John N Randall

List of Publications by Year
in descending order

59 papers	1,835 citations	516561 16 h-index	265120 42 g-index
59 all docs	59 docs citations	59 times ranked	1335 citing authors

#	Article	IF	Citations
1	Atomic-resolution lithography with an on-chip scanning tunneling microscope. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, .	0.6	4
2	High signal-to-noise ratio differential conductance spectroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	0.6	3
3	Advanced Scanning Probe Nanolithography Using GaN Nanowires. Nano Letters, 2021, 21, 5493-5499.	4.5	9
4	Atomic-precision advanced manufacturing for Si quantum computing. MRS Bulletin, 2021, 46, 607-615.	1.7	16
5	Ultrafast method for scanning tunneling spectroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	0.6	3
6	Atomic precision imaging with an on-chip scanning tunneling microscope integrated into a commercial ultrahigh vacuum STM system. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	0.6	2
7	Controlled removal of hydrogen atoms from H-terminated silicon surfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	0.6	6
8	Atomically precise digital e-beam lithography. , 2020, , .		3
9	Scanning Tunneling Microscope Control: A Self-Tuning PI Controller Based on Online Local Barrier Height Estimation. IEEE Transactions on Control Systems Technology, 2019, 27, 2004-2015.	3.2	16
10	Next generation of extreme-resolution electron beam lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	0.6	21
11	On the effect of local barrier height in scanning tunneling microscopy: Measurement methods and control implications. Review of Scientific Instruments, 2018, 89, 013701.	0.6	15
12	Digital atomic scale fabrication an inverse Moore's Law â€“ A path to atomically precise manufacturing. Micro and Nano Engineering, 2018, 1, 1-14.	1.4	21
13	Highly parallel scanning tunneling microscope based hydrogen depassivation lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	0.6	11
14	A self-tuning controller for high-performance scanning tunneling microscopy. , 2017, , .		9
15	Toward Selective Ultra-High-Vacuum Atomic Layer Deposition of Metal Oxides on Si(100). Journal of Physical Chemistry C, 2016, 120, 24213-24223.	1.5	16
16	Toward Atomic-Scale Patterned Atomic Layer Deposition: Reactions of Al₂O₃ Precursors on a Si(001) Surface with Mixed Functionalizations. Journal of Physical Chemistry C, 2016, 120, 2628-2641.	1.5	17
17	Atomically Traceable Nanostructure Fabrication. Journal of Visualized Experiments, 2015, , e52900.	0.2	2
18	Spurious dangling bond formation during atomically precise hydrogen depassivation lithography on Si(100): The role of liberated hydrogen. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	11

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19	Pattern transfer of hydrogen depassivation lithography patterns into silicon with atomically traceable placement and size control. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	16
20	Selectivity of metal oxide atomic layer deposition on hydrogen terminated and oxidized Si(001)-(2Ã—1) surface. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	40
21	Digermane Deposition on Si(100) and Ge(100): from Adsorption Mechanism to Epitaxial Growth. Journal of Physical Chemistry C, 2014, 118, 482-493.	1.5	6
22	Ab Initio Study of H2 Associative Desorption on Ad-Dimer Reconstructed Si(001) and Ge(001)-(2Ã—1) Surfaces. Journal of Physical Chemistry C, 2014, 118, 10088-10096.	1.5	5
23	Controlling the Atomic Layer Deposition of Titanium Dioxide on Silicon: Dependence on Surface Termination. Journal of Physical Chemistry C, 2013, 117, 20250-20259.	1.5	58
24	Multimode hydrogen depassivation lithography: A method for optimizing atomically precise write times. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06FC01.	0.6	28
25	A density-functional theory study of tip electronic structures in scanning tunneling microscopy. Nanotechnology, 2013, 24, 105201.	1.3	7
26	Patterning of sub-1 nm dangling-bond lines with atomic precision alignment on H:Si(100) surface at room temperature. Nanotechnology, 2012, 23, 275301.	1.3	11
27	Automated Scanning Tunneling Microscope image analysis of Si (100):H 2Ã—1 surfaces. Microelectronic Engineering, 2012, 98, 214-217.	1.1	9
28	Si₂H₆ Dissociative Chemisorption and Dissociation on Si(100)-(2Ã—1) and Ge(100)-(2Ã—1). Journal of Physical Chemistry C, 2011, 115, 24534-24548.	1.5	9
29	Patterned atomic layer epitaxy of Si/Si(001):H. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	0.6	15
30	Using patterned H-resist for controlled three-dimensional growth of nanostructures. Applied Physics Letters, 2011, 98, .	1.5	9
31	Wireless Embedded Control System for Atomically Precise Manufacturing. , 2011, , .		1
32	Atomic precision patterning on Si: An opportunity for a digitized process. Microelectronic Engineering, 2010, 87, 955-958.	1.1	14
33	Theoretical and Experimental Study of Tip Electronic Structure in Scanning Tunneling Microscope. Materials Research Society Symposia Proceedings, 2009, 1177, 1.	0.1	1
34	The nanotech impact on IC processing: near and long term. , 2006, 6156, 322.		0
35	Characterization of assembled MEMS. , 2005, , .		0
36	First-Principles Calculation of Hydrogen Diffusion Barriers on Si(001)-2 Ã— 1 Surface. Journal of Computational and Theoretical Nanoscience, 2005, 2, 293-297.	0.4	1

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37	Fabrication of high-density nanostructures with an atomic force microscope. Applied Physics Letters, 2004, 84, 1359-1361.	1.5	19
38	OPC on real-world circuitry. , 2003, , .		1
39	Dual-mask model-based proximity correction for high-performance 0.10-Î¼m CMOS process. , 2001, , .		0
40	Lithography simulation with aerial image â€" Variable threshold resist model. Microelectronic Engineering, 1999, 46, 59-63.	1.1	7
41	Reduction of mask-induced CD errors by optical proximity correction. , 1998, 3334, 124.		12
42	Functional InP/InGaAs lateral double barrier heterostructure resonant tunneling diodes by using etch and regrowth. Applied Physics Letters, 1996, 69, 1918-1920.	1.5	2
43	Atomic layer epitaxy for resonant tunneling devices. Thin Solid Films, 1993, 225, 99-104.	0.8	10
44	Co-integration of resonant tunneling and double heterojunction bipolar transistors on InP. IEEE Electron Device Letters, 1993, 14, 472-474.	2.2	28
45	Room-temperature operation of a resonant-tunneling hot-electron transistor based integrated circuit. IEEE Electron Device Letters, 1993, 14, 441-443.	2.2	18
46	A lateral-resonant-tunneling universal quantum-dot cell. Nanotechnology, 1993, 4, 41-48.	1.3	19
47	Scanning tunneling microscope images of identifiable quantum dot diodes. Superlattices and Microstructures, 1992, 11, 333-336.	1.4	2
48	In0.52Al0.48As/In0.53Ga0.47As lateral resonant tunnelling transistor. Electronics Letters, 1991, 27, 1832.	0.5	13
49	Resonant transmission in the base/collector junction of a bipolar quantumâ€well resonantâ€tunneling transistor. Applied Physics Letters, 1991, 59, 3413-3415.	1.5	22
50	Low stress silicon stencil masks for sub-100 nm ion beam lithography. Microelectronic Engineering, 1990, 11, 449-452.	1.1	6
51	Non-equilibrium quantum dots: transport. Nanotechnology, 1990, 1, 63-66.	1.3	6
52	Realization of a threeâ€terminal resonant tunneling device: The bipolar quantum resonant tunneling transistor. Applied Physics Letters, 1989, 54, 1034-1036.	1.5	120
53	Pseudomorphic bipolar quantum resonant-tunneling transistor. IEEE Transactions on Electron Devices, 1989, 36, 2328-2334.	1.6	32
54	Observation of discrete electronic states in a zero-dimensional semiconductor nanostructure. Physical Review Letters, 1988, 60, 535-537.	2.9	952

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55	Selfâ€developing resist with submicrometer resolution and processing stability. Applied Physics Letters, 1983, 43, 74-76.	1.5	74
56	High resolution ion beam lithography at large gaps using stencil masks. Applied Physics Letters, 1983, 42, 457-459.	1.5	37
57	Preparation of xâ€ray lithography masks using a tungsten reactive ion etching process. Applied Physics Letters, 1982, 41, 247-248.	1.5	8
58	Highâ€resolution pattern definition in tungsten. Applied Physics Letters, 1981, 39, 742-743.	1.5	24
59	A focusing X-ray polarizer for energy-dispersive analysis. X-Ray Spectrometry, 1978, 7, 241-248.	0.9	8