Dana M Spence

List of Publications by Year
in descending order

76 papers	4,257 citations	126708 33 h-index	110170 64 g-index
77 all docs	77 docs citations	77 times ranked	5355 citing authors

#	Article	IF	Citations
1	Evaluation of 3D Printing and Its Potential Impact on Biotechnology and the Chemical Sciences. Analytical Chemistry, 2014, 86, 3240-3253.	3.2	1,380
2	Recent Advances in Analytical Chemistry by 3D Printing. Analytical Chemistry, 2017, 89, 57-70.	3.2	260
3	3D printed microfluidic devices with integrated versatile and reusable electrodes. Lab on A Chip, 2014, 14, 2023-2032.	3.1	248
4	3D-printed microfluidic devices: fabrication, advantages and limitationsâ€"a mini review. Analytical Methods, 2016, 8, 6005-6012.	1.3	212
5	A 3D Printed Fluidic Device that Enables Integrated Features. Analytical Chemistry, 2013, 85, 5622-5626.	3.2	199
6	Review of 3D cell culture with analysis in microfluidic systems. Analytical Methods, 2019, 11, 4220-4232.	1.3	86
7	Drug penetration and metabolism in 3D cell cultures treated in a 3D printed fluidic device: assessment of irinotecan via MALDI imaging mass spectrometry. Proteomics, 2016, 16, 1814-1821.	1.3	67
8	PolyJet 3D-Printed Enclosed Microfluidic Channels without Photocurable Supports. Analytical Chemistry, 2019, 91, 6910-6917.	3.2	67
9	3D-printed fluidic devices enable quantitative evaluation of blood components in modified storage solutions for use in transfusion medicine. Analyst, The, 2014, 139, 3219-3226.	1.7	66
10	Deformation-Induced Release of ATP from Erythrocytes in a Poly(dimethylsiloxane)-Based Microchip with Channels That Mimic Resistance Vessels. Analytical Chemistry, 2004, 76, 4849-4855.	3.2	64
11	A perspective on the role of metals in diabetes: past findings and possible future directions. Metallomics, 2009, 1, 32-41.	1.0	63
12	Amperometric determination of nitric oxide derived from pulmonary artery endothelial cells immobilized in a microchip channel. Analyst, The, 2004, 129, 995.	1.7	61
13	Fabrication of carbon microelectrodes with a micromolding technique and their use in microchip-based flow analyses. Analyst, The, 2004, 129, 400.	1.7	60
14	Addressing a vascular endothelium array with blood components using underlying microfluidic channels. Lab on A Chip, 2007, 7, 1256.	3.1	59
15	Metal-activated C-peptide facilitates glucose clearance and the release of a nitric oxide stimulus via the GLUT1 transporter. Diabetologia, 2007, 51, 175-182.	2.9	59
16	Applications of 3D-Printing for Improving Chemistry Education. Journal of Chemical Education, 2020, 97, 112-117.	1.1	55
17	Determination of ATP Release from Erythrocytes Using Microbore Tubing as a Model of Resistance Vessels in Vivo. Analytical Chemistry, 2002, 74, 2274-2278.	3.2	54
18	An altered oxidant defense system in red blood cells affects their ability to release nitric oxide-stimulating ATP. Molecular BioSystems, 2006, 2, 305.	2.9	54

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19	Microfluidic technologies as platforms for performing quantitative cellular analyses in an in vitro environment. Analyst, The, 2006, 131, 1197.	1.7	49
20	Microfluidic Transendothelial Electrical Resistance Measurement Device that Enables Blood Flow and Postgrowth Experiments. Analytical Chemistry, 2011, 83, 4296-4301.	3.2	49
21	Simultaneous determination of cell aging and ATP release from erythrocytes and its implications in type 2 diabetes. Analytica Chimica Acta, 2008, 618, 227-233.	2.6	48
22	Fluorescence Monitoring of ATP-Stimulated, Endothelium-Derived Nitric Oxide Production in Channels of a Poly(dimethylsiloxane)-Based Microfluidic Device. Analytical Chemistry, 2006, 78, 3193-3197.	3.2	45
23	Determination of erythrocyte deformability and its correlation to cellular ATP release using microbore tubing with diameters that approximate resistance vessels in vivo. Analyst, The, 2003, 128, 1163.	1.7	44
24	Polymer Coatings in 3D-Printed Fluidic Device Channels for Improved Cellular Adherence Prior to Electrical Lysis. Analytical Chemistry, 2015, 87, 6335-6341.	3.2	44
25	A Diffusion-Based and Dynamic 3D-Printed Device That Enables Parallel in Vitro Pharmacokinetic Profiling of Molecules. Analytical Chemistry, 2016, 88, 1864-1870.	3.2	43
26	Interactions between Multiple Cell Types in Parallel Microfluidic Channels: Monitoring Platelet Adhesion to an Endothelium in the Presence of an Anti-Adhesion Drug. Analytical Chemistry, 2008, 80, 7543-7548.	3.2	41
27	Chemiluminescence detection of ATP release from red blood cells upon passage through microbore tubing. Analyst, The, 2001, 126, 1257-1260.	1.7	40
28	A Printed Equilibrium Dialysis Device with Integrated Membranes for Improved Binding Affinity Measurements. Analytical Chemistry, 2017, 89, 7302-7306.	3.2	38
29	C-peptide and zinc delivery to erythrocytes requires the presence of albumin: implications in diabetes explored with a 3D-printed fluidic device. Integrative Biology (United Kingdom), 2015, 7, 534-543.	0.6	37
30	Red Blood Cell Stimulation of Platelet Nitric Oxide Production Indicated by Quantitative Monitoring of the Communication between Cells in the Bloodstream. Analytical Chemistry, 2007, 79, 5133-5138.	3.2	36
31	Measuring the simultaneous effects of hypoxia and deformation on ATP release from erythrocytes. Analyst, The, 2008, 133, 678.	1.7	34
32	Direct Plate-Reader Measurement of Nitric Oxide Released from Hypoxic Erythrocytes Flowing through a Microfluidic Device. Analytical Chemistry, 2010, 82, 7492-7497.	3.2	34
33	Integration of multiple components in polystyrene-based microfluidic devices part I: fabrication and characterization. Analyst, The, 2013, 138, 129-136.	1.7	33
34	Multiphoton excited hemoglobin fluorescence and third harmonic generation for non-invasive microscopy of stored blood. Biomedical Optics Express, 2016, 7, 3449.	1.5	30
35	Zinc-activated C-peptide resistance to the type 2 diabetic erythrocyte is associated with hyperglycemia-induced phosphatidylserine externalization and reversed by metformin. Molecular BioSystems, 2009, 5, 1157.	2.9	29
36	Dynamic Monitoring of Glutathione in Erythrocytes, without a Separation Step, in the Presence of an Oxidant Insult. Analytical Chemistry, 2006, 78, 8556-8560.	3.2	28

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37	Factors Affecting Zone Variance in a Capillary Flow Injection System. Analytical Chemistry, 1997, 69, 165-169.	3.2	25
38	Fluorescence Determination of Nitric Oxide Production in Stimulated and Activated Platelets. Analytical Chemistry, 2007, 79, 2421-2426.	3.2	24
39	Detection of ATP-Induced Nitric Oxide in a Biomimetic Circulatory Vessel Containing an Immobilized Endothelium. Analytical Chemistry, 2003, 75, 145-151.	3.2	23
40	Evaluating the effects of estradiol on endothelial nitric oxide stimulated by erythrocyte-derived ATP using a microfluidic approach. Analytical and Bioanalytical Chemistry, 2010, 397, 3369-3375.	1.9	22
41	Integration of multiple components in polystyrene-based microfluidic devices part II: cellular analysis. Analyst, The, 2013, 138, 137-143.	1.7	22
42	A rapid method for post-antibiotic bacterial susceptibility testing. PLoS ONE, 2019, 14, e0210534.	1.1	22
43	Endothelium-derived nitric oxide production is increased by ATP released from red blood cells incubated with hydroxyurea. Nitric Oxide - Biology and Chemistry, 2014, 38, 1-7.	1.2	20
44	Câ€peptideâ€stimulated nitric oxide production in a cultured pulmonary artery endothelium is erythrocyte mediated and requires Zn²⁺. Diabetes/Metabolism Research and Reviews, 2013, 29, 44-52.	1.7	19
45	Technologies for Measuring Pharmacokinetic Profiles. Annual Review of Analytical Chemistry, 2018, 11, 79-100.	2.8	19
46	A Molecular Level Understanding of Zinc Activation of C-peptide and its Effects on Cellular Communication in the Bloodstream. Review of Diabetic Studies, 2009, 6, 148-158.	0.5	19
47	Monitoring erythrocytes in a microchip channel that narrows uniformly: Towards an improved microfluidic-based mimic of the microcirculation. Journal of Chromatography A, 2006, 1111, 220-227.	1.8	18
48	Mass spectrometric characterization and activity of zinc-activated proinsulin C-peptide and C-peptide mutants. Analyst, The, 2010, 135, 278-288.	1.7	18
49	C-Peptide replacement therapy in type 1 diabetes: are we in the trough of disillusionment?. Molecular BioSystems, 2017, 13, 1432-1437.	2.9	17
50	Microfluidic evaluation of red cells collected and stored in modified processing solutions used in blood banking. Integrative Biology (United Kingdom), 2014, 6, 65-75.	0.6	16
51	Personalized Metabolic Assessment of Erythrocytes Using Microfluidic Delivery to an Array of Luminescent Wells. Analytical Chemistry, 2009, 81, 3102-3108.	3.2	15
52	Flow-based amperometric detection of dopamine in an immobilized cell reactor. Journal of Neuroscience Methods, 2003, 124, 129-134.	1.3	13
53	Plate Reader Compatible 3D-Printed Device for Teaching Equilibrium Dialysis Binding Assays. Journal of Chemical Education, 2018, 95, 1662-1667.	1.1	13
54	A microfluidic technique for monitoring bloodstream analytes indicative of C-peptide resistance in type 2 diabetes. Analyst, The, 2009, 134, 188-193.	1.7	11

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55	Microfluidic device with tunable post arrays and integrated electrodes for studying cellular release. Analyst, The, 2014, 139, 5686-5694.	1.7	11
56	Engineering the hCRBPII Domain-Swapped Dimer into a New Class of Protein Switches. Journal of the American Chemical Society, 2019, 141, 17125-17132.	6.6	9
57	Design Considerations for Capillary flow Injection Systems. Instrumentation Science and Technology, 1996, 24, 103-113.	0.9	8
58	Ultrafiltration binding analyses of glycated albumin with a 3D-printed syringe attachment. Analytical and Bioanalytical Chemistry, 2018, 410, 7565-7573.	1.9	8
59	A novel 3D-printed centrifugal ultrafiltration method reveals <i>in vivo</i> glycation of human serum albumin decreases its binding affinity for zinc. Metallomics, 2020, 12, 1036-1043.	1.0	8
60	Capillary flow injection: Performance under pressure. Analytica Chimica Acta, 1998, 366, 305-311.	2.6	7
61	A quantitative, in vitro appraisal of experimental low-glucose storage solutions used for blood banking. Analytical Methods, 2016, 8, 6856-6864.	1.3	7
62	Bioanalytical challenges for analytical chemists. Analyst, The, 2004, 129, 102.	1.7	6
63	Merging Microfluidics with Microtitre Technology for More Efficient Drug Discovery. Journal of the Association for Laboratory Automation, 2008, 13, 275-279.	2.8	6
64	An In Vitro Diagnostic for Multiple Sclerosis Based on C-peptide Binding to Erythrocytes. EBioMedicine, 2016, 11, 249-252.	2.7	6
65	Performance enhancement in flow reversal flow injection using on-capillary detection. Analytica Chimica Acta, 2000, 417, 185-190.	2.6	5
66	Fabrication and evaluation of a 3-dimensional microchip device where carbon microelectrodes individually address channels in the separate fluidic layers. Analyst, The, 2007, 132, 1246.	1.7	4
67	Use of the red blood cell as a simple drug target and diagnostic by manipulating and monitoring its ability to release adenosine triphosphate (ATP). Pure and Applied Chemistry, 2010, 82, 1623-1634.	0.9	4
68	Steroid inhibition of erythrocyte-derived ATP reduces endothelial cell production of nitric oxide in a 3D-printed fluidic model. Analytical Methods, 2018, 10, 3416-3422.	1.3	4
69	Rapid Prototyping and Image Fusion Guidance for Transcatheter Closure of Superior Sinus Venosus Atrial Septal Defect. SN Comprehensive Clinical Medicine, 2019, 1, 996-1000.	0.3	3
70	A 3D-printed transfusion platform reveals beneficial effects of normoglycemic erythrocyte storage solutions and a novel rejuvenating solution. Lab on A Chip, 2022, 22, 1310-1320.	3.1	3
71	Specific Binding of Leptin to Red Blood Cells Delivers a Pancreatic Hormone and Stimulates ATP Release. Molecular Pharmaceutics, 2021, 18, 2438-2447.	2.3	2
72	Albumin Glycation Affects the Delivery of C-Peptide to the Red Blood Cells. ACS Measurement Science Au, 0, , .	1.9	2

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73	Measuring P2X1 receptor activity in washed platelets in the absence of exogenous apyrase. Analytical Methods, 2012, 4, 101-105.	1.3	1
74	Human Cellular Retinol Binding Protein II Forms a Domainâ€Swapped Trimer Representing a Novel Fold and a New Template for Protein Engineering. ChemBioChem, 2020, 21, 3192-3196.	1.3	1
75	Release of Erythrocyte-Derived ATP, a Recognized Stimulus of Nitric Oxide Production, Is Increased upon Incubation of Erythrocytes with C-Peptide.. Blood, 2006, 108, 1567-1567.	0.6	0
76	Blood Storage Solutions Effecting Advanced Glycated End Products (AGEs) Nâ€CEL and Nâ€CML on Red Blood Cell Membranes. FASEB Journal, 2022, 36, .	0.2	0