Scott D Collins

List of Publications by Year
in descending order

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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	A microfluidic approach to rescue ALS motor neuron degeneration using rapamycin. Scientific Reports, 2021, 11, 18168.	3.3	12
2	Development-on-chip: in vitro neural tube patterning with a microfluidic device. Development (Cambridge), 2016, 143, 1884-1892.	2.5	116
3	A microfabricated, flow driven mill for the mechanical lysis of algae. , 2015, , .		1
4	Rapid Colorimetric Detection of the Fungal Phytopathogen Synchytrium endobioticum Using Cyanine dye-Indicated PNA Hybridization. American Journal of Potato Research, 2015, 92, 398-409.	0.9	8
5	Analytical and Semipreparative HPLC Analysis and Isolation of Hemocyanin from the American LobsterHomarus americanus. Journal of Shellfish Research, 2014, 33, 11-17.	0.9	0
6	A field-deployable colorimetric bioassay for the rapid and specific detection of ribosomal RNA. Biosensors and Bioelectronics, 2014, 52, 433-437.	10.1	15
7	Mechanism of nanowire formation in metal assisted chemical etching. Electrochimica Acta, 2013, 92, 139-147.	5.2	90
8	Fabrication and characterization of a solid-state nanopore with self-aligned carbon nanoelectrodes for molecular detection. Nanotechnology, 2012, 23, 135501.	2.6	23
9	Fabrication and characterization of a solid state nanopore with self-aligned carbon nanoelectrodes for molecular detection. , 2012, , .		0
10	Low-cost colorimeter development for the field-based detection of harmful algal blooms. , 2011, , .		2
11	Microfluidic device for the combinatorial application and maintenance of dynamically imposed diffusional gradients. Microfluidics and Nanofluidics, 2010, 9, 613-622.	2.2	14
12	Preparation of surfactant-stabilized gold nanoparticleâ€“peptide nucleic acid conjugates. Journal of Nanoparticle Research, 2010, 12, 2363-2369.	1.9	38
13	Nanopore formation by low-energy focused electron beam machining. Nanotechnology, 2010, 21, 375301.	2.6	65
14	Electrical characterization of a carbon nanoelectrode instrumented nanopore sensor. , 2009, , .		2
15	Electron Beam Stimulated Oxidation of Carbon (EBSOC). , 2009, , .		1
16	Spectroscopic Analysis of Hemolymph from the American Lobster (Homarus americanus). Journal of Shellfish Research, 2009, 28, 905-912.	0.9	11
17	Electron beam stimulated oxidation of carbon. Nanotechnology, 2009, 20, 465301.	2.6	24
18	The Applications ofIn SituElectron Energy Loss Spectroscopy to the Study of Electron Beam Nanofabrication. Microscopy and Microanalysis, 2009, 15, 204-212.	0.4	4

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19	Photomediated crosslinking of cinnamated PDMS for in situ direct photopatterning. Journal of Polymer Science Part A, 2008, 46, 3482-3487.	2.3	16
20	Nanopore with transverse nanoelectrodes for electrical characterization and sequencing of DNA. Sensors and Actuators B: Chemical, 2008, 132, 593-600.	7.8	59
21	An electron microscopy investigation of the structure of porous silicon by oxide replication. Nanotechnology, 2008, 19, 225301.	2.6	16
22	The electron beam hole drilling of silicon nitride thin films. Journal of Applied Physics, 2008, 103, .	2.5	50
23	Application of solid phase direct write (SPDW) via scanning force microscopy for electrical devices and sensors. , 2008, , .		0
24	Solid Phase Direct Write (SPDW) of Carbon Via Scanning Force Microscopy. , 2007, , .		0
25	A Multi-Parameter Platform For Gas Sensing Using Semiconducting Metal Oxide Films. , 2007, , .		0
26	Nanopore with Transverse Nanoelectrodes for Electrical Characterization and Sequencing of DNA. , 2007, , .		5
27	Solid-Phase Direct Write (SPDW) of Carbon via Scanning Force Microscopy. Nano Letters, 2007, 7, 1512-1515.	9.1	8
28	Frequency Dependence of Gold Nanoparticle Superassembly by Dielectrophoresis. Langmuir, 2007, 23, 12450-12456.	3.5	130
29	A Low-noise Low-offset Op Amp in 0.35μm CMOS Process. , 2006, , .		4
30	Micro-Instruments for BioMedicine. , 2006, 6223, 83.		0
31	Analysis of G-wire DNA Conductivity. AIP Conference Proceedings, 2006, , .	0.4	0
32	MEASUREMENT OF FLUID FOOD VISCOSITY USING MICROFABRICATED RADIO FREQUENCY COILS. Journal of Texture Studies, 2006, 37, 607-619.	2.5	4
33	Thermally actuated, bistable, oxide/silicon/metal membranes. Journal of Micromechanics and Microengineering, 2006, 16, 40-47.	2.6	10
34	A microfabricated electromagnetic linear synchronous motor. Sensors and Actuators A: Physical, 2005, 121, 566-575.	4.1	39
35	Nuclear magnetic resonance imaging for viscosity measurements of non-Newtonian fluids using a miniaturized RF coil. Measurement Science and Technology, 2005, 16, 513-518.	2.6	14
36	Biomolecule detection via target mediated nanoparticle aggregation and dielectrophoretic impedance measurement. Lab on A Chip, 2005, 5, 606.	6.0	21

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37	Integration of biaxial planar gradient coils and an RF microcoil for NMR flow imaging. Measurement Science and Technology, 2005, 16, 505-512.	2.6	15
38	Development of low field nuclear magnetic resonance microcoils. Review of Scientific Instruments, 2005, 76, 024101.	1.3	20
39	Removable tubing interconnects for glass-based micro-fluidic systems made using ECDM. Journal of Micromechanics and Microengineering, 2004, 14, 535-541.	2.6	89
40	Interlocking mechanical and fluidic interconnections for microfluidic circuit boards. Sensors and Actuators A: Physical, 2004, 112, 18-24.	4.1	45
41	Microneedle array for transdermal biological fluid extraction and in situ analysis. Sensors and Actuators A: Physical, 2004, 114, 267-275.	4.1	263
42	Electrostatic inchworm microsystem with long range translation. Sensors and Actuators A: Physical, 2004, 114, 379-386.	4.1	17
43	A bulk micromachined silicon thermopile with high sensitivity. Sensors and Actuators A: Physical, 2003, 104, 32-39.	4.1	36
44	A Micromachined Double-Tuned NMR Microprobe. Analytical Chemistry, 2003, 75, 5030-5036.	6.5	42
45	Micromachined, silicon filament light source for spectrophotometric microsystems. Applied Optics, 2003, 42, 2388.	2.1	11
46	<title>Miniature linear synchronous motor</title>. , 2003, , .		1
47	Microchannel Platform for the Study of Endothelial Cell Shape and Function. Biomedical Microdevices, 2002, 4, 9-16.	2.8	67
48	Electrophoresis Separation in Open Microchannels. A Method for Coupling Electrophoresis with MALDI-MS. Analytical Chemistry, 2001, 73, 2147-2151.	6.5	57
49	Microsystems engineering. , 2001, , .		1
50	Active Load Control for Airfoils using Microtabs. Journal of Solar Energy Engineering, Transactions of the ASME, 2001, 123, 282-289.	1.8	91
51	<title>Long-range translation actuator</title>. , 2000, 3912, 158.		0
52	<title>Modular microinstrumentation for endothelial cell research</title>. , 2000, , .		1
53	A single-fringe etalon silicon pressure transducer. Sensors and Actuators A: Physical, 2000, 86, 21-25.	4.1	0
54	Vaporizing liquid microthruster. Sensors and Actuators A: Physical, 2000, 83, 231-236.	4.1	78

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55	Title is missing!. Biomedical Microdevices, 2000, 2, 221-229.	2.8	6
56	Microinstrument gradient-force optical trap. Applied Optics, 1999, 38, 6068.	2.1	30
57	Fourier-transform optical microsystems. Optics Letters, 1999, 24, 844.	3.3	58
58	A physical model for threshold voltage instability in Si/sub 3/N/sub 4/-gate H/sup +/-sensitive FET's (pH) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.0	116
59	MicroJoinery: concept, definition, and application to microsystem development. Sensors and Actuators A: Physical, 1998, 66, 315-332.	4.1	32
60	Fluidic interconnects for modular assembly of chemical microsystems. Sensors and Actuators B: Chemical, 1998, 49, 40-45.	7.8	247
61	DNA quantification with an electrochemiluminescence microcell. Sensors and Actuators B: Chemical, 1998, 49, 1-4.	7.8	45
62	Electrochemiluminescence of Tris(2,2â€˜-bipyridine)ruthenium in Water at Carbon Microelectrodes. Analytical Chemistry, 1998, 70, 4157-4161.	6.5	56
63	<title>Modular assembly and interconnects for fluidic microsystems</title>. , 1998, , .		0
64	<title>Electrochemiluminescence at microelectrodes for biosensing</title>. , 1997, 2978, 64.		1
65	<title>Microjoinery for optomechanical systems</title>. , 1997, 3008, 171.		1
66	<title>Micromachined optical trap for use as a microcytology workstation</title>. , 1997, , .		2
67	<title>Acoustic wave device for the translation of microparticles</title>. , 1997, , .		1
68	Etch Stop Techniques for Micromachining. Journal of the Electrochemical Society, 1997, 144, 2242-2262.	2.9	74
69	Trapping forces in a multiple-beam fiber-optic trap. Applied Optics, 1997, 36, 6423.	2.1	79
70	A micromachined pressure sensor with fiber-optic interferometric readout. Sensors and Actuators A: Physical, 1994, 43, 196-201.	4.1	43
71	Microfabricated surface plasmon sensing system. Sensors and Actuators A: Physical, 1994, 43, 202-207.	4.1	30
72	Practical limits for solid-state reference electrodes. Sensors and Actuators B: Chemical, 1993, 10, 169-178.	7.8	20

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73	<title>Micromachined fiber optic pressure sensor for in-vivo biomedical applications</title>. , 1993, , .		1
74	Porous silicon formation mechanisms. Journal of Applied Physics, 1992, 71, R1-R22.	2.5	1,041
75	Fractal transitions in diffusion-limited cluster formation. Physical Review A, 1991, 43, 3165-3167.	2.5	10
76	The design and fabrication of a magnetically actuated micromachined flow valve. Sensors and Actuators A: Physical, 1990, 24, 47-53.	4.1	30
77	Thick films of silicon nitride. Sensors and Actuators A: Physical, 1990, 23, 830-834.	4.1	8
78	Porous silicon morpbologies and formation mechanism. Sensors and Actuators A: Physical, 1990, 23, 825-829.	4.1	23
79	Generalized model for the diffusion-limited aggregation and Eden models of cluster growth. Physical Review A, 1989, 39, 5409-5413.	2.5	48
80	Porous silicon microstructure as studied by transmission electron microscopy. Applied Physics Letters, 1989, 55, 1540-1542.	3.3	61
81	A wafer-to-wafer alignment technique. Sensors and Actuators, 1989, 20, 315-316.	1.7	8
82	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
83	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
84	Porous Silicon Formation and Electropolishing of Silicon by Anodic Polarization in â€‰HFâ€‰ Solution. Journal of the Electrochemical Society, 1989, 136, 1561-1565.	2.9	237
85	Micromachined packaging for chemical microsensors. IEEE Transactions on Electron Devices, 1988, 35, 787-792.	3.0	50
86	A theoretical model of the formation morphologies of porous silicon. Journal of Electronic Materials, 1988, 17, 533-541.	2.2	157
87	Anodic Passivation of {111} Silicon in â€‰KOH. Journal of the Electrochemical Society, 1988, 135, 2001-2008.	2.9	16
88	The potential dependence of silicon anisotropic etching in KOH at 60Â°c. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1987, 238, 103-113.	0.1	46
89	An Integrated Sensor for Electrochemical Measurements. IEEE Transactions on Biomedical Engineering, 1986, BME-33, 83-90.	4.2	102
90	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

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91	The excess enthalpies of 10 (n-butane + alcohol) mixtures at 298.15 K. Journal of Chemical Thermodynamics, 1981, 13, 41-46.	2.0	42
92	The excess enthalpies of 10 (n-pentane + an n-alkanol) mixtures at 298.15 K. Journal of Chemical Thermodynamics, 1980, 12, 609-614.	2.0	50
93	Thermally actuated, bi-stable, snapping silicon membranes. , 0, , .		2
94	Microneedle array with integrated microchannels for transdermal sample extraction and in situ analysis. , 0, , .		4
95	Electrostatic actuators with long range translation. , 0, , .		3