

William J Polacheck

List of Publications by Citations

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37
papers

2,751
citations

21
h-index

45
g-index

45
ext. papers

3,360
ext. citations

10.1
avg, IF

5.47
L-index

#	Paper	IF	Citations
37	HEART DISEASE. Titin mutations in iPS cells define sarcomere insufficiency as a cause of dilated cardiomyopathy. <i>Science</i> , 2015 , 349, 982-6	33.3	379
36	Interstitial flow influences direction of tumor cell migration through competing mechanisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 11115-20	11.5	329
35	Measuring cell-generated forces: a guide to the available tools. <i>Nature Methods</i> , 2016 , 13, 415-23	21.6	274
34	Noncontact three-dimensional mapping of intracellular hydromechanical properties by Brillouin microscopy. <i>Nature Methods</i> , 2015 , 12, 1132-4	21.6	223
33	Microfluidic platforms for mechanobiology. <i>Lab on A Chip</i> , 2013 , 13, 2252-67	7.2	180
32	Mechanotransduction of fluid stresses governs 3D cell migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 2447-52	11.5	173
31	A non-canonical Notch complex regulates adherens junctions and vascular barrier function. <i>Nature</i> , 2017 , 552, 258-262	50.4	163
30	Matrix degradability controls multicellularity of 3D cell migration. <i>Nature Communications</i> , 2017 , 8, 371	17.4	145
29	Tumor cell migration in complex microenvironments. <i>Cellular and Molecular Life Sciences</i> , 2013 , 70, 1335-563	14.3	143
28	Methods for photocrosslinking alginate hydrogel scaffolds with high cell viability. <i>Tissue Engineering - Part C: Methods</i> , 2011 , 17, 173-9	2.9	133
27	Stiffness of photocrosslinked RGD-alginate gels regulates adipose progenitor cell behavior. <i>Biotechnology and Bioengineering</i> , 2011 , 108, 1683-92	4.9	83
26	Force Generation via β Cardiac Myosin, Titin, and β Actinin Drives Cardiac Sarcomere Assembly from Cell-Matrix Adhesions. <i>Developmental Cell</i> , 2018 , 44, 87-96.e5	10.2	75
25	Three-dimensional biomimetic vascular model reveals a RhoA, Rac1, and -cadherin balance in mural cell-endothelial cell-regulated barrier function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 8758-8763	11.5	71
24	Engineering of in vitro 3D capillary beds by self-directed angiogenic sprouting. <i>PLoS ONE</i> , 2012 , 7, e50582	3.7	67
23	Microfabricated blood vessels for modeling the vascular transport barrier. <i>Nature Protocols</i> , 2019 , 14, 1425-1454	18.8	61
22	A microfluidics assay to study invasion of human placental trophoblast cells. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	43
21	Photodynamic Therapy and the Biophysics of the Tumor Microenvironment. <i>Photochemistry and Photobiology</i> , 2020 , 96, 232-259	3.6	28

20	Functional angiogenesis requires microenvironmental cues balancing endothelial cell migration and proliferation. <i>Lab on A Chip</i> , 2020 , 20, 1153-1166	7.2	27
19	Probabilistic Voxel-Fe model for single cell motility in 3D 2014 , 1, 2		26
18	A Bile Duct-on-a-Chip With Organ-Level Functions. <i>Hepatology</i> , 2020 , 71, 1350-1363	11.2	26
17	Inhibition of v5 Integrin Attenuates Vascular Permeability and Protects against Renal Ischemia-Reperfusion Injury. <i>Journal of the American Society of Nephrology: JASN</i> , 2017 , 28, 1741-1752	12.7	23
16	Microfluidics for the study of mechanotransduction. <i>Journal Physics D: Applied Physics</i> , 2020 , 53,	3	11
15	Proliferation-independent role of NF2 (merlin) in limiting biliary morphogenesis. <i>Development (Cambridge)</i> , 2018 , 145,	6.6	10
14	Malignant Ascites in Ovarian Cancer: Cellular, Acellular, and Biophysical Determinants of Molecular Characteristics and Therapy Response. <i>Cancers</i> , 2021 , 13,	6.6	10
13	Uncovering mutation-specific morphogenic phenotypes and paracrine-mediated vessel dysfunction in a biomimetic vascularized mammary duct platform. <i>Nature Communications</i> , 2020 , 11, 3377	17.4	8
12	Control of the electromechanical properties of alginate hydrogels via ionic and covalent cross-linking and microparticle doping. <i>Biomacromolecules</i> , 2010 , 11, 2184-9	6.9	7
11	Microfluidic and Organ-on-a-Chip Approaches to Investigate Cellular and Microenvironmental Contributions to Cardiovascular Function and Pathology. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 624435	5.8	7
10	Collective tumor cell migration in the presence of fibroblasts. <i>Journal of Biomechanics</i> , 2020 , 100, 109568.9		5
9	Synthetic extracellular matrices with tailored adhesiveness and degradability support lumen formation during angiogenic sprouting. <i>Nature Communications</i> , 2021 , 12, 3402	17.4	5
8	Direct comparison of angiogenesis in natural and synthetic biomaterials reveals that matrix porosity regulates endothelial cell invasion speed and sprout diameter. <i>Acta Biomaterialia</i> , 2021 , 135, 260-273	10.8	5
7	Adherens junction engagement regulates functional patterning of the cardiac pacemaker cell lineage. <i>Developmental Cell</i> , 2021 , 56, 1498-1511.e7	10.2	2
6	Mechanical Modulation of Tumor Nodules under Flow. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , PP,	5	2
5	Microfluidic model of monocyte extravasation reveals the role of hemodynamics and subendothelial matrix mechanics in regulating endothelial integrity. <i>Biomicrofluidics</i> , 2021 , 15, 054102	3.2	2
4	A Bile Duct-on-a-Chip with Organ-Level Functions		1
3	Responsible Research in an International Laboratory. <i>The Journal of Philosophy, Science & Law</i> , 2014 , 14, 13-31		

2 REPLY. *Hepatology*, **2021**, 73, 872-873

11.2

1 Bile Duct-on-a-Chip. *Methods in Molecular Biology*, **2022**, 2373, 57-68

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