Marcy Zenobi-Wong

List of Publications by Year
in descending order

119 papers	7,496 citations	46984 47 h-index	60583 81 g-index
125 all docs	125 docs citations	125 times ranked	8917 citing authors

#	Article	IF	Citations
1	Alginate Sulfateâ€“Nanocellulose Bioinks for Cartilage Bioprinting Applications. Annals of Biomedical Engineering, 2017, 45, 210-223.	1.3	317
2	Articular cartilage functional histomorphology and mechanobiology: a research perspective. Bone, 2003, 33, 1-13.	1.4	300
3	Nanostructured Pluronic hydrogels as bioinks for 3D bioprinting. Biofabrication, 2015, 7, 035006.	3.7	295
4	A versatile bioink for three-dimensional printing of cellular scaffolds based on thermally and photo-triggered tandem gelation. Acta Biomaterialia, 2015, 11, 162-172.	4.1	242
5	Stimulation of Aggrecan Synthesis in Cartilage Explants by Cyclic Loading Is Localized to Regions of High Interstitial Fluid Flow1. Archives of Biochemistry and Biophysics, 1999, 366, 1-7.	1.4	238
6	Growth of Epithelial Organoids in a Defined Hydrogel. Advanced Materials, 2018, 30, e1801621.	11.1	200
7	Bovine Primary Chondrocyte Culture in Synthetic Matrix Metalloproteinase-Sensitive Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlo	4.9	192
8	Amyloidâ€Hydroxyapatite Bone Biomimetic Composites. Advanced Materials, 2014, 26, 3207-3212.	11.1	188
9	Artificial Bacterial Flagella for Remoteâ€Controlled Targeted Singleâ€Cell Drug Delivery. Small, 2014, 10, 1953-1957.	5.2	178
10	Bioprinting Complex Cartilaginous Structures with Clinically Compliant Biomaterials. Advanced Functional Materials, 2015, 25, 7406-7417.	7.8	174
11	Molecular and biophysical mechanisms regulating hypertrophic differentiation in chondrocytes and mesenchymal stem cells. , 2012, 24, 118-135.		171
12	Chondrocyte biosynthesis correlates with local tissue strain in statically compressed adult articular cartilage. Journal of Orthopaedic Research, 1997, 15, 189-196.	1.2	150
13	Cyclic compression of articular cartilage explants is associated with progressive consolidation and altered expression pattern of extracellular matrix proteins. Matrix Biology, 1999, 18, 391-399.	1.5	148
14	Engineering the Extracellular Environment: Strategies for Building 2D and 3D Cellular Structures. Advanced Materials, 2010, 22, 5443-5462.	11.1	147
15	Modelling cartilage mechanobiology. Philosophical Transactions of the Royal Society B: Biological Sciences, 2003, 358, 1461-1471.	1.8	141
16	Importance of the superficial tissue layer for the indentation stiffness of articular cartilage. Medical Engineering and Physics, 2002, 24, 99-108.	0.8	137
17	Volumetric changes of articular cartilage during stress relaxation in unconfined compression. Journal of Biomechanics, 2000, 33, 1049-1054.	0.9	131
18	3D extrusion bioprinting. Nature Reviews Methods Primers, 2021, 1, .	11.8	127

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19	Guiding Lights: Tissue Bioprinting Using Photoactivated Materials. Chemical Reviews, 2020, 120, 10950-11027.	23.0	120
20	Zone-specific cell biosynthetic activity in mature bovine articular cartilage: A new method using confocal microscopic stereology and quantitative autoradiography. Journal of Orthopaedic Research, 1996, 14, 424-432.	1.2	118
21	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie - International Edition, 2018, 57, 11667-11672.	7.2	110
22	Biphasic Poroviscoelastic Simulation of the Unconfined Compression of Articular Cartilage: Iâ€"Simultaneous Prediction of Reaction Force and Lateral Displacement. Journal of Biomechanical Engineering, 2001, 123, 191-197.	0.6	104
23	Cartilage tissue formation through assembly of microgels containing mesenchymal stem cells. Acta Biomaterialia, 2018, 77, 48-62.	4.1	102
24	Novel enzymatically cross-linked hyaluronan hydrogels support the formation of 3D neuronal networks. Biomaterials, 2016, 99, 47-55.	5.7	101
25	Surface and Subsurface Morphology of Bovine Humeral Articular Cartilage as Assessed by Atomic Force and Transmission Electron Microscopy. Journal of Structural Biology, 1996, 117, 45-54.	1.3	98
26	3D Bioprinting of Macroporous Materials Based on Entangled Hydrogel Microstrands. Advanced Science, 2020, 7, 2001419.	5.6	92
27	Three-Dimensional Bioprinting and Its Potential in the Field of Articular Cartilage Regeneration. Cartilage, 2017, 8, 327-340.	1.4	90
28	Chondrocyte Culture in Three Dimensional Alginate Sulfate Hydrogels Promotes Proliferation While Maintaining Expression of Chondrogenic Markers. Tissue Engineering - Part A, 2014, 20, 1454-1464.	1.6	89
29	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie - International Edition, 2017, 56, 4507-4511.	7.2	86
30	Topology Effects on the Structural and Physicochemical Properties of Polymer Brushes. Macromolecules, 2017, 50, 7760-7769.	2.2	86
31	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. Angewandte Chemie - International Edition, 2018, 57, 1621-1626.	7.2	84
32	Development of mechanically stable alginate/chondrocyte constructs: effects of guluronic acid content and matrix synthesis. Journal of Orthopaedic Research, 2001, 19, 493-499.	1.2	74
33	Nanoassemblies of Tissue-Reactive, Polyoxazoline Graft-Copolymers Restore the Lubrication Properties of Degraded Cartilage. ACS Nano, 2017, 11, 2794-2804.	7.3	72
34	Electrochemical plasmonic sensors. Analytical and Bioanalytical Chemistry, 2012, 402, 1773-1784.	1.9	71
35	Sulfated Hydrogel Matrices Direct Mitogenicity and Maintenance of Chondrocyte Phenotype through Activation of FGF Signaling. Advanced Functional Materials, 2016, 26, 3649-3662.	7.8	68
36	Precise tailoring of tyramine-based hyaluronan hydrogel properties using DMTMM conjugation. Carbohydrate Polymers, 2015, 115, 325-333.	5.1	65

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37	Axon Growth of CNS Neurons in Three Dimensions Is Amoeboid and Independent of Adhesions. Cell Reports, 2020, 32, 107907.	2.9	61
38	Exploitation of Cationic Silica Nanoparticles for Bioprinting of Large-Scale Constructs with High Printing Fidelity. ACS Applied Materials & Interfaces, 2018, 10, 37820-37828.	4.0	60
39	Oxygen Tolerant and Cytocompatible Iron(0)-Mediated ATRP Enables the Controlled Growth of Polymer Brushes from Mammalian Cell Cultures. Journal of the American Chemical Society, 2020, 142, 3158-3164.	6.6	59
40	Factor XIII Cross-Linked Hyaluronan Hydrogels for Cartilage Tissue Engineering. ACS Biomaterials Science and Engineering, 2016, 2, 2176-2184.	2.6	58
41	Layer-by-Layer Films Made from Extracellular Matrix Macromolecules on Silicone Substrates. Biomacromolecules, 2011, 12, 609-616.	2.6	57
42	Pre-Osteoarthritis. Cartilage, 2015, 6, 156-165.	1.4	57
43	GFOGER-Modified MMP-Sensitive Polyethylene Glycol Hydrogels Induce Chondrogenic Differentiation of Human Mesenchymal Stem Cells. Tissue Engineering - Part A, 2014, 20, 1165-1174.	1.6	54
44	A Bioinspired Ultraporous Nanofiberâ€Hydrogel Mimic of the Cartilage Extracellular Matrix. Advanced Healthcare Materials, 2016, 5, 3129-3138.	3.9	54
45	Sortase A as a cross-linking enzyme in tissue engineering. Acta Biomaterialia, 2018, 77, 182-190.	4.1	54
46	Double-Network Hydrogels Including Enzymatically Crosslinked Poly-(2-alkyl-2-oxazoline)s for 3D Bioprinting of Cartilage-Engineering Constructs. Biomacromolecules, 2019, 20, 4502-4511.	2.6	54
47	Morphogenesis Guided by 3D Patterning of Growth Factors in Biological Matrices. Advanced Materials, 2020, 32, e1908299.	11.1	54
48	An injectable heparin-conjugated hyaluronan scaffold for local delivery of transforming growth factor Î²1 promotes successful chondrogenesis. Acta Biomaterialia, 2019, 99, 168-180.	4.1	50
49	Electrochemically switchable platform for the micro-patterning and release of heterotypic cell sheets. Biomedical Microdevices, 2011, 13, 221-230.	1.4	49
50	Disentangling the multifactorial contributions of fibronectin, collagen and cyclic strain on MMP expression and extracellular matrix remodeling by fibroblasts. Matrix Biology, 2014, 40, 62-72.	1.5	49
51	Macroporous hydrogels derived from aqueous dynamic phase separation. Biomaterials, 2019, 200, 56-65.	5.7	49
52	Optimized Photoclick (Bio)Resins for Fast Volumetric Bioprinting. Advanced Materials, 2021, 33, e2102900.	11.1	49
53	Cross-Linking Chemistry of Tyramine-Modified Hyaluronan Hydrogels Alters Mesenchymal Stem Cell Early Attachment and Behavior. Biomacromolecules, 2017, 18, 855-864.	2.6	48
54	PEG/HA Hybrid Hydrogels for Biologically and Mechanically Tailorable Bone Marrow Organoids. Advanced Functional Materials, 2020, 30, 1910282.	7.8	48

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55	Ultrasoft Alginate Hydrogels Support Long-Term Three-Dimensional Functional Neuronal Networks. Tissue Engineering - Part A, 2015, 21, 2177-2185.	1.6	46
56	Cartilage-targeting dexamethasone prodrugs increase the efficacy of dexamethasone. Journal of Controlled Release, 2019, 295, 118-129.	4.8	45
57	Microfabrication of Photo-Cross-Linked Hyaluronan Hydrogels by Single- and Two-Photon Tyramine Oxidation. Biomacromolecules, 2015, 16, 2624-2630.	2.6	44
58	Molecularly Engineered Biolubricants for Articular Cartilage. Advanced Healthcare Materials, 2018, 7, e1701463.	3.9	43
59	Chondrocytes From Device-Minced Articular Cartilage Show Potent Outgrowth Into Fibrin and Collagen Hydrogels. Orthopaedic Journal of Sports Medicine, 2019, 7, 232596711986761.	0.8	43
60	Ribosomal Protein L13a as a Reference Gene for Human Bone Marrow-Derived Mesenchymal Stromal Cells During Expansion, Adipo-, Chondro-, and Osteogenesis. Tissue Engineering - Part C: Methods, 2012, 18, 761-771.	1.1	42
61	Nanocomposite bioink exploits dynamic covalent bonds between nanoparticles and polysaccharides for precision bioprinting. Biofabrication, 2020, 12, 025025.	3.7	42
62	Cartilage tissue engineering by extrusion bioprinting utilizing porous hyaluronic acid microgel bioinks. Biofabrication, 2022, 14, 034105.	3.7	41
63	Interference with the contractile machinery of the fibroblastic chondrocyte cytoskeleton induces re-expression of the cartilage phenotype through involvement of PI3K, PKC and MAPKs. Experimental Cell Research, 2014, 320, 175-187.	1.2	39
64	Synthesis of Biocompatible PEG Hydrogels by pH-Sensitive Potassium Acyltrifluoroborate (KAT) Amide Ligations. ACS Biomaterials Science and Engineering, 2015, 1, 456-462.	2.6	39
65	Surface Density Variation within Cyclic Polymer Brushes Reveals Topology Effects on Their Nanotribological and Biopassive Properties. ACS Macro Letters, 2018, 7, 1455-1460.	2.3	39
66	Printing Thermoresponsive Reverse Molds for the Creation of Patterned Two-component Hydrogels for 3D Cell Culture. Journal of Visualized Experiments, 2013, , e50632.	0.2	37
67	Engineered Sulfated Polysaccharides for Biomedical Applications. Advanced Functional Materials, 2021, 31, 2010732.	7.8	37
68	Cartilage issues in footballâ€”today's problems and tomorrow's solutions. British Journal of Sports Medicine, 2015, 49, 590-596.	3.1	36
69	Anti-oxidant and immune-modulatory properties of sulfated alginate derivatives on human chondrocytes and macrophages. Biomaterials Science, 2017, 5, 1756-1765.	2.6	36
70	Hairy and Slippery Polyoxazoline-Based Copolymers on Model and Cartilage Surfaces. Biomacromolecules, 2018, 19, 680-690.	2.6	36
71	Guidelines for standardization of bioprinting: a systematic study of process parameters and their effect on bioprinted structures. BioNanoMaterials, 2016, 17, .	1.4	35
72	Hybrid Randomly Electrospun Poly(lactic-<i>co</i>-glycolic acid):Poly(ethylene oxide) (PLGA:PEO) Fibrous Scaffolds Enhancing Myoblast Differentiation and Alignment. ACS Applied Materials & Interfaces, 2016, 8, 31574-31586.	4.0	35

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73	Characterization of polydactyly chondrocytes and their use in cartilage engineering. Scientific Reports, 2019, 9, 4275.	1.6	33
74	Collagen Fibrillogenesis by Chondrocytes in Alginate. Tissue Engineering, 2002, 8, 979-987.	4.9	32
75	The Flavonoid Isoquercitrin Promotes Neurite Elongation by Reducing RhoA Activity. PLoS ONE, 2012, 7, e49979.	1.1	32
76	Osteoarthritis in Football. Cartilage, 2017, 8, 162-172.	1.4	32
77	The epigenetically active small chemical N-methyl pyrrolidone (NMP) prevents estrogen depletion induced osteoporosis. Bone, 2015, 78, 114-121.	1.4	31
78	Human chondroprogenitors in alginate-collagen hybrid scaffolds produce stable cartilage<i>in vivo</i>. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 3014-3026.	1.3	31
79	Tyrosinase-crosslinked, tissue adhesive and biomimetic alginate sulfate hydrogels for cartilage repair. Biomedical Materials (Bristol), 2020, 15, 045019.	1.7	31
80	Improved accuracy and precision of bioprinting through progressive cavity pump-controlled extrusion. Biofabrication, 2021, 13, 015012.	3.7	30
81	Microencapsulation improves chondrogenesis <i>in vitro</i> and cartilaginous matrix stability <i>in vivo</i> compared to bulk encapsulation. Biomaterials Science, 2020, 8, 1711-1725.	2.6	27
82	Engineered Microtissues Formed by Schiff Base Crosslinking Restore the Chondrogenic Potential of Aged Mesenchymal Stem Cells. Advanced Healthcare Materials, 2015, 4, 1348-1358.	3.9	25
83	Bioprinting of Cartilaginous Auricular Constructs Utilizing an Enzymatically Crosslinkable Bioink. Advanced Functional Materials, 2021, 31, 2008261.	7.8	25
84	Development and thorough characterization of the processing steps of an ink for 3D printing for bone tissue engineering. Materials Science and Engineering C, 2020, 108, 110510.	3.8	23
85	Functional Nanoassemblies of Cyclic Polymers Show Amplified Responsiveness and Enhanced Protein-Binding Ability. ACS Nano, 2020, 14, 10054-10067.	7.3	23
86	Comblike Polymers with Topologically Different Side Chains for Surface Modification: Assembly Process and Interfacial Physicochemical Properties. Macromolecules, 2019, 52, 1632-1641.	2.2	22
87	Probing the microenvironmental conditions for induction of superficial zone protein expression. Osteoarthritis and Cartilage, 2013, 21, 1924-1932.	0.6	20
88	Fabrication of cell-compatible hyaluronan hydrogels with a wide range of biophysical properties through high tyramine functionalization. Journal of Materials Chemistry B, 2017, 5, 2355-2363.	2.9	20
89	Hypoxia regulates RhoA and Wnt/Î2-catenin signaling in a context-dependent way to control re-differentiation of chondrocytes. Scientific Reports, 2017, 7, 9032.	1.6	19
90	Efficient electroporation of peptides into adherent cells: investigation of the role of mechano-growth factor in chondrocyte culture. Biotechnology Letters, 2011, 33, 883-888.	1.1	18

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91	Enzymatically crosslinked poly(2-alkyl-2-oxazoline) networks for 3D cell culture. Journal of Materials Chemistry B, 2018, 6, 7568-7572.	2.9	17
92	The role of poly(2-alkyl-2-oxazoline)s in hydrogels and biofabrication. Biomaterials Science, 2021, 9, 2874-2886.	2.6	15
93	Combination of a Collagen Scaffold and an Adhesive Hyaluronan-Based Hydrogel for Cartilage Regeneration: A Proof of Concept in an Ovine Model. Cartilage, 2021, 13, 636S-649S.	1.4	15
94	Effects of N-glycosylation of the human cation channel TRPA1 on agonist-sensitivity. Bioscience Reports, 2016, 36, .	1.1	14
95	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie, 2017, 129, 4578-4582.	1.6	14
96	RhoA activation and nuclearization marks loss of chondrocyte phenotype in crosstalk with Wnt pathway. Experimental Cell Research, 2017, 360, 113-124.	1.2	14
97	Hydrogels Generated from Cyclic Poly(2â€Oxazoline)s Display Unique Swelling and Mechanical Properties. Macromolecular Rapid Communications, 2021, 42, e2000658.	2.0	13
98	3Dâ€Printed Reinforcement Scaffolds with Targeted Biodegradation Properties for the Tissue Engineering of Articular Cartilage. Advanced Healthcare Materials, 2021, 10, e2101094.	3.9	13
99	The bromodomain inhibitor N-methyl pyrrolidone reduced fat accumulation in an ovariectomized rat model. Clinical Epigenetics, 2016, 8, 42.	1.8	12
100	Regenerative Potential of Perichondrium: A Tissue Engineering Perspective. Tissue Engineering - Part B: Reviews, 2022, 28, 531-541.	2.5	12
101	Magnetically deliverable calcium phosphate nanoparticles for localized gene expression. RSC Advances, 2015, 5, 9997-10004.	1.7	10
102	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. Angewandte Chemie, 2018, 130, 1637-1642.	1.6	10
103	Functional analysis of synovial fluid from osteoarthritic knee and carpometacarpal joints unravels different molecular profiles. Rheumatology, 2019, 58, 897-907.	0.9	10
104	Femtomolar oligonucleotide detection by a one-step gold nanoparticle-based assay. Colloids and Surfaces B: Biointerfaces, 2015, 135, 193-200.	2.5	9
105	A comparative study of cartilage engineered constructs in immunocompromised, humanized and immunocompetent mice. Journal of Immunology and Regenerative Medicine, 2018, 2, 36-46.	0.2	9
106	Factor XIII Cross-Linked Adhesive Chitosan Hydrogels. ACS Biomaterials Science and Engineering, 2021, 7, 2198-2203.	2.6	8
107	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie, 2018, 130, 11841-11846.	1.6	6
108	Cell-Instructive Alginate Hydrogels Targeting RhoA. Bioconjugate Chemistry, 2018, 29, 3042-3053.	1.8	5

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109	Is There a Scientific Rationale for the Refixation of Delaminated Chondral Flaps in Femoroacetabular Impingement? A Laboratory Study. Clinical Orthopaedics and Related Research, 2020, 478, 854-867.	0.7	4
110	Biomimetic Composites: Amyloid-Hydroxyapatite Bone Biomimetic Composites (Adv. Mater. 20/2014). Advanced Materials, 2014, 26, 3206-3206.	11.1	2
111	Postâ€Assembly Photomasking of Potassium Acyltrifluoroborates (KATs) for Twoâ€Photon 3D Patterning of PEGâ€Hydrogels. Helvetica Chimica Acta, 2020, 103, e2000172.	1.0	2
112	Additively Manufactured Semiflexible Titanium Lattices as Hydrogel Reinforcement for Biomedical Implants. Advanced NanoBiomed Research, 2021, 1, 2000031.	1.7	2
113	Artificial bacterial flagella functionalized with temperature-sensitive liposomes for biomedical applications. , 2013, , .		1
114	Engineering Cellular Assembly for Applications in Regenerative Medicine. Nanomedicine and Nanotoxicology, 2014, , 131-145.	0.1	1
115	RÃ¼cktitelbild: Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes (Angew. Chem. 16/2017). Angewandte Chemie, 2017, 129, 4702-4702.	1.6	0
116	Regeneration â€“ eine neue therapeutische Dimension in der Hals-Nasen-Ohrenheilkunde. Laryngo- Rhino- Otologie, 2018, 97, S185-S213.	0.2	0
117	Tissue Engineering: Morphogenesis Guided by 3D Patterning of Growth Factors in Biological Matrices (Adv. Mater. 25/2020). Advanced Materials, 2020, 32, 2070193.	11.1	0
118	Perichondrozyten aus Mikrotiepatienten sind eine geeignete Zellquelle fÃ¼r das Tissue Engineering einer Ohrmuschel. Laryngo- Rhino- Otologie, 2022, , .	0.2	0
119	Perichondrocytes from microtia patients are a suitable cell source for tissue engineering of an auricle. Laryngo- Rhino- Otologie, 2022, , .	0.2	0