

Nicolas G Green

List of Publications by Year in descending order

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97
papers

7,145
citations

66336

42
h-index

76898

74
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101
all docs

101
docs citations

101
times ranked

4312
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrohydrodynamics and dielectrophoresis in microsystems: scaling laws. <i>Journal Physics D: Applied Physics</i> , 2003, 36, 2584-2597.	2.8	587
2	Separation of Submicron Bioparticles by Dielectrophoresis. <i>Biophysical Journal</i> , 1999, 77, 516-525.	0.5	492
3	AC Electric-Field-Induced Fluid Flow in Microelectrodes. <i>Journal of Colloid and Interface Science</i> , 1999, 217, 420-422.	9.4	458
4	Fluid flow induced by nonuniform ac electric fields in electrolytes on microelectrodes. I. Experimental measurements. <i>Physical Review E</i> , 2000, 61, 4011-4018.	2.1	434
5	Single cell dielectric spectroscopy. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 61-70.	2.8	365
6	Fluid flow induced by nonuniform ac electric fields in electrolytes on microelectrodes. II. A linear double-layer analysis. <i>Physical Review E</i> , 2000, 61, 4019-4028.	2.1	332
7	Electrothermally induced fluid flow on microelectrodes. <i>Journal of Electrostatics</i> , 2001, 53, 71-87.	1.9	251
8	Dielectrophoresis of Submicrometer Latex Spheres. 1. Experimental Results. <i>Journal of Physical Chemistry B</i> , 1999, 103, 41-50.	2.6	214
9	Dielectrophoretic manipulation of rod-shaped viral particles. <i>Journal of Electrostatics</i> , 1997, 42, 279-293.	1.9	207
10	Ac electrokinetics: a survey of sub-micrometre particle dynamics. <i>Journal Physics D: Applied Physics</i> , 2000, 33, 632-641.	2.8	200
11	The dielectrophoretic and travelling wave forces generated by interdigitated electrode arrays: analytical solution using Fourier series. <i>Journal Physics D: Applied Physics</i> , 2001, 34, 1553-1561.	2.8	185
12	High throughput particle analysis: Combining dielectrophoretic particle focussing with confocal optical detection. <i>Biosensors and Bioelectronics</i> , 2006, 21, 1621-1630.	10.1	158
13	Manipulation and trapping of sub-micron bioparticles using dielectrophoresis. <i>Journal of Proteomics</i> , 1997, 35, 89-102.	2.4	156
14	Numerical solution of the dielectrophoretic and travelling wave forces for interdigitated electrode arrays using the finite element method. <i>Journal of Electrostatics</i> , 2002, 56, 235-254.	1.9	155
15	Negative DEP traps for single cell immobilisation. <i>Lab on A Chip</i> , 2009, 9, 1534.	6.0	154
16	Dielectrophoretic separation of nano-particles. <i>Journal Physics D: Applied Physics</i> , 1997, 30, L41-L44.	2.8	147
17	Electrothermal flows generated by alternating and rotating electric fields in microsystems. <i>Journal of Fluid Mechanics</i> , 2006, 564, 415.	3.4	142
18	Separation of submicrometre particles using a combination of dielectrophoretic and electrohydrodynamic forces. <i>Journal Physics D: Applied Physics</i> , 1998, 31, L25-L30.	2.8	123

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19	Dielectric spectroscopy of single cells: time domain analysis using Maxwell's mixture equation. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 1-8.	2.8	122
20	Large-area travelling-wave dielectrophoresis particle separator. <i>Journal of Micromechanics and Microengineering</i> , 1997, 7, 65-70.	2.6	113
21	Field-effect sensors from pH sensing to biosensing: sensitivity enhancement using streptavidin-biotin as a model system. <i>Analyst</i> , 2017, 142, 4173-4200.	3.5	109
22	High speed multi-frequency impedance analysis of single particles in a microfluidic cytometer using maximum length sequences. <i>Lab on A Chip</i> , 2007, 7, 1034.	6.0	107
23	Dielectrophoretic investigations of sub-micrometre latex spheres. <i>Journal Physics D: Applied Physics</i> , 1997, 30, 2626-2633.	2.8	105
24	Electric field induced fluid flow on microelectrodes: the effect of illumination. <i>Journal Physics D: Applied Physics</i> , 2000, 33, L13-L17.	2.8	103
25	Acid-base dissociation mechanisms and energetics at the silica-water interface: An activationless process. <i>Journal of Colloid and Interface Science</i> , 2015, 451, 231-244.	9.4	96
26	Integrated systems for rapid point of care (PoC) blood cell analysis. <i>Lab on A Chip</i> , 2011, 11, 1249.	6.0	86
27	Microdevices for dielectrophoretic flow-through cell separation. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2003, 22, 85-90.	0.8	78
28	Formation of artificial lipid bilayers using droplet dielectrophoresis. <i>Lab on A Chip</i> , 2008, 8, 1617.	6.0	77
29	Numerical determination of the effective moments of non-spherical particles. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 78-85.	2.8	76
30	Broadband single cell impedance spectroscopy using maximum length sequences: theoretical analysis and practical considerations. <i>Measurement Science and Technology</i> , 2007, 18, 2859-2868.	2.6	75
31	High speed simultaneous single particle impedance and fluorescence analysis on a chip. <i>Current Applied Physics</i> , 2006, 6, 367-370.	2.4	71
32	Experiments on AC electrokinetic pumping of liquids using arrays of microelectrodes. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2006, 13, 670-677.	2.9	69
33	Optically Modulated Electrokinetic Manipulation and Concentration of Colloidal Particles near an Electrode Surface. <i>Langmuir</i> , 2010, 26, 5262-5272.	3.5	69
34	ANALYTICAL AND NUMERICAL MODELING METHODS FOR IMPEDANCE ANALYSIS OF SINGLE CELLS ON-CHIP. <i>Nano</i> , 2008, 03, 55-63.	1.0	65
35	The role of electrohydrodynamic forces in the dielectrophoretic manipulation and separation of particles. <i>Journal of Electrostatics</i> , 1999, 47, 71-81.	1.9	64
36	Analytical solutions of ac electrokinetics in interdigitated electrode arrays: Electric field, dielectrophoretic and traveling-wave dielectrophoretic forces. <i>Physical Review E</i> , 2007, 76, 046610.	2.1	64

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37	Hybrid opto-electric manipulation in microfluidics—opportunities and challenges. <i>Lab on A Chip</i> , 2011, 11, 2135.	6.0	62
38	A simple, optically induced electrokinetic method to concentrate and pattern nanoparticles. <i>Nanoscale</i> , 2009, 1, 133.	5.6	59
39	Impedance spectroscopy using maximum length sequences: Application to single cell analysis. <i>Review of Scientific Instruments</i> , 2007, 78, 054301.	1.3	50
40	Continuous separation of colloidal particles using dielectrophoresis. <i>Electrophoresis</i> , 2013, 34, 969-978.	2.4	45
41	Traveling-Wave Electrokinetic Micropumps: Velocity, Electrical Current, and Impedance Measurements. <i>Langmuir</i> , 2008, 24, 9361-9369.	3.5	44
42	Flow Reversal in Traveling-Wave Electrokinetics: An Analysis of Forces Due to Ionic Concentration Gradients. <i>Langmuir</i> , 2009, 25, 4988-4997.	3.5	44
43	An optoelectrokinetic technique for programmable particle manipulation and bead-based biosignal enhancement. <i>Lab on A Chip</i> , 2014, 14, 3958-3967.	6.0	43
44	Numerical simulation of travelling wave induced electrothermal fluid flow. <i>Journal Physics D: Applied Physics</i> , 2004, 37, 2323-2330.	2.8	42
45	Digital signal processing methods for impedance microfluidic cytometry. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 179-187.	2.2	42
46	Optically induced electrokinetic concentration and sorting of colloids. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 015022.	2.6	40
47	Electrothermal pumping with interdigitated electrodes and resistive heaters. <i>Electrophoresis</i> , 2015, 36, 1681-1689.	2.4	34
48	Image-based sorting and negative dielectrophoresis for high purity cell and particle separation. <i>Electrophoresis</i> , 2019, 40, 2718-2727.	2.4	28
49	Design and fabrication of an ac-electro-osmosis micropump with 3D high-aspect-ratio electrodes using only SU-8. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 035018.	2.6	27
50	Higher-order dielectrophoresis of nonspherical particles. <i>Physical Review E</i> , 2014, 89, 063302.	2.1	26
51	Dynamic behaviour of the silica-water-bio electrical double layer in the presence of a divalent electrolyte. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 2687-2701.	2.8	23
52	Control of two-phase flow in a microfluidic system using ac electric fields. <i>Applied Physics Letters</i> , 2007, 91, 254107.	3.3	20
53	Large area multilayered electrode arrays for dielectrophoretic fractionation. <i>Microelectronic Engineering</i> , 1997, 35, 421-424.	2.4	19
54	The Influence of Stern Layer Conductance on the Dielectrophoretic Behavior of Latex Nanospheres. <i>Journal of Colloid and Interface Science</i> , 2002, 250, 266-268.	9.4	18

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55	Modified Maxwell Garnett model for hysteresis in phase change materials. <i>Optical Materials Express</i> , 2018, 8, 1988.	3.0	16
56	Calculation of surface potentials at the silica-water interface using molecular dynamics: Challenges and opportunities. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 04FM02.	1.5	15
57	Fabrication of microfluidic device channel using a photopolymer for colloidal particle separation. <i>Microsystem Technologies</i> , 2010, 16, 2099-2107.	2.0	14
58	Coherently tunable metalens tweezers for optofluidic particle routing. <i>Optics Express</i> , 2020, 28, 38949.	3.4	14
59	Continuous separation of submicron particles using Angled electrodes. <i>Journal of Physics: Conference Series</i> , 2008, 142, 012068.	0.4	13
60	Electric field analysis using Schwarz-Christoffel mapping. <i>Journal of Physics: Conference Series</i> , 2008, 142, 012029.	0.4	8
61	The dielectrophoretic and travelling wave forces generated by interdigitated electrode arrays: analytical solution using Fourier series. <i>Journal Physics D: Applied Physics</i> , 2001, 34, 2708-2708.	2.8	8
62	Analytical solutions for the electric field and dielectrophoretic force in a dielectrophoretic focusing electrode structure. <i>Applied Physics Letters</i> , 2008, 92, 173901.	3.3	7
63	Recommendations from cold starts in big data. <i>Computing (Vienna/New York)</i> , 2020, 102, 1323-1344.	4.8	7
64	AC electrokinetic pumping of liquids using arrays of microelectrodes. , 2005, , .		6
65	Scaling law analysis of electrohydrodynamics and dielectrophoresis for isomotive dielectrophoresis microfluidic devices. <i>Electrophoresis</i> , 2020, 41, 148-155.	2.4	6
66	Interactions of electric fields with fluids. <i>Analytical and Bioanalytical Chemistry</i> , 2005, 382, 891-893.	3.7	5
67	Comment on "Theoretical Model of Electrode Polarization and AC Electroosmotic Fluid Flow in Planar Electrode Arrays"; <i>Journal of Colloid and Interface Science</i> , 2001, 243, 265-266.	9.4	4
68	Droplet mixer based on electrowetting. <i>Journal of Physics: Conference Series</i> , 2008, 142, 012071.	0.4	4
69	Detecting and identifying DNA via the THz backbone frequency using a metamaterial-based label-free biosensor. , 2017, , .		4
70	Tuning of salt separation efficiency by flow rate control in microfluidic dynamic dialysis. <i>Microfluidics and Nanofluidics</i> , 2019, 23, 1.	2.2	4
71	Dielectrophoresis and AC Electrokinetics. , 2011, , 61-84.		4
72	Particle-Induced Electrostatic Repulsion within an Electric Curtain Operating below the Paschen Limit. <i>Micromachines</i> , 2022, 13, 288.	2.9	4

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73	Fabrication of micro-electrode arrays for biotechnological applications. Microelectronic Engineering, 1999, 46, 397-400.	2.4	3
74	<title>Impedance based flow sensor</title>. , 2005, , .		3
75	Solid state AC electroosmosis micro pump on a Chip. , 2006, , .		3
76	Analytical solutions of the dielectrophoretic and travelling wave forces generated by interdigitated electrode arrays. Journal of Physics: Conference Series, 2008, 142, 012011.	0.4	3
77	Ab Initio DFT Simulations of Nanostructures. , 2012, , 11-17.		3
78	AFM, Tapping Mode. , 2012, , 99-99.		2
79	A novel portable filtration system for sampling and concentration of microorganisms: Demonstration on marine microalgae with subsequent quantification using IC-NASBA. Harmful Algae, 2018, 75, 94-104.	4.8	2
80	AC Electrokinetics of Nanoparticles. , 2015, , 1-10.		2
81	Evaluating the electrostatic discharge risk between small radius objects and charged planar insulating materials. Journal of Electrostatics, 2022, 115, 103680.	1.9	2
82	<title>AC electric field microfluidic control in microsystems</title>. , 2005, , .		1
83	AC Electroosmosis: Basics and Lab-on-a-Chip Applications. , 2012, , 25-30.		1
84	A Modified Maxwell Garnett Model: Hysteresis in phase change materials. Journal of Physics: Conference Series, 2019, 1322, 012038.	0.4	1
85	Single-cell impedance spectroscopy: maximum length sequence analysis. , 2006, , .		0
86	Adaptive line enhancer assisted single cell identification in a pseudorandom noise-stimulated microflow-cytometry. , 2008, , .		0
87	Process for the determination of thickness of polymeric microchannels for microfluidic applications. , 2011, , .		0
88	Drug Delivery System. , 2012, , 587-587.		0
89	Doping in Organic Semiconductors. , 2012, , 583-587.		0
90	AFM. , 2012, , 83-83.		0

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91	Dye Sensitized Solar Cells. , 2012, , 604-604.		0
92	Modelling the Operational Limits of a Separation Enhancement Method for Capillary Electrophoresis: a Designer's Tool. Procedia Engineering, 2012, 47, 694-697.	1.2	0
93	Optics experimental unit and analysis housing for maximum dielectrophoresis (DEP) and AC electrokinetics operations. , 2013, , .		0
94	Analysis of dielectrophoresis AC electrokinetic in equilibrium using Matlab. , 2017, , .		0
95	Optical Routing of Nanospheres on Plasmonic Rails. , 2019, , .		0
96	Metalens-based Particle Routing in Continuous-flow Microchannels. , 2021, , .		0
97	Dielectrophoresis. , 2016, , 730-741.		0