David J Beebe

List of Publications by Year in descending order

140 papers	12,073 citations	70961 41 h-index	27345 106 g-index
149 all docs	149 docs citations	149 times ranked	14228 citing authors

#	Article	IF	Citations
1	Volumeless reagent delivery: a liquid handling method for adding reagents to microscale droplets without increasing volume. Lab on A Chip, 2022, 22, 286-295.	3.1	8
2	Underâ€Oil Autonomously Regulated Oxygen Microenvironments: A Goldilocks Principleâ€Based Approach for Microscale Cell Culture. Advanced Science, 2022, 9, e2104510.	5.6	8
3	Fresh tissue procurement and preparation for multicompartment and multimodal analysis of the prostate tumor microenvironment. Prostate, 2022, 82, 836-849.	1.2	2
4	Role of the Skin Microenvironment in Melanomagenesis: Epidermal Keratinocytes and Dermal Fibroblasts Promote BRAF Oncogene-Induced Senescence Escape in Melanocytes. Cancers, 2022, 14, 1233.	1.7	6
5	Models of Renal Cell Carcinoma Used to Investigate Molecular Mechanisms and Develop New Therapeutics. Frontiers in Oncology, 2022, 12, 871252.	1.3	8
6	Microphysiological model of renal cell carcinoma to inform anti-angiogenic therapy. Biomaterials, 2022, 283, 121454.	5.7	9
7	Analytical validation and initial clinical testing of quantitative microscopic evaluation for PD-L1 and HLA I expression on circulating tumor cells from patients with non-small cell lung cancer. Biomarker Research, 2022, 10, 26.	2.8	1
8	Innate immune cell response to host-parasite interaction in a human intestinal tissue microphysiological system. Science Advances, 2022, 8, eabm8012.	4.7	10
9	A role for microfluidic systems in precision medicine. Nature Communications, 2022, 13, .	5.8	63
10	Induced Pluripotent Stem Cells on a Chip: A Self-Contained, Accessible, Pipette-less iPSC Culturing and Differentiation Kit. SLAS Technology, 2021, 26, 80-91.	1.0	1
11	Immune Cell Paracrine Signaling Drives the Neutrophil Response to A. fumigatus in an Infection-on-a-Chip Model. Cellular and Molecular Bioengineering, 2021, 14, 133-145.	1.0	15
12	18F-DCFPyL PSMA PET imaging compared to conventional imaging in the detection of pelvic nodal metastases in patients with locally advanced or oligometastatic prostate cancer.. Journal of Clinical Oncology, 2021, 39, 36-36.	0.8	0
13	A Microphysiological Approach to Evaluate Effectors of Intercellular Hedgehog Signaling in Development. Frontiers in Cell and Developmental Biology, 2021, 9, 621442.	1.8	5
14	Microfluidic tumor-on-a-chip model to evaluate the role of tumor environmental stress on NK cell exhaustion. Science Advances, 2021, 7, .	4.7	82
15	Preoperative predictors of biochemical recurrence in a phase II trial of neoadjuvant therapy in very high-risk prostate cancer.. Journal of Clinical Oncology, 2021, 39, 74-74.	0.8	0
16	Elucidating cancer-vascular paracrine signaling using a human organotypic breast cancer cell extravasation model. Biomaterials, 2021, 270, 120640.	5.7	25
17	Development and initial clinical testing of a multiplexed circulating tumor cell assay in patients with clear cell renal cell carcinoma. Molecular Oncology, 2021, 15, 2330-2344.	2.1	14
18	Toward improved in vitro models of human cancer. APL Bioengineering, 2021, 5, 010902.	3.3	30

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19	A reconfigurable microscale assay enables insights into cancer-associated fibroblast modulation of immune cell recruitment. Integrative Biology (United Kingdom), 2021, 13, 87-97.	0.6	6
20	Oil immersed lossless total analysis system for integrated RNA extraction and detection of SARS-CoV-2. Nature Communications, 2021, 12, 4317.	5.8	28
21	Live cell molecular analysis of primary prostate cancer organoids identifies persistent androgen receptor signaling. Medical Oncology, 2021, 38, 135.	1.2	11
22	Social motility of biofilm-like microcolonies in a gliding bacterium. Nature Communications, 2021, 12, 5700.	5.8	16
23	Transendothelial migration induces differential migration dynamics of leukocytes in tissue matrix. Journal of Cell Science, 2021, 134, .	1.2	10
24	Primary head and neck tumour-derived fibroblasts promote lymphangiogenesis in a lymphatic organotypic co-culture model. EBioMedicine, 2021, 73, 103634.	2.7	19
25	Microfluidic Systems to Study Neutrophil Forward and Reverse Migration. Frontiers in Immunology, 2021, 12, 781535.	2.2	5
26	Immune cell mediated cabozantinib resistance for patients with renal cell carcinoma. Integrative Biology (United Kingdom), 2021, 13, 259-268.	0.6	4
27	Human Tumorâ€Lymphatic Microfluidic Model Reveals Differential Conditioning of Lymphatic Vessels by Breast Cancer Cells. Advanced Healthcare Materials, 2020, 9, e1900925.	3.9	45
28	Fungal oxylipins direct programmed developmental switches in filamentous fungi. Nature Communications, 2020, 11, 5158.	5.8	37
29	Autofluorescence Imaging of 3D Tumorâ€“Macrophage Microscale Cultures Resolves Spatial and Temporal Dynamics of Macrophage Metabolism. Cancer Research, 2020, 80, 5408-5423.	0.4	26
30	A bioengineered organotypic prostate model for the study of tumor microenvironment-induced immune cell activation. Integrative Biology (United Kingdom), 2020, 12, 250-262.	0.6	10
31	Microfluidic lumen-based systems for advancing tubular organ modeling. Chemical Society Reviews, 2020, 49, 6402-6442.	18.7	54
32	Organotypic primary blood vessel models of clear cell renal cell carcinoma for single-patient clinical trials. Lab on A Chip, 2020, 20, 4420-4432.	3.1	21
33	Microfluidic Tumor-on-a-Chip Model to Study Tumor Metabolic Vulnerability. International Journal of Molecular Sciences, 2020, 21, 9075.	1.8	16
34	Breast Fibroblasts and ECM Components Modulate Breast Cancer Cell Migration through the Secretion of MMPs in a 3D Microfluidic Co-Culture Model. Cancers, 2020, 12, 1173.	1.7	56
35	Engineered Perineural Vascular Plexus for Modeling Developmental Toxicity. Advanced Healthcare Materials, 2020, 9, e2000825.	3.9	14
36	Non-toxic fragment of botulinum neurotoxin type A and monomethyl auristatin E conjugate for targeted therapy for neuroendocrine tumors. Cancer Gene Therapy, 2020, 27, 898-909.	2.2	2

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37	Modeling chemical effects on breast cancer: the importance of the microenvironment in vitro. Integrative Biology (United Kingdom), 2020, 12, 21-33.	0.6	9
38	Pairing Microwell Arrays with an Affordable, Semiautomated Single-Cell Aspirator for the Interrogation of Circulating Tumor Cell Heterogeneity. SLAS Technology, 2020, 25, 162-176.	1.0	10
39	Matrix density drives 3D organotypic lymphatic vessel activation in a microfluidic model of the breast tumor microenvironment. Lab on A Chip, 2020, 20, 1586-1600.	3.1	40
40	Under oil open-channel microfluidics empowered by exclusive liquid repellency. Science Advances, 2020, 6, eaay9919.	4.7	34
41	Deconstructing tumor heterogeneity: the stromal perspective. Oncotarget, 2020, 11, 3621-3632.	0.8	29
42	Targeting tumor-associated macrophage (TAM) mediated inhibition of T-cell migration in prostate cancer using epigenetic modifying agents.. Journal of Clinical Oncology, 2020, 38, 166-166.	0.8	0
43	Phase II trial of neoadjuvant chemohormonal therapy (NAC) in prostate cancer (PC) with response assessment using PSMA PET/MRI.. Journal of Clinical Oncology, 2020, 38, 334-334.	0.8	0
44	Reconfigurable open microfluidics for studying the spatiotemporal dynamics of paracrine signalling. Nature Biomedical Engineering, 2019, 3, 830-841.	11.6	68
45	Centrifugation-Assisted Immiscible Fluid Filtration for Dual-Bioanalyte Extraction. Analytical Chemistry, 2019, 91, 11848-11855.	3.2	10
46	Evaluation of PEG-Based Hydrogel Influence on Estrogen-Receptor-Driven Responses in MCF7 Breast Cancer Cells. ACS Biomaterials Science and Engineering, 2019, 5, 6089-6098.	2.6	13
47	Tumor-on-a-chip: a microfluidic model to study cell response to environmental gradients. Lab on A Chip, 2019, 19, 3461-3471.	3.1	65
48	Effects of culture method on response to EGFR therapy in head and neck squamous cell carcinoma cells. Scientific Reports, 2019, 9, 12480.	1.6	30
49	Human organotypic lymphatic vessel model elucidates microenvironment-dependent signaling and barrier function. Biomaterials, 2019, 214, 119225.	5.7	61
50	Automated System for Small-Population Single-Particle Processing Enabled by Exclusive Liquid Repellency. SLAS Technology, 2019, 24, 535-542.	1.0	16
51	User-defined morphogen patterning for directing human cell fate stratification. Scientific Reports, 2019, 9, 6433.	1.6	10
52	Enabling cell recovery from 3D cell culture microfluidic devices for tumour microenvironment biomarker profiling. Scientific Reports, 2019, 9, 6199.	1.6	33
53	Mammary adipose stromal cells derived from obese women reduce sensitivity to the aromatase inhibitor anastrazole in an organotypic breast model. FASEB Journal, 2019, 33, 8623-8633.	0.2	23
54	Patient-specific organotypic blood vessels as an in vitro model for anti-angiogenic drug response testing in renal cell carcinoma. EBioMedicine, 2019, 42, 408-419.	2.7	33

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55	Development of a Microfluidic Array to Study Drug Response in Breast Cancer. Molecules, 2019, 24, 4385.	1.7	9
56	Neutrophil trafficking on-a-chip: an in vitro, organotypic model for investigating neutrophil priming, extravasation, and migration with spatiotemporal control. Lab on A Chip, 2019, 19, 3697-3705.	3.1	27
57	Evaluating natural killer cell cytotoxicity against solid tumors using a microfluidic model. OncoImmunology, 2019, 8, 1553477.	2.1	103
58	Integration of Magnetic Bead-Based Cell Selection into Complex Isolations. ACS Omega, 2018, 3, 3908-3917.	1.6	19
59	miFAST: A novel and rapid microRNA target capture method. Molecular Carcinogenesis, 2018, 57, 559-566.	1.3	6
60	An Accessible Organotypic Microvessel Model Using iPSCâ€Derived Endothelium. Advanced Healthcare Materials, 2018, 7, 1700497.	3.9	42
61	Organotypic microfluidic breast cancer model reveals starvation-induced spatial-temporal metabolic adaptations. EBioMedicine, 2018, 37, 144-157.	2.7	68
62	Vital ex vivo tissue labeling and pathology-guided micropunching to characterize cellular heterogeneity in the tissue microenvironment. BioTechniques, 2018, 64, 13-19.	0.8	5
63	Integrating electrochemical immunosensing and cell adhesion technologies for cancer cell detection and enumeration. Electrochimica Acta, 2018, 286, 205-211.	2.6	9
64	Double-exclusive liquid repellency (double-ELR): an enabling technology for rare phenotype analysis. Lab on A Chip, 2018, 18, 2710-2719.	3.1	20
65	Exclusive Liquid Repellency: An Open Multi-Liquid-Phase Technology for Rare Cell Culture and Single-Cell Processing. ACS Applied Materials & Interfaces, 2018, 10, 17065-17070.	4.0	28
66	Mammary fibroblasts reduce apoptosis and speed estrogen-induced hyperplasia in an organotypic MCF7-derived duct model. Scientific Reports, 2018, 8, 7139.	1.6	35
67	Surface topography and hydrophilicity regulate macrophage phenotype in milled microfluidic systems. Lab on A Chip, 2018, 18, 3011-3017.	3.1	25
68	Chemokine Signaling and the Regulation of Bidirectional Leukocyte Migration in Interstitial Tissues. Cell Reports, 2017, 19, 1572-1585.	2.9	103
69	Adaptation of a Simple Microfluidic Platform for High-Dimensional Quantitative Morphological Analysis of Human Mesenchymal Stromal Cells on Polystyrene-Based Substrates. SLAS Technology, 2017, 22, 646-661.	1.0	10
70	Microbial volatile communication in human organotypic lung models. Nature Communications, 2017, 8, 1770.	5.8	78
71	Integrated Analysis of Multiple Biomarkers from Circulating Tumor Cells Enabled by Exclusion-Based Analyte Isolation. Clinical Cancer Research, 2017, 23, 746-756.	3.2	52
72	Multikingdom microscale models. PLoS Pathogens, 2017, 13, e1006424.	2.1	6

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73	Therapeutic targeting of tumor-associated macrophages through microscale engineering of the prostate cancer microenvironment.. Journal of Clinical Oncology, 2017, 35, 184-184.	0.8	1
74	High rates of chromosome missegregation suppress tumor progression but do not inhibit tumor initiation. Molecular Biology of the Cell, 2016, 27, 1981-1989.	0.9	50
75	Personalized in vitro cancer models to predict therapeutic response: Challenges and a framework for improvement. , 2016, 165, 79-92.		60
76	Magnetic System for Automated Manipulation of Paramagnetic Particles. Analytical Chemistry, 2016, 88, 9902-9907.	3.2	14
77	Transitions from mono- to co- to tri-culture uniquely affect gene expression in breast cancer, stromal, and immune compartments. Biomedical Microdevices, 2016, 18, 70.	1.4	19
78	LumeNEXT: A Practical Method to Pattern Luminal Structures in ECM Gels. Advanced Healthcare Materials, 2016, 5, 198-204.	3.9	88
79	AirJump: Using Interfaces to Instantly Perform Simultaneous Extractions. ACS Applied Materials & Interfaces, 2016, 8, 15040-15045.	4.0	16
80	Development of a Highly Sensitive Cell-Based Assay for Detecting Botulinum Neurotoxin Type A through Neural Culture Media Optimization. Journal of Biomolecular Screening, 2016, 21, 65-73.	2.6	5
81	Microbial metabolomics in open microscale platforms. Nature Communications, 2016, 7, 10610.	5.8	86
82	Stable engineered vascular networks from human induced pluripotent stem cell-derived endothelial cells cultured in synthetic hydrogels. Acta Biomaterialia, 2016, 35, 32-41.	4.1	86
83	High Specificity in Circulating Tumor Cell Identification Is Required for Accurate Evaluation of Programmed Death-Ligand 1. PLoS ONE, 2016, 11, e0159397.	1.1	54
84	The Extracellular Matrix of Candida albicans Biofilms Impairs Formation of Neutrophil Extracellular Traps. PLoS Pathogens, 2016, 12, e1005884.	2.1	105
85	MicroC³: an ex vivo microfluidic cis-coculture assay to test chemosensitivity and resistance of patient multiple myeloma cells. Integrative Biology (United Kingdom), 2015, 7, 643-654.	0.6	42
86	High-Density Self-Contained Microfluidic KOALA Kits for Use by Everyone. Journal of the Association for Laboratory Automation, 2015, 20, 146-153.	2.8	11
87	Phosphodiesterase 4D Inhibitors Limit Prostate Cancer Growth Potential. Molecular Cancer Research, 2015, 13, 149-160.	1.5	39
88	Microfluidic Multiculture Assay to Analyze Biomolecular Signaling in Angiogenesis. Analytical Chemistry, 2015, 87, 3239-3246.	3.2	50
89	Microfluidic model of ductal carcinoma in situ with 3D, organotypic structure. BMC Cancer, 2015, 15, 12.	1.1	93
90	Micromilling: a method for ultra-rapid prototyping of plastic microfluidic devices. Lab on A Chip, 2015, 15, 2364-2378.	3.1	394

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91	Using Exclusion-Based Sample Preparation (ESP) to Reduce Viral Load Assay Cost. PLoS ONE, 2015, 10, e0143631.	1.1	8
92	A Combined Fabrication and Instrumentation Platform for Sample Preparation. Journal of the Association for Laboratory Automation, 2014, 19, 267-274.	2.8	7
93	HIV Viral RNA Extraction in Wax Immiscible Filtration Assisted by Surface Tension (IFAST) Devices. Journal of Molecular Diagnostics, 2014, 16, 297-304.	1.2	24
94	The present and future role of microfluidics in biomedical research. Nature, 2014, 507, 181-189.	13.7	2,259
95	Weak proteinâ€“protein interactions revealed by immiscible filtration assisted by surface tension. Analytical Biochemistry, 2014, 447, 133-140.	1.1	18
96	A Golgi-Localized Pool of the Mitotic Checkpoint Component Mad1 Controls Integrin Secretion and Cell Migration. Current Biology, 2014, 24, 2687-2692.	1.8	20
97	The importance of being a lumen. FASEB Journal, 2014, 28, 4583-4590.	0.2	59
98	A microfluidic coculture and multiphoton FAD analysis assay provides insight into the influence of the bone microenvironment on prostate cancer cells. Integrative Biology (United Kingdom), 2014, 6, 627-635.	0.6	31
99	Streamlining gene expression analysis: integration of co-culture and mRNA purification. Integrative Biology (United Kingdom), 2014, 6, 224.	0.6	14
100	Cellular Microenvironment Dictates Androgen Production by Murine Fetal Leydig Cells in Primary Culture1. Biology of Reproduction, 2014, 91, 85.	1.2	18
101	Microfluidic 3D models of cancer. Advanced Drug Delivery Reviews, 2014, 79-80, 68-78.	6.6	156
102	Efficient Sample Preparation from Complex Biological Samples Using a Sliding Lid for Immobilized Droplet Extractions. Analytical Chemistry, 2014, 86, 6355-6362.	3.2	23
103	Fluorescence-Based Assessment of Plasma-Induced Hydrophilicity in Microfluidic Devices via Nile Red Adsorption and Depletion. Analytical Chemistry, 2014, 86, 7258-7263.	3.2	6
104	Circulating Tumor Cells in Metastatic Breast Cancer: A Prognostic and Predictive Marker. Journal of Patient-centered Research and Reviews, 2014, 1, 85-92.	0.6	18
105	Predictive and pharmacodynamic biomarkers of kinase inhibitors in renal cell carcinoma circulating tumor cells using the versa platform.. Journal of Clinical Oncology, 2014, 32, e15600-e15600.	0.8	0
106	High-content adhesion assay to address limited cell samples. Integrative Biology (United Kingdom), 2013, 5, 720.	0.6	13
107	The VerIFAST: an integrated method for cell isolation and extracellular/intracellular staining. Lab on A Chip, 2013, 13, 391-396.	3.1	60
108	Characterization of Molecules Binding to the 70K N-Terminal Region of Fibronectin by IFAST Purification Coupled with Mass Spectrometry. Journal of Proteome Research, 2013, 12, 3393-3404.	1.8	18

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109	Tubeless microfluidic angiogenesis assay with three-dimensional endothelial-lined microvessels. Biomaterials, 2013, 34, 1471-1477.	5.7	224
110	Low-Volume Toolbox for the Discovery of Immunosuppressive Fungal Secondary Metabolites. PLoS Pathogens, 2013, 9, e1003289.	2.1	73
111	Suspended microfluidics. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10111-10116.	3.3	156
112	Automated Operation of Immiscible Filtration Assisted by Surface Tension (IFAST) Arrays for Streamlined Analyte Isolation. Journal of the Association for Laboratory Automation, 2013, 18, 206-211.	2.8	34
113	A Quantitative Comparison of Human HT-1080 Fibrosarcoma Cells and Primary Human Dermal Fibroblasts Identifies a 3D Migration Mechanism with Properties Unique to the Transformed Phenotype. PLoS ONE, 2013, 8, e81689.	1.1	32
114	Nuclear localization of the androgen receptor in prostate cancer circulating tumor cells from men who have failed androgen deprivation therapy.. Journal of Clinical Oncology, 2013, 31, e22141-e22141.	0.8	0
115	Both LRP5 and LRP6 Receptors Are Required to Respond to Physiological Wnt Ligands in Mammary Epithelial Cells and Fibroblasts. Journal of Biological Chemistry, 2012, 287, 16454-16466.	1.6	66
116	Harnessing gravitational, hydrodynamic and negative dielectrophoretic forces for higher throughput cell sorting. Biochip Journal, 2012, 6, 229-239.	2.5	4
117	Engineers are from PDMS-land, Biologists are from Polystyrenia. Lab on A Chip, 2012, 12, 1224.	3.1	769
118	Future of lab on a chip. Biomedical Engineering Letters, 2012, 2, 71-71.	2.1	1
119	Microfluidic Platform Enabling Primary Multiple Myeloma Mono- and Cis-Co-Culture Analysis. Blood, 2012, 120, 1830-1830.	0.6	0
120	One-step purification of nucleic acid for gene expression analysis via Immiscible Filtration Assisted by Surface Tension (IFAST). Lab on A Chip, 2011, 11, 1747.	3.1	140
121	Purification of cell subpopulations via immiscible filtration assisted by surface tension (IFAST). Biomedical Microdevices, 2011, 13, 1033-1042.	1.4	44
122	A Cell Programmable Assay (CPA) chip. Lab on A Chip, 2010, 10, 2071.	3.1	8
123	Biological implications of polydimethylsiloxane-based microfluidic cell culture. Lab on A Chip, 2009, 9, 2132.	3.1	572
124	Lab on a Chip launches a new Methods section. Lab on A Chip, 2009, 9, 3035.	3.1	1
125	Cellular observations enabled by microculture: paracrine signaling and population demographics. Integrative Biology (United Kingdom), 2009, 1, 267.	0.6	71
126	Interfacial formation of porous membranes with poly(ethylene glycol) in a microfluidic environment. Journal of Applied Polymer Science, 2008, 110, 1581-1589.	1.3	9

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127	Quantification of small cell numbers with a microchannel device. BioTechniques, 2008, 45, 321-325.	0.8	6
128	Microscale bioengineering inspired by nature: from widgets to cell biology. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1.	0.5	1
129	Design of microfluidic impellers capable of bi-directional pumping under a single rotating magnetic actuation. , 2007, , .		0
130	Microscale Bioengineering Inspired by Nature: From Widgets to Cell Biology. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, , .	0.5	0
131	Substrate-Modified Hydrogels for Autonomous Sensing of Botulinum Neurotoxin Type A. Chemistry of Materials, 2007, 19, 5842-5844.	3.2	25
132	Controlled microfluidic interfaces. Nature, 2005, 437, 648-655.	13.7	856
133	Tunable Microfabricated Hydrogelsâ€"A Study in Protein Interaction and Diffusion. Biomedical Microdevices, 2003, 5, 35-45.	1.4	28
134	Evaluation of a Three-Dimensional Micromixer in a Surface-Based Biosensorâ€. Langmuir, 2003, 19, 1824-1828.	1.6	149
135	A passive pumping method for microfluidic devices. Lab on A Chip, 2002, 2, 131.	3.1	367
136	Physics and Applications of Microfluidics in Biology. Annual Review of Biomedical Engineering, 2002, 4, 261-286.	5.7	1,515
137	Surface-Directed Liquid Flow Inside Microchannels. Science, 2001, 291, 1023-1026.	6.0	723
138	An organic self-regulating microfluidic system. Lab on A Chip, 2001, 1, 96.	3.1	81
139	Microfabricated elastomeric stencils for micropatterning cell cultures. Journal of Biomedical Materials Research Part B, 2000, 52, 346-353.	3.0	313
140	Particle imaging technique for measuring the deformation rate of hydrogel microstructures. Applied Physics Letters, 2000, 76, 3310-3312.	1.5	26