

Ferry P W Melchels

List of Publications by Citations

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Version: 2024-04-27

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43
papers

9,370
citations

32
h-index

47
g-index

47
ext. papers

10,874
ext. citations

10.7
avg, IF

6.3
L-index

#	Paper	IF	Citations
43	A review on stereolithography and its applications in biomedical engineering. <i>Biomaterials</i> , 2010 , 31, 6121-30	15.6	1426
42	25th anniversary article: Engineering hydrogels for biofabrication. <i>Advanced Materials</i> , 2013 , 25, 5011-28	24	1194
41	Additive manufacturing of tissues and organs. <i>Progress in Polymer Science</i> , 2012 , 37, 1079-1104	29.6	841
40	A review of rapid prototyping techniques for tissue engineering purposes. <i>Annals of Medicine</i> , 2008 , 40, 268-80	1.5	557
39	Gelatin-methacrylamide hydrogels as potential biomaterials for fabrication of tissue-engineered cartilage constructs. <i>Macromolecular Bioscience</i> , 2013 , 13, 551-61	5.5	507
38	Reinforcement of hydrogels using three-dimensionally printed microfibrils. <i>Nature Communications</i> , 2015 , 6, 6933	17.4	464
37	Gelatin-Methacryloyl Hydrogels: Towards Biofabrication-Based Tissue Repair. <i>Trends in Biotechnology</i> , 2016 , 34, 394-407	15.1	411
36	Functionalization, preparation and use of cell-laden gelatin methacryloyl-based hydrogels as modular tissue culture platforms. <i>Nature Protocols</i> , 2016 , 11, 727-46	18.8	391
35	Mathematically defined tissue engineering scaffold architectures prepared by stereolithography. <i>Biomaterials</i> , 2010 , 31, 6909-16	15.6	365
34	Proposal to assess printability of bioinks for extrusion-based bioprinting and evaluation of rheological properties governing bioprintability. <i>Biofabrication</i> , 2017 , 9, 044107	10.5	363
33	A poly(D,L-lactide) resin for the preparation of tissue engineering scaffolds by stereolithography. <i>Biomaterials</i> , 2009 , 30, 3801-9	15.6	328
32	Effects of the architecture of tissue engineering scaffolds on cell seeding and culturing. <i>Acta Biomaterialia</i> , 2010 , 6, 4208-17	10.8	275
31	A biomimetic extracellular matrix for cartilage tissue engineering centered on photocurable gelatin, hyaluronic acid and chondroitin sulfate. <i>Acta Biomaterialia</i> , 2014 , 10, 214-23	10.8	234
30	Biofabrication of multi-material anatomically shaped tissue constructs. <i>Biofabrication</i> , 2013 , 5, 035007	10.5	221
29	Yield stress determines bioprintability of hydrogels based on gelatin-methacryloyl and gellan gum for cartilage bioprinting. <i>Biofabrication</i> , 2016 , 8, 035003	10.5	175
28	3D bioprinting of methacrylated hyaluronic acid (MeHA) hydrogel with intrinsic osteogenicity. <i>PLoS ONE</i> , 2017 , 12, e0177628	3.7	169
27	Development and characterisation of a new bioink for additive tissue manufacturing. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 2282-2289	7.3	150

26	Bio-resin for high resolution lithography-based biofabrication of complex cell-laden constructs. <i>Biofabrication</i> , 2018 , 10, 034101	10.5	135
25	Designed biodegradable hydrogel structures prepared by stereolithography using poly(ethylene glycol)/poly(D,L-lactide)-based resins. <i>Journal of Controlled Release</i> , 2010 , 148, 34-41	11.7	134
24	Gelatine methacrylamide-based hydrogels: an alternative three-dimensional cancer cell culture system. <i>Acta Biomaterialia</i> , 2014 , 10, 2551-62	10.8	130
23	The influence of the scaffold design on the distribution of adhering cells after perfusion cell seeding. <i>Biomaterials</i> , 2011 , 32, 2878-84	15.6	115
22	Fumaric acid monoethyl ester-functionalized poly(D,L-lactide)/N-vinyl-2-pyrrolidone resins for the preparation of tissue engineering scaffolds by stereolithography. <i>Biomacromolecules</i> , 2009 , 10, 214-20	6.9	110
21	3D Printing in Suspension Baths: Keeping the Promises of Bioprinting Afloat. <i>Trends in Biotechnology</i> , 2020 , 38, 584-593	15.1	93
20	Sustained regeneration of high-volume adipose tissue for breast reconstruction using computer aided design and biomanufacturing. <i>Biomaterials</i> , 2015 , 52, 551-60	15.6	75
19	Visible Light Cross-Linking of Gelatin Hydrogels Offers an Enhanced Cell Microenvironment with Improved Light Penetration Depth. <i>Macromolecular Bioscience</i> , 2019 , 19, e1900098	5.5	63
18	Hydrogel-based reinforcement of 3D bioprinted constructs. <i>Biofabrication</i> , 2016 , 8, 035004	10.5	63
17	Chondrocyte redifferentiation and construct mechanical property development in single-component photocrosslinkable hydrogels. <i>Journal of Biomedical Materials Research - Part A</i> , 2014 , 102, 2544-53	5.4	47
16	CAD/CAM-assisted breast reconstruction. <i>Biofabrication</i> , 2011 , 3, 034114	10.5	44
15	Effects of scaffold architecture on mechanical characteristics and osteoblast response to static and perfusion bioreactor cultures. <i>Biotechnology and Bioengineering</i> , 2014 , 111, 1440-51	4.9	43
14	Engineering of vascularized adipose constructs. <i>Cell and Tissue Research</i> , 2012 , 347, 747-57	4.2	36
13	Three dimensional in vitro models of cancer: Bioprinting multilineage glioblastoma models. <i>Advances in Biological Regulation</i> , 2020 , 75, 100658	6.2	36
12	Improved bovine embryo production in an oviduct-on-a-chip system: prevention of poly-spermic fertilization and parthenogenic activation. <i>Lab on A Chip</i> , 2017 , 17, 905-916	7.2	35
11	Photo-Cross-Linked Poly(dl-lactide)-Based Networks. Structural Characterization by HR-MAS NMR Spectroscopy and Hydrolytic Degradation Behavior. <i>Macromolecules</i> , 2010 , 43, 8570-8579	5.5	29
10	3D Bioprinting of Lignocellulosic Biomaterials. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2001472	10.1	24
9	Emulating Human Tissues and Organs: A Bioprinting Perspective Toward Personalized Medicine. <i>Chemical Reviews</i> , 2020 , 120, 11128-11174	68.1	24

8	Focal adhesion signaling affects regeneration by human nucleus pulposus cells in collagen- but not carbohydrate-based hydrogels. <i>Acta Biomaterialia</i> , 2018 , 66, 238-247	10.8	15
7	Comparing Hydrogels for Human Nucleus Pulposus Regeneration: Role of Osmolarity During Expansion. <i>Tissue Engineering - Part C: Methods</i> , 2018 , 24, 222-232	2.9	10
6	Breast Reconstruction Using Biofabrication-Based Tissue Engineering Strategies 2013 , 183-216		7
5	Prolonged recovery of 3D printed, photo-cured polylactide shape memory polymer networks. <i>APL Bioengineering</i> , 2020 , 4, 036105	6.6	6
4	Accurate Measurements of the Skin Surface Area of the Healthy Auricle and Skin Deficiency in Microtia Patients. <i>Plastic and Reconstructive Surgery - Global Open</i> , 2016 , 4, e1146	1.2	5
3	Initial design and physical characterization of a polymeric device for osmosis-driven delayed burst delivery of vaccines. <i>Biotechnology and Bioengineering</i> , 2015 , 112, 1927-35	4.9	4
2	Methacrylate-Functionalized Oligomers Based On Lactide, E-Caprolactone And Trimethylene Carbonate For Application In Stereo-Lithography. <i>Materials Research Innovations</i> , 2006 , 10, 321-330	1.9	3
1	Routes towards manufacturing biodegradable electronics with polycaprolactone (PCL) via direct light writing and electroless plating. <i>Flexible and Printed Electronics</i> , 2022 , 7, 025006	3.1	3