Michael T Bowser

List of Publications by Year
in descending order

71 papers	4,225 citations	87843 38 h-index	110317 64 g-index
71 all docs	71 docs citations	71 times ranked	3310 citing authors

#	Article	IF	Citations
1	In Vitro Evolution of Functional DNA Using Capillary Electrophoresis. Journal of the American Chemical Society, 2004, 126, 20-21.	6.6	343
2	Designed Signaling Aptamers that Transduce Molecular Recognition to Changes in Fluorescence Intensity. Journal of the American Chemical Society, 2000, 122, 2469-2473.	6.6	272
3	In Vitro Selection of High-Affinity DNA Ligands for Human IgE Using Capillary Electrophoresis. Analytical Chemistry, 2004, 76, 5387-5392.	3.2	226
4	Capillary Electrophoresis-SELEX Selection of Aptamers with Affinity for HIV-1 Reverse Transcriptase. Analytical Chemistry, 2005, 77, 6107-6112.	3.2	195
5	Methods for measuring aptamer-protein equilibria: A review. Analytica Chimica Acta, 2011, 686, 9-18.	2.6	174
6	In Vitro Selection of Aptamers with Affinity for Neuropeptide Y Using Capillary Electrophoresis. Journal of the American Chemical Society, 2005, 127, 9382-9383.	6.6	163
7	In vivomonitoring of amine neurotransmitters using microdialysis with on-line capillary electrophoresis. Electrophoresis, 2001, 22, 3668-3676.	1.3	155
8	Micro free-flow electrophoresis: theory and applications. Analytical and Bioanalytical Chemistry, 2009, 394, 187-198.	1.9	140
9	Capillary Electrophoresis. Analytical Chemistry, 2012, 84, 577-596.	3.2	124
10	Capillary Electrophoresisâ€“SELEX Selection of Catalytic DNA Aptamers for a Small-Molecule Porphyrin Target. Analytical Chemistry, 2013, 85, 1525-1530.	3.2	122
11	Quantitative Analysis of Receptors for Adenosine Nucleotides Obtained via In Vitro Selection from a Library Incorporating a Cationic Nucleotide Analog. Journal of the American Chemical Society, 1999, 121, 9781-9789.	6.6	115
12	Neuronal release of Dâ€serine: a physiological pathway controlling extracellular Dâ€serine concentration. FASEB Journal, 2010, 24, 2951-2961.	0.2	113
13	Capillary Electrophoresis. Analytical Chemistry, 2016, 88, 299-319.	3.2	111
14	Free-Flow Electrophoresis on an Anodic Bonded Glass Microchip. Analytical Chemistry, 2005, 77, 5706-5710.	3.2	103
15	Using Channel Depth To Isolate and Control Flow in a Micro Free-Flow Electrophoresis Device. Analytical Chemistry, 2006, 78, 5369-5374.	3.2	81
16	Optimizing Band Width and Resolution in Micro-Free Flow Electrophoresis. Analytical Chemistry, 2006, 78, 8236-8244.	3.2	80
17	Analyteâ€“additive interactions in nonaqueous capillary electrophoresis: a critical review. TrAC - Trends in Analytical Chemistry, 1998, 17, 424-434.	5.8	76
18	4-Fluoro-7-nitro-2,1,3-benzoxadiazole as a Fluorogenic Labeling Reagent for the in Vivo Analysis of Amino Acid Neurotransmitters Using Online Microdialysisâ^'Capillary Electrophoresis. Analytical Chemistry, 2007, 79, 8747-8754.	3.2	75

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19	Isolation of DNA aptamers using micro free flow electrophoresis. Lab on A Chip, 2011, 11, 3703.	3.1	72
20	3D Printed Micro Free-Flow Electrophoresis Device. Analytical Chemistry, 2016, 88, 7675-7682.	3.2	70
21	Monte Carlo Simulation of Error Propagation in the Determination of Binding Constants from Rectangular Hyperbolae. 1. Ligand Concentration Range and Binding Constant. Journal of Physical Chemistry A, 1998, 102, 8063-8071.	1.1	68
22	Quantitative description of analyte migration behavior based on dynamic complexation in capillary electrophoresis with one or more additives. Electrophoresis, 1997, 18, 706-716.	1.3	65
23	Monte Carlo Simulation of Error Propagation in the Determination of Binding Constants from Rectangular Hyperbolae. 2. Effect of the Maximum-Response Range. Journal of Physical Chemistry A, 1999, 103, 197-202.	1.1	60
24	Monitoringd-Serine Dynamics in the Rat Brain Using Online Microdialysis-Capillary Electrophoresis. Analytical Chemistry, 2004, 76, 6582-6587.	3.2	59
25	Higher Order Equilibria and Their Effect on Analyte Migration Behavior in Capillary Electrophoresis. Analytical Chemistry, 1998, 70, 3261-3270.	3.2	58
26	Capillary Electrophoresis. Analytical Chemistry, 2010, 82, 4682-4698.	3.2	56
27	Fast Determination of Mitochondria Electrophoretic Mobility Using Micro Free-Flow Electrophoresis. Analytical Chemistry, 2009, 81, 9267-9273.	3.2	55
28	Effect of anionic additive type on ion pair formation constants of basic pharmaceuticals. Journal of Chromatography A, 2005, 1069, 225-234.	1.8	54
29	Quantitative description of migration behavior of porphyrins based on the dynamic complexation model in a nonaqueous capillary electrophoresis system. Electrophoresis, 1997, 18, 82-91.	1.3	52
30	Measuring Aptamer Equilibria Using Gradient Micro Free Flow Electrophoresis. Analytical Chemistry, 2010, 82, 3636-3641.	3.2	47
31	d-Serine uptake by isolated retinas is consistent with ASCT-mediated transport. Neuroscience Letters, 2005, 385, 58-63.	1.0	45
32	Tracking the Emergence of High Affinity Aptamers for rhVEGF₁₆₅ During Capillary Electrophoresis-Systematic Evolution of Ligands by Exponential Enrichment Using High Throughput Sequencing. Analytical Chemistry, 2013, 85, 10761-10770.	3.2	45
33	Monitoring Neurotransmitter Release from Isolated Retinas Using Online Microdialysis-Capillary Electrophoresis. Analytical Chemistry, 2004, 76, 5069-5074.	3.2	44
34	Microfluidic methods for aptamer selection and characterization. Analyst, The, 2018, 143, 21-32.	1.7	44
35	A soft-polymer piezoelectric bimorph cantilever-actuated peristaltic micropump. Lab on A Chip, 2008, 8, 1664.	3.1	43
36	Micro free flow electrophoresis. Lab on A Chip, 2018, 18, 27-40.	3.1	42

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37	Development and Application of a Nonaqueous Capillary Electrophoresis System for the Analysis of Porphyrins and Their Oligomers (PHOTOFRIN). Analytical Biochemistry, 1996, 241, 143-150.	1.1	41
38	SELEX: Just another separation?. Analyst, The, 2005, 130, 128.	1.7	39
39	Fast Electrophoretic Separation Optimization Using Gradient Micro Free-Flow Electrophoresis. Analytical Chemistry, 2008, 80, 3182-3189.	3.2	38
40	Comprehensive Multidimensional Separations of Peptides Using Nano-Liquid Chromatography Coupled with Micro Free Flow Electrophoresis. Analytical Chemistry, 2014, 86, 5136-5142.	3.2	36
41	Monitoring Neurochemical Release from Astrocytes Using in Vitro Microdialysis Coupled with High-Speed Capillary Electrophoresis. Analytical Chemistry, 2013, 85, 9070-9077.	3.2	33
42	Using buffer additives to improve analyte stream stability in micro free flow electrophoresis. Lab on A Chip, 2010, 10, 1231.	3.1	29
43	High-Speed, Comprehensive, Two Dimensional Separations of Peptides and Small Molecule Biological Amines Using Capillary Electrophoresis Coupled with Micro Free Flow Electrophoresis. Analytical Chemistry, 2017, 89, 1665-1673.	3.2	28
44	Measuring the effect of glutamate receptor agonists on extracellular d-serine concentrations in the rat striatum using online microdialysis-capillary electrophoresis. Neuroscience Letters, 2006, 393, 200-205.	1.0	25
45	MeasuringD-serine efflux from mouse cortical brain slices using online microdialysis-capillary electrophoresis. Electrophoresis, 2006, 27, 1949-1956.	1.3	25
46	The effects of a mixture of charged and neutral additives on analyte migration behavior in capillary electrophoresis. Electrophoresis, 1998, 19, 388-396.	1.3	24
47	Properties of Multivariate Binding Isotherms in Capillary Electrophoresis. Analytical Chemistry, 1998, 70, 1076-1084.	3.2	24
48	High-Speed Microdialysisâ€“Capillary Electrophoresis Assays for Measuring Branched Chain Amino Acid Uptake in 3T3-L1 cells. Analytical Chemistry, 2016, 88, 8115-8122.	3.2	24
49	Preparation and certification of solutions of perdeuterated polycyclic aromatic compounds intended for use as surrogate internal standards. Fresenius' Journal of Analytical Chemistry, 1994, 350, 109-118.	1.5	23
50	Redefining the separation factor: A potential pathway to a unified separation science. Electrophoresis, 1997, 18, 2928-2934.	1.3	23
51	Improving sensitivity in microâ€free flow electrophoresis using signal averaging. Electrophoresis, 2009, 30, 1342-1348.	1.3	21
52	Effect of Fluorescent Labels on Peptide and Amino Acid Sample Dimensionality in Two Dimensional nLC Ã— Î¼FFE Separations. Analytical Chemistry, 2016, 88, 2177-2187.	3.2	17
53	Dynamic complexation of solutes in capillary electrophoresis. Electrophoresis, 1998, 19, 383-387.	1.3	15
54	Reversal of Phospholamban Inhibition of the Sarco(endo)plasmic Reticulum Ca2+-ATPase (SERCA) Using Short, Protein-interacting RNAs and Oligonucleotide Analogs. Journal of Biological Chemistry, 2016, 291, 21510-21518.	1.6	15

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55	In Vivo Monitoring of Amino Acid Biomarkers from Inguinal Adipose Tissue Using Online Microdialysis-Capillary Electrophoresis. Analytical Chemistry, 2017, 89, 1009-1014.	3.2	13
56	Reduced surface adsorption in 3D printed acrylonitrile butadiene styrene micro freeâ€flow electrophoresis devices. Electrophoresis, 2020, 41, 225-234.	1.3	13
57	Effect of Surface Adsorption on Temporal and Spatial Broadening in Micro Free Flow Electrophoresis. Analytical Chemistry, 2015, 87, 11682-11690.	3.2	12
58	Isolating single stranded DNA using a microfluidic dialysis device. Analyst, The, 2014, 139, 215-224.	1.7	11
59	Size selective DNA transport through a nanoporous membrane in a PDMS microfluidic device. Analyst, The, 2012, 137, 1144.	1.7	9
60	Analysis of individual mitochondria via fluorescent immunolabeling with Anti-TOM22 antibodies. Analytical and Bioanalytical Chemistry, 2014, 406, 1683-1691.	1.9	9
61	Rheostatic Regulation of the SERCA/Phospholamban Membrane Protein Complex Using Non-Coding RNA and Single-Stranded DNA oligonucleotides. Scientific Reports, 2015, 5, 13000.	1.6	8
62	Analysis and Monitoring of Volatile Analytes from Aqueous Solutions by Extractions into the Gas Phase Using Microdialysis Membranes and Coupling to Fast GC. Analytical Chemistry, 2008, 80, 123-128.	3.2	6
63	Biochemical markers of striatal desensitization in cortical-limbic hyperglutamatergic TS- & OCD-like transgenic mice. Journal of Chemical Neuroanatomy, 2018, 89, 11-20.	1.0	6
64	Effect of cross sectional geometry on PDMS micro peristaltic pump performance: comparison of SU-8 replica molding vs. micro injection molding. Analyst, The, 2013, 138, 5791.	1.7	4
65	Introduction to New Frontiers in Bioanalytical Chemistry. Chemical Reviews, 2013, 113, 2267-2268.	23.0	3
66	Recent developments towards a unified theory for separation science (Minireview). Electrophoresis, 1998, 19, 1586-1589.	1.3	2
67	Development of a sensitive assay for SERCA activity using FRET detection of ADP. Analytical Methods, 2014, 6, 1468-1474.	1.3	1
68	Cytoplasmic nucleic acid-based XNAs directly enhance live cardiac cell function by a Ca2+ cycling-independent mechanism via the sarcomere. Journal of Molecular and Cellular Cardiology, 2019, 130, 1-9.	0.9	1
69	Sequence-Independent SSDNA Relieves Phospholamban Inhibition of SERCA in a Length Dependent Manner. Biophysical Journal, 2015, 108, 254a.	0.2	0
70	Micro Free-Flow Electrophoresis (Î¼FFE). , 2015, , 1-15.		0
71	Micro Free-Flow Electrophoresis (Î¼FFE). , 2016, , 2092-2105.		0