

# Brian J Kirby

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

6,355  
citations

87723

38  
h-index

74018

75  
g-index

87  
all docs

87  
docs citations

87  
times ranked

8153  
citing authors

#	ARTICLE	IF	CITATIONS
1	Acquired chemoresistance drives spatial heterogeneity, chemoprotection and collective migration in pancreatic tumor spheroids. <i>PLoS ONE</i> , 2022, 17, e0267882.	1.1	0
2	Rational design protocols for size-based particle sorting microdevices using symmetry-induced cyclical dynamics. <i>Physical Review E</i> , 2020, 101, 032125.	0.8	1
3	Microfluidic chip for label-free removal of teratoma-forming cells from therapeutic human stem cells. <i>Journal of Immunology and Regenerative Medicine</i> , 2020, 10, 100030.	0.2	2
4	Three-Dimensional Numerical Modeling of Surface-Acoustic-Wave Devices: Acoustophoresis of Micro- and Nanoparticles Including Streaming. <i>Physical Review Applied</i> , 2019, 12, .	1.5	39
5	Using Acoustic Perturbations to Dynamically Tune Shear Thickening in Colloidal Suspensions. <i>Physical Review Letters</i> , 2019, 123, 128001.	2.9	17
6	Scalable Synthesis of Switchable Assemblies of Gold Nanorod Lyotropic Liquid Crystal Nanocomposites. <i>Small</i> , 2019, 15, 1901666.	5.2	12
7	anti-EGFR capture mitigates EMT- and chemoresistance-associated heterogeneity in a resistance-profiling CTC platform. <i>Analytical Biochemistry</i> , 2019, 577, 26-33.	1.1	12
8	Charge Scaling Manifesto: A Way of Reconciling the Inherently Macroscopic and Microscopic Natures of Molecular Simulations. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7531-7536.	2.1	83
9	Expression of AR-V7 and ARv567es in Circulating Tumor Cells Correlates with Outcomes to Taxane Therapy in Men with Metastatic Prostate Cancer Treated in TAXYNERGY. <i>Clinical Cancer Research</i> , 2019, 25, 1880-1888.	3.2	92
10	How Biophysical Forces Regulate Human B Cell Lymphomas. <i>Cell Reports</i> , 2018, 23, 499-511.	2.9	30
11	Decorrelation correction for nanoparticle tracking analysis of dilute polydisperse suspensions in bulk flow. <i>Physical Review E</i> , 2017, 95, 033305.	0.8	4
12	Separation of 300 and 100 nm Particles in Fabry-Pérot Acoustofluidic Resonators. <i>Analytical Chemistry</i> , 2017, 89, 12192-12200.	3.2	53
13	Randomized, Noncomparative, Phase II Trial of Early Switch From Docetaxel to Cabazitaxel or Vice Versa, With Integrated Biomarker Analysis, in Men With Chemotherapy-Naïve, Metastatic, Castration-Resistant Prostate Cancer. <i>Journal of Clinical Oncology</i> , 2017, 35, 3181-3188.	0.8	73
14	Surface conductivity in electrokinetic systems with porous and charged interfaces: Analytical approximations and numerical results. <i>Electrophoresis</i> , 2016, 37, 1979-1991.	1.3	4
15	Automated electrorotation shows electrokinetic separation of pancreatic cancer cells is robust to acquired chemotherapy resistance, serum starvation, and EMT. <i>Biomicrofluidics</i> , 2016, 10, 064109.	1.2	30
16	Comparison and optimization of machine learning methods for automated classification of circulating tumor cells. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2016, 89, 922-931.	1.1	27
17	2563 Screening and baseline analysis of circulating tumor cell (CTC) counts and androgen receptor (AR) localization with clinical characteristics of men with metastatic castration-resistant prostate cancer (mCRPC) in TAXYNERGY. <i>European Journal of Cancer</i> , 2015, 51, S498-S499.	1.3	0
18	A transfer function approach for predicting rare cell capture microdevice performance. <i>Biomedical Microdevices</i> , 2015, 17, 9956.	1.4	2

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19	Enhancing sensitivity and specificity in rare cell capture microdevices with dielectrophoresis. <i>Biomicrofluidics</i> , 2015, 9, 014116.	1.2	19
20	Measurement of Lipid Accumulation in <i>Chlorella vulgaris</i> via Flow Cytometry and Liquid-State $^1\text{H}$ NMR Spectroscopy for Development of an NMR-Traceable Flow Cytometry Protocol. <i>PLoS ONE</i> , 2015, 10, e0134846.	1.1	15
21	Baseline analysis of circulating tumor cell (CTC) enumeration and androgen receptor (AR) localization in men with metastatic castration-resistant prostate cancer (mCRPC) in TAXYNERGY.. <i>Journal of Clinical Oncology</i> , 2015, 33, 5031-5031.	0.8	1
22	Microfluidic isolation of cancer-cell-derived microvesicles from heterogeneous extracellular shed vesicle populations. <i>Biomedical Microdevices</i> , 2014, 16, 869-877.	1.4	87
23	Single-Cell Copy Number Analysis of Prostate Cancer Cells Captured with Geometrically Enhanced Differential Immunocapture Microdevices. <i>Analytical Chemistry</i> , 2014, 86, 11013-11017.	3.2	11
24	Characterization of microfluidic shear-dependent epithelial cell adhesion molecule immunocapture and enrichment of pancreatic cancer cells from blood cells with dielectrophoresis. <i>Biomicrofluidics</i> , 2014, 8, 044107.	1.2	23
25	Cancerous epithelial cell lines shed extracellular vesicles with a bimodal size distribution that is sensitive to glutamine inhibition. <i>Physical Biology</i> , 2014, 11, 065001.	0.8	21
26	Microfluidic immunocapture of circulating pancreatic cells using parallel EpCAM and MUC1 capture: characterization, optimization and downstream analysis. <i>Lab on A Chip</i> , 2014, 14, 1775-1784.	3.1	107
27	Parametric control of collision rates and capture rates in geometrically enhanced differential immunocapture (GED) microfluidic devices for rare cell capture. <i>Biomedical Microdevices</i> , 2014, 16, 143-151.	1.4	24
28	Circulating Tumor Cells in Prostate Cancer Diagnosis and Monitoring: An Appraisal of Clinical Potential. <i>Molecular Diagnosis and Therapy</i> , 2014, 18, 389-402.	1.6	51
29	Isolation of breast cancer and gastric cancer circulating tumor cells by use of an anti HER2-based microfluidic device. <i>Lab on A Chip</i> , 2014, 14, 147-156.	3.1	94
30	Electrokinetic Measurements of Thin Nafion Films. <i>Langmuir</i> , 2014, 30, 1985-1993.	1.6	13
31	Detection of Circulating Pancreas Epithelial Cells in Patients With Pancreatic Cystic Lesions. <i>Gastroenterology</i> , 2014, 146, 647-651.	0.6	191
32	Detection of algal lipid accumulation due to nitrogen limitation via dielectric spectroscopy of <i>Chlamydomonas reinhardtii</i> suspensions in a coaxial transmission line sample cell. <i>Bioresource Technology</i> , 2013, 143, 623-631.	4.8	33
33	Culture of primary rat hippocampal neurons: design, analysis, and optimization of a microfluidic device for cell seeding, coherent growth, and solute delivery. <i>Biomedical Microdevices</i> , 2013, 15, 97-108.	1.4	9
34	Transport and collision dynamics in periodic asymmetric obstacle arrays: Rational design of microfluidic rare-cell immunocapture devices. <i>Physical Review E</i> , 2013, 88, 032136.	0.8	20
35	Characterization of a hybrid dielectrophoresis and immunocapture microfluidic system for cancer cell capture. <i>Electrophoresis</i> , 2013, 34, 2970-2979.	1.3	14
36	Microfluidic Enrichment of Mouse Epidermal Stem Cells and Validation of Stem Cell Proliferation In Vitro. <i>Tissue Engineering - Part C: Methods</i> , 2013, 19, 765-773.	1.1	15

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37	Enrichment of prostate cancer cells from blood cells with a hybrid dielectrophoresis and immunocapture microfluidic system. <i>Biomedical Microdevices</i> , 2013, 15, 941-948.	1.4	49
38	Force and flux relations for flows of ionic solutions between parallel plates with porous and charged layers. <i>Physical Review E</i> , 2013, 88, 042408.	0.8	3
39	TAXYNERGY (NCT01718353): A randomized phase II trial examining an early switch from first-line docetaxel to cabazitaxel, or cabazitaxel to docetaxel, in men with metastatic castration-resistant prostate cancer (mCRPC).. <i>Journal of Clinical Oncology</i> , 2013, 31, TPS5100-TPS5100.	0.8	4
40	Microfluidic transport in microdevices for rare cell capture. <i>Electrophoresis</i> , 2012, 33, 3133-3142.	1.3	38
41	Soft diffuse interfaces in electrokinetics – theory and experiment for transport in charged diffuse layers. <i>Soft Matter</i> , 2012, 8, 10598.	1.2	60
42	Isolation and characterization of circulating tumor cells in prostate cancer. <i>Frontiers in Oncology</i> , 2012, 2, 131.	1.3	38
43	Functional Characterization of Circulating Tumor Cells with a Prostate-Cancer-Specific Microfluidic Device. <i>PLoS ONE</i> , 2012, 7, e35976.	1.1	185
44	Immunocapture of prostate cancer cells by use of anti-PSMA antibodies in microdevices. <i>Biomedical Microdevices</i> , 2012, 14, 401-407.	1.4	42
45	Micro-total analysis system for virus detection: microfluidic pre-concentration coupled to liposome-based detection. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 315-323.	1.9	59
46	Automated Dielectrophoretic Characterization of <i>Mycobacterium smegmatis</i> . <i>Analytical Chemistry</i> , 2011, 83, 3507-3515.	3.2	46
47	Methods for Photocrosslinking Alginate Hydrogel Scaffolds with High Cell Viability. <i>Tissue Engineering - Part C: Methods</i> , 2011, 17, 173-179.	1.1	167
48	Integrated microfluidic preconcentrator and immunobiosensor. <i>Microfluidics and Nanofluidics</i> , 2011, 11, 537-544.	1.0	10
49	Stiffness of photocrosslinked RGD–alginate gels regulates adipose progenitor cell behavior. <i>Biotechnology and Bioengineering</i> , 2011, 108, 1683-1692.	1.7	91
50	Rare cell capture in microfluidic devices. <i>Chemical Engineering Science</i> , 2011, 66, 1508-1522.	1.9	171
51	Ambient pressure effects on the electrokinetic potential of Zeonor–water interfaces. <i>Journal of Colloid and Interface Science</i> , 2011, 361, 381-387.	5.0	3
52	Electrothermal flow effects in insulating (electrodeless) dielectrophoresis systems. <i>Electrophoresis</i> , 2010, 31, 3622-3633.	1.3	88
53	Capture of circulating tumor cells from whole blood of prostate cancer patients using geometrically enhanced differential immunocapture (GEDI) and a prostate-specific antibody. <i>Lab on A Chip</i> , 2010, 10, 27-29.	3.1	346
54	Control of the Electromechanical Properties of Alginate Hydrogels via Ionic and Covalent Cross-Linking and Microparticle Doping. <i>Biomacromolecules</i> , 2010, 11, 2184-2189.	2.6	8

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55	Transient $\zeta$ -potential measurements in hydrophobic, TOPAS microfluidic substrates. <i>Electrophoresis</i> , 2009, 30, 2656-2667.	1.3	18
56	Refolding of $\beta$ -galactosidase: microfluidic device for reagent metering and mixing and quantification of refolding yield. <i>Microfluidics and Nanofluidics</i> , 2009, 7, 275-281.	1.0	8
57	Zeta potential and electroosmotic mobility in microfluidic devices fabricated from hydrophobic polymers: 1. The origins of charge. <i>Electrophoresis</i> , 2008, 29, 1092-1101.	1.3	170
58	Zeta potential and electroosmotic mobility in microfluidic devices fabricated from hydrophobic polymers: 2. Slip and interfacial water structure. <i>Electrophoresis</i> , 2008, 29, 1102-1114.	1.3	84
59	Microfluidic devices for terahertz spectroscopy of biomolecules. <i>Optics Express</i> , 2008, 16, 1577.	1.7	110
60	Continuous-Flow Particle Separation by 3D Insulative Dielectrophoresis Using Coherently Shaped, dc-Biased, ac Electric Fields. <i>Analytical Chemistry</i> , 2007, 79, 7291-7300.	3.2	154
61	Low-Light-Level Optical Interactions with Rubidium Vapor in a Photonic Band-Gap Fiber. <i>Physical Review Letters</i> , 2006, 97, 023603.	2.9	173
62	Inorganic Proton Exchange Membranes. , 2006, , 1135.		0
63	Nonlinear optical interactions with Rubidium atoms confined in a hollow-core photonic crystal fiber. , 2006, , .		1
64	The zeta potential of cyclo-olefin polymer microchannels and its effects on insulative (electrodeless) dielectrophoresis particle trapping devices. <i>Electrophoresis</i> , 2005, 26, 1792-1799.	1.3	93
65	Microfluidic routing of aqueous and organic flows at high pressures: fabrication and characterization of integrated polymer microvalve elements. <i>Lab on A Chip</i> , 2005, 5, 184.	3.1	27
66	Microchip HPLC of Peptides and Proteins. <i>Analytical Chemistry</i> , 2005, 77, 2997-3000.	3.2	88
67	Zeta potential of microfluidic substrates: 1. Theory, experimental techniques, and effects on separations. <i>Electrophoresis</i> , 2004, 25, 187-202.	1.3	834
68	Zeta potential of microfluidic substrates: 2. Data for polymers. <i>Electrophoresis</i> , 2004, 25, 203-213.	1.3	403
69	Electrophoretic Concentration of Proteins at Laser-Patterned Nanoporous Membranes in Microchips. <i>Analytical Chemistry</i> , 2004, 76, 4589-4592.	3.2	154
70	Microchip Dialysis of Proteins Using in Situ Photopatterned Nanoporous Polymer Membranes. <i>Analytical Chemistry</i> , 2004, 76, 2367-2373.	3.2	107
71	On-Chip High-Pressure Picoliter Injector for Pressure-Driven Flow through Porous Media. <i>Analytical Chemistry</i> , 2004, 76, 5063-5068.	3.2	53
72	Effects of ammonioalkyl sulfonate internal salts on electrokinetic micropump performance and reversed-phase high-performance liquid chromatographic separations. <i>Journal of Chromatography A</i> , 2003, 1013, 93-101.	1.8	18

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73	Increasing the performance of high-pressure, high-efficiency electrokinetic micropumps using zwitterionic solute additives. <i>Sensors and Actuators B: Chemical</i> , 2003, 92, 37-43.	4.0	60
74	Programmable modification of cell adhesion and zeta potential in silica microchips. <i>Lab on A Chip</i> , 2003, 3, 5.	3.1	79
75	Miniature and Microchip Technologies. <i>Journal of Chromatography Library</i> , 2003, , 659-685.	0.1	4
76	Linear excitation schemes for IR planar-induced fluorescence imaging of CO and CO <sub>2</sub> . <i>Applied Optics</i> , 2002, 41, 1190.	2.1	31
77	Voltage-addressable on/off microvalves for high-pressure microchip separations. <i>Journal of Chromatography A</i> , 2002, 979, 147-154.	1.8	56
78	CO <sub>2</sub> imaging with saturated planar laser-induced vibrational fluorescence. <i>Applied Optics</i> , 2001, 40, 6136.	2.1	20
79	Imaging of CO and CO <sub>2</sub> using infrared planar laser-induced fluorescence. <i>Proceedings of the Combustion Institute</i> , 2000, 28, 253-259.	2.4	32
80	Planar laser-induced fluorescence imaging of carbon monoxide using vibrational (infrared) transitions. <i>Applied Physics B: Lasers and Optics</i> , 1999, 69, 505-507.	1.1	49
81	Measurements and modeling of acetone laser-induced fluorescence with implications for temperature-imaging diagnostics. <i>Applied Optics</i> , 1998, 37, 4963.	2.1	228
82	Effects of heater surface orientation on the critical heat flux. An experimental evaluation of models for subcooled pool boiling. <i>International Journal of Heat and Mass Transfer</i> , 1997, 40, 4007-4019.	2.5	50