Christopher T Culbertson

List of Publications by Year
in descending order

67 papers	4,842 citations	147566 31 h-index	143772 57 g-index
70 all docs	70 docs citations	70 times ranked	4892 citing authors

#	Article	IF	Citations
1	Diffusion coefficient measurements in microfluidic devices. Talanta, 2002, 56, 365-373.	2.9	400
2	Microfluidic Devices for the High-Throughput Chemical Analysis of Cells. Analytical Chemistry, 2003, 75, 5646-5655.	3.2	357
3	Microchip Structures for Submillisecond Electrophoresis. Analytical Chemistry, 1998, 70, 3476-3480.	3.2	301
4	Paper-based microfluidic devices for analysis of clinically relevant analytes present in urine and saliva. Analytical and Bioanalytical Chemistry, 2010, 397, 1821-1829.	1.9	249
5	Flow Cytometry ofEscherichia colion Microfluidic Devices. Analytical Chemistry, 2001, 73, 5334-5338.	3.2	230
6	Microchip Flow Cytometry Using Electrokinetic Focusing. Analytical Chemistry, 1999, 71, 4173-4177.	3.2	213
7	Two-Dimensional Electrochromatography/Capillary Electrophoresis on a Microchip. Analytical Chemistry, 2001, 73, 2669-2674.	3.2	209
8	Solâ^'Gel Modified Poly(dimethylsiloxane) Microfluidic Devices with High Electroosmotic Mobilities and Hydrophilic Channel Wall Characteristics. Analytical Chemistry, 2005, 77, 1414-1422.	3.2	207
9	Effects of storage temperature on airway exosome integrity for diagnostic and functional analyses. Journal of Extracellular Vesicles, 2017, 6, 1359478.	5.5	199
10	Microchip Devices for High-Efficiency Separations. Analytical Chemistry, 2000, 72, 5814-5819.	3.2	193
11	High-Efficiency, Two-Dimensional Separations of Protein Digests on Microfluidic Devices. Analytical Chemistry, 2003, 75, 3758-3764.	3.2	189
12	Dispersion Sources for Compact Geometries on Microchips. Analytical Chemistry, 1998, 70, 3781-3789.	3.2	186
13	Micro Total Analysis Systems: Fundamental Advances and Biological Applications. Analytical Chemistry, 2014, 86, 95-118.	3.2	160
14	Electroosmotically Induced Hydraulic Pumping with Integrated Electrodes on Microfluidic Devices. Analytical Chemistry, 2001, 73, 4045-4049.	3.2	131
15	Electroosmotically Induced Hydraulic Pumping on Microchips:â€‰ Differential Ion Transport. Analytical Chemistry, 2000, 72, 2285-2291.	3.2	117
16	Surface Engineering of Poly(dimethylsiloxane) Microfluidic Devices Using Transition Metal Solâ^'Gel Chemistry. Langmuir, 2006, 22, 4445-4451.	1.6	116
17	Flow Counterbalanced Capillary Electrophoresis. Analytical Chemistry, 1994, 66, 955-962.	3.2	108
18	Single-cell manipulation and analysis using microfluidic devices. Analytical and Bioanalytical Chemistry, 2006, 387, 9-12.	1.9	103

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19	Micro Total Analysis Systems: Fundamental Advances and Applications. Analytical Chemistry, 2016, 88, 320-338.	3.2	94
20	Synthesis and Photophysical Properties of Mono(2,2',2''-terpyridine) Complexes of Ruthenium(II). Inorganic Chemistry, 1995, 34, 3385-3395.	1.9	92
21	Effects of the electric field distribution on microchip valving performance. Electrophoresis, 2000, 21, 100-106.	1.3	80
22	Integrated microchip-device for the digestion, separation and postcolumn labeling of proteins and peptides. Biomedical Applications, 2000, 745, 243-249.	1.7	76
23	High efficiency micellar electrokinetic chromatography of hydrophobic analytes on poly(dimethylsiloxane) microchips. Analyst, The, 2006, 131, 194-201.	1.7	67
24	Integration of a nanostructured dielectrophoretic device and a surface-enhanced Raman probe for highly sensitive rapid bacteria detection. Nanoscale, 2015, 7, 3726-3736.	2.8	62
25	Chemical Analysis of Single Mammalian Cells with Microfluidics. Analytical Chemistry, 2007, 79, 2614-2621.	3.2	60
26	Cellular Analysis Using Microfluidics. Analytical Chemistry, 2018, 90, 65-85.	3.2	52
27	An Integrated Microfluidic Device for Monitoring Changes in Nitric Oxide Production in Single T-Lymphocyte (Jurkat) Cells. Analytical Chemistry, 2013, 85, 10188-10195.	3.2	42
28	Microchip Separations in Reduced-Gravity and Hypergravity Environments. Analytical Chemistry, 2005, 77, 7933-7940.	3.2	37
29	Monitoring intracellular nitric oxide production using microchip electrophoresis and laser-induced fluorescence detection. Analytical Methods, 2012, 4, 414.	1.3	36
30	Lowering the UV Absorbance Detection Limit in Capillary Zone Electrophoresis Using a Single Linear Photodiode Array Detector. Analytical Chemistry, 1998, 70, 2629-2638.	3.2	33
31	Static and Dynamic Acute Cytotoxicity Assays on Microfluidic Devices. Analytical Chemistry, 2005, 77, 667-672.	3.2	33
32	Manipulation of bacteriophages with dielectrophoresis on carbon nanofiber nanoelectrode arrays. Electrophoresis, 2013, 34, 1123-1130.	1.3	31
33	Effects of Microfabrication Processing on the Electrochemistry of Carbon Nanofiber Electrodes. Journal of Physical Chemistry B, 2003, 107, 10722-10728.	1.2	29
34	Electrokinetic trapping using titania nanoporous membranes fabricated using solâ€“gel chemistry on microfluidic devices. Electrophoresis, 2009, 30, 3160-3167.	1.3	26
35	Early detection of pancreatic cancers in liquid biopsies by ultrasensitive fluorescence nanobiosensors. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 1823-1832.	1.7	25
36	Micellar electrokinetic chromatography of fluorescently labeled proteins on poly(dimethylsiloxane)-based microchips. Electrophoresis, 2006, 27, 2933-2939.	1.3	23

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37	Electrophoretic separation of proteins on microchips. Journal of Separation Science, 2000, 12, 407-411.	1.0	22
38	Synthesis and Characterization of a Poly(dimethylsiloxane)âˆ’Poly(ethylene oxide) Block Copolymer for Fabrication of Amphiphilic Surfaces on Microfluidic Devices. Langmuir, 2009, 25, 10390-10396.	1.6	22
39	Synthesis and pharmacology of irreversible affinity labels as potential cocaine antagonists: aryl 1,4-dialkylpiperazines related to GBR-12783. European Journal of Pharmacology, 1992, 220, 173-180.	1.7	21
40	Demonstration of an integrated electroactive polymer actuator on a microfluidic electrophoresis device. Lab on A Chip, 2009, 9, 2076.	3.1	20
41	Generation of Nonbiased Hydrodynamic Injections on Microfluidic Devices Using Integrated Dielectric Elastomer Actuators. Analytical Chemistry, 2009, 81, 8942-8948.	3.2	19
42	Increasing the resolving power of capillary electrophoresis through electroosmotic flow control using radial fields. Journal of Separation Science, 1999, 11, 167-174.	1.0	16
43	Dielectrophoretic capture of <i>E. coli</i> cells at micropatterned nanoelectrode arrays. Electrophoresis, 2011, 32, 2358-2365.	1.3	15
44	Highâ€throughput microfluidic device for single cell analysis using multiple integrated soft lithographic pumps. Electrophoresis, 2016, 37, 1337-1344.	1.3	15
45	Single-Molecule Studies of Oligomer Extraction and Uptake of Dyes in Poly(dimethylsiloxane) Films. Analytical Chemistry, 2009, 81, 10089-10096.	3.2	12
46	Integrated microfluidic device for the separation and electrochemical detection of catechol estrogen-derived DNA adducts. Analytical and Bioanalytical Chemistry, 2011, 399, 519-524.	1.9	11
47	Out-of-plane integration of a multimode optical fiber for single particle/cell detection at multiple points on a microfluidic device with applications to particle/cell counting, velocimetry, size discrimination and the analysis of single cell lysate injections. Lab on A Chip, 2017, 17, 145-155.	3.1	11
48	Lowering the UV absorbance detection limit and increasing the sensitivity of capillary electrophoresis using a dual linear photodiode array detector and signal averaging. Journal of Separation Science, 1999, 11, 652-662.	1.0	10
49	Integrating Optical Fiber Bridges in Microfluidic Devices to Create Multiple Excitation/Detection Points for Single Cell Analysis. Analytical Chemistry, 2016, 88, 9920-9925.	3.2	10
50	A novel, environmentally friendly sodium lauryl ether sulfateâ€; cocamidopropyl betaineâ€; cocamide monoethanolamineâ€containing buffer for MEKC on microfluidic devices. Electrophoresis, 2008, 29, 4900-4905.	1.3	8
51	Measuring stimulation and inhibition of intracellular nitric oxide production in SIM-A9 microglia using microfluidic single-cell analysis. Analytical Methods, 2020, 12, 4665-4673.	1.3	8
52	The effect of photomask resolution on separation efficiency on microfabricated devices. Lab on A Chip, 2006, 6, 1355.	3.1	7
53	Single Cell Analysis on Microfluidic Devices. , 2006, 339, 203-216.		7
54	Optical biosensing of markers of mucosal inflammation. Nanomedicine: Nanotechnology, Biology, and Medicine, 2022, 40, 102476.	1.7	7

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55	Single Molecule Studies of Solvent-Dependent Diffusion and Entrapment in Poly(dimethylsiloxane) Thin Films. Analytical Chemistry, 2008, 80, 9726-9734.	3.2	6
56	Separation of fluorescently derivatized deuterated isotopomers of phenylalanine using micellar electrokinetic chromatography and flow counterbalanced micellar electrokinetic chromatography. Journal of Separation Science, 1999, 11, 175-183.	1.0	5
57	Electroosmotically Induced Hydraulic Pumping on Microchips. , 2001, , 131-132.		5
58	Fabrication of Glass Microfluidic Devices. Methods in Molecular Biology, 2019, 1906, 1-12.	0.4	4
59	Single Cell Lysis on Microfluidic Devices. , 2001, , 301-302.		3
60	Rapid Cellular Assays on Microfabricated Fluidic Devices. , 2001, , 285-286.		3
61	Microelectrophoretic single-cell measurements with microfluidic devices. Methods in Enzymology, 2019, 628, 223-241.	0.4	2
62	High Performance Two Dimensional Separations of Tryptic Digests on Microfluidic Devices. , 2002, , 608-610.		2
63	Rapid Electrophoretic and Chromatographic Analysis on Microchips. , 1998, , 315-318.		2
64	High Efficiency Separations on Microchip Devices. , 2000, , 221-224.		1
65	Optical microscopy studies of polymer/liquid-crystal diffractive optics. , 2006, , .		0
66	Microfabricated Fluidic Devices for Cellular Assays. , 2000, , 107-110.		0
67	Minimizing Dispersion Introduced by Turns on Microchips. , 1998, , 161-164.		0