Mark W Tibbitt

List of Publications by Citations

60 papers	6,036 citations	32 h-index	77 g-index
77 ext. papers	7,175 ext. citations	12.4 avg, IF	6.51 L-index

#	Paper	IF	Citations
60	Hydrogels as extracellular matrix mimics for 3D cell culture. *Biotechnology and Bioengineering*, **2009**, 103, 655-63	4.9	1816
59	Mechanical memory and dosing influence stem cell fate. *Nature Materials*, **2014**, 13, 645-52	27	727
58	Emerging Frontiers in Drug Delivery. *Journal of the American Chemical Society*, **2016**, 138, 704-17	16.4	625
57	Self-assembled hydrogels utilizing polymer-nanoparticle interactions. *Nature Communications*, **2015**, 6, 6295	17.4	341
56	Synthesis of photodegradable hydrogels as dynamically tunable cell culture platforms. *Nature Protocols*, **2010**, 5, 1867-87	18.8	216
55	Tunable hydrogels for external manipulation of cellular microenvironments through controlled photodegradation. *Advanced Materials*, **2010**, 22, 61-6	24	180
54	Progress in material design for biomedical applications. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 14444-51	11.5	174
53	Dynamic microenvironments: the fourth dimension. *Science Translational Medicine*, **2012**, 4, 160ps24	17.5	126
52	Bioinspired Alkenyl Amino Alcohol Ionizable Lipid Materials for Highly Potent In Vivo mRNA Delivery. *Advanced Materials*, **2016**, 28, 2939-43	24	125
51	Hydrogels preserve native phenotypes of valvular fibroblasts through an elasticity-regulated PI3K/AKT pathway. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 19336-41	11.5	117
50	Mechanical Properties and Degradation of Chain and Step Polymerized Photodegradable Hydrogels. *Macromolecules*, **2013**, 46,	5.5	116
49	Synthesis and Biological Evaluation of Ionizable Lipid Materials for the In Vivo Delivery of Messenger RNA to B Lymphocytes. *Advanced Materials*, **2017**, 29, 1606944	24	105
48	Controlled two-photon photodegradation of PEG hydrogels to study and manipulate subcellular interactions on soft materials. *Soft Matter*, **2010**, 6, 5100-5108	3.6	102
47	Ultrasmall Silica-Based Bismuth Gadolinium Nanoparticles for Dual Magnetic Resonance-Computed Tomography Image Guided Radiation Therapy. *Nano Letters*, **2017**, 17, 1733-1740	11.5	88
46	Human neutrophil elastase responsive delivery from poly(ethylene glycol) hydrogels. *Biomacromolecules*, **2009**, 10, 1484-9	6.9	87
45	Photocontrolled nanoparticles for on-demand release of proteins. *Biomacromolecules*, **2012**, 13, 2219-24	6.9	81
44	Design of moldable hydrogels for biomedical applications using dynamic covalent boronic esters. *Materials Today Chemistry*, **2019**, 12, 16-33	6.2	70

43	Exploiting Electrostatic Interactions in Polymer Nanoparticle Hydrogels. *ACS Macro Letters*, **2015**, 4, 848-852	6.6	68
42	Additive Manufacturing of Precision Biomaterials. *Advanced Materials*, **2020**, 32, e1901994	24	62
41	Engineering a 3D-Bioprinted Model of Human Heart Valve Disease Using Nanoindentation-Based Biomechanics. *Nanomaterials*, **2018**, 8,	5.4	59
40	Scalable manufacturing of biomimetic moldable hydrogels for industrial applications. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 14255-14260	11.5	58
39	Linking Molecular Behavior to Macroscopic Properties in Ideal Dynamic Covalent Networks. *Journal of the American Chemical Society*, **2020**, 142, 15371-15385	16.4	43
38	Responsive culture platform to examine the influence of microenvironmental geometry on cell function in 3D. *Integrative Biology (United Kingdom)*, **2012**, 4, 1540-9	3.7	42
37	Surface tension-assisted additive manufacturing. *Nature Communications*, **2018**, 9, 1184	17.4	41
36	Living Biomaterials. *Accounts of Chemical Research*, **2017**, 50, 508-513	24.3	40
35	Formation of Core-Shell Particles by Interfacial Radical Polymerization Initiated by a Glucose Oxidase-Mediated Redox System. *Chemistry of Materials*, **2013**, 25, 761-767	9.6	38
34	High throughput screening for discovery of materials that control stem cell fate. *Current Opinion in Solid State and Materials Science*, **2016**, 20, 202-211	12	34
33	Injectable Biocompatible Hydrogels from Cellulose Nanocrystals for Locally Targeted Sustained Drug Release. *ACS Applied Materials & Interfaces*, **2019**, 11, 38578-38585	9.5	33
32	In vitro model alveoli from photodegradable microsphere templates. *Biomaterials Science*, **2015**, 3, 821-32	7.4	33
31	Injectable Polymer-Nanoparticle Hydrogels for Local Immune Cell Recruitment. *Biomacromolecules*, **2019**, 20, 4430-4436	6.9	33
30	Supramolecular engineering of hydrogels for drug delivery. *Advanced Drug Delivery Reviews*, **2021**, 171, 240-256	18.5	32
29	Modeling Controlled Photodegradation in Optically Thick Hydrogels. *Journal of Polymer Science Part A*, **2013**, 51, 1899-1911	2.5	27
28	Light activated cell migration in synthetic extracellular matrices. *Biomaterials*, **2012**, 33, 8040-6	15.6	23
27	Thermal Stabilization of Biologics with Photoresponsive Hydrogels. *Biomacromolecules*, **2018**, 19, 740-747	6.9	22
26	Universal Nanocarrier Ink Platform for Biomaterials Additive Manufacturing. *Small*, **2019**, 15, e1905421	11	22

25	Immunofunctional photodegradable poly(ethylene glycol) hydrogel surfaces for the capture and release of rare cells. *Colloids and Surfaces B: Biointerfaces*, **2019**, 174, 483-492	6	22
24	In vitro 3D model and miRNA drug delivery to target calcific aortic valve disease. *Clinical Science*, **2017**, 131, 181-195	6.5	21
23	Engineering Hydrogel Adhesion for Biomedical Applications via Chemical Design of the Junction. *ACS Biomaterials Science and Engineering*, **2021**, 7, 4048-4076	5.5	19
22	Matryoshka-Inspired Micro-Origami Capsules to Enhance Loading, Encapsulation, and Transport of Drugs. *Soft Robotics*, **2019**, 6, 150-159	9.2	17
21	Environment Controls Biomolecule Release from Dynamic Covalent Hydrogels. *Biomacromolecules*, **2021**, 22, 146-157	6.9	15
20	Dynamic and reconfigurable materials from reversible network interactions. *Nature Reviews Materials*,	73.3	10
19	Human Retinal Microvasculature-on-a-Chip for Drug Discovery. *Advanced Healthcare Materials*, **2020** , 9, e2001531	10.1	10
18	Model Assisted Analysis of the Hepatic Arterial Buffer Response During Ex Vivo Porcine Liver Perfusion. *IEEE Transactions on Biomedical Engineering*, **2020**, 67, 667-678	5	9
17	Bile formation in long-term ex situ perfused livers. *Surgery*, **2021**, 169, 894-902	3.6	5
16	Supramolecular Reinforcement of Polymer-Nanoparticle Hydrogels for Modular Materials Design.. *Advanced Materials*, **2021**, e2106941	24	4
15	Screening method to identify hydrogel formulations that facilitate myotube formation from encapsulated primary myoblasts. *Bioengineering and Translational Medicine*, **2020**, 5, e10181	14.8	4
14	Bioprinting within live animals. *Nature Biomedical Engineering*, **2020**, 4, 851-852	19	4
13	Photopolymers for Multiphoton Lithography in Biomaterials and Hydrogels **2016**, 183-220		4
12	Automated and Continuous Production of Polymeric Nanoparticles. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 423	5.8	4
11	Hierarchical biomaterials via photopatterning-enhanced direct ink writing. *Biofabrication*, **2021**, 13,	10.5	4
10	Additive manufacturing in drug delivery: Innovative drug product design and opportunities for industrial application. *Advanced Drug Delivery Reviews*, **2021**, 178, 113990	18.5	4
9	Automated Insulin Delivery - Continuous Blood Glucose Control During Ex Situ Liver Perfusion. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 1399-1408	5	3
8	Long-term Normothermic Machine Preservation of Partial Livers: First Experience With 21 Human Hemi-livers. *Annals of Surgery*, **2021**, 274, 836-842	7.8	3

List of Publications

7	Hyperoxia in portal vein causes enhanced vasoconstriction in arterial vascular bed. *Scientific Reports* , **2020**, 10, 20966	4.9	2
6	Polymer-Nanoparticle Hydrogels. *Chimia*, **2019**, 73, 1034	1.3	2
5	Continuous Production of Acoustically Patterned Cells Within Hydrogel Fibers for Musculoskeletal Tissue Engineering. *Advanced Functional Materials*,2113038	15.6	2
4	Biopolymer Nano-network for Antimicrobial Peptide Protection and Local Delivery.. *Advanced Healthcare Materials*, **2021**, e2101426	10.1	1
3	3D Confinement Regulates Cell Life and Death. *Advanced Functional Materials*,2104098	15.6	1
2	Sources and prevention of graft infection during long-term ex situ liver perfusion. *Transplant Infectious Disease*, **2021**, 23, e13623	2.7	0
1	Surface Tension-Assisted Additive Manufacturing of Tubular, Multicomponent Biomaterials. *Methods in Molecular Biology*, **2021**, 2147, 149-160	1.4	