Robert C Chang

List of Publications by Year
in descending order

33 papers	1,314 citations	687220 13 h-index	580701 25 g-index
33 all docs	33 docs citations	33 times ranked	1814 citing authors

#	Article	IF	Citations
1	Quantitative Investigation into the Design and Process Parametric Effects on the Fiberâ€Entrapped Residual Charge for a Polymer Melt Electrohydrodynamic Printing Process. Macromolecular Materials and Engineering, 2022, 307, .	1.7	7
2	Design, fabrication, and analysis of spatially heterogeneous scaffold by melt electrospinning writing of poly(lμâ€Caprolactone). Journal of Applied Polymer Science, 2022, 139, .	1.3	11
3	Numerical analysis on the effects of microfluidic-based bioprinting parameters on the microfiber geometrical outcomes. Scientific Reports, 2022, 12, 3364.	1.6	10
4	A review of the structural and physical properties that govern cell interactions with structured biomaterials enabled by additive manufacturing. Bioprinting, 2022, 26, e00201.	2.9	9
5	Advancing a real-time image-based jet lag tracking methodology for optimizing print parameters and assessing melt electrowritten fiber quality. Additive Manufacturing, 2022, 54, 102764.	1.7	5
6	Effects of scaffold design parameters on the printing accuracy for melt electrowriting. Journal of Manufacturing Processes, 2022, 81, 177-190.	2.8	5
7	Analytical interpretation of microscale fiber deviation in designing for polymer melt electrohydrodynamic-based additive manufacturing. Additive Manufacturing, 2022, 58, 103035.	1.7	3
8	A Chargeâ€Based Mechanistic Study into the Effect of Collector Temperature on Melt Electrohydrodynamic Printing Outcomes. Advanced Materials Technologies, 2021, 6, 2100251.	3.0	16
9	A Charge-Based Mechanistic Study into the Effects of Process Parameters on Fiber Accumulating Geometry for a Melt Electrohydrodynamic Process. Processes, 2020, 8, 1440.	1.3	8
10	Biomedical Manufacturing: A Review of the Emerging Research and Applications. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	8
11	A Fundamental Study of Charge Effects on Melt Electrowritten Polymer Fibers. Materials and Design, 2019, 178, 107857.	3.3	50
12	Machine learning metrology of cell confinement in melt electrowritten three-dimensional biomaterial substrates. Microsystems and Nanoengineering, 2019, 5, 15.	3.4	59
13	3D Bioprinted GelMA Based Models for the Study of Trophoblast Cell Invasion. Scientific Reports, 2019, 9, 18854.	1.6	42
14	Investigation of Cellular Confinement in Three-Dimensional Microscale Fibrous Substrates: Fabrication and Metrology. Journal of Micro and Nano-Manufacturing, 2018, 6, .	0.8	0
15	Influence of Transition Metal Dichalcogenide Surfaces on Cellular Morphology and Adhesion. ACS Applied Bio Materials, 2018, 1, 1448-1457.	2.3	16
16	Simulating image-guided in situ bioprinting of a skin graft onto a phantom burn wound bed. Additive Manufacturing, 2018, 22, 708-719.	1.7	24
17	Printability Study of Bioprinted Tubular Structures Using Liquid Hydrogel Precursors in a Support Bath. Applied Sciences (Switzerland), 2018, 8, 403.	1.3	77
18	Bioprinting multidimensional constructs: a quantitative approach to understanding printed cell density and redistribution phenomena. Biomedical Physics and Engineering Express, 2017, 3, 035016.	0.6	12

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19	Melt Electrospinning Writing Process Guided by a â€œPrintability Numberâ€• Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2017, 139, .	1.3	45
20	A Methodology for Quantifying Cell Density and Distribution in Multidimensional Bioprinted Gelatin-Alginate Constructs. , 2017, , .		3
21	Dimensional Metrology of Cell-matrix Interactions in 3D Microscale Fibrous Substrates. Procedia CIRP, 2017, 65, 32-37.	1.0	24
22	Towards Resolution Enhancement and Process Repeatability With a Melt Electrospinning Writing Process: Design and Protocol Considerations. , 2016, , .		5
23	Numerical investigation of dynamic microorgan devices as drug screening platforms. Part I: Macroscale modeling approach & validation. Biotechnology and Bioengineering, 2016, 113, 612-622.	1.7	13
24	Numerical investigation of dynamic microorgan devices as drug screening platforms. Part II: Microscale modeling approach and validation. Biotechnology and Bioengineering, 2016, 113, 623-634.	1.7	8
25	A Novel Melt Electrospinning System for Studying Cell Substrate Interactions. , 2015, , .		5
26	Organ Printing. , 2015, , 333-347.		5
27	Comparison of photometric stereo and spectral analysis for visualization and assessment of burn injury from hyperspectral imaging. , 2015, , .		1
28	Microprinting of Liver Micro-organ for Drug Metabolism Study. Methods in Molecular Biology, 2011, 671, 219-238.	0.4	12
29	Biofabrication of a three-dimensional liver micro-organ as an in vitro drug metabolism model. Biofabrication, 2010, 2, 045004.	3.7	212
30	Bioprinted nanoparticles for tissue engineering. , 2009, , .		0
31	Direct Cell Writing of 3D Microorgan for In Vitro Pharmacokinetic Model. Tissue Engineering - Part C: Methods, 2008, 14, 157-166.	1.1	191
32	Effects of Dispensing Pressure and Nozzle Diameter on Cell Survival from Solid Freeform Fabricationâ€“Based Direct Cell Writing. Tissue Engineering - Part A, 2008, 14, 41-48.	1.6	428
33	Effects of Printing Sequence on the Printing Accuracy of Melt Electrowriting Scaffolds. Macromolecular Materials and Engineering, 0, , 2200222.	1.7	0