

Frances M Ross

List of Publications by Year in descending order

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45
papers

3,762
citations

236612

25
h-index

253896

43
g-index

45
all docs

45
docs citations

45
times ranked

4094
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron microscopy of specimens in liquid. <i>Nature Nanotechnology</i> , 2011, 6, 695-704.	15.6	838
2	Electron-Water Interactions and Implications for Liquid Cell Electron Microscopy. <i>Journal of Physical Chemistry C</i> , 2014, 118, 22373-22382.	1.5	519
3	Bubble and Pattern Formation in Liquid Induced by an Electron Beam. <i>Nano Letters</i> , 2014, 14, 359-364.	4.5	286
4	Quantifying Electrochemical Nucleation and Growth of Nanoscale Clusters Using Real-Time Kinetic Data. <i>Nano Letters</i> , 2006, 6, 238-242.	4.5	248
5	Controlling nanowire structures through real time growth studies. <i>Reports on Progress in Physics</i> , 2010, 73, 114501.	8.1	178
6	The Morphology of Axial and Branched Nanowire Heterostructures. <i>Nano Letters</i> , 2007, 7, 1817-1822.	4.5	175
7	Control of Si Nanowire Growth by Oxygen. <i>Nano Letters</i> , 2006, 6, 1292-1296.	4.5	159
8	Resolution and aberration correction in liquid cell transmission electron microscopy. <i>Nature Reviews Materials</i> , 2019, 4, 61-78.	23.3	125
9	Dynamic observations of interface propagation during silicon oxidation. <i>Physical Review Letters</i> , 1992, 68, 1782-1785.	2.9	124
10	Control of Electron Beam-Induced Au Nanocrystal Growth Kinetics through Solution Chemistry. <i>Nano Letters</i> , 2015, 15, 5314-5320.	4.5	122
11	Pore morphology and the mechanism of pore formation in α -type silicon. <i>Journal of Applied Physics</i> , 1992, 72, 253-258.	1.1	110
12	Controlling the Growth of Si/Ge Nanowires and Heterojunctions Using Silver-Gold Alloy Catalysts. <i>ACS Nano</i> , 2012, 6, 6407-6415.	7.3	77
13	Growth System, Structure, and Doping of Aluminum-Seeded Epitaxial Silicon Nanowires. <i>Nano Letters</i> , 2009, 9, 3296-3301.	4.5	73
14	Environmental (S)TEM Studies of Gas-Liquid-Solid Interactions under Reaction Conditions. <i>MRS Bulletin</i> , 2008, 33, 107-114.	1.7	69
15	Strategies To Control Morphology in Hybrid Group III-V/Group IV Heterostructure Nanowires. <i>Nano Letters</i> , 2013, 13, 903-908.	4.5	63
16	Dynamic observations of interface motion during the oxidation of silicon. <i>Surface Science</i> , 1994, 310, 243-266.	0.8	62
17	Three-Dimensional α -Si:H Solar Cells on Glass Nanocone Arrays Patterned by Self-Assembled Sn Nanospheres. <i>ACS Nano</i> , 2012, 6, 265-271.	7.3	60
18	Direct imaging and electronic structure modulation of moiré superlattices at the 2D/3D interface. <i>Nature Communications</i> , 2021, 12, 1290.	5.8	48

#	ARTICLE	IF	CITATIONS
19	Nanoscale evolution of interface morphology during electrodeposition. Nature Communications, 2017, 8, 2174.	5.8	44
20	Au Stabilization and Coverage of Sawtooth Facets on Si Nanowires Grown by Vapor-Liquid-Solid Epitaxy. Nano Letters, 2008, 8, 3065-3068.	4.5	41
21	Observation of materials processes in liquids by electron microscopy. MRS Bulletin, 2015, 40, 46-52.	1.7	40
22	Control of GaP and GaAs Nanowire Morphology through Particle and Substrate Chemical Modification. Nano Letters, 2008, 8, 4087-4091.	4.5	35
23	Growth and characterization of epitaxial Si/(La _x Y _{1-x}) ₂ O ₃ /Si heterostructures. Journal of Applied Physics, 2003, 93, 251-258.	1.1	34
24	In Situ TEM Creation and Electrical Characterization of Nanowire Devices. Nano Letters, 2012, 12, 2965-2970.	4.5	34
25	Measurement of Local Nanowire Growth Kinetics Using In situ Transmission Electron Microscopy of Heated Cantilevers. Small, 2010, 6, 2058-2064.	5.2	27
26	Strain and Stability of Ultrathin Ge Layers in Si/Ge/Si Axial Heterojunction Nanowires. Nano Letters, 2015, 15, 1654-1659.	4.5	24
27	Impact of substrate induced band tail states on the electronic and optical properties of MoS ₂ . Applied Physics Letters, 2019, 115, .	1.5	24
28	Bringing order to twin-plane defects. Nature Nanotechnology, 2009, 4, 17-18.	15.6	18
29	Creating New VLS Silicon Nanowire Contact Geometries by Controlling Catalyst Migration. Nano Letters, 2015, 15, 6535-6541.	4.5	16
30	Catalytically mediated epitaxy of 3D semiconductors on van der Waals substrates. Applied Physics Reviews, 2020, 7, .	5.5	15
31	Visualization of Active and Passive Control of Morphology during Electrodeposition. Microscopy and Microanalysis, 2014, 20, 1530-1531.	0.2	11
32	Multilayer Graphene: A Promising Electrode Material in Liquid Cell Electrochemistry. Advanced Functional Materials, 2021, 31, 2104628.	7.8	11
33	Heteroepitaxial silicon film growth at 600°C from an Al-Si eutectic melt. Thin Solid Films, 2010, 518, 5368-5371.	0.8	10
34	Real-time imaging of nanoscale electrochemical Ni etching under thermal conditions. Chemical Science, 2021, 12, 5259-5268.	3.7	10
35	Nanoscale chemical templating of Si nanowires seeded with Al. Nanotechnology, 2013, 24, 235301.	1.3	8
36	Dynamic Studies of Semiconductor Growth Processes Using <i>In Situ</i> Electron Microscopy. MRS Bulletin, 2001, 26, 94-101.	1.7	4

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37	Microstructural changes in silicon induced by patterning with focused ion beams of Ga, Si and Au. <i>Ultramicroscopy</i> , 2013, 127, 126-131.	0.8	4
38	Electric Field Induced Au Nanocrystal Formation in Aqueous Solutions. <i>Microscopy and Microanalysis</i> , 2014, 20, 1598-1599.	0.2	4
39	Directed Self-Assembly of Ge Quantum Dots Using Focused Si ²⁺ Ion Beam Patterning. <i>Scientific Reports</i> , 2018, 8, 9361.	1.6	4
40	In situ TEM modification of individual silicon nanowires and their charge transport mechanisms. <i>Nanotechnology</i> , 2020, 31, 494002.	1.3	3
41	30 nm CoSi ₂ surface layers for contact metallization in complementary metal-oxide-semiconductor processes. <i>Applied Physics Letters</i> , 1992, 61, 2311-2313.	1.5	2
42	(Invited) Fabrication and Properties of Abrupt Si-Ge Heterojunction Nanowire Structures. <i>ECS Transactions</i> , 2010, 33, 671-680.	0.3	1
43	Radiolysis during Liquid Cell Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1516-1517.	0.2	1
44	Corrosion of Metal Films Observed Using In Situ and Ex Situ Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1540-1541.	0.2	1
45	Controlled Nucleation of Ge Islands on Si and Self-Assembly of Nanoscale Island Clusters. <i>International Journal of High Speed Electronics and Systems</i> , 2014, 23, 1420003.	0.3	0