near-Molecular Level. <i>Chemical Reviews</i> , 2008, 108, 4784-4822.	47.7	96
15	Mechanism of Dissolution of Sparingly Soluble Electrolytes. <i>Journal of the American Chemical Society</i> , 2001, 123, 5437-5443.	13.7	88
16	Molecular mechanisms of crystallization impacting calcium phosphate cements. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 1937-1961.	3.4	80
17	Control of Biomineralization Dynamics by Interfacial Energies. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 3698-3702.	13.8	79
18	A New Model for Nanoscale Enamel Dissolution. <i>Journal of Physical Chemistry B</i> , 2005, 109, 999-1005.	2.6	75

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19	Instabilities in MBE Growth. <i>Europhysics Letters</i> , 1994, 27, 611-616.	2.0	73
20	Competitive effects of metal dissolution and passivation modulated by surface structure: An AFM and EBSD study of the corrosion of alloy 22. <i>Surface Science</i> , 2006, 600, 2488-2494.	1.9	73
21	Extremely sharp carbon nanocone probes for atomic force microscopy imaging. <i>Applied Physics Letters</i> , 2006, 88, 153102.	3.3	64
22	Electrochemical impedance spectroscopy study of the passive films of alloy 22 in low pH nitrate and chloride environments. <i>Electrochimica Acta</i> , 2007, 52, 2370-2375.	5.2	62
23	Molecular "Tuning" of Crystal Growth by Nacre-Associated Polypeptides. <i>Crystal Growth and Design</i> , 2006, 6, 5-10.	3.0	60
24	Effect of hydrogen peroxide on titanium surfaces: In situ imaging and step-polarization impedance spectroscopy of commercially pure titanium and titanium, 6-aluminum, 4-vanadium. <i>Journal of Biomedical Materials Research Part B</i> , 2003, 67A, 702-712.	3.1	58
25	A New Understanding of Demineralization: The Dynamics of Brushite Dissolution. <i>Journal of Physical Chemistry B</i> , 2003, 107, 10653-10657.	2.6	55
26	Direct observation of hydration of TiO ₂ on Ti using electrochemical AFM: freely corroding versus potentiostatically held. <i>Surface Science</i> , 2001, 491, 370-387.	1.9	52
27	Using Nucleation Rates to Determine the Interfacial Line Tension of Symmetric and Asymmetric Lipid Bilayer Domains. <i>Langmuir</i> , 2007, 23, 5875-5877.	3.5	51
28	Fabrication of high-aspect-ratio carbon nanocone probes by electron beam induced deposition patterning. <i>Nanotechnology</i> , 2006, 17, 4322-4326.	2.6	50
29	In situ imaging and impedance measurements of titanium surfaces using AFM and SPIS. <i>Biomaterials</i> , 2003, 24, 1837-1852.	11.4	46
30	Quantifying Growth of Symmetric and Asymmetric Lipid Bilayer Domains. <i>Langmuir</i> , 2008, 24, 1219-1224.	3.5	46
31	Studies of large scale unstable growth formed during GaAs(001) homoepitaxy. <i>Journal of Crystal Growth</i> , 1995, 150, 128-135.	1.5	44
32	Dissolution of Crystallites: Surface Energetic Control and Size Effects. <i>ChemPhysChem</i> , 2004, 5, 688-696.	2.1	44
33	Domain Nucleation Rates and Interfacial Line Tensions in Supported Bilayers of Ternary Mixtures Containing Galactosylceramide. <i>Biophysical Journal</i> , 2008, 94, 2691-2697.	0.5	39
34	Entropic Barriers in Nanoscale Adhesion Studied by Variable Temperature Chemical Force Microscopy. <i>Journal of the American Chemical Society</i> , 2003, 125, 1356-1362.	13.7	37
35	Influence of Solution pH, Anion Concentration, and Temperature on the Corrosion Properties of Alloy 22. <i>Journal of the Electrochemical Society</i> , 2006, 153, B61.	2.9	37
36	Rapid assessment of anisotropic surface processes: experiments on the corrosion of Inconel 600. <i>Surface Science</i> , 2003, 544, 183-192.	1.9	36

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37	The solubility and recrystallization of 1,3,5-triamino-2,4,6-trinitrobenzene in a 3-ethyl-1-methylimidazolium acetate/DMSO co-solvent system. <i>New Journal of Chemistry</i> , 2009, 33, 50-56.	2.8	36
38	Reversible, Tunable, Electric-Field Driven Assembly of Silver Nanocrystal Superlattices. <i>Nano Letters</i> , 2017, 17, 3862-3869.	9.1	36
39	In situ atomic force microscopy of layer-by-layer crystal growth and key growth concepts. <i>Crystallography Reports</i> , 2006, 51, 1063-1074.	0.6	35
40	A Bioinspired Artificial Injury Response System Based on a Robust Polymer Memristor to Mimic a Sense of Pain, Sign of Injury, and Healing. <i>Advanced Science</i> , 2022, 9, e2200629.	11.2	34
41	An in situ AFM Study of the Evolution of Surface Roughness for Zinc Electrodeposition within an Imidazolium Based Ionic Liquid Electrolyte. <i>Electrochimica Acta</i> , 2015, 152, 161-171.	5.2	31
42	Morphological and Kinetic Transformation of Calcite Crystal Growth by Prismatic-Associated Asprich Sequences. <i>Crystal Growth and Design</i> , 2008, 8, 1154-1160.	3.0	28
43	Dual roles of brushite crystals in calcium oxalate crystallization provide physicochemical mechanisms underlying renal stone formation. <i>Kidney International</i> , 2006, 70, 71-78.	5.2	27
44	Modulation of Crystal Growth by the Terminal Sequences of the Prismatic-Associated Asprich Protein. <i>Crystal Growth and Design</i> , 2008, 8, 4481-4486.	3.0	26
45	Space- and time-resolved small angle X-ray scattering to probe assembly of silver nanocrystal superlattices. <i>Nature Communications</i> , 2018, 9, 4211.	12.8	26
46	Solvent screening for a hard-to-dissolve molecular crystal. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 5050.	2.8	25
47	Inhibiting Effects of Nitrates on the Passive Film Breakdown of Alloy 22 in Chloride Environments. <i>Journal of the Electrochemical Society</i> , 2006, 153, B156.	2.9	18
48	Direct visualization of phase transition dynamics in binary supported phospholipid bilayers using imaging ellipsometry. <i>Soft Matter</i> , 2008, 4, 1161.	2.7	16
49	Characterization of Folic Acid and Poly(amidoamine) Dendrimer Interactions with Folate Binding Protein: A Force-Pulling Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 11506-11512.	2.6	16
50	Atomic force microscope chamber for in situ studies of ice. <i>Review of Scientific Instruments</i> , 2001, 72, 4159-4163.	1.3	14
51	Shape control synthesis of fluorapatite structures based on supersaturation: prismatic nanowires, ellipsoids, star, and aggregate formation. <i>CrystEngComm</i> , 2012, 14, 6384.	2.6	14
52	Dynamic Changes in LSM Nanoparticles on YSZ: A Model System for Non-Stationary SOFC Cathode Behavior. <i>Journal of the Electrochemical Society</i> , 2009, 156, B602.	2.9	13
53	An Understanding of Renal Stone Development in a Mixed Oxalate/Phosphate System. <i>Langmuir</i> , 2008, 24, 7058-7060.	3.5	11
54	Thermally induced phase separation in supported bilayers of glycosphingolipid and phospholipid mixtures. <i>Biointerphases</i> , 2010, 5, 120-130.	1.6	11

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55	The surface evolution and kinetic roughening during homoepitaxy of GaAs (001). Solid-State Electronics, 1994, 37, 1057-1063.	1.4	10
56	Using atomic force microscopy to investigate solution crystal growth. , 2001, , 361-380.		10
57	Control of Curvature in Highly Compliant Probe Cantilevers during Carbon Nanotube Growth. Nano Letters, 2007, 7, 3035-3040.	9.1	10
58	SURFACE EVOLUTION DURING MBE GROWTH. Surface Review and Letters, 1997, 04, 71-105.	1.1	9
59	Enhanced Raman scattering and nonlinear conductivity in Ag-doped hollow ZnO microspheres. Applied Physics A: Materials Science and Processing, 2012, 109, 15-23.	2.3	9
60	In situ characterization of Ti-peroxy gel during formation on titanium surfaces in hydrogen peroxide containing solutions. Materials Science and Engineering C, 2006, 26, 1408-1411.	7.3	8
61	Coupling in situ atomic force microscopy (AFM) and ultra-small-angle X-ray scattering (USAXS) to study the evolution of zinc morphology during electrodeposition within an imidazolium based ionic liquid electrolyte. Electrochimica Acta, 2020, 342, 136073.	5.2	8
62	Beyond Thermodynamics: Assessing the Dynamical Softness of Hydrated Ions from First Principles. Journal of Physical Chemistry Letters, 2021, 12, 11980-11986.	4.6	8
63	Atomic force microscopy and scanning tunneling microscopy studies of large-scale unstable growth formed during GaAs(001) homoepitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1995, 30, 143-148.	3.5	7
64	Improving Nanoparticle Dispersion and Charge Transfer in Cadmium Telluride Tetrapod and Conjugated Polymer Blends. ACS Applied Materials & Interfaces, 2011, 3, 1077-1082.	8.0	6
65	Transformations of Ti-5Al-5V-5Cr-3Mo powder due to reuse in laser powder bed fusion: A surface analytical approach. Applied Surface Science, 2021, 564, 150433.	6.1	5
66	The Use of Scanning Probe Microscopy to Investigate Crystal-Fluid Interfaces. AIP Conference Proceedings, 2007, , .	0.4	4
67	Rapid In Situ Ligandâ€Exchange Process Used to Prepare 3D PbSe Nanocrystal Superlattice Infrared Photodetectors. Small, 2021, 17, e2101166.	10.0	4
68	Unraveling the Mechanism of Electrically Induced Adhesive Debonding: A Spectroâ€Microscopic Study. Advanced Materials Interfaces, 2022, 9, 2101447.	3.7	4
69	Xenon doping of glow discharge polymer by ion implantation. Journal of Applied Physics, 2012, 111, 096101.	2.5	3
70	Characteristics of the Oxides Films formed on Alloy C-22. Materials Research Society Symposia Proceedings, 2002, 757, II4.8.1.	0.1	2
71	Coupling In-Situ Techniques to Analyze Zinc Deposition and Dissolution for Energy Storage Applications. Materials Research Society Symposia Proceedings, 2013, 1491, 29.	0.1	2
72	Methodsâ€Design Guidelines for Tubular Flow-through Electrodes for Use in Electroanalytical Studies of Redox Reaction Kinetics. Journal of the Electrochemical Society, 2021, 168, 043505.	2.9	2

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73	Changes in electric field noise due to thermal transformation of a surface ion trap. Physical Review B, 2022, 106, .	3.2	2
74	High voltage control and monitoring system for proportional chambers. IEEE Transactions on Nuclear Science, 1988, 35, 191-192.	2.0	1
75	AFM and STM Studies of Large Scale Unstable Growth Formed During GaAs (001) Homoepitaxy. Materials Research Society Symposia Proceedings, 1994, 340, 233.	0.1	1
76	Biological Modification in the Brushite Crystallization. Materials Research Society Symposia Proceedings, 2004, 823, W7.2.1.	0.1	1
77	Real-Time Dynamics during Recharging Cycles. ECS Transactions, 2013, 50, 13-17.	0.5	1
78	Suppression of low temperature magnetic ordering in samarium nanoparticles. Journal of Physics Condensed Matter, 2020, 32, 495803.	1.8	1
79	Interaction Between Titanium Implant Surfaces and Hydrogen Peroxide in Biologically Relevant Environments. Materials Research Society Symposia Proceedings, 2004, 823, W11.17.1.	0.1	0
80	In Situ Characterization of Surface Evolution on Titanium in Hydrogen Peroxide Containing Solutions. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	0
81	In Situ Investigation of the Silver-CTAB System. Materials Research Society Symposia Proceedings, 2007, 1017, 122.	0.1	0
82	Inducing order using nanolaminate templates. Journal of Materials Research, 2011, 26, 194-204.	2.6	0
83	Controlled Superlattice Assembly â€” a Step Towards Superlattice Devices. ECS Meeting Abstracts, 2018, , .	0.0	0
84	In Situ Studies of Zinc Oxide Nucleation and Growth. ECS Meeting Abstracts, 2018, , .	0.0	0