

Rosemary L Smith

List of Publications by Year in descending order

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100
papers

4,982
citations

109321

35
h-index

91884

69
g-index

100
all docs

100
docs citations

100
times ranked

3924
citing authors

#	ARTICLE	IF	CITATIONS
1	Porous silicon formation mechanisms. Journal of Applied Physics, 1992, 71, R1-R22.	2.5	1,041
2	Microneedle array for transdermal biological fluid extraction and in situ analysis. Sensors and Actuators A: Physical, 2004, 114, 267-275.	4.1	263
3	Fluidic interconnects for modular assembly of chemical microsystems. Sensors and Actuators B: Chemical, 1998, 49, 40-45.	7.8	247
4	Porous Silicon Formation and Electropolishing of Silicon by Anodic Polarization in H_2SO_4 Solution. Journal of the Electrochemical Society, 1989, 136, 1561-1565.	2.9	237
5	A physical model for drift in pH ISFETs. Sensors and Actuators B: Chemical, 1998, 49, 146-155.	7.8	218
6	Study of electrochemical etch-stop for high-precision thickness control of silicon membranes. IEEE Transactions on Electron Devices, 1989, 36, 663-669.	3.0	195
7	A theoretical model of the formation morphologies of porous silicon. Journal of Electronic Materials, 1988, 17, 533-541.	2.2	157
8	Frequency Dependence of Gold Nanoparticle Superassembly by Dielectrophoresis. Langmuir, 2007, 23, 12450-12456.	3.5	130
9	Preferential propagation of pores during the formation of porous silicon: A transmission electron microscopy study. Applied Physics Letters, 1989, 55, 675-677.	3.3	129
10	A dry electrode for EEG recording. Electroencephalography and Clinical Neurophysiology, 1994, 90, 376-383.	0.3	127
11	A physical model for threshold voltage instability in Si_3N_4 -gate H^+ -sensitive FET's (pH) T_j EQq1 1 0.784314 $\text{rgBT} / \text{Over}$	3.0	116
12	Development-on-chip: <i>in vitro</i> neural tube patterning with a microfluidic device. Development (Cambridge), 2016, 143, 1884-1892.	2.5	116
13	An Integrated Sensor for Electrochemical Measurements. IEEE Transactions on Biomedical Engineering, 1986, BME-33, 83-90.	4.2	102
14	Active Load Control for Airfoils using Microtabs. Journal of Solar Energy Engineering, Transactions of the ASME, 2001, 123, 282-289.	1.8	91
15	Mechanism of nanowire formation in metal assisted chemical etching. Electrochimica Acta, 2013, 92, 139-147.	5.2	90
16	Removable tubing interconnects for glass-based micro-fluidic systems made using ECDM. Journal of Micromechanics and Microengineering, 2004, 14, 535-541.	2.6	89
17	Vaporizing liquid microthruster. Sensors and Actuators A: Physical, 2000, 83, 231-236.	4.1	78
18	Microchannel Platform for the Study of Endothelial Cell Shape and Function. Biomedical Microdevices, 2002, 4, 9-16.	2.8	67

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19	Nanopore formation by low-energy focused electron beam machining. <i>Nanotechnology</i> , 2010, 21, 375301.	2.6	65
20	Porous silicon microstructure as studied by transmission electron microscopy. <i>Applied Physics Letters</i> , 1989, 55, 1540-1542.	3.3	61
21	Nanopore with transverse nanoelectrodes for electrical characterization and sequencing of DNA. <i>Sensors and Actuators B: Chemical</i> , 2008, 132, 593-600.	7.8	59
22	Fourier-transform optical microsystems. <i>Optics Letters</i> , 1999, 24, 844.	3.3	58
23	Electrophoresis Separation in Open Microchannels. A Method for Coupling Electrophoresis with MALDI-MS. <i>Analytical Chemistry</i> , 2001, 73, 2147-2151.	6.5	57
24	Electrochemiluminescence of Tris(2,2'-bipyridine)ruthenium in Water at Carbon Microelectrodes. <i>Analytical Chemistry</i> , 1998, 70, 4157-4161.	6.5	56
25	Micromachined packaging for chemical microsensors. <i>IEEE Transactions on Electron Devices</i> , 1988, 35, 787-792.	3.0	50
26	The electron beam hole drilling of silicon nitride thin films. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	50
27	Generalized model for the diffusion-limited aggregation and Eden models of cluster growth. <i>Physical Review A</i> , 1989, 39, 5409-5413.	2.5	48
28	The potential dependence of silicon anisotropic etching in KOH at 60°C. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1987, 238, 103-113.	0.1	46
29	A microfabricated, electrochemiluminescence cell for the detection of amplified DNA. <i>Sensors and Actuators B: Chemical</i> , 1996, 33, 110-114.	7.8	45
30	DNA quantification with an electrochemiluminescence microcell. <i>Sensors and Actuators B: Chemical</i> , 1998, 49, 1-4.	7.8	45
31	Interlocking mechanical and fluidic interconnections for microfluidic circuit boards. <i>Sensors and Actuators A: Physical</i> , 2004, 112, 18-24.	4.1	45
32	A micromachined pressure sensor with fiber-optic interferometric readout. <i>Sensors and Actuators A: Physical</i> , 1994, 43, 196-201.	4.1	43
33	A Micromachined Double-Tuned NMR Microprobe. <i>Analytical Chemistry</i> , 2003, 75, 5030-5036.	6.5	42
34	A microfabricated electromagnetic linear synchronous motor. <i>Sensors and Actuators A: Physical</i> , 2005, 121, 566-575.	4.1	39
35	Preparation of surfactant-stabilized gold nanoparticle-peptide nucleic acid conjugates. <i>Journal of Nanoparticle Research</i> , 2010, 12, 2363-2369.	1.9	38
36	Electrostatically protected ion sensitive field effect transistors. <i>Sensors and Actuators</i> , 1984, 5, 127-136.	1.7	37

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37	Microsensor packaging and system partitioning. <i>Sensors and Actuators</i> , 1988, 15, 221-234.	1.7	37
38	A bulk micromachined silicon thermopile with high sensitivity. <i>Sensors and Actuators A: Physical</i> , 2003, 104, 32-39.	4.1	36
39	Silicon wafer-to-wafer bonding at $T < 200^{\circ}\text{C}$ with polymethylmethacrylate. <i>Applied Physics Letters</i> , 1994, 65, 439-441.	3.3	32
40	MicroJoinery: concept, definition, and application to microsystem development. <i>Sensors and Actuators A: Physical</i> , 1998, 66, 315-332.	4.1	32
41	The design and fabrication of a magnetically actuated micromachined flow valve. <i>Sensors and Actuators A: Physical</i> , 1990, 24, 47-53.	4.1	30
42	Microfabricated surface plasmon sensing system. <i>Sensors and Actuators A: Physical</i> , 1994, 43, 202-207.	4.1	30
43	An active, microfabricated, scalp electrode array for EEG recording. <i>Sensors and Actuators A: Physical</i> , 1996, 54, 606-611.	4.1	24
44	Electron beam stimulated oxidation of carbon. <i>Nanotechnology</i> , 2009, 20, 465301.	2.6	24
45	Porous silicon morphologies and formation mechanism. <i>Sensors and Actuators A: Physical</i> , 1990, 23, 825-829.	4.1	23
46	Fabrication and characterization of a solid-state nanopore with self-aligned carbon nanoelectrodes for molecular detection. <i>Nanotechnology</i> , 2012, 23, 135501.	2.6	23
47	Transient Phenomena in Ion Sensitive Field Effect Transistors. <i>Journal of the Electrochemical Society</i> , 1980, 127, 1599-1603.	2.9	21
48	Biomolecule detection via target mediated nanoparticle aggregation and dielectrophoretic impedance measurement. <i>Lab on A Chip</i> , 2005, 5, 606.	6.0	21
49	Dielectrophoretic manipulation of finite sized species and the importance of the quadrupolar contribution. <i>Physical Review E</i> , 2004, 70, 066617.	2.1	17
50	Electrostatic inchworm microsystem with long range translation. <i>Sensors and Actuators A: Physical</i> , 2004, 114, 379-386.	4.1	17
51	Anodic Passivation of {111} Silicon in KOH . <i>Journal of the Electrochemical Society</i> , 1988, 135, 2001-2008.	2.9	16
52	Photomediated crosslinking of cinnamated PDMS for <i>in situ</i> direct photopatterning. <i>Journal of Polymer Science Part A</i> , 2008, 46, 3482-3487.	2.3	16
53	An electron microscopy investigation of the structure of porous silicon by oxide replication. <i>Nanotechnology</i> , 2008, 19, 225301.	2.6	16
54	Movable micromachined silicon plates with integrated position sensing. <i>Sensors and Actuators A: Physical</i> , 1990, 21, 211-214.	4.1	15

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55	A field-deployable colorimetric bioassay for the rapid and specific detection of ribosomal RNA. <i>Biosensors and Bioelectronics</i> , 2014, 52, 433-437.	10.1	15
56	Microfluidic device for the combinatorial application and maintenance of dynamically imposed diffusional gradients. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 613-622.	2.2	14
57	A microfluidic approach to rescue ALS motor neuron degeneration using rapamycin. <i>Scientific Reports</i> , 2021, 11, 18168.	3.3	12
58	Micromachined, silicon filament light source for spectrophotometric microsystems. <i>Applied Optics</i> , 2003, 42, 2388.	2.1	11
59	Spectroscopic Analysis of Hemolymph from the American Lobster (<i>Homarus americanus</i>). <i>Journal of Shellfish Research</i> , 2009, 28, 905-912.	0.9	11
60	Thermally actuated, bistable, oxide/silicon/metal membranes. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 40-47.	2.6	10
61	Fabrication of nano-gap electrodes and nano wires using an electrochemical and chemical etching technique. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 045016.	2.6	9
62	A wafer-to-wafer alignment technique. <i>Sensors and Actuators</i> , 1989, 20, 315-316.	1.7	8
63	A New Technique for Determination of Tensile Stress in Thin Films. <i>Journal of the Electrochemical Society</i> , 1989, 136, 1566-1568.	2.9	8
64	Thick films of silicon nitride. <i>Sensors and Actuators A: Physical</i> , 1990, 23, 830-834.	4.1	8
65	Surface-plasmon excitation using a polarization-preserving optical fiber and an index-matching fluid optical cell. <i>Applied Optics</i> , 1993, 32, 2901.	2.1	8
66	Solid-Phase Direct Write (SPDW) of Carbon via Scanning Force Microscopy. <i>Nano Letters</i> , 2007, 7, 1512-1515.	9.1	8
67	Rapid Colorimetric Detection of the Fungal Phytopathogen <i>Synchytrium endobioticum</i> Using Cyanine dye-Indicated PNA Hybridization. <i>American Journal of Potato Research</i> , 2015, 92, 398-409.	0.9	8
68	Title is missing!. <i>Biomedical Microdevices</i> , 2000, 2, 221-229.	2.8	6
69	Nanopore with Transverse Nanoelectrodes for Electrical Characterization and Sequencing of DNA. , 2007, , .		5
70	Microneedle array with integrated microchannels for transdermal sample extraction and in situ analysis. , 0, , .		4
71	A Low-noise Low-offset Op Amp in 0.35μm CMOS Process. , 2006, , .		4
72	The Applications of In Situ Electron Energy Loss Spectroscopy to the Study of Electron Beam Nanofabrication. <i>Microscopy and Microanalysis</i> , 2009, 15, 204-212.	0.4	4

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73	Electrostatic actuators with long range translation. , 0, , .		3
74	<title>Fabrication and design of open microchannels for capillary electrophoresis separations and matrix-assisted laser/desorption mass spectroscopy analysis</title>. , 1999, 3606, 137.		2
75	Thermally actuated, bi-stable, snapping silicon membranes. , 0, , .		2
76	Electrical characterization of a carbon nanoelectrode instrumented nanopore sensor. , 2009, , .		2
77	Low-cost colorimeter development for the field-based detection of harmful algal blooms. , 2011, , .		2
78	Directing the spatial patterning of motor neuron differentiation in engineered microenvironments. , 2016, 2016, 477-480.		2
79	<title>Micromachined fiber optic pressure sensor for in-vivo biomedical applications</title>. , 1993, , .		1
80	Microfabricated high-energy particle detector. Sensors and Actuators A: Physical, 1996, 54, 594-600.	4.1	1
81	<title>Electrochemiluminescence at microelectrodes for biosensing</title>. , 1997, 2978, 64.		1
82	<title>Microjoinery for optomechanical systems</title>. , 1997, 3008, 171.		1
83	<title>Modular microinstrumentation for endothelial cell research</title>. , 2000, , .		1
84	<title>Miniature linear synchronous motor</title>. , 2003, , .		1
85	Electron Beam Stimulated Oxidation of Carbon (EBSOC). , 2009, , .		1
86	A microfabricated, flow driven mill for the mechanical lysis of algae. , 2015, , .		1
87	Dermal ISF Collection Using a Si Microneedle Array. , 2020, , .		1
88	Materials And Technologies For Microstructure Engineering. Proceedings of SPIE, 1989, 1068, 10.	0.8	0
89	The Relationship of Porous Silicon Film Morphology to The Photoluminescence Spectra. Materials Research Society Symposia Proceedings, 1993, 298, 193.	0.1	0
90	<title>Modular assembly and interconnects for fluidic microsystems</title>. , 1998, , .		0

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91	<title>Long-range translation actuator</title>. , 2000, 3912, 158.		0
92	A single-fringe etalon silicon pressure transducer. Sensors and Actuators A: Physical, 2000, 86, 21-25.	4.1	0
93	Micro-Instruments for BioMedicine. , 2006, 6223, 83.		0
94	Analysis of G-wire DNA Conductivity. AIP Conference Proceedings, 2006, , .	0.4	0
95	Solid Phase Direct Write (SPDW) of Carbon Via Scanning Force Microscopy. , 2007, , .		0
96	A Multi-Parameter Platform For Gas Sensing Using Semiconducting Metal Oxide Films. , 2007, , .		0
97	Application of solid phase direct write (SPDW) via scanning force microscopy for electrical devices and sensors. , 2008, , .		0
98	Development of a direct detection method for Alexandrium spp. Using surface plasmon resonance and peptide nucleic acid probes.. , 2009, , .		0
99	Fabrication and characterization of a solid state nanopore with self-aligned carbon nanoelectrodes for molecular detection. , 2012, , .		0
100	MEMS Micromixer for Ultra Fast Mixing of Fluids. , 2020, , .		0