David T Eddington

List of Publications by Year
in descending order

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50 papers	2,433 citations	218677 26 h-index	206112 48 g-index
53 all docs	53 docs citations	53 times ranked	3465 citing authors

#	Article	IF	Citations
1	Flow control with hydrogels. Advanced Drug Delivery Reviews, 2004, 56, 199-210.	13.7	340
2	Thermal aging and reduced hydrophobic recovery of polydimethylsiloxane. Sensors and Actuators B: Chemical, 2006, 114, 170-172.	7.8	289
3	Oxygen control with microfluidics. Lab on A Chip, 2014, 14, 4305-4318.	6.0	157
4	Dendrimerâ€Mediated Multivalent Binding for the Enhanced Capture of Tumor Cells. Angewandte Chemie - International Edition, 2011, 50, 11769-11772.	13.8	147
5	Microfluidic device for multimodal characterization of pancreatic islets. Lab on A Chip, 2009, 9, 97-106.	6.0	114
6	Oxygen gradients for open well cellular cultures via microfluidic substrates. Lab on A Chip, 2010, 10, 2394.	6.0	110
7	Enhanced Tumor Cell Isolation by a Biomimetic Combination of E-selectin and anti-EpCAM: Implications for the Effective Separation of Circulating Tumor Cells (CTCs). Langmuir, 2010, 26, 8589-8596.	3.5	83
8	An organic self-regulating microfluidic system. Lab on A Chip, 2001, 1, 96.	6.0	81
9	Modulating Temporal and Spatial Oxygenation over Adherent Cellular Cultures. PLoS ONE, 2009, 4, e6891.	2.5	72
10	Islet Preconditioning via Multimodal Microfluidic Modulation of Intermittent Hypoxia. Analytical Chemistry, 2012, 84, 1987-1993.	6.5	71
11	Microfluidic perifusion and imaging device for multi-parametric islet function assessment. Biomedical Microdevices, 2010, 12, 409-417.	2.8	64
12	Precise control over the oxygen conditions within the Boyden chamber using a microfabricated insert. Lab on A Chip, 2010, 10, 2366.	6.0	55
13	Direct Measurements on CD24-Mediated Rolling of Human Breast Cancer MCF-7 Cells on E-Selectin. Analytical Chemistry, 2011, 83, 1078-1083.	6.5	53
14	Microfluidic Array with Integrated Oxygenation Control for Real-Time Live-Cell Imaging: Effect of Hypoxia on Physiology of Microencapsulated Pancreatic Islets. Analytical Chemistry, 2013, 85, 11240-11249.	6.5	53
15	Systematic prevention of bubble formation and accumulation for long-term culture of pancreatic islet cells in microfluidic device. Biomedical Microdevices, 2012, 14, 419-426.	2.8	51
16	A microfluidic array for real-time live-cell imaging of human and rodent pancreatic islets. Lab on A Chip, 2016, 16, 1466-1472.	6.0	44
17	Precise Spatial and Temporal Control of Oxygen within In Vitro Brain Slices via Microfluidic Gas Channels. PLoS ONE, 2012, 7, e43309.	2.5	41
18	A 3D-Printed Oxygen Control Insert for a 24-Well Plate. PLoS ONE, 2015, 10, e0137631.	2.5	40

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19	Proatherogenic Flow Increases Endothelial Stiffness via Enhanced CD36-Mediated Uptake of Oxidized Low-Density Lipoproteins. Arteriosclerosis, Thrombosis, and Vascular Biology, 2018, 38, 64-75.	2.4	37
20	Dual microfluidic perifusion networks for concurrent islet perifusion and optical imaging. Biomedical Microdevices, 2012, 14, 7-16.	2.8	36
21	Size-based separation and collection of mouse pancreatic islets for functional analysis. Biomedical Microdevices, 2010, 12, 865-874.	2.8	33
22	Microfluidic add-on for standard electrophysiology chambers. Lab on A Chip, 2008, 8, 1048.	6.0	32
23	Channel Surface Patterning of Alternating Biomimetic Protein Combinations for Enhanced Microfluidic Tumor Cell Isolation. Analytical Chemistry, 2012, 84, 4022-4028.	6.5	30
24	Microfluidic platform generates oxygen landscapes for localized hypoxic activation. Lab on A Chip, 2014, 14, 4688-4695.	6.0	29
25	A microfabricated platform for establishing oxygen gradients in 3-D constructs. Biomedical Microdevices, 2013, 15, 407-414.	2.8	28
26	Competence pili in Streptococcus pneumoniae are highly dynamic structures that retract to promote DNA uptake. Molecular Microbiology, 2021, 116, 381-396.	2.5	28
27	Size-Based Separation of Microparticles in a Multilayered Microfluidic Device. Journal of Microelectromechanical Systems, 2010, 19, 375-383.	2.5	27
28	Application of microfluidic technology to pancreatic islet research: first decade of endeavor. Bioanalysis, 2010, 2, 1729-1744.	1.5	26
29	Microfluidic wound bandage: Localized oxygen modulation of collagen maturation. Wound Repair and Regeneration, 2013, 21, 226-234.	3.0	26
30	Rapid prototyping for neuroscience and neural engineering. Journal of Neuroscience Methods, 2008, 172, 263-269.	2.5	25
31	Oxygen sensitive microwells. Lab on A Chip, 2010, 10, 3291.	6.0	25
32	A microfluidic oxygen gradient demonstrates differential activation of the hypoxia-regulated transcription factors HIF-1Î± and HIF-2Î±. Integrative Biology (United Kingdom), 2017, 9, 742-750.	1.3	25
33	Leveraging stimuli responsive hydrogels for on/off control of mixing. Sensors and Actuators B: Chemical, 2011, 157, 722-726.	7.8	22
34	Open Design 3D-Printable Adjustable Micropipette that Meets the ISO Standard for Accuracy. Micromachines, 2018, 9, 191.	2.9	15
35	Development of a Disposable Infusion System for the Delivery of Protein Therapeutics. Biomedical Microdevices, 2005, 7, 223-230.	2.8	12
36	Multiphysics simulation of a microfluidic perfusion chamber for brain slice physiology. Biomedical Microdevices, 2010, 12, 761-767.	2.8	12

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37	Enhanced loading of Fura-2/AM calcium indicator dye in adult rodent brain slices via a microfluidic oxygenator. Journal of Neuroscience Methods, 2013, 216, 110-117.	2.5	9
38	Femtoliter droplet confinement ofStreptococcus pneumoniae: bacterial genetic transformation by cellâ€“cell interaction in droplets. Lab on A Chip, 2019, 19, 682-692.	6.0	9
39	Quantitative and Temporal Control of Oxygen Microenvironment at the Single Islet Level. Journal of Visualized Experiments, 2013, , e50616.	0.3	8
40	96-Well Oxygen Control Using a 3D-Printed Device. Analytical Chemistry, 2021, 93, 2570-2577.	6.5	8
41	Rheologically biomimetic cell suspensions for decreased cell settling in microfluidic devices. Biomedical Microdevices, 2011, 13, 549-557.	2.8	7
42	Multiplex gene transfer by genetic transformation between isolated S. pneumoniae cells confined in microfluidic droplets. Integrative Biology (United Kingdom), 2019, 11, 415-424.	1.3	6
43	Effect of localized hypoxia on Drosophila embryo development. PLoS ONE, 2017, 12, e0185267.	2.5	6
44	Device for the control of oxygen concentration in multiwell cell culture plates. , 2009, 2009, 2097-100.		4
45	A Multi-Parametric Islet Perifusion System within a Microfluidic Perifusion Device. Journal of Visualized Experiments, 2010, , .	0.3	4
46	Bubble removal with the use of a vacuum pressure generated by a converging-diverging nozzle. Biomedical Microdevices, 2017, 19, 58.	2.8	4
47	Generation of controllable gaseous H2S concentrations using microfluidics. RSC Advances, 2018, 8, 4078-4083.	3.6	4
48	Vacuum pressure generation via microfabricated converging-diverging nozzles for operation of automated pneumatic logic. Biomedical Microdevices, 2016, 18, 74.	2.8	3
49	Controlling Hydrogen Sulfide concentrations via PDMS microfluidics for endothelial cell culture. FASEB Journal, 2017, 31, 689.6.	0.5	2
50	Applying Microfluidics to Electrophysiology. Journal of Visualized Experiments, 2007, , 301.	0.3	0