

Scott D Collins

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7278511/publications.pdf>

Version: 2024-02-01

95
papers

4,817
citations

94433

37
h-index

95266

68
g-index

95
all docs

95
docs citations

95
times ranked

3697
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_2F_4 Solution. Journal of the Electrochemical Society, 1989, 136, 1561-1565.	2.9	237
5	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
6	A theoretical model of the formation morphologies of porous silicon. Journal of Electronic Materials, 1988, 17, 533-541.	2.2	157
7	Frequency Dependence of Gold Nanoparticle Superassembly by Dielectrophoresis. Langmuir, 2007, 23, 12450-12456.	3.5	130
8	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
9	A physical model for threshold voltage instability in Si_3N_4 -gate H^+ -sensitive FET's (pH) T_j EQq1 1 0.784314 pgBT/Ov	3.0	116
10	Development-on-chip: <i>in vitro</i> neural tube patterning with a microfluidic device. Development (Cambridge), 2016, 143, 1884-1892.	2.5	116
11	An Integrated Sensor for Electrochemical Measurements. IEEE Transactions on Biomedical Engineering, 1986, BME-33, 83-90.	4.2	102
12	Active Load Control for Airfoils using Microtabs. Journal of Solar Energy Engineering, Transactions of the ASME, 2001, 123, 282-289.	1.8	91
13	Mechanism of nanowire formation in metal assisted chemical etching. Electrochimica Acta, 2013, 92, 139-147.	5.2	90
14	Removable tubing interconnects for glass-based micro-fluidic systems made using ECDM. Journal of Micromechanics and Microengineering, 2004, 14, 535-541.	2.6	89
15	Trapping forces in a multiple-beam fiber-optic trap. Applied Optics, 1997, 36, 6423.	2.1	79
16	Vaporizing liquid microthruster. Sensors and Actuators A: Physical, 2000, 83, 231-236.	4.1	78
17	A critical evaluation of the mechanism of potential response of antigen polymer membranes to the corresponding antiserum. Analytica Chimica Acta, 1982, 136, 93-99.	5.4	77
18	Etch Stop Techniques for Micromachining. Journal of the Electrochemical Society, 1997, 144, 2242-2262.	2.9	74

#	ARTICLE	IF	CITATIONS
19	Microchannel Platform for the Study of Endothelial Cell Shape and Function. <i>Biomedical Microdevices</i> , 2002, 4, 9-16.	2.8	67
20	Nanopore formation by low-energy focused electron beam machining. <i>Nanotechnology</i> , 2010, 21, 375301.	2.6	65
21	Porous silicon microstructure as studied by transmission electron microscopy. <i>Applied Physics Letters</i> , 1989, 55, 1540-1542.	3.3	61
22	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
23	Fourier-transform optical microsystems. <i>Optics Letters</i> , 1999, 24, 844.	3.3	58
24	Electrophoresis Separation in Open Microchannels. A Method for Coupling Electrophoresis with MALDI-MS. <i>Analytical Chemistry</i> , 2001, 73, 2147-2151.	6.5	57
25	Electrochemiluminescence of Tris(2,2'-bipyridine)ruthenium in Water at Carbon Microelectrodes. <i>Analytical Chemistry</i> , 1998, 70, 4157-4161.	6.5	56
26	The excess enthalpies of 10 (n-pentane + an n-alkanol) mixtures at 298.15 K. <i>Journal of Chemical Thermodynamics</i> , 1980, 12, 609-614.	2.0	50
27	Micromachined packaging for chemical microsensors. <i>IEEE Transactions on Electron Devices</i> , 1988, 35, 787-792.	3.0	50
28	The electron beam hole drilling of silicon nitride thin films. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	50
29	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
30	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
31	DNA quantification with an electrochemiluminescence microcell. <i>Sensors and Actuators B: Chemical</i> , 1998, 49, 1-4.	7.8	45
32	Interlocking mechanical and fluidic interconnections for microfluidic circuit boards. <i>Sensors and Actuators A: Physical</i> , 2004, 112, 18-24.	4.1	45
33	A micromachined pressure sensor with fiber-optic interferometric readout. <i>Sensors and Actuators A: Physical</i> , 1994, 43, 196-201.	4.1	43
34	The excess enthalpies of 10 (n-butane + alcohol) mixtures at 298.15 K. <i>Journal of Chemical Thermodynamics</i> , 1981, 13, 41-46.	2.0	42
35	A Micromachined Double-Tuned NMR Microprobe. <i>Analytical Chemistry</i> , 2003, 75, 5030-5036.	6.5	42
36	A microfabricated electromagnetic linear synchronous motor. <i>Sensors and Actuators A: Physical</i> , 2005, 121, 566-575.	4.1	39

#	ARTICLE	IF	CITATIONS
37	Preparation of surfactant-stabilized gold nanoparticle-peptide nucleic acid conjugates. <i>Journal of Nanoparticle Research</i> , 2010, 12, 2363-2369.	1.9	38
38	A bulk micromachined silicon thermopile with high sensitivity. <i>Sensors and Actuators A: Physical</i> , 2003, 104, 32-39.	4.1	36
39	MicroJoinery: concept, definition, and application to microsystem development. <i>Sensors and Actuators A: Physical</i> , 1998, 66, 315-332.	4.1	32
40	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
41	Microfabricated surface plasmon sensing system. <i>Sensors and Actuators A: Physical</i> , 1994, 43, 202-207.	4.1	30
42	Microinstrument gradient-force optical trap. <i>Applied Optics</i> , 1999, 38, 6068.	2.1	30
43	Electron beam stimulated oxidation of carbon. <i>Nanotechnology</i> , 2009, 20, 465301.	2.6	24
44	Porous silicon morphologies and formation mechanism. <i>Sensors and Actuators A: Physical</i> , 1990, 23, 825-829.	4.1	23
45	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
46	Biomolecule detection via target mediated nanoparticle aggregation and dielectrophoretic impedance measurement. <i>Lab on A Chip</i> , 2005, 5, 606.	6.0	21
47	Practical limits for solid-state reference electrodes. <i>Sensors and Actuators B: Chemical</i> , 1993, 10, 169-178.	7.8	20
48	Development of low field nuclear magnetic resonance microcoils. <i>Review of Scientific Instruments</i> , 2005, 76, 024101.	1.3	20
49	Electrostatic inchworm microsystem with long range translation. <i>Sensors and Actuators A: Physical</i> , 2004, 114, 379-386.	4.1	17
50	Anodic Passivation of {111} Silicon in 10% KOH. <i>Journal of the Electrochemical Society</i> , 1988, 135, 2001-2008.	2.9	16
51	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
52	An electron microscopy investigation of the structure of porous silicon by oxide replication. <i>Nanotechnology</i> , 2008, 19, 225301.	2.6	16
53	Integration of biaxial planar gradient coils and an RF microcoil for NMR flow imaging. <i>Measurement Science and Technology</i> , 2005, 16, 505-512.	2.6	15
54	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

#	ARTICLE	IF	CITATIONS
55	Nuclear magnetic resonance imaging for viscosity measurements of non-Newtonian fluids using a miniaturized RF coil. <i>Measurement Science and Technology</i> , 2005, 16, 513-518.	2.6	14
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	Fractal transitions in diffusion-limited cluster formation. <i>Physical Review A</i> , 1991, 43, 3165-3167.	2.5	10
61	Thermally actuated, bistable, oxide/silicon/metal membranes. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 40-47.	2.6	10
62	A wafer-to-wafer alignment technique. <i>Sensors and Actuators</i> , 1989, 20, 315-316.	1.7	8
63	Thick films of silicon nitride. <i>Sensors and Actuators A: Physical</i> , 1990, 23, 830-834.	4.1	8
64	Solid-Phase Direct Write (SPDW) of Carbon via Scanning Force Microscopy. <i>Nano Letters</i> , 2007, 7, 1512-1515.	9.1	8
65	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
66	Title is missing!. <i>Biomedical Microdevices</i> , 2000, 2, 221-229.	2.8	6
67	Nanopore with Transverse Nanoelectrodes for Electrical Characterization and Sequencing of DNA. , 2007, , .		5
68	Microneedle array with integrated microchannels for transdermal sample extraction and in situ analysis. , 0, , .		4
69	A Low-noise Low-offset Op Amp in 0.35μm CMOS Process. , 2006, , .		4
70	MEASUREMENT OF FLUID FOOD VISCOSITY USING MICROFABRICATED RADIO FREQUENCY COILS. <i>Journal of Texture Studies</i> , 2006, 37, 607-619.	2.5	4
71	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
72	Electrostatic actuators with long range translation. , 0, , .		3

#	ARTICLE	IF	CITATIONS
73	<title>Micromachined optical trap for use as a microcytology workstation</title>. , 1997, , .		2
74	Thermally actuated, bi-stable, snapping silicon membranes. , 0, , .		2
75	Electrical characterization of a carbon nanoelectrode instrumented nanopore sensor. , 2009, , .		2
76	Low-cost colorimeter development for the field-based detection of harmful algal blooms. , 2011, , .		2
77	<title>Micromachined fiber optic pressure sensor for in-vivo biomedical applications</title>. , 1993, , .		1
78	<title>Electrochemiluminescence at microelectrodes for biosensing</title>. , 1997, 2978, 64.		1
79	<title>Microjoinery for optomechanical systems</title>. , 1997, 3008, 171.		1
80	<title>Acoustic wave device for the translation of microparticles</title>. , 1997, , .		1
81	<title>Modular microinstrumentation for endothelial cell research</title>. , 2000, , .		1
82	Microsystems engineering. , 2001, , .		1
83	<title>Miniature linear synchronous motor</title>. , 2003, , .		1
84	Electron Beam Stimulated Oxidation of Carbon (EBSOC). , 2009, , .		1
85	A microfabricated, flow driven mill for the mechanical lysis of algae. , 2015, , .		1
86	<title>Modular assembly and interconnects for fluidic microsystems</title>. , 1998, , .		0
87	<title>Long-range translation actuator</title>. , 2000, 3912, 158.		0
88	A single-fringe etalon silicon pressure transducer. Sensors and Actuators A: Physical, 2000, 86, 21-25.	4.1	0
89	Micro-Instruments for BioMedicine. , 2006, 6223, 83.		0
90	Analysis of G-wire DNA Conductivity. AIP Conference Proceedings, 2006, , .	0.4	0

#	ARTICLE	IF	CITATIONS
91	Solid Phase Direct Write (SPDW) of Carbon Via Scanning Force Microscopy. , 2007, , .		0
92	A Multi-Parameter Platform For Gas Sensing Using Semiconducting Metal Oxide Films. , 2007, , .		0
93	Application of solid phase direct write (SPDW) via scanning force microscopy for electrical devices and sensors. , 2008, , .		0
94	Fabrication and characterization of a solid state nanopore with self-aligned carbon nanoelectrodes for molecular detection. , 2012, , .		0
95	Analytical and Semipreparative HPLC Analysis and Isolation of Hemocyanin from the American Lobster <i>Homarus americanus</i> . Journal of Shellfish Research, 2014, 33, 11-17.	0.9	0