Jos Malda

List of Publications by Year
in descending order

131 papers	15,074 citations	25034 57 h-index	18647 119 g-index
137 all docs	137 docs citations	137 times ranked	12896 citing authors

#	Article	IF	Citations
1	25th Anniversary Article: Engineering Hydrogels for Biofabrication. Advanced Materials, 2013, 25, 5011-5028.	21.0	1,522
2	Additive manufacturing of tissues and organs. Progress in Polymer Science, 2012, 37, 1079-1104.	24.7	997
3	Gelatinâ€Methacrylamide Hydrogels as Potential Biomaterials for Fabrication of Tissueâ€Engineered Cartilage Constructs. Macromolecular Bioscience, 2013, 13, 551-561.	4.1	646
4	Gelatin-Methacryloyl Hydrogels: Towards Biofabrication-Based Tissue Repair. Trends in Biotechnology, 2016, 34, 394-407.	9.3	599
5	Reinforcement of hydrogels using three-dimensionally printed microfibres. Nature Communications, 2015, 6, 6933.	12.8	567
6	Printability and Shape Fidelity of Bioinks in 3D Bioprinting. Chemical Reviews, 2020, 120, 11028-11055.	47.7	552
7	Biofabrication: reappraising the definition of an evolving field. Biofabrication, 2016, 8, 013001.	7.1	523
8	Extracellular matrix scaffolds for cartilage and bone regeneration. Trends in Biotechnology, 2013, 31, 169-176.	9.3	465
9	Biofabrication: A Guide to Technology and Terminology. Trends in Biotechnology, 2018, 36, 384-402.	9.3	465
10	Oxygen gradients correlate with cell density and cell viability in engineered cardiac tissue. Biotechnology and Bioengineering, 2006, 93, 332-343.	3.3	360
11	Biofabrication of tissue constructs by 3D bioprinting of cell-laden microcarriers. Biofabrication, 2014, 6, 035020.	7.1	310
12	Additive Manufacturing of Biomaterials, Tissues, and Organs. Annals of Biomedical Engineering, 2017, 45, 1-11.	2.5	301
13	From Shape to Function: The Next Step in Bioprinting. Advanced Materials, 2020, 32, e1906423.	21.0	298
14	A biomimetic extracellular matrix for cartilage tissue engineering centered on photocurable gelatin, hyaluronic acid and chondroitin sulfate. Acta Biomaterialia, 2014, 10, 214-223.	8.3	291
15	Volumetric Bioprinting of Complex Livingâ€Tissue Constructs within Seconds. Advanced Materials, 2019, 31, e1904209.	21.0	286
16	Tissue Engineering of Articular Cartilage with Biomimetic Zones. Tissue Engineering - Part B: Reviews, 2009, 15, 143-157.	4.8	273
17	Assessing bioink shape fidelity to aid material development in 3D bioprinting. Biofabrication, 2018, 10, 014102.	7.1	272
18	Yield stress determines bioprintability of hydrogels based on gelatin-methacryloyl and gellan gum for cartilage bioprinting. Biofabrication, 2016, 8, 035003.	7.1	261

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19	The bio in the ink: cartilage regeneration with bioprintable hydrogels and articular cartilage-derived progenitor cells. Acta Biomaterialia, 2017, 61, 41-53.	8.3	247
20	Bio-resin for high resolution lithography-based biofabrication of complex cell-laden constructs. Biofabrication, 2018, 10, 034101.	7.1	216
21	Development and characterisation of a new bioink for additive tissue manufacturing. Journal of Materials Chemistry B, 2014, 2, 2282.	5.8	182
22	Heterogeneous proliferation within engineered cartilaginous tissue: the role of oxygen tension. Biotechnology and Bioengineering, 2005, 91, 607-615.	3.3	155
23	Endochondral bone formation in gelatin methacrylamide hydrogel with embedded cartilage-derived matrix particles. Biomaterials, 2015, 37, 174-182.	11.4	153
24	Supply of Nutrients to Cells in Engineered Tissues. Biotechnology and Genetic Engineering Reviews, 2009, 26, 163-178.	6.2	149
25	A Printable Photopolymerizable Thermosensitive p(HPMAmâ€lactate)â€PEG Hydrogel for Tissue Engineering. Advanced Functional Materials, 2011, 21, 1833-1842.	14.9	147
26	Melt Electrospinning Writing of Polyâ€Hydroxymethylglycolideâ€<i>co</i>â€Îµâ€Caprolactoneâ€Based Scaffolds for Cardiac Tissue Engineering. Advanced Healthcare Materials, 2017, 6, 1700311.	7.6	144
27	Visible Light Crossâ€Linking of Gelatin Hydrogels Offers an Enhanced Cell Microenvironment with Improved Light Penetration Depth. Macromolecular Bioscience, 2019, 19, e1900098.	4.1	127
28	3D extrusion bioprinting. Nature Reviews Methods Primers, 2021, 1, .	21.2	127
29	A Stimuliâ€Responsive Nanocomposite for 3D Anisotropic Cellâ€Guidance and Magnetic Soft Robotics. Advanced Functional Materials, 2019, 29, 1804647.	14.9	126
30	Melt Electrowriting Allows Tailored Microstructural and Mechanical Design of Scaffolds to Advance Functional Human Myocardial Tissue Formation. Advanced Functional Materials, 2018, 28, 1803151.	14.9	125
31	Hyaluronic Acid Enhances the Mechanical Properties of Tissue-Engineered Cartilage Constructs. PLoS ONE, 2014, 9, e113216.	2.5	124
32	Covalent attachment of a three-dimensionally printed thermoplast to a gelatin hydrogel for mechanically enhanced cartilage constructs. Acta Biomaterialia, 2014, 10, 2602-2611.	8.3	123
33	Double printing of hyaluronic acid/poly(glycidol) hybrid hydrogels with poly(<i>Îµ</i> -caprolactone) for MSC chondrogenesis. Biofabrication, 2017, 9, 044108.	7.1	119
34	Mechanical behavior of a soft hydrogel reinforced with three-dimensional printed microfibre scaffolds. Scientific Reports, 2018, 8, 1245.	3.3	116
35	A Synthetic Thermosensitive Hydrogel for Cartilage Bioprinting and Its Biofunctionalization with Polysaccharides. Biomacromolecules, 2016, 17, 2137-2147.	5.4	111
36	Cartilage Tissue Engineering: Controversy in the Effect of Oxygen. Critical Reviews in Biotechnology, 2003, 23, 175-194.	9.0	109

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37	Of Mice, Men and Elephants: The Relation between Articular Cartilage Thickness and Body Mass. PLoS ONE, 2013, 8, e57683.	2.5	106
38	Volumetric Bioprinting of Organoids and Optically Tuned Hydrogels to Build Liverâ€Like Metabolic Biofactories. Advanced Materials, 2022, 34, e2110054.	21.0	100
39	Rapid Photocrosslinking of Silk Hydrogels with High Cell Density and Enhanced Shape Fidelity. Advanced Healthcare Materials, 2020, 9, e1901667.	7.6	96
40	Simultaneous Micropatterning of Fibrous Meshes and Bioinks for the Fabrication of Living Tissue Constructs. Advanced Healthcare Materials, 2019, 8, e1800418.	7.6	92
41	Three-Dimensional Bioprinting and Its Potential in the Field of Articular Cartilage Regeneration. Cartilage, 2017, 8, 327-340.	2.7	90
42	Combining multi-scale 3D printing technologies to engineer reinforced hydrogel-ceramic interfaces. Biofabrication, 2020, 12, 025014.	7.1	90
43	Bi-layered micro-fibre reinforced hydrogels for articular cartilage regeneration. Acta Biomaterialia, 2019, 95, 297-306.	8.3	89
44	Additive Biomanufacturing: An Advanced Approach for Periodontal Tissue Regeneration. Annals of Biomedical Engineering, 2017, 45, 12-22.	2.5	87
45	Tough magnesium phosphate-based 3D-printed implants induce bone regeneration in an equine defect model. Biomaterials, 2020, 261, 120302.	11.4	87
46	Development of a thermosensitive HAMA-containing bio-ink for the fabrication of composite cartilage repair constructs. Biofabrication, 2017, 9, 015026.	7.1	85
47	Hydrogel-based reinforcement of 3D bioprinted constructs. Biofabrication, 2016, 8, 035004.	7.1	81
48	Extracellular Matrix/Amorphous Magnesium Phosphate Bioink for 3D Bioprinting of Craniomaxillofacial Bone Tissue. ACS Applied Materials & Interfaces, 2020, 12, 23752-23763.	8.0	79
49	Converging biofabrication and organoid technologies: the next frontier in hepatic and intestinal tissue engineering?. Biofabrication, 2017, 9, 013001.	7.1	78
50	Bio-ink development for three-dimensional bioprinting of hetero-cellular cartilage constructs. Connective Tissue Research, 2020, 61, 137-151.	2.3	78
51	Highly tunable bioactive fiber-reinforced hydrogel for guided bone regeneration. Acta Biomaterialia, 2020, 113, 164-176.	8.3	77
52	From the printer: Potential of three-dimensional printing for orthopaedicÂapplications. Journal of Orthopaedic Translation, 2016, 6, 42-49.	3.9	70
53	A Versatile Biosynthetic Hydrogel Platform for Engineering of Tissue Analogues. Advanced Healthcare Materials, 2019, 8, e1900979.	7.6	69
54	Multitechnology Biofabrication: A New Approach for the Manufacturing of Functional Tissue Structures?. Trends in Biotechnology, 2020, 38, 1316-1328.	9.3	68

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55	Cartilage Tissue Engineering: Controversy in the Effect of Oxygen. Critical Reviews in Biotechnology, 2003, 23, 175-194.	9.0	68
56	Hydrodynamics and mass transfer in a tubular airlift photobioreactor. Journal of Applied Phycology, 2002, 14, 169-184.	2.8	67
57	Decellularized Cartilage-Derived Matrix as Substrate for Endochondral Bone Regeneration. Tissue Engineering - Part A, 2015, 21, 694-703.	3.1	61
58	Innovative Tissueâ€Engineered Strategies for Osteochondral Defect Repair and Regeneration: Current Progress and Challenges. Advanced Healthcare Materials, 2020, 9, e2001008.	7.6	57
59	Chondrocyte redifferentiation and construct mechanical property development in singleâ€component photocrosslinkable hydrogels. Journal of Biomedical Materials Research - Part A, 2014, 102, 2544-2553.	4.0	56
60	Biofabrication of reinforced 3D-scaffolds using two-component hydrogels. Journal of Materials Chemistry B, 2015, 3, 9067-9078.	5.8	56
61	Oneâ€Step Photoactivation of a Dualâ€Functionalized Bioink as Cell Carrier and Cartilageâ€Binding Glue for Chondral Regeneration. Advanced Healthcare Materials, 2020, 9, e1901792.	7.6	56
62	Hydrogel-Based Bioinks for Cell Electrowriting of Well-Organized Living Structures with Micrometer-Scale Resolution. Biomacromolecules, 2021, 22, 855-866.	5.4	54
63	Combining regenerative medicine strategies to provide durable reconstructive options: auricular cartilage tissue engineering. Stem Cell Research and Therapy, 2016, 7, 19.	5.5	53
64	Outâ€ofâ€Plane 3Dâ€Printed Microfibers Improve the Shear Properties of Hydrogel Composites. Small, 2018, 14, 1702773.	10.0	53
65	Improved bovine embryo production in an oviduct-on-a-chip system: prevention of poly-spermic fertilization and parthenogenic activation. Lab on A Chip, 2017, 17, 905-916.	6.0	49
66	Rapid and cytocompatible cell-laden silk hydrogel formation <i>via</i> riboflavin-mediated crosslinking. Journal of Materials Chemistry B, 2020, 8, 9566-9575.	5.8	47
67	Potential Health and Environmental Risks of Three-Dimensional Engineered Polymers. Environmental Science and Technology Letters, 2018, 5, 80-85.	8.7	45
68	Rethinking articular cartilage regeneration based on a 250-year-old statement. Nature Reviews Rheumatology, 2019, 15, 571-572.	8.0	44
69	Melt electrowriting onto anatomically relevant biodegradable substrates: Resurfacing a diarthrodial joint. Materials and Design, 2020, 195, 109025.	7.0	39
70	Bioprinting Neural Systems to Model Central Nervous System Diseases. Advanced Functional Materials, 2020, 30, 1910250.	14.9	38
71	High-resolution lithographic biofabrication of hydrogels with complex microchannels from low-temperature-soluble gelatin bioresins. Materials Today Bio, 2021, 12, 100162.	5.5	38
72	Flow-perfusion interferes with chondrogenic and hypertrophic matrix production by mesenchymal stem cells. Journal of Biomechanics, 2014, 47, 2122-2129.	2.1	35

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73	From intricate to integrated: Biofabrication of articulating joints. Journal of Orthopaedic Research, 2017, 35, 2089-2097.	2.3	35
74	Extracellular Vesicles in Joint Disease and Therapy. Frontiers in Immunology, 2018, 9, 2575.	4.8	34
75	Fabrication of MSC-laden composites of hyaluronic acid hydrogels reinforced with MEW scaffolds for cartilage repair. Biofabrication, 2022, 14, 014106.	7.1	34
76	Arthroscopic near infrared spectroscopy enables simultaneous quantitative evaluation of articular cartilage and subchondral bone in vivo. Scientific Reports, 2018, 8, 13409.	3.3	33
77	Orthotopic Bone Regeneration within 3D Printed Bioceramic Scaffolds with Regionâ€Dependent Porosity Gradients in an Equine Model. Advanced Healthcare Materials, 2020, 9, e1901807.	7.6	33
78	Arthroscopic Determination of Cartilage Proteoglycan Content and Collagen Network Structure with Near-Infrared Spectroscopy. Annals of Biomedical Engineering, 2019, 47, 1815-1826.	2.5	32
79	Stable and Antibacterial Magnesiumâ€"Graphene Nanocomposite-Based Implants for Bone Repair. ACS Biomaterials Science and Engineering, 2020, 6, 6253-6262.	5.2	32
80	A Highly Ordered, Nanostructured Fluorinated CaPâ€Coated Melt Electrowritten Scaffold for Periodontal Tissue Regeneration. Advanced Healthcare Materials, 2021, 10, e2101152.	7.6	32
81	Fixation of Hydrogel Constructs for Cartilage Repair in the Equine Model: A Challenging Issue. Tissue Engineering - Part C: Methods, 2017, 23, 804-814.	2.1	31
82	Viscoelastic Chondroitin Sulfate and Hyaluronic Acid Double-Network Hydrogels with Reversible Cross-Links. Biomacromolecules, 2022, 23, 1350-1365.	5.4	29
83	Synovial fluid pretreatment with hyaluronidase facilitates isolation of CD44+ extracellular vesicles. Journal of Extracellular Vesicles, 2016, 5, 31751.	12.2	28
84	Chondrogenesis by bone marrowâ€derived mesenchymal stem cells grown in chondrocyteâ€conditioned medium for auricular reconstruction. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2763-2773.	2.7	28
85	Topographic Guidance in Melt-Electrowritten Tubular Scaffolds Enhances Engineered Kidney Tubule Performance. Frontiers in Bioengineering and Biotechnology, 2020, 8, 617364.	4.1	28
86	Tissue-specific melt electrowritten polymeric scaffolds for coordinated regeneration of soft and hard periodontal tissues. Bioactive Materials, 2023, 19, 268-281.	15.6	28
87	Mimicking the Articular Joint with In Vitro Models. Trends in Biotechnology, 2019, 37, 1063-1077.	9.3	27
88	Thermoplastic PCL-b-PEG-b-PCL and HDI Polyurethanes for Extrusion-Based 3D-Printing of Tough Hydrogels. Bioengineering, 2018, 5, 99.	3.5	26
89	Bioink with cartilage-derived extracellular matrix microfibers enables spatial control of vascular capillary formation in bioprinted constructs. Biofabrication, 2022, 14, 034104.	7.1	26
90	A Theoretical and Experimental Study to Optimize Cell Differentiation in a Novel Intestinal Chip. Frontiers in Bioengineering and Biotechnology, 2020, 8, 763.	4.1	25

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91	Ex vivo model unravelling cell distribution effect in hydrogels for cartilage repair. ALTEX: Alternatives To Animal Experimentation, 2018, 35, 65-76.	1.5	25
92	Fiber Scaffold Patterning for Mending Hearts: 3D Organization Bringing the Next Step. Advanced Healthcare Materials, 2020, 9, e1900775.	7.6	24
93	The clinical potential of articular cartilage-derived progenitor cells: a systematic review. Npj Regenerative Medicine, 2022, 7, 2.	5.2	24
94	Multi-scale imaging techniques to investigate solute transport across articular cartilage. Journal of Biomechanics, 2018, 78, 10-20.	2.1	23
95	Innovations in craniofacial bone and periodontal tissue engineering â€“ from electrospinning to converged biofabrication. International Materials Reviews, 2022, 67, 347-384.	19.3	23
96	Bioprinting of Human Liverâ€Derived Epithelial Organoids for Toxicity Studies. Macromolecular Bioscience, 2021, 21, e2100327.	4.1	22
97	Localization of the Potential Zonal Marker Clusterin in Native Cartilage and in Tissue-Engineered Constructs. Tissue Engineering - Part A, 2010, 16, 897-904.	3.1	21
98	Bone Morphogenetic Protein-9 Is a Potent Chondrogenic and Morphogenic Factor for Articular Cartilage Chondroprogenitors. Stem Cells and Development, 2020, 29, 882-894.	2.1	21
99	Fabrication of Kidney Proximal Tubule Grafts Using Biofunctionalized Electrospun Polymer Scaffolds. Macromolecular Bioscience, 2019, 19, e1800412.	4.1	20
100	Cartilage defect repair in horses: Current strategies and recent developments in regenerative medicine of the equine joint with emphasis on the surgical approach. Veterinary Journal, 2016, 214, 61-71.	1.7	19
101	Importance of Timing of Platelet Lysate-Supplementation in Expanding or Redifferentiating Human Chondrocytes for Chondrogenesis. Frontiers in Bioengineering and Biotechnology, 2020, 8, 804.	4.1	19
102	Unveiling the potential of melt electrowriting in regenerative dental medicine. Acta Biomaterialia, 2023, 156, 88-109.	8.3	18
103	A Step Towards Clinical Translation of Biofabrication. Trends in Biotechnology, 2016, 34, 356-357.	9.3	16
104	A Multifunctional Nanocomposite Hydrogel for Endoscopic Tracking and Manipulation. Advanced Intelligent Systems, 2020, 2, 1900105.	6.1	16
105	Evaluation of articular cartilage with quantitative MRI in an equine model of postâ€traumatic osteoarthritis. Journal of Orthopaedic Research, 2021, 39, 63-73.	2.3	16
106	Platelet-Rich Plasma Does Not Inhibit Inflammation or Promote Regeneration in Human Osteoarthritic Chondrocytes <i>In Vitro</i> Despite Increased Proliferation. Cartilage, 2021, 13, 991S-1003S.	2.7	15
107	3Dâ€Printed Regenerative Magnesium Phosphate Implant Ensures Stability and Restoration of Hip Dysplasia. Advanced Healthcare Materials, 2021, 10, e2101051.	7.6	15
108	Impact of Endotoxins in Gelatine Hydrogels on Chondrogenic Differentiation and Inflammatory Cytokine Secretion In Vitro. International Journal of Molecular Sciences, 2020, 21, 8571.	4.1	14

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109	Articular cartilage generation applying PEG-LA-DM/PEGDM copolymer hydrogels. BMC Musculoskeletal Disorders, 2016, 17, 245.	1.9	13
110	Anisotropic hygro-expansion in hydrogel fibers owing to uniting 3D electrowriting and supramolecular polymer assembly. European Polymer Journal, 2020, 141, 110099.	5.4	13
111	Triblock Copolymers Based on Îµ-Caprolactone and Trimethylene Carbonate for the 3D Printing of Tissue Engineering Scaffolds. International Journal of Artificial Organs, 2017, 40, 176-184.	1.4	12
112	The Importance of Interfaces in Multiâ€Material Biofabricated Tissue Structures. Advanced Healthcare Materials, 2021, 10, e2101021.	7.6	12
113	Differential Production of Cartilage ECM in 3D Agarose Constructs by Equine Articular Cartilage Progenitor Cells and Mesenchymal Stromal Cells. International Journal of Molecular Sciences, 2020, 21, 7071.	4.1	11
114	Biofabrication: Volumetric Bioprinting of Complex Livingâ€Tissue Constructs within Seconds (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	21.0	9
115	Long-Term in Vivo Performance of Low-Temperature 3D-Printed Bioceramics in an Equine Model. ACS Biomaterials Science and Engineering, 2020, 6, 1681-1689.	5.2	9
116	Potential of Melt Electrowritten Scaffolds Seeded with Meniscus Cells and Mesenchymal Stromal Cells. International Journal of Molecular Sciences, 2021, 22, 11200.	4.1	8
117	Organs by design. Current Opinion in Organ Transplantation, 2019, 24, 562-567.	1.6	7
118	Cell nutrition. , 2008, , 327-362.		6
119	Fabrication of Decellularized Cartilage-derived Matrix Scaffolds. Journal of Visualized Experiments, 2019, , .	0.3	6
120	The Complexity of Joint Regeneration: How an Advanced Implant could Fail by Its In Vivo Proven Bone Component. Journal of Trial and Error, 2022, 2, 7-25.	0.5	6
121	Accurate Measurements of the Skin Surface Area of the Healthy Auricle and Skin Deficiency in Microtia Patients. Plastic and Reconstructive Surgery - Global Open, 2016, 4, e1146.	0.6	5
122	Robust gelatin hydrogels for local sustained release of bupivacaine following spinal surgery. Acta Biomaterialia, 2022, 146, 145-158.	8.3	5
123	Topographic features of nano-pores within the osteochondral interface and their effects on transport properties â€“a 3D imaging and modeling study. Journal of Biomechanics, 2021, 123, 110504.	2.1	4
124	Comparison of in vitro and in vivo Toxicity of Bupivacaine in Musculoskeletal Applications. Frontiers in Pain Research, 2021, 2, 723883.	2.0	4
125	Nonâ€enzymatic crossâ€linking of collagen type II fibrils is tuned via osmolality switch. Journal of Orthopaedic Research, 2018, 36, 1929-1936.	2.3	3
126	Building Blocks for Biofabricated Models. Advanced Healthcare Materials, 2019, 8, e1900326.	7.6	3

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127	A Multifunctional Nanocomposite Hydrogel for Endoscopic Tracking and Manipulation. Advanced Intelligent Systems, 2020, 2, 2070031.	6.1	2
128	Dualâ€contrast computed tomography enables detection of equine posttraumatic osteoarthritis in vitro. Journal of Orthopaedic Research, 2022, 40, 703-711.	2.3	2
129	Current Trends in Cartilage Science. Cartilage, 2013, 4, 273-280.	2.7	1
130	Musculoskeletal regeneration research network: A global initiative. Journal of Orthopaedic Translation, 2015, 3, 160-165.	3.9	1
131	Tissue Engineering: Melt Electrospinning Writing of Polyâ€Hydroxymethylglycolideâ€<i>co</i>â€Îµâ€Caprolactoneâ€Based Scaffolds for Cardiac Tissue Engineering (Adv. Healthcare Mater. 18/2017). Advanced Healthcare Materials, 2017, 6, .	7.6	1