Dana M Spence

List of Publications by Citations

72 papers	3,458 citations	30 h-index	58 g-index
77 ext. papers	3,847 ext. citations	5.6 avg, IF	5.62 L-index

#	Paper	IF	Citations
72	Evaluation of 3D printing and its potential impact on biotechnology and the chemical sciences. *Analytical Chemistry*, **2014**, 86, 3240-53	7.8	1085
71	3D printed microfluidic devices with integrated versatile and reusable electrodes. *Lab on A Chip*, **2014**, 14, 2023-32	7.2	213
70	Recent Advances in Analytical Chemistry by 3D Printing. *Analytical Chemistry*, **2017**, 89, 57-70	7.8	200
69	A 3D printed fluidic device that enables integrated features. *Analytical Chemistry*, **2013**, 85, 5622-6	7.8	177
68	3D-printed Microfluidic Devices: Fabrication, Advantages and Limitations-a Mini Review. *Analytical Methods*, **2016**, 8, 6005-6012	3.2	148
67	3D-printed fluidic devices enable quantitative evaluation of blood components in modified storage solutions for use in transfusion medicine. *Analyst, The*, **2014**, 139, 3219-26	5	59
66	Deformation-induced release of ATP from erythrocytes in a poly(dimethylsiloxane)-based microchip with channels that mimic resistance vessels. *Analytical Chemistry*, **2004**, 76, 4849-55	7.8	58
65	A perspective on the role of metals in diabetes: past findings and possible future directions. *Metallomics*, **2009**, 1, 32-41	4.5	57
64	Amperometric determination of nitric oxide derived from pulmonary artery endothelial cells immobilized in a microchip channel. *Analyst, The*, **2004**, 129, 995-1000	5	56
63	Addressing a vascular endothelium array with blood components using underlying microfluidic channels. *Lab on A Chip*, **2007**, 7, 1256-9	7.2	55
62	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, 1814-21	4.8	54
61	Fabrication of carbon microelectrodes with a micromolding technique and their use in microchip-based flow analyses. *Analyst, The*, **2004**, 129, 400-5	5	53
60	An altered oxidant defense system in red blood cells affects their ability to release nitric oxide-stimulating ATP. *Molecular BioSystems*, **2006**, 2, 305-11		51
59	Determination of ATP release from erythrocytes using microbore tubing as a model of resistance vessels in vivo. *Analytical Chemistry*, **2002**, 74, 2274-8	7.8	51
58	Metal-activated C-peptide facilitates glucose clearance and the release of a nitric oxide stimulus via the GLUT1 transporter. *Diabetologia*, **2008**, 51, 175-82	10.3	50
57	Microfluidic technologies as platforms for performing quantitative cellular analyses in an in vitro environment. *Analyst, The*, **2006**, 131, 1197-206	5	47
56	Microfluidic transendothelial electrical resistance measurement device that enables blood flow and postgrowth experiments. *Analytical Chemistry*, **2011**, 83, 4296-301	7.8	45

55	Review of 3D Cell Culture with Analysis in Microfluidic Systems. *Analytical Methods*, **2019**, 11, 4220-4232	3.2	44
54	Simultaneous determination of cell aging and ATP release from erythrocytes and its implications in type 2 diabetes. *Analytica Chimica Acta*, **2008**, 618, 227-33	6.6	43
53	Fluorescence monitoring of ATP-stimulated, endothelium-derived nitric oxide production in channels of a poly(dimethylsiloxane)-based microfluidic device. *Analytical Chemistry*, **2006**, 78, 3193-7	7.8	42
52	PolyJet 3D-Printed Enclosed Microfluidic Channels without Photocurable Supports. *Analytical Chemistry*, **2019**, 91, 6910-6917	7.8	41
51	Polymer Coatings in 3D-Printed Fluidic Device Channels for Improved Cellular Adherence Prior to Electrical Lysis. *Analytical Chemistry*, **2015**, 87, 6335-41	7.8	40
50	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, 7543-8	7.8	39
49	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, 1163-8	5	38
48	A Diffusion-Based and Dynamic 3D-Printed Device That Enables Parallel in Vitro Pharmacokinetic Profiling of Molecules. *Analytical Chemistry*, **2016**, 88, 1864-70	7.8	37
47	Chemiluminescence detection of ATP release from red blood cells upon passage through microbore tubing. *Analyst, The*, **2001**, 126, 1257-60	5	36
46	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, 5133-8	7.8	35
45	Measuring the simultaneous effects of hypoxia and deformation on ATP release from erythrocytes. *Analyst, The*, **2008**, 133, 678-82	5	33
44	Integration of multiple components in polystyrene-based microfluidic devices part I: fabrication and characterization. *Analyst, The*, **2013**, 138, 129-36	5	31
43	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, 534-43	3.7	30
42	Direct plate-reader measurement of nitric oxide released from hypoxic erythrocytes flowing through a microfluidic device. *Analytical Chemistry*, **2010**, 82, 7492-7	7.8	30
41	A Printed Equilibrium Dialysis Device with Integrated Membranes for Improved Binding Affinity Measurements. *Analytical Chemistry*, **2017**, 89, 7302-7306	7.8	29
40	Dynamic monitoring of glutathione in erythrocytes, without a separation step, in the presence of an oxidant insult. *Analytical Chemistry*, **2006**, 78, 8556-60	7.8	26
39	Fluorescence determination of nitric oxide production in stimulated and activated platelets. *Analytical Chemistry*, **2007**, 79, 2421-6	7.8	23
38	Applications of 3D-Printing for Improving Chemistry Education. *Journal of Chemical Education*, **2020**, 97, 112-117	2.4	23

37	Multiphoton excited hemoglobin fluorescence and third harmonic generation for non-invasive microscopy of stored blood. *Biomedical Optics Express*, **2016**, 7, 3449-3460	3.5	22
36	Integration of multiple components in polystyrene-based microfluidic devices part II: cellular analysis. *Analyst, The*, **2013**, 138, 137-43	5	21
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, 1157-62		21
34	Factors Affecting Zone Variance in a Capillary Flow Injection System. *Analytical Chemistry*, **1997**, 69, 165-169	7.8	21
33	Detection of ATP-induced nitric oxide in a biomimetic circulatory vessel containing an immobilized endothelium. *Analytical Chemistry*, **2003**, 75, 145-51	7.8	20
32	Evaluating the effects of estradiol on endothelial nitric oxide stimulated by erythrocyte-derived ATP using a microfluidic approach. *Analytical and Bioanalytical Chemistry*, **2010**, 397, 3369-75	4.4	19
31	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, 148-58	3.6	17
30	Technologies for Measuring Pharmacokinetic Profiles. *Annual Review of Analytical Chemistry*, **2018**, 11, 79-100	12.5	16
29	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	5	16
28	Mass spectrometric characterization and activity of zinc-activated proinsulin C-peptide and C-peptide mutants. *Analyst, The*, **2010**, 135, 278-88	5	16
27	Monitoring erythrocytes in a microchip channel that narrows uniformly: towards an improved microfluidic-based mimic of the microcirculation. *Journal of Chromatography A*, **2006**, 1111, 220-7	4.5	15
26	C-peptide-stimulated nitric oxide production in a cultured pulmonary artery endothelium is erythrocyte mediated and requires Zn(2+). *Diabetes/Metabolism Research and Reviews*, **2013**, 29, 44-52	7.5	14
25	Personalized metabolic assessment of erythrocytes using microfluidic delivery to an array of luminescent wells. *Analytical Chemistry*, **2009**, 81, 3102-8	7.8	14
24	A rapid method for post-antibiotic bacterial susceptibility testing. *PLoS ONE*, **2019**, 14, e0210534	3.7	14
23	Plate Reader Compatible 3D-Printed Device for Teaching Equilibrium Dialysis Binding Assays. *Journal of Chemical Education*, **2018**, 95, 1662-1667	2.4	13
22	Microfluidic evaluation of red cells collected and stored in modified processing solutions used in blood banking. *Integrative Biology (United Kingdom)*, **2014**, 6, 65-75	3.7	12
21	C-Peptide replacement therapy in type 1 diabetes: are we in the trough of disillusionment?. *Molecular BioSystems*, **2017**, 13, 1432-1437		11
20	Flow-based amperometric detection of dopamine in an immobilized cell reactor. *Journal of Neuroscience Methods*, **2003**, 124, 129-34	3	11

19	Microfluidic device with tunable post arrays and integrated electrodes for studying cellular release. *Analyst, The*, **2014**, 139, 5686-94	5	10
18	A microfluidic technique for monitoring bloodstream analytes indicative of C-peptide resistance in type 2 diabetes. *Analyst, The*, **2009**, 134, 188-93	5	10
17	Engineering the hCRBPII Domain-Swapped Dimer into a New Class of Protein Switches. *Journal of the American Chemical Society*, **2019**, 141, 17125-17132	16.4	8
16	Design Considerations for Capillary flow Injection Systems. *Instrumentation Science and Technology*, **1996**, 24, 103-113	1.4	7
15	Capillary flow injection: Performance under pressure. *Analytica Chimica Acta*, **1998**, 366, 305-311	6.6	6
14	A quantitative, in vitro appraisal of experimental low-glucose storage solutions used for blood banking. *Analytical Methods*, **2016**, 8, 6856-6864	3.2	5
13	Bioanalytical challenges for analytical chemists. *Analyst, The*, **2004**, 129, 102-4	5	5
12	Ultrafiltration binding analyses of glycated albumin with a 3D-printed syringe attachment. *Analytical and Bioanalytical Chemistry*, **2018**, 410, 7565-7573	4.4	5
11	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	2.1	4
10	Merging Microfluidics with Micro-titre Technology for More Efficient Drug Discovery. *Journal of the Association for Laboratory Automation*, **2008**, 13, 275-279		4
9	Performance enhancement in flow reversal flow injection using on-capillary detection. *Analytica Chimica Acta*, **2000**, 417, 185-190	6.6	4
8	An In Vitro Diagnostic for Multiple Sclerosis Based on C-peptide Binding to Erythrocytes. *EBioMedicine*, **2016**, 11, 249-252	8.8	4
7	A novel 3D-printed centrifugal ultrafiltration method reveals in vivo glycation of human serum albumin decreases its binding affinity for zinc. *Metallomics*, **2020**, 12, 1036-1043	4.5	3
6	Fabrication and evaluation of a 3-dimensional microchip device where carbon microelectrodes individually address channels in the separate fluidic layers. *Analyst, The*, **2007**, 132, 1246-53	5	3
5	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	3.2	2
4	Specific Binding of Leptin to Red Blood Cells Delivers a Pancreatic Hormone and Stimulates ATP Release. *Molecular Pharmaceutics*, **2021**, 18, 2438-2447	5.6	2
3	Rapid Prototyping and Image Fusion Guidance for Transcatheter Closure of Superior Sinus Venosus Atrial Septal Defect. *SN Comprehensive Clinical Medicine*, **2019**, 1, 996-1000	2.7	2
2	Measuring P2X1 receptor activity in washed platelets in the absence of exogenous apyrase. *Analytical Methods*, **2012**, 4, 101-105	3.2	1

1	Human Cellular Retinol Binding Protein II Forms a Domain-Swapped Trimer Representing a Novel Fold and a New Template for Protein Engineering. *ChemBioChem*, **2020**, 21, 3192-3196	3.8	0