Joe Tien

List of Publications by Year
in descending order

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Version: 2024-02-01

42 papers	2,677 citations	331670 21 h-index	315739 38 g-index
42 all docs	42 docs citations	42 times ranked	3159 citing authors

#	Article	IF	Citations
1	Formation of perfused, functional microvascular tubes in vitro. Microvascular Research, 2006, 71, 185-196.	2.5	484
2	Fabrication of microfluidic hydrogels using molded gelatin as a sacrificial element. Lab on A Chip, 2007, 7, 720.	6.0	432
3	Microfluidic Models of Vascular Functions. Annual Review of Biomedical Engineering, 2012, 14, 205-230.	12.3	208
4	Effect of mechanical factors on the function of engineered human blood microvessels in microfluidic collagen gels. Biomaterials, 2010, 31, 6182-6189.	11.4	161
5	Microcontact Printing of Proteins on Mixed Self-Assembled Monolayers. Langmuir, 2002, 18, 519-523.	3.5	160
6	Fabrication of aligned microstructures with a single elastomeric stamp. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1758-1762.	7.1	152
7	Molding of Three-Dimensional Microstructures of Gels. Journal of the American Chemical Society, 2003, 125, 12988-12989.	13.7	137
8	Microstructured extracellular matrices in tissue engineering and development. Current Opinion in Biotechnology, 2006, 17, 518-523.	6.6	104
9	Interstitial fluid pressure regulates collective invasion in engineered human breast tumorsviaSnail, vimentin, and E-cadherin. Integrative Biology (United Kingdom), 2016, 8, 319-331.	1.3	81
10	The role of cyclic AMP in normalizing the function of engineered human blood microvessels in microfluidic collagen gels. Biomaterials, 2010, 31, 4706-4714.	11.4	65
11	Effect of cyclic AMP on barrier function of human lymphatic microvascular tubes. Microvascular Research, 2008, 76, 46-51.	2.5	62
12	Artificial lymphatic drainage systems for vascularized microfluidic scaffolds. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2181-2190.	4.0	62
13	Crosslinking of collagen scaffolds promotes blood and lymphatic vascular stability. Journal of Biomedical Materials Research - Part A, 2014, 102, 3186-3195.	4.0	51
14	Methods for Forming Human Microvascular Tubes In Vitro and Measuring Their Macromolecular Permeability. Methods in Molecular Biology, 2011, 671, 281-293.	0.9	49
15	Modulation of Invasive Phenotype by Interstitial Pressure-Driven Convection in Aggregates of Human Breast Cancer Cells. PLoS ONE, 2012, 7, e45191.	2.5	40
16	Physical and Chemical Signals That Promote Vascularization of Capillary-Scale Channels. Cellular and Molecular Bioengineering, 2016, 9, 73-84.	2.1	39
17	Microfluidic approaches for engineering vasculature. Current Opinion in Chemical Engineering, 2014, 3, 36-41.	7.8	38
18	Plasma expanders stabilize human microvessels in microfluidic scaffolds. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1815-1822.	4.0	37

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19	Bonding of Macromolecular Hydrogels Using Perturbants. Journal of the American Chemical Society, 2008, 130, 6664-6665.	13.7	34
20	Generation, Endothelialization, and Microsurgical Suture Anastomosis of Strong 1-mm-Diameter Collagen Tubes. Tissue Engineering - Part A, 2017, 23, 335-344.	3.1	33
21	Matrix Pore Size Governs Escape of Human Breast Cancer Cells from a Microtumor to an Empty Cavity. IScience, 2020, 23, 101673.	4.1	29
22	Computational design of drainage systems for vascularized scaffolds. Biomaterials, 2009, 30, 4435-4443.	11.4	27
23	Design principles for lymphatic drainage of fluid and solutes from collagen scaffolds. Journal of Biomedical Materials Research - Part A, 2018, 106, 106-114.	4.0	24
24	Tissue Engineering of the Microvasculature. , 2019, 9, 1155-1212.		20
25	Engineering of microscale vascularized fat that responds to perfusion with lipoactive hormones. Biofabrication, 2019, 11, 014101.	7.1	19
26	Microstructured Extracellular Matrices in Tissue Engineering and Development: An Update. Annals of Biomedical Engineering, 2014, 42, 1413-1423.	2.5	18
27	Microfluidic Biomaterials. Advanced Healthcare Materials, 2021, 10, e2001028.	7.6	18
28	Perfusion systems that minimize vascular volume fraction in engineered tissues. Biomicrofluidics, 2011, 5, 022201.	2.4	15
29	Patterning the cellular microenvironment. IEEE Engineering in Medicine and Biology Magazine, 2002, 21, 95-98.	0.8	13
30	Interstitial Hypertension Suppresses Escape of Human Breast Tumor Cells Via Convection of Interstitial Fluid. Cellular and Molecular Bioengineering, 2021, 14, 147-159.	2.1	13
31	A 3D Culture Model to Study How Fluid Pressure and Flow Affect the Behavior of Aggregates of Epithelial Cells. Methods in Molecular Biology, 2017, 1501, 245-257.	0.9	10
32	Dynamics of Interstitial Fluid Pressure in Extracellular Matrix Hydrogels in Microfluidic Devices. Journal of Biomechanical Engineering, 2015, 137, .	1.3	9
33	Evaluation of 1â€mmâ€diameter endothelialized dense collagen tubes in vascular microsurgery. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2441-2449.	3.4	9
34	Matrix degradation and cell proliferation are coupled to promote invasion and escape from an engineered human breast microtumor. Integrative Biology (United Kingdom), 2021, 13, 17-29.	1.3	8
35	Vascularization of Microfluidic Hydrogels. , 2013, , 205-221.		6
36	Adipose Stroma Accelerates the Invasion and Escape of Human Breast Cancer Cells from an Engineered Microtumor. Cellular and Molecular Bioengineering, 2022, 15, 15-29.	2.1	4

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37	Determination of vascular permeability coefficients under slow luminal filling. Microvascular Research, 2013, 90, 117-120.	2.5	2
38	Comparison of blind deconvolution- and Patlak analysis-based methods for determining vascular permeability. Microvascular Research, 2021, 133, 104102.	2.5	2
39	Non-invasive mapping of interstitial fluid pressure in microscale tissues. Integrative Biology (United) Tj ETQq1 1 0.784314 rgBT /Overl	1.3	1
40	Crosslinking of collagen scaffolds promotes blood and lymphatic vascular stability. Journal of Biomedical Materials Research - Part A, 2013, 102, n/a-n/a.	4.0	1
41	Vascularization of capillary-scale channels in type I collagen gels. , 2015, , .		0
42	Methods for Forming Human Lymphatic Microvessels In Vitro and Assessing their Drainage Function. Methods in Molecular Biology, 2022, 2394, 651-668.	0.9	0