Marcy Zenobi-Wong

List of Publications by Citations

118 papers	5,450 citations	40 h-index	71 g-index
125 ext. papers	6,456 ext. citations	8.5 avg, IF	6.02 L-index

#	Paper	IF	Citations
118	Articular cartilage functional histomorphology and mechanobiology: a research perspective. *Bone*, **2003**, 33, 1-13	4.7	264
117	Alginate Sulfate-Nanocellulose Bioinks for Cartilage Bioprinting Applications. *Annals of Biomedical Engineering*, **2017**, 45, 210-223	4.7	231
116	Stimulation of aggrecan synthesis in cartilage explants by cyclic loading is localized to regions of high interstitial fluid flow. *Archives of Biochemistry and Biophysics*, **1999**, 366, 1-7	4.1	218
115	Nanostructured Pluronic hydrogels as bioinks for 3D bioprinting. *Biofabrication*, **2015**, 7, 035006	10.5	217
114	A versatile bioink for three-dimensional printing of cellular scaffolds based on thermally and photo-triggered tandem gelation. *Acta Biomaterialia*, **2015**, 11, 162-72	10.8	197
113	Bovine primary chondrocyte culture in synthetic matrix metalloproteinase-sensitive poly(ethylene glycol)-based hydrogels as a scaffold for cartilage repair. *Tissue Engineering*, **2004**, 10, 515-22		176
112	Amyloid-hydroxyapatite bone biomimetic composites. *Advanced Materials*, **2014**, 26, 3207-12	24	159
111	Artificial bacterial flagella for remote-controlled targeted single-cell drug delivery. *Small*, **2014**, 10, 1953-7	11	150
110	Bioprinting Complex Cartilaginous Structures with Clinically Compliant Biomaterials. *Advanced Functional Materials*, **2015**, 25, 7406-7417	15.6	139
109	Chondrocyte biosynthesis correlates with local tissue strain in statically compressed adult articular cartilage. *Journal of Orthopaedic Research*, **1997**, 15, 189-96	3.8	137
108	Molecular and biophysical mechanisms regulating hypertrophic differentiation in chondrocytes and mesenchymal stem cells. *European Cells and Materials*, **2012**, 24, 118-35; discussion 135	4.3	137
107	Engineering the extracellular environment: Strategies for building 2D and 3D cellular structures. *Advanced Materials*, **2010**, 22, 5443-62	24	133
106	Cyclic compression of articular cartilage explants is associated with progressive consolidation and altered expression pattern of extracellular matrix proteins. *Matrix Biology*, **1999**, 18, 391-9	11.4	131
105	Importance of the superficial tissue layer for the indentation stiffness of articular cartilage. *Medical Engineering and Physics*, **2002**, 24, 99-108	2.4	125
104	Volumetric changes of articular cartilage during stress relaxation in unconfined compression. *Journal of Biomechanics*, **2000**, 33, 1049-54	2.9	122
103	Modelling cartilage mechanobiology. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2003**, 358, 1461-71	5.8	121
102	Growth of Epithelial Organoids in a Defined Hydrogel. *Advanced Materials*, **2018**, 30, e1801621	24	114

101	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, 424-32	3.8	108
100	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	3.4	93
99	Biphasic poroviscoelastic simulation of the unconfined compression of articular cartilage: I--Simultaneous prediction of reaction force and lateral displacement. *Journal of Biomechanical Engineering*, **2001**, 123, 191-7	2.1	91
98	Novel enzymatically cross-linked hyaluronan hydrogels support the formation of 3D neuronal networks. *Biomaterials*, **2016**, 99, 47-55	15.6	78
97	Chemical Design of Non-Ionic Polymer Brushes as Biointerfaces: Poly(2-oxazine)s Outperform Both Poly(2-oxazoline)s and PEG. *Angewandte Chemie - International Edition*, **2018**, 57, 11667-11672	16.4	75
96	Next-Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultra-Dense, and Long-Lasting Cyclic Brushes. *Angewandte Chemie - International Edition*, **2017**, 56, 4507-4511	16.4	70
95	Development of mechanically stable alginate/chondrocyte constructs: effects of guluronic acid content and matrix synthesis. *Journal of Orthopaedic Research*, **2001**, 19, 493-9	3.8	67
94	Chondrocyte culture in three dimensional alginate sulfate hydrogels promotes proliferation while maintaining expression of chondrogenic markers. *Tissue Engineering - Part A*, **2014**, 20, 1454-64	3.9	66
93	Three-Dimensional Bioprinting and Its Potential in the Field of Articular Cartilage Regeneration. *Cartilage*, **2017**, 8, 327-340	3	64
92	Electrochemical plasmonic sensors. *Analytical and Bioanalytical Chemistry*, **2012**, 402, 1773-84	4.4	61
91	Topology Effects on the Structural and Physicochemical Properties of Polymer Brushes. *Macromolecules*, **2017**, 50, 7760-7769	5.5	58
90	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. *Angewandte Chemie - International Edition*, **2018**, 57, 1621-1626	16.4	58
89	Cartilage tissue formation through assembly of microgels containing mesenchymal stem cells. *Acta Biomaterialia*, **2018**, 77, 48-62	10.8	57
88	Guiding Lights: Tissue Bioprinting Using Photoactivated Materials. *Chemical Reviews*, **2020**, 120, 10950-11027	60.2	55
87	Layer-by-layer films made from extracellular matrix macromolecules on silicone substrates. *Biomacromolecules*, **2011**, 12, 609-16	6.9	52
86	Nanoassemblies of Tissue-Reactive, Polyoxazoline Graft-Copolymers Restore the Lubrication Properties of Degraded Cartilage. *ACS Nano*, **2017**, 11, 2794-2804	16.7	48
85	Sulfated hydrogel matrices direct mitogenicity and maintenance of chondrocyte phenotype through activation of FGF signaling. *Advanced Functional Materials*, **2016**, 26, 3649-3662	15.6	45
84	Precise tailoring of tyramine-based hyaluronan hydrogel properties using DMTMM conjugation. *Carbohydrate Polymers*, **2015**, 115, 325-33	10.3	42

83	Electrochemically switchable platform for the micro-patterning and release of heterotypic cell sheets. *Biomedical Microdevices*, **2011**, 13, 221-30	3.7	42
82	Factor XIII Cross-Linked Hyaluronan Hydrogels for Cartilage Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2016**, 2, 2176-2184	5.5	41
81	3D Bioprinting of Macroporous Materials Based on Entangled Hydrogel Microstrands. *Advanced Science*, **2020**, 7, 2001419	13.6	41
80	A Bioinspired Ultraporous Nanofiber-Hydrogel Mimic of the Cartilage Extracellular Matrix. *Advanced Healthcare Materials*, **2016**, 5, 3129-3138	10.1	40
79	Pre-Osteoarthritis: Definition and Diagnosis of an Elusive Clinical Entity. *Cartilage*, **2015**, 6, 156-65	3	40
78	Exploitation of Cationic Silica Nanoparticles for Bioprinting of Large-Scale Constructs with High Printing Fidelity. *ACS Applied Materials & Interfaces*, **2018**, 10, 37820-37828	9.5	37
77	Microfabrication of Photo-Cross-Linked Hyaluronan Hydrogels by Single- and Two-Photon Tyramine Oxidation. *Biomacromolecules*, **2015**, 16, 2624-30	6.9	36
76	Ultrasoft Alginate Hydrogels Support Long-Term Three-Dimensional Functional Neuronal Networks. *Tissue Engineering - Part A*, **2015**, 21, 2177-85	3.9	36
75	GFOGER-modified MMP-sensitive polyethylene glycol hydrogels induce chondrogenic differentiation of human mesenchymal stem cells. *Tissue Engineering - Part A*, **2014**, 20, 1165-74	3.9	36
74	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	11.4	36
73	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, 761-71	2.9	36
72	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	16.4	34
71	Sortase A as a cross-linking enzyme in tissue engineering. *Acta Biomaterialia*, **2018**, 77, 182-190	10.8	34
70	Synthesis of Biocompatible PEG Hydrogels by pH-Sensitive Potassium Acyltrifluoroborate (KAT) Amide Ligations. *ACS Biomaterials Science and Engineering*, **2015**, 1, 456-462	5.5	34
69	Cross-Linking Chemistry of Tyramine-Modified Hyaluronan Hydrogels Alters Mesenchymal Stem Cell Early Attachment and Behavior. *Biomacromolecules*, **2017**, 18, 855-864	6.9	32
68	Morphogenesis Guided by 3D Patterning of Growth Factors in Biological Matrices. *Advanced Materials*, **2020**, 32, e1908299	24	31
67	Double-Network Hydrogels Including Enzymatically Crosslinked Poly-(2-alkyl-2-oxazoline)s for 3D Bioprinting of Cartilage-Engineering Constructs. *Biomacromolecules*, **2019**, 20, 4502-4511	6.9	31
66	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, 175-87	4.2	31

65	Hybrid Randomly Electrospun Poly(lactic-co-glycolic acid):Poly(ethylene oxide) (PLGA:PEO) Fibrous Scaffolds Enhancing Myoblast Differentiation and Alignment. *ACS Applied Materials & Interfaces*, **2016**, 8, 31574-31586	9.5	29
64	Printing thermoresponsive reverse molds for the creation of patterned two-component hydrogels for 3D cell culture. *Journal of Visualized Experiments*, **2013**, e50632	1.6	29
63	Collagen fibrillogenesis by chondrocytes in alginate. *Tissue Engineering*, **2002**, 8, 979-87		29
62	Surface Density Variation within Cyclic Polymer Brushes Reveals Topology Effects on Their Nanotribological and Biopassive Properties. *ACS Macro Letters*, **2018**, 7, 1455-1460	6.6	29
61	Cartilage-targeting dexamethasone prodrugs increase the efficacy of dexamethasone. *Journal of Controlled Release*, **2019**, 295, 118-129	11.7	27
60	Macroporous hydrogels derived from aqueous dynamic phase separation. *Biomaterials*, **2019**, 200, 56-65	15.6	26
59	Cartilage issues in football-today's problems and tomorrow's solutions. *British Journal of Sports Medicine*, **2015**, 49, 590-6	10.3	26
58	Nanocomposite bioink exploits dynamic covalent bonds between nanoparticles and polysaccharides for precision bioprinting. *Biofabrication*, **2020**, 12, 025025	10.5	26
57	The flavonoid isoquercitrin promotes neurite elongation by reducing RhoA activity. *PLoS ONE*, **2012**, 7, e49979	3.7	26
56	Osteoarthritis in Football. *Cartilage*, **2017**, 8, 162-172	3	25
55	An injectable heparin-conjugated hyaluronan scaffold for local delivery of transforming growth factor β1 promotes successful chondrogenesis. *Acta Biomaterialia*, **2019**, 99, 168-180	10.8	24
54	Chondrocytes From Device-Minced Articular Cartilage Show Potent Outgrowth Into Fibrin and Collagen Hydrogels. *Orthopaedic Journal of Sports Medicine*, **2019**, 7, 2325967119867618	3.5	24
53	The epigenetically active small chemical N-methyl pyrrolidone (NMP) prevents estrogen depletion induced osteoporosis. *Bone*, **2015**, 78, 114-21	4.7	23
52	Comblike Polymers with Topologically Different Side Chains for Surface Modification: Assembly Process and Interfacial Physicochemical Properties. *Macromolecules*, **2019**, 52, 1632-1641	5.5	22
51	Hairy and Slippery Polyoxazoline-Based Copolymers on Model and Cartilage Surfaces. *Biomacromolecules*, **2018**, 19, 680-690	6.9	22
50	Human chondroprogenitors in alginate-collagen hybrid scaffolds produce stable cartilage in vivo. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 3014-3026	4.4	22
49	Guidelines for standardization of bioprinting: a systematic study of process parameters and their effect on bioprinted structures. *BioNanoMaterials*, **2016**, 17,		22
48	Anti-oxidant and immune-modulatory properties of sulfated alginate derivatives on human chondrocytes and macrophages. *Biomaterials Science*, **2017**, 5, 1756-1765	7.4	21

47	Axon Growth of CNS Neurons in Three Dimensions Is Amoeboid and Independent of Adhesions. *Cell Reports*, **2020**, 32, 107907	10.6	20
46	PEG/HA Hybrid Hydrogels for Biologically and Mechanically Tailorable Bone Marrow Organoids. *Advanced Functional Materials*, **2020**, 30, 1910282	15.6	20
45	Molecularly Engineered Biolubricants for Articular Cartilage. *Advanced Healthcare Materials*, **2018**, 7, e1701463	10.1	19
44	Engineered Microtissues Formed by Schiff Base Crosslinking Restore the Chondrogenic Potential of Aged Mesenchymal Stem Cells. *Advanced Healthcare Materials*, **2015**, 4, 1348-58	10.1	19
43	Characterization of polydactyly chondrocytes and their use in cartilage engineering. *Scientific Reports*, **2019**, 9, 4275	4.9	18
42	3D extrusion bioprinting. *Nature Reviews Methods Primers*, **2021**, 1,		17
41	Probing the microenvironmental conditions for induction of superficial zone protein expression. *Osteoarthritis and Cartilage*, **2013**, 21, 1924-32	6.2	15
40	Tyrosinase-crosslinked, tissue adhesive and biomimetic alginate sulfate hydrogels for cartilage repair. *Biomedical Materials (Bristol)*, **2020**, 15, 045019	3.5	13
39	Functional Nanoassemblies of Cyclic Polymers Show Amplified Responsiveness and Enhanced Protein-Binding Ability. *ACS Nano*, **2020**, 14, 10054-10067	16.7	13
38	Hypoxia regulates RhoA and Wnt/β-catenin signaling in a context-dependent way to control re-differentiation of chondrocytes. *Scientific Reports*, **2017**, 7, 9032	4.9	13
37	Enzymatically crosslinked poly(2-alkyl-2-oxazoline) networks for 3D cell culture. *Journal of Materials Chemistry B*, **2018**, 6, 7568-7572	7.3	13
36	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	7.3	12
35	Efficient electroporation of peptides into adherent cells: investigation of the role of mechano-growth factor in chondrocyte culture. *Biotechnology Letters*, **2011**, 33, 883-8	3	12
34	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	8.3	12
33	Next-Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultra-Dense, and Long-Lasting Cyclic Brushes. *Angewandte Chemie*, **2017**, 129, 4578-4582	3.6	11
32	Bioprinting of Cartilaginous Auricular Constructs Utilizing an Enzymatically Crosslinkable Bioink. *Advanced Functional Materials*, **2021**, 31, 2008261	15.6	11
31	The bromodomain inhibitor N-methyl pyrrolidone reduced fat accumulation in an ovariectomized rat model. *Clinical Epigenetics*, **2016**, 8, 42	7.7	10
30	Optimized Photoclick (Bio)Resins for Fast Volumetric Bioprinting. *Advanced Materials*, **2021**, 33, e2102900	24	10

29	Microencapsulation improves chondrogenesis in vitro and cartilaginous matrix stability in vivo compared to bulk encapsulation. *Biomaterials Science*, **2020**, 8, 1711-1725	7.4	10
28	Improved accuracy and precision of bioprinting through progressive cavity pump-controlled extrusion. *Biofabrication*, **2020**,	10.5	10
27	Effects of N-Glycosylation of the human cation channel TRPA1 on agonist-sensitivity. *Bioscience Reports*, **2016**, 36,	4.1	10
26	Femtomolar oligonucleotide detection by a one-step gold nanoparticle-based assay. *Colloids and Surfaces B: Biointerfaces*, **2015**, 135, 193-200	6	9
25	RhoA activation and nuclearization marks loss of chondrocyte phenotype in crosstalk with Wnt pathway. *Experimental Cell Research*, **2017**, 360, 113-124	4.2	9
24	Engineered Sulfated Polysaccharides for Biomedical Applications. *Advanced Functional Materials*, **2021**, 31, 2010732	15.6	9
23	Magnetically deliverable calcium phosphate nanoparticles for localized gene expression. *RSC Advances*, **2015**, 5, 9997-10004	3.7	7
22	The role of poly(2-alkyl-2-oxazoline)s in hydrogels and biofabrication. *Biomaterials Science*, **2021**, 9, 2874-2886	7.4	7
21	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. *Angewandte Chemie*, **2018**, 130, 1637-1642	3.6	6
20	Hydrogels Generated from Cyclic Poly(2-Oxazoline)s Display Unique Swelling and Mechanical Properties. *Macromolecular Rapid Communications*, **2021**, 42, e2000658	4.8	6
19	Combination of a Collagen Scaffold and an Adhesive Hyaluronan-Based Hydrogel for Cartilage Regeneration: A Proof of Concept in an Ovine Model. *Cartilage*, **2021**, 1947603521989417	3	6
18	Cell-Instructive Alginate Hydrogels Targeting RhoA. *Bioconjugate Chemistry*, **2018**, 29, 3042-3053	6.3	5
17	A comparative study of cartilage engineered constructs in immunocompromised, humanized and immunocompetent mice. *Journal of Immunology and Regenerative Medicine*, **2018**, 2, 36-46	2.8	5
16	Chemical Design of Non-Ionic Polymer Brushes as Biointerfaces: Poly(2-oxazine)s Outperform Both Poly(2-oxazoline)s and PEG. *Angewandte Chemie*, **2018**, 130, 11841-11846	3.6	4
15	Functional analysis of synovial fluid from osteoarthritic knee and carpometacarpal joints unravels different molecular profiles. *Rheumatology*, **2019**, 58, 897-907	3.9	4
14	Improved accuracy and precision of bioprinting through progressive cavity pump-controlled extrusion		4
13	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	2.2	3
12	Biomimetic Composites: Amyloid-Hydroxyapatite Bone Biomimetic Composites (Adv. Mater. 20/2014). *Advanced Materials*, **2014**, 26, 3206-3206	24	2

11	Post-Assembly Photomasking of Potassium Acyltrifluoroborates (KATs) for Two-Photon 3D Patterning of PEG-Hydrogels. *Helvetica Chimica Acta*, **2020**, 103, e2000172	2	1
10	Artificial bacterial flagella functionalized with temperature-sensitive liposomes for biomedical applications **2013**,		1
9	3D-Printed Reinforcement Scaffolds with Targeted Biodegradation Properties for the Tissue Engineering of Articular Cartilage. *Advanced Healthcare Materials*, **2021**, 10, e2101094	10.1	1
8	Engineering Cellular Assembly for Applications in Regenerative Medicine. *Nanomedicine and Nanotoxicology*, **2014**, 131-145	0.3	1
7	Nanocomposite bioink exploits dynamic covalent bonds between nanoparticles and polysaccharides for precision bioprinting		1
6	Factor XIII Cross-Linked Adhesive Chitosan Hydrogels. *ACS Biomaterials Science and Engineering*, **2021**, 7, 2198-2203	5.5	1
5	Regenerative Potential of Perichondrium: A Tissue Engineering Perspective. *Tissue Engineering - Part B: Reviews*, **2021**,	7.9	1
4	R□ktitelbild: Next-Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultra-Dense, and Long-Lasting Cyclic Brushes (Angew. Chem. 16/2017). *Angewandte Chemie*, **2017**, 129, 4702-4702	3.6	
3	Tissue Engineering: Morphogenesis Guided by 3D Patterning of Growth Factors in Biological Matrices (Adv. Mater. 25/2020). *Advanced Materials*, **2020**, 32, 2070193	24	
2	[Regeneration - A New Therapeutic Dimension in Otorhinolaryngology]. *Laryngo- Rhino- Otologie*, **2018**, 97, S185-S213	0.8	
1	Additively Manufactured Semiflexible Titanium Lattices as Hydrogel Reinforcement for Biomedical Implants. *Advanced NanoBiomed Research*, **2021**, 1, 2000031	0	