

Michael P Hughes

List of Publications by Year in descending order

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105
papers

4,221
citations

126907

33
h-index

114465

63
g-index

110
all docs

110
docs citations

110
times ranked

2867
citing authors

#	ARTICLE	IF	CITATIONS
1	The Platelet Electrome: Evidence for a Role in Regulation of Function and Surface Interaction. <i>Bioelectricity</i> , 2022, 4, 153-159.	1.1	7
2	Transcriptome-based screening of ion channels and transporters in a migratory chondroprogenitor cell line isolated from late-stage osteoarthritic cartilage. <i>Journal of Cellular Physiology</i> , 2021, 236, 7421-7439.	4.1	6
3	Vm-related extracellular potentials observed in red blood cells. <i>Scientific Reports</i> , 2021, 11, 19446.	3.3	14
4	An Algorithm for Tracking the Position and Velocity of Multiple Neuronal Signals Using Implantable Microelectrodes In Vivo. <i>Micromachines</i> , 2021, 12, 1346.	2.9	0
5	Rapid, Low-Cost Dielectrophoretic Diagnosis of Bladder Cancer in a Clinical Setting. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2020, 8, 1-5.	3.7	9
6	Ten-Second Electrophysiology: Evaluation of the 3DEP Platform for high-speed, high-accuracy cell analysis. <i>Scientific Reports</i> , 2019, 9, 19153.	3.3	34
7	Dielectrophoretic analysis of treated cancer cells for rapid assessment of treatment efficacy. <i>Electrophoresis</i> , 2018, 39, 1104-1110.	2.4	16
8	Barefoot plantar pressure measurement in Chronic Exertional Compartment Syndrome. <i>Gait and Posture</i> , 2018, 63, 10-16.	1.4	4
9	Complexity Changes in Brain Activity in Healthy Ageing: A Permutation Lempel-Ziv Complexity Study of Magnetoencephalograms. <i>Entropy</i> , 2018, 20, 506.	2.2	12
10	Technological developments in dielectrophoresis and its path to commercialization. <i>Cell & Gene Therapy Insights</i> , 2018, 4, 81-88.	0.1	3
11	A dielectrophoresis-impedance method for protein detection and analysis. <i>AIP Advances</i> , 2017, 7, .	1.3	20
12	High-throughput, low-loss, low-cost, and label-free cell separation using electrophysiology-activated cell enrichment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4591-4596.	7.1	84
13	Rapid determination of nanowires electrical properties using a dielectrophoresis-well based system. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	10
14	Synchronisation likelihood analysis of the effects of age on the brain. , 2017, , .		0
15	Permutation Entropy for the Characterisation of Brain Activity Recorded with Magnetoencephalograms in Healthy Ageing. <i>Entropy</i> , 2017, 19, 141.	2.2	16
16	Rapid determination of nanowire electrical properties using a dielectrophoresis-well based system. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	0
17	Preface to Special Topic: Selected Papers from the 2015 Annual Meeting of the AES Electrophoresis Society in Salt Lake City, Utah. <i>Biomicrofluidics</i> , 2016, 10, 032701.	2.4	1
18	Fifty years of dielectrophoretic cell separation technology. <i>Biomicrofluidics</i> , 2016, 10, 032801.	2.4	73

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19	Ion channel expression and function in a chondrogenic progenitor cell line derived from osteoarthritic cartilage. <i>Osteoarthritis and Cartilage</i> , 2016, 24, S141.	1.3	4
20	Accurate quantification of apoptosis progression and toxicity using a dielectrophoretic approach. <i>Analyst, The</i> , 2016, 141, 6408-6415.	3.5	65
21	Simultaneous Tunable Selection and Self-Assembly of Si Nanowires from Heterogeneous Feedstock. <i>ACS Nano</i> , 2016, 10, 4384-4394.	14.6	25
22	Assembly of tin oxide nanowires for dielectrophoretic response modeling. , 2015, , .		0
23	Effects of cell detachment methods on the dielectric properties of adherent and suspension cells. <i>Electrophoresis</i> , 2015, 36, 1493-1498.	2.4	13
24	A dielectrophoretic method of discrimination between normal oral epithelium, and oral and oropharyngeal cancer in a clinical setting. <i>Analyst, The</i> , 2015, 140, 5198-5204.	3.5	28
25	Apoptosis progression studied using parallel dielectrophoresis electrophysiological analysis and flow cytometry. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 1396-1401.	1.3	32
26	Characterization of human skeletal stem and bone cell populations using dielectrophoresis. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2015, 9, 162-168.	2.7	36
27	Factors affecting particle collection by electroosmosis in microfluidic systems. <i>Electrophoresis</i> , 2014, 35, 345-351.	2.4	11
28	Dielectrophoretic sample preparation for environmental monitoring of microorganisms: Soil particle removal. <i>Biomicrofluidics</i> , 2014, 8, 044115.	2.4	12
29	Dielectrophoretic Response of DNA Shows Different Conduction Mechanisms for Poly(dG)-Poly(dC) and Poly(dA)-Poly(dT) in Solution. <i>IEEE Transactions on Nanobioscience</i> , 2014, 13, 51-54.	3.3	8
30	Impedance spectroscopy of Zinc Oxide nanoparticles in dielectrophoresis biotechnology. , 2014, , .		1
31	Continuous flow nanoparticle concentration using alternating current electroosmotic flow. <i>Electrophoresis</i> , 2014, 35, 467-473.	2.4	9
32	Abstract 3490: Measurement of Gifinitib (ZD1839) effect on electrophysiological properties of head and neck cancer cells using Dielectrophoresis (DEP). , 2014, , .		1
33	Epithelial cancer cells exhibit different electrical properties when cultured in 2D and 3D environments. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2013, 1830, 5136-5141.	2.4	30
34	Efficient dielectrophoretic cell enrichment using a dielectrophoresis-well based system. <i>Biomicrofluidics</i> , 2013, 7, 064110.	2.4	19
35	Determination of the thermal and physical properties of black tattoo ink using compound analysis. <i>Lasers in Medical Science</i> , 2013, 28, 1107-1112.	2.1	15
36	Finite element analysis of thermal and acoustic processes during laser tattoo removal. <i>Lasers in Surgery and Medicine</i> , 2013, 45, 108-115.	2.1	17

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37	A dielectrophoresis and image processing based system for loading single-neurons per micro-well in planar microelectrode arrays. , 2013, , .		1
38	Solution processable multi-channel ZnO nanowire field-effect transistors with organic gate dielectric. Nanotechnology, 2013, 24, 405203.	2.6	27
39	Process development for cell aggregate arrays encapsulated in a synthetic hydrogel using negative dielectrophoresis. Electrophoresis, 2013, 34, 1059-1067.	2.4	12
40	Dielectrophoresis of poly AT and poly GC DNA Nanomanipulation. , 2012, , .		2
41	Cytoplasm Resistivity of Mammalian Atrial Myocardium Determined by Dielectrophoresis and Impedance Methods. Biophysical Journal, 2012, 103, 2287-2294.	0.5	24
42	Nanoparticle Manipulation by Electrostatic Forces. The Electrical Engineering Handbook, 2012, , 279-312.	0.2	0
43	Biophysical Characteristics Reveal Neural Stem Cell Differentiation Potential. PLoS ONE, 2011, 6, e25458.	2.5	69
44	Cancer, pre-cancer and normal oral cells distinguished by dielectrophoresis. Analytical and Bioanalytical Chemistry, 2011, 401, 2455-2463.	3.7	78
45	Rapid, automated measurement of dielectrophoretic forces using DEP-activated microwells. Electrophoresis, 2011, 32, 2393-2399.	2.4	18
46	Semi-automated Dielectrophoretic Cell Characterisation Module for Lab-on-Chip Applications. IFMBE Proceedings, 2011, , 582-586.	0.3	2
47	Dielectrophoresis as a Cell Characterisation Tool. Methods in Molecular Biology, 2010, 583, 183-198.	0.9	20
48	AC-Electrokinetic Applications in a Biological Setting. Methods in Molecular Biology, 2010, 583, 199-219.	0.9	2
49	Action potential recording from dielectrophoretically positioned neurons inside micro-wells of a planar microelectrode array. Journal of Neuroscience Methods, 2009, 182, 225-235.	2.5	20
50	Protein adsorption on materials for recording sites on implantable microelectrodes. Journal of Materials Science: Materials in Medicine, 2008, 19, 143-151.	3.6	25
51	Rapid-on-chip determination of dielectric properties of biological cells using imaging techniques in a dielectrophoresis dot microsystem. Electrophoresis, 2008, 29, 3-10.	2.4	53
52	Bacterial Concentration, Separation and Analysis by Dielectrophoresis. , 2008, , 895-907.		5
53	Dielectrophoresis-Activated Multiwell Plate for Label-Free High-Throughput Drug Assessment. Analytical Chemistry, 2008, 80, 2063-2068.	6.5	76
54	Dielectrophoretic analysis of changes in cytoplasmic ion levels due to ion channel blocker action reveals underlying differences between drug-sensitive and multidrug-resistant leukaemic cells. Physics in Medicine and Biology, 2008, 53, N1-N7.	3.0	44

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55	Microelectrode Fabrication Using Indium Tin Oxide (ITO) For Microfluidic Devices Employing Dielectrophoresis. IFMBE Proceedings, 2008, , 719-722.	0.3	3
56	Rapid determination of antibiotic resistance in E. coli using dielectrophoresis. Physics in Medicine and Biology, 2007, 52, 6001-6009.	3.0	31
57	Biophysical characterization of MDR breast cancer cell lines reveals the cytoplasm is critical in determining drug sensitivity. Biochimica Et Biophysica Acta - General Subjects, 2007, 1770, 601-608.	2.4	77
58	Dielectrophoretic separation of Bacillus subtilis spores from environmental diesel particles. Journal of Environmental Monitoring, 2007, 9, 87-90.	2.1	24
59	An integrated dielectrophoretic quartz crystal microbalance (DEP-QCM) device for rapid biosensing applications. Biosensors and Bioelectronics, 2007, 23, 225-232.	10.1	31
60	Early detection of oral cancer – Is dielectrophoresis the answer?. Oral Oncology, 2007, 43, 199-203.	1.5	67
61	Nanoparticle Manipulation by Electrostatic Forces. The Electrical Engineering Handbook, 2007, , 16-1-16-32.	0.2	0
62	Applications of dielectrophoretic/electrohydrodynamic "zipper" electrodes for detection of biological nanoparticles. International Journal of Nanomedicine, 2007, 2, 427-31.	6.7	13
63	Differences in the biophysical properties of membrane and cytoplasm of apoptotic cells revealed using dielectrophoresis. Biochimica Et Biophysica Acta - General Subjects, 2006, 1760, 922-929.	2.4	90
64	In situ and real time determination of metallic and semiconducting single-walled carbon nanotubes in suspension via dielectrophoresis. Applied Physics Letters, 2006, 88, 243109.	3.3	28
65	Rapid assessment of early biophysical changes in K562 cells during apoptosis determined using dielectrophoresis. International Journal of Nanomedicine, 2006, 1, 333-7.	6.7	27
66	A High-Throughput 3-D Composite Dielectrophoretic Separator. IEEE Transactions on Biomedical Engineering, 2005, 52, 1347-1349.	4.2	33
67	Action potential velocity detection using a penetrating microprobe. Measurement Science and Technology, 2005, 16, N7-N10.	2.6	2
68	Parallel measurements of drug actions on Erythrocytes by dielectrophoresis, using a three-dimensional electrode design. IET Nanobiotechnology, 2005, 152, 150.	2.1	23
69	Extraction of dielectric properties of multiple populations from dielectrophoretic collection spectrum data. Physics in Medicine and Biology, 2005, 50, 2267-2274.	3.0	81
70	Numerical simulation of dielectrophoretic ratchet structures. Journal Physics D: Applied Physics, 2004, 37, 1275-1280.	2.8	11
71	AC Electrokinetics of Particles. The Electrical Engineering Handbook, 2004, , .	0.2	0
72	Micro- and nano-electrokinetics in medicine. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 32-32.	0.8	20

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73	Optimizing particle collection for enhanced surface-based biosensors. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 68-74.	0.8	39
74	Surface-Enhanced Resonance Raman Scattering of Black Inkjet Dyes in Solution and in Situ Printed onto Paper. Applied Spectroscopy, 2003, 57, 977-983.	2.2	9
75	Assessment of Multidrug Resistance Reversal Using Dielectrophoresis and Flow Cytometry. Biophysical Journal, 2003, 85, 2028-2034.	0.5	93
76	Water quality test based on dielectrophoretic measurements of fresh water algae <i>Selenastrum capricornutum</i> . Journal of Environmental Monitoring, 2003, 5, 861-864.	2.1	20
77	Use of combined dielectrophoretic/electrohydrodynamic forces for biosensor enhancement. Journal Physics D: Applied Physics, 2003, 36, L101-L104.	2.8	62
78	Dielectrophoretic assay of bacterial resistance to antibiotics. Physics in Medicine and Biology, 2003, 48, N193-N198.	3.0	45
79	Theoretical evaluation of asynchronous ac dielectric nanomotors. Nanotechnology, 2002, 13, 157-162.	2.6	5
80	Measuring the dielectric properties of herpes simplex virus type 1 virions with dielectrophoresis. Biochimica Et Biophysica Acta - General Subjects, 2002, 1571, 1-8.	2.4	92
81	Strategies for dielectrophoretic separation in laboratory-on-a-chip systems. Electrophoresis, 2002, 23, 2569-2582.	2.4	369
82	The Influence of Stern Layer Conductance on the Dielectrophoretic Behavior of Latex Nanospheres. Journal of Colloid and Interface Science, 2002, 250, 266-268.	9.4	18
83	Dielectrophoretic Behavior of Latex Nanospheres: Low-Frequency Dispersion. Journal of Colloid and Interface Science, 2002, 250, 291-294.	9.4	38
84	Strategies for dielectrophoretic separation in laboratory-on-a-chip systems. , 2002, 23, 2569.		1
85	Strategies for dielectrophoretic separation in laboratory-on-a-chip systems. , 2002, 23, 2569.		1
86	Nanoelectromechanics in Engineering and Biology. Nano- and Microscience, Engineering, Technology, and Medicine Series, 2002, , .	0.2	81
87	Dielectrophoretic manipulation and characterization of herpes simplex virus-1 capsids. European Biophysics Journal, 2001, 30, 268-272.	2.2	61
88	AC electrokinetics: applications for nanotechnology. Nanotechnology, 2000, 11, 124-132.	2.6	268
89	Mapping the electrorotational torque in planar microelectrodes. Journal Physics D: Applied Physics, 1999, 32, 1548-1552.	2.8	13
90	Measurement of Bacterial Flagellar Thrust by Negative Dielectrophoresis. Biotechnology Progress, 1999, 15, 245-249.	2.6	42

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91	The Dielectrophoretic Behavior of Submicron Latex Spheres: Influence of Surface Conductance. <i>Journal of Colloid and Interface Science</i> , 1999, 220, 454-457.	9.4	88
92	An evanescent-field technique for dielectrophoresis studies of colloidal particles. <i>Measurement Science and Technology</i> , 1999, 10, 759-762.	2.6	7
93	Separation of Submicron Bioparticles by Dielectrophoresis. <i>Biophysical Journal</i> , 1999, 77, 516-525.	0.5	492
94	Dielectrophoretic Characterization and Separation of Antibody-Coated Submicrometer Latex Spheres. <i>Analytical Chemistry</i> , 1999, 71, 3441-3445.	6.5	76
95	Manipulation of herpes simplex virus type 1 by dielectrophoresis. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 1998, 1425, 119-126.	2.4	141
96	Dielectrophoretic trapping of single sub-micrometre scale bioparticles. <i>Journal Physics D: Applied Physics</i> , 1998, 31, 2205-2210.	2.8	110
97	Computer-aided analysis of conditions for optimizing practical electrorotation. <i>Physics in Medicine and Biology</i> , 1998, 43, 3639-3648.	3.0	29
98	Large-area travelling-wave dielectrophoresis particle separator. <i>Journal of Micromechanics and Microengineering</i> , 1997, 7, 65-70.	2.6	113
99	Large area multilayered electrode arrays for dielectrophoretic fractionation. <i>Microelectronic Engineering</i> , 1997, 35, 421-424.	2.4	19
100	Dielectrophoretic forces on particles in travelling electric fields. <i>Journal Physics D: Applied Physics</i> , 1996, 29, 474-482.	2.8	93
101	Non-uniform spatial distributions of both the magnitude and phase of AC electric fields determine dielectrophoretic forces. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 1995, 1243, 185-194.	2.4	52
102	Computer-aided analyses of electric fields used in electrorotation studies. <i>Journal Physics D: Applied Physics</i> , 1994, 27, 1564-1570.	2.8	41
103	Effects of electrode size on the performance of neural recording microelectrodes. , 0, , .		8
104	Biocompatibility studies of materials used for chronically implantable microelectrodes. , 0, , .		4
105	Assessing biocompatibility of materials for implantable microelectrodes using cytotoxicity and protein adsorption studies. , 0, , .		15