Roman K TruckenmÃ¼ller

List of Publications by Year
in descending order

54 papers	2,217 citations	304743 22 h-index	233421 45 g-index
55 all docs	55 docs citations	55 times ranked	3163 citing authors

#	Article	IF	Citations
1	Blastocyst-like structures generated solely from stem cells. Nature, 2018, 557, 106-111.	27.8	366
2	An algorithm-based topographical biomaterials library to instruct cell fate. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16565-16570.	7.1	355
3	Colorectal tumor-on-a-chip system: A 3D tool for precision onco-nanomedicine. Science Advances, 2019, 5, eaaw1317.	10.3	143
4	Overlooked? Underestimated? Effects of Substrate Curvature on Cell Behavior. Trends in Biotechnology, 2019, 37, 838-854.	9.3	107
5	3D tissue culture substrates produced by microthermoforming of pre-processed polymer films. Biomedical Microdevices, 2006, 8, 191-199.	2.8	100
6	Thermoforming of Filmâ€Based Biomedical Microdevices. Advanced Materials, 2011, 23, 1311-1329.	21.0	98
7	Regeneration of the lung: Lung stem cells and the development of lung mimicking devices. Respiratory Research, 2016, 17, 44.	3.6	86
8	Engineered Microâ€Objects as Scaffolding Elements in Cellular Building Blocks for Bottomâ€Up Tissue Engineering Approaches. Advanced Materials, 2014, 26, 2592-2599.	21.0	78
9	Flexible fluidic microchips based on thermoformed and locally modified thin polymer films. Lab on A Chip, 2008, 8, 1570.	6.0	69
10	Analysis of high-throughput screening reveals the effect of surface topographies on cellular morphology. Acta Biomaterialia, 2015, 15, 29-38.	8.3	61
11	Microwell Scaffolds for the Extrahepatic Transplantation of Islets of Langerhans. PLoS ONE, 2013, 8, e64772.	2.5	56
12	Directed Assembly and Development of Materialâ€Free Tissues with Complex Architectures. Advanced Materials, 2016, 28, 4032-4039.	21.0	54
13	A Fast Process for Imprinting Micro and Nano Patterns on Electrospun Fiber Meshes at Physiological Temperatures. Small, 2013, 9, 3405-3409.	10.0	42
14	Grow with the Flow: When Morphogenesis Meets Microfluidics. Advanced Materials, 2019, 31, e1805764.	21.0	42
15	Fabrication of cell container arrays with overlaid surface topographies. Biomedical Microdevices, 2012, 14, 95-107.	2.8	40
16	In vitro modelling of alveolar repair at the air-liquid interface using alveolar epithelial cells derived from human induced pluripotent stem cells. Scientific Reports, 2020, 10, 5499.	3.3	35
17	Linking the Transcriptional Landscape of Bone Induction to Biomaterial Design Parameters. Advanced Materials, 2017, 29, 1603259.	21.0	34
18	Controlling Growth and Osteogenic Differentiation of Osteoblasts on Microgrooved Polystyrene Surfaces. PLoS ONE, 2016, 11, e0161466.	2.5	33

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19	Micro-fabricated scaffolds lead to efficient remission of diabetes in mice. Biomaterials, 2017, 135, 10-22.	11.4	33
20	Independent effects of the chemical and microstructural surface properties of polymer/ceramic composites on proliferation and osteogenic differentiation of human MSCs. Acta Biomaterialia, 2016, 42, 364-377.	8.3	32
21	3D alveolar in vitro model based on epithelialized biomimetically curved culture membranes. Biomaterials, 2021, 266, 120436.	11.4	29
22	3D Lung-on-Chip Model Based on Biomimetically Microcurved Culture Membranes. ACS Biomaterials Science and Engineering, 2022, 8, 2684-2699.	5.2	27
23	High-definition micropatterning method for hard, stiff and brittle polymers. Materials Science and Engineering C, 2017, 71, 558-564.	7.3	26
24	Intestinal Organoid Culture in Polymer Filmâ€Based Microwell Arrays. Advanced Biology, 2020, 4, e2000126.	3.0	22
25	Mechanical Properties of Bioengineered Corneal Stroma. Advanced Healthcare Materials, 2021, 10, e2100972.	7.6	21
26	Biofunctional Micropatterning of Thermoformed 3D Substrates. Advanced Functional Materials, 2014, 24, 442-450.	14.9	19
27	Development of Highly Functional Biomaterials by Decoupling and Recombining Material Properties. Advanced Materials, 2016, 28, 1803-1808.	21.0	17
28	3D screening device for the evaluation of cell response to different electrospun microtopographies. Acta Biomaterialia, 2017, 55, 310-322.	8.3	16
29	TopoWellPlate: A Wellâ€Plateâ€Based Screening Platform to Study Cellâ€“Surface Topography Interactions. Advanced Biology, 2017, 1, e1700002.	3.0	16
30	Reversing Epithelial Polarity in Pluripotent Stem Cell-Derived Intestinal Organoids. Frontiers in Bioengineering and Biotechnology, 2022, 10, 879024.	4.1	16
31	Biodegradable Elastic Sponge from Nanofibrous Biphasic Calcium Phosphate Ceramic as an Advanced Material for Regenerative Medicine. Advanced Functional Materials, 2021, 31, 2102911.	14.9	15
32	Development of an In Vitro Airway Epithelialâ€“Endothelial Cell Culture Model on a Flexible Porous Poly(Trimethylene Carbonate) Membrane Based on Calu-3 Airway Epithelial Cells and Lung Microvascular Endothelial Cells. Membranes, 2021, 11, 197.	3.0	13
33	Development of Porous and Flexible PTMC Membranes for In Vitro Organ Models Fabricated by Evaporation-Induced Phase Separation. Membranes, 2020, 10, 330.	3.0	12
34	Challenges to, and prospects for, reverse engineering the gastrointestinal tract using organoids. Trends in Biotechnology, 2022, 40, 932-944.	9.3	12
35	Chips for Biomaterials and Biomaterials for Chips: Recent Advances at the Interface between Microfabrication and Biomaterials Research. Advanced Healthcare Materials, 2021, 10, e2100371.	7.6	11
36	From fiber curls to mesh waves: a platform for the fabrication of hierarchically structured nanofibers mimicking natural tissue formation. Nanoscale, 2019, 11, 14312-14321.	5.6	10

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37	A New Microengineered Platform for 4D Tracking of Single Cells in a Stemâ€Cellâ€Based In Vitro Morphogenesis Model. Advanced Materials, 2020, 32, e1907966.	21.0	10
38	Biomaterials and Microfluidics for Drug Discovery and Development. Advances in Experimental Medicine and Biology, 2020, 1230, 121-135.	1.6	8
39	Nanoscale Topographies for Corneal Endothelial Regeneration. Applied Sciences (Switzerland), 2021, 11, 827.	2.5	7
40	Assessment of Cellâ€“Material Interactions in Three Dimensions through Dispersed Coaggregation of Microsized Biomaterials into Tissue Spheroids. Small, 2022, 18, .	10.0	7
41	A Microcavity Array-Based 3D Model System of the Hematopoietic Stem Cell Niche. Methods in Molecular Biology, 2019, 2017, 85-95.	0.9	6
42	Effect of tissue scaffold topography on protein structure monitored by fluorescence spectroscopy. Journal of Biotechnology, 2014, 189, 166-174.	3.8	5
43	Ten steps to investigate a cellular system with mathematical modeling. PLoS Computational Biology, 2021, 17, e1008921.	3.2	5
44	Mechanistic Computational Models of Epithelial Cell Transporters-the Adorned Heroes of Pharmacokinetics. Frontiers in Pharmacology, 2021, 12, 780620.	3.5	4
45	The Galapagos Chip Platform for Highâ€Throughput Screening of Cell Adhesive Chemical Micropatterns. Small, 2022, 18, e2105704.	10.0	4
46	A Oneâ€Step Biofunctionalization Strategy of Electrospun Scaffolds Enables Spatially Selective Presentation of Biological Cues. Advanced Materials Technologies, 2020, 5, 2000269.	5.8	3
47	Polystyrene Pocket Lithography: Sculpting Plastic with Light. Advanced Materials, 2022, 34, e2200687.	21.0	3
48	3D Nanofabrication: 3D Nanofabrication of Fluidic Components by Corner Lithography (Small 24/2012). Small, 2012, 8, 3702-3702.	10.0	2
49	Measurement of Biomimetic Deposition of Calcium Phosphate in Real Time Using Complex Capacitance. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000672.	1.8	2
50	Thin fluorinated polymer film microcavity arrays for 3D cell culture and label-free automated feature extraction. Biomaterials Science, 2021, 9, 7838-7850.	5.4	2
51	Electrospinning: A Fast Process for Imprinting Micro and Nano Patterns on Electrospun Fiber Meshes at Physiological Temperatures (Small 20/2013). Small, 2013, 9, 3544-3544.	10.0	1
52	The Influence of OAT1 Density and Functionality on Indoxyl Sulfate Transport in the Human Proximal Tubule: An Integrated Computational and In Vitro Study. Toxins, 2021, 13, 674.	3.4	1
53	Modeling indoxyl sulfate transport in a bioartificial kidney: Two-step binding kinetics or lumped parameters model for uremic toxin clearance?. Computers in Biology and Medicine, 2021, 138, 104912.	7.0	1
54	Singleâ€Cell Tracking: A New Microengineered Platform for 4D Tracking of Single Cells in a Stemâ€Cellâ€Based In Vitro Morphogenesis Model (Adv. Mater. 24/2020). Advanced Materials, 2020, 32, 2070182.	21.0	0