JÃ¼rgen Groll

List of Publications by Year
in descending order

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Version: 2024-02-01

252	15,247	22153	20961
papers	citations	59	115
		h-index	g-index

261	261	261	17217
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	25th Anniversary Article: Engineering Hydrogels for Biofabrication. Advanced Materials, 2013, 25, 5011-5028.	21.0	1,522
2	Proposal to assess printability of bioinks for extrusion-based bioprinting and evaluation of rheological properties governing bioprintability. Biofabrication, 2017, 9, 044107.	7.1	620
3	Hydrogels in sensing applications. Progress in Polymer Science, 2012, 37, 1678-1719.	24.7	593
4	Strategies and Molecular Design Criteria for 3D Printable Hydrogels. Chemical Reviews, 2016, 116, 1496-1539.	47.7	580
5	Biofabrication: reappraising the definition of an evolving field. Biofabrication, 2016, 8, 013001.	7.1	523
6	Biofabrication: A Guide to Technology and Terminology. Trends in Biotechnology, 2018, 36, 384-402.	9.3	465
7	How smart do biomaterials need to be? A translational science and clinical point of view. Advanced Drug Delivery Reviews, 2013, 65, 581-603.	13.7	429
8	Rapid preparation of flexible porous coordination polymer nanocrystals with accelerated guest adsorption kinetics. Nature Chemistry, 2010, 2, 410-416.	13.6	324
9	Degradable polyester scaffolds with controlled surface chemistry combining minimal protein adsorption with specific bioactivation. Nature Materials, 2011, 10, 67-73.	27.5	298
10	From Shape to Function: The Next Step in Bioprinting. Advanced Materials, 2020, 32, e1906423.	21.0	298
11	Additive manufacturing of scaffolds with sub-micron filaments via melt electrospinning writing. Biofabrication, 2015, 7, 035002.	7.1	296
12	The bioprinting roadmap. Biofabrication, 2020, 12, 022002.	7.1	291
13	Thiolâ€“Ene Clickable Gelatin: A Platform Bioink for Multiple 3D Biofabrication Technologies. Advanced Materials, 2017, 29, 1703404.	21.0	248
14	Rapid Uptake of Gold Nanorods by Primary Human Blood Phagocytes and Immunomodulatory Effects of Surface Chemistry. ACS Nano, 2010, 4, 3073-3086.	14.6	214
15	Biofabrication of Cellâ€Loaded 3D Spider Silk Constructs. Angewandte Chemie - International Edition, 2015, 54, 2816-2820.	13.8	207
16	Biofunctionalized, Ultrathin Coatings of Cross-Linked Star-Shaped Poly(ethylene oxide) Allow Reversible Folding of Immobilized Proteins. Journal of the American Chemical Society, 2004, 126, 4234-4239.	13.7	191
17	Direct 3D powder printing of biphasic calcium phosphate scaffolds for substitution of complex bone defects. Biofabrication, 2014, 6, 015006.	7.1	180
18	Phagocytosis Independent Extracellular Nanoparticle Clearance by Human Immune Cells. Nano Letters, 2010, 10, 59-63.	9.1	168

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19	Dimensionâ€Based Design of Melt Electrowritten Scaffolds. Small, 2018, 14, e1800232.	10.0	167
20	Fiber reinforcement during 3D printing. Materials Letters, 2015, 139, 165-168.	2.6	147
21	Melt Electrospinning Writing of Polyâ€Hydroxymethylglycolideâ€coâ€Îµâ€Caprolactoneâ€Based Scaffolds for Cardiac Tissue Engineering. Advanced Healthcare Materials, 2017, 6, 1700311.	7.6	144
22	Fiber reinforced calcium phosphate cements â€“ On the way to degradable load bearing bone substitutes?. Biomaterials, 2012, 33, 5887-5900.	11.4	142
23	A novel star PEG-derived surface coating for specific cell adhesion. Journal of Biomedical Materials Research - Part A, 2005, 74A, 607-617.	4.0	140
24	Peptide-Functionalized Gold Nanorods Increase Liver Injury in Hepatitis. ACS Nano, 2012, 6, 8767-8777.	14.6	137
25	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
26	Patterned melt electrospun substrates for tissue engineering. Biomedical Materials (Bristol), 2008, 3, 034109.	3.3	123
27	Double printing of hyaluronic acid/poly(glycidol) hybrid hydrogels with poly(Îµ -caprolactone) for MSC chondrogenesis. Biofabrication, 2017, 9, 044108.	7.1	119
28	Mechanical behavior of a soft hydrogel reinforced with three-dimensional printed microfibre scaffolds. Scientific Reports, 2018, 8, 1245.	3.3	116
29	Magnesium ions and alginate do form hydrogels: a rheological study. Soft Matter, 2012, 8, 4877.	2.7	114
30	Inducing healing-like human primary macrophage phenotypes by 3D hydrogel coated nanofibres. Biomaterials, 2012, 33, 4136-4146.	11.4	112
31	Fibre pulsing during melt electrospinning writing. BioNanoMaterials, 2016, 17, .	1.4	109
32	Precisely defined fiber scaffolds with 40 Î¼m porosity induce elongation driven M2-like polarization of human macrophages. Biofabrication, 2020, 12, 025007.	7.1	109
33	Immobilized DNA aptamers used as potent attractors for porcine endothelial precursor cells. Journal of Biomedical Materials Research - Part A, 2008, 84A, 614-621.	4.0	108
34	Surface Grafting of PEOâ€Based Starâ€Shaped Molecules for Bioanalytical and Biomedical Applications. Macromolecular Bioscience, 2007, 7, 1010-1023.	4.1	104
35	High definition fibrous poly(2-ethyl-2-oxazoline) scaffolds through melt electrospinning writing. Polymer, 2014, 55, 5017-5023.	3.8	104
36	Comparison of Coatings from Reactive Star Shaped PEG-stat-PPG Prepolymers and Grafted Linear PEG for Biological and Medical Applications. Biomacromolecules, 2005, 6, 956-962.	5.4	103

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37	Myoblast morphology and organization on biochemically micro-patterned hydrogel coatings under cyclic mechanical strain. Biomaterials, 2010, 31, 250-258.	11.4	101
38	Surface Coating Strategies to Prevent Biofilm Formation on Implant Surfaces. International Journal of Artificial Organs, 2010, 33, 646-653.	1.4	97
39	Ice Templating Soft Matter: Fundamental Principles and Fabrication Approaches to Tailor Pore Structure and Morphology and Their Biomedical Applications. Advanced Materials, 2021, 33, e2100091.	21.0	97
40	Fabrication of computationally designed scaffolds by low temperature 3D printing. Biofabrication, 2013, 5, 035012.	7.1	90
41	A Thermogelling Supramolecular Hydrogel with Sponge-Like Morphology as a Cytocompatible Bioink. Biomacromolecules, 2017, 18, 2161-2171.	5.4	90
42	Embedding of Active Proteins and Living Cells in Redoxâ€Sensitive Hydrogels and Nanogels through Enzymatic Crossâ€Linking. Angewandte Chemie - International Edition, 2013, 52, 3000-3003.	13.8	89
43	Microcontact printing of proteins for neuronal cell guidance. Soft Matter, 2007, 3, 290-298.	2.7	88
44	Melt electrospinning onto cylinders: effects of rotational velocity and collector diameter on morphology of tubular structures. Polymer International, 2015, 64, 1086-1095.	3.1	86
45	Thiol-ene Clickable Poly(glycidol) Hydrogels for Biofabrication. Annals of Biomedical Engineering, 2017, 45, 273-285.	2.5	86
46	Advances in Hybrid Fabrication toward Hierarchical Tissue Constructs. Advanced Science, 2020, 7, 1902953.	11.2	86
47	Additive Manufacturing of a Photo-Cross-Linkable Polymer via Direct Melt Electrospinning Writing for Producing High Strength Structures. Biomacromolecules, 2016, 17, 208-214.	5.4	85
48	Biofunctionalized Polymer Surfaces Exhibiting Minimal Interaction towards Immobilized Proteins. ChemPhysChem, 2004, 5, 552-555.	2.1	84
49	Influence of Microgel Fabrication Technique on Granular Hydrogel Properties. ACS Biomaterials Science and Engineering, 2021, 7, 4269-4281.	5.2	84
50	Synthesis, patterning and applications of star-shaped poly(ethylene glycol) biofunctionalized surfaces. Molecular BioSystems, 2007, 3, 419-430.	2.9	83
51	Melt electrowriting below the critical translation speed to fabricate crimped elastomer scaffolds with non-linear extension behaviour mimicking that of ligaments and tendons. Acta Biomaterialia, 2018, 72, 110-120.	8.3	83
52	Heterotypic Scaffold Design Orchestrates Primary Cell Organization and Phenotypes in Cocultured Small Diameter Vascular Grafts. Advanced Functional Materials, 2019, 29, 1905987.	14.9	82
53	Hyaluronic Acidâ€Based Bioink Composition Enabling 3D Bioprinting and Improving Quality of Deposited Cartilaginous Extracellular Matrix. Advanced Healthcare Materials, 2020, 9, e2000737.	7.6	81
54	Bone targeting for the treatment of osteoporosis. Journal of Controlled Release, 2012, 161, 198-213.	9.9	79

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55	Strength reliability and in vitro degradation of three-dimensional powder printed strontium-substituted magnesium phosphate scaffolds. Acta Biomaterialia, 2016, 31, 401-411.	8.3	79
56	Influence of Different ECM Mimetic Peptide Sequences Embedded in a Nonfouling Environment on the Specific Adhesion of Humanâ€Skin Keratinocytes and Fibroblasts on Deformable Substrates. Small, 2007, 3, 1023-1031.	10.0	76
57	Biocompatible and degradable nanogels via oxidation reactions of synthetic thiomers in inverse miniemulsion. Journal of Polymer Science Part A, 2009, 47, 5543-5549.	2.3	70
58	A new strategy to measure intercellular adhesion forces in mature cell-cell contacts. Scientific Reports, 2017, 7, 46152.	3.3	70
59	Ultrathin Coatings from Isocyanate-Terminated Star PEG Prepolymers:â€‰ Layer Formation and Characterization. Langmuir, 2005, 21, 1991-1999.	3.5	61
60	Blood cell and plasma protein repellent properties of Star-PEG-modified surfaces. Journal of Biomaterials Science, Polymer Edition, 2006, 17, 985-996.	3.5	60
61	Differences of crystal structure and dynamics between a soft porous nanocrystal and a bulk crystal. Chemical Communications, 2011, 47, 7632.	4.1	60
62	Reinforcement Strategies for Load-Bearing Calcium Phosphate Biocements. Materials, 2015, 8, 2700-2717.	2.9	59
63	Fabrication of individual alginate-TCP scaffolds for bone tissue engineering by means of powder printing. Biofabrication, 2015, 7, 015004.	7.1	56
64	Design and fabrication of melt electrowritten tubes using intuitive software. Materials and Design, 2018, 155, 46-58.	7.0	56
65	Current Treatment Limitations in Age-Related Macular Degeneration and Future Approaches Based on Cell Therapy and Tissue Engineering. Journal of Ophthalmology, 2014, 2014, 1-13.	1.3	53
66	Biofabrication of 3D constructs: fabrication technologies and spider silk proteins as bioinks. Pure and Applied Chemistry, 2015, 87, 737-749.	1.9	53
67	Control of Nanoparticle Release Kinetics from 3D Printed Hydrogel Scaffolds. Angewandte Chemie - International Edition, 2017, 56, 4623-4628.	13.8	53
68	Outâ€ofâ€Plane 3Dâ€Printed Microfibers Improve the Shear Properties of Hydrogel Composites. Small, 2018, 14, 1702773.	10.0	53
69	Melt Electrowriting of Thermoplastic Elastomers. Macromolecular Rapid Communications, 2018, 39, e1800055.	3.9	52
70	Bone tissue engineering in osteoporosis. Maturitas, 2013, 75, 118-124.	2.4	50
71	Mechanically strong hydrogels with reversible behaviour under cyclic compression with MPa loading. Soft Matter, 2013, 9, 2869.	2.7	49
72	The use of a cartilage decellularized matrix scaffold for the repair of osteochondral defects: the importance of long-term studies in a large animal model. Osteoarthritis and Cartilage, 2017, 25, 413-420.	1.3	49

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73	Tailored Melt Electrowritten Scaffolds for the Generation of Sheetâ€Like Tissue Constructs from Multicellular Spheroids. Advanced Healthcare Materials, 2019, 8, e1801326.	7.6	48
74	Ultrathin Coatings from Isocyanate Terminated Star PEG Prepolymers:Â Patterning of Proteins on the Layers. Langmuir, 2005, 21, 3076-3083.	3.5	47
75	Novel Surface Coatings Modulating Eukaryotic Cell Adhesion and Preventing Implant Infection. International Journal of Artificial Organs, 2009, 32, 655-662.	1.4	46
76	Bioprinting and Differentiation of Adipose-Derived Stromal Cell Spheroids for a 3D Breast Cancer-Adipose Tissue Model. Cells, 2021, 10, 803.	4.1	46
77	Thin Film Morphologies of Block Copolymers Complexed with Wedge-Shaped Liquid Crystalline Amphiphilic Molecules. Macromolecules, 2008, 41, 1728-1738.	4.8	45
78	Structure and Properties of Ureaâ€Crosslinked Star Poly[(ethylene oxide)â€ranâ€(propylene oxide)] Hydrogels. Macromolecular Bioscience, 2008, 8, 923-931.	4.1	44
79	Rethinking articular cartilage regeneration based on a 250-year-old statement. Nature Reviews Rheumatology, 2019, 15, 571-572.	8.0	44
80	A versatile biomaterial ink platform for the melt electrowriting of chemically-crosslinked hydrogels. Materials Horizons, 2020, 7, 928-933.	12.2	44
81	Micro- and Nanopatterned Star Poly(ethylene glycol) (PEG) Materials Prepared by UV-Based Imprint Lithography. Langmuir, 2007, 23, 7841-7846.	3.5	43
82	Layer-specific cell differentiation in bi-layered vascular grafts under flow perfusion. Biofabrication, 2020, 12, 015009.	7.1	43
83	Bioactive Electrospun Fibers: Fabrication Strategies and a Critical Review of Surface-Sensitive Characterization and Quantification. Chemical Reviews, 2021, 121, 11194-11237.	47.7	41
84	Effects of nanoparticle surface-coupled peptides, functional endgroups, and charge on intracellular distribution and functionality of human primary reticuloendothelial cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2012, 8, 1282-1292.	3.3	40
85	Evolution of Bioengineered Lung Models: Recent Advances and Challenges in Tissue Mimicry for Studying the Role of Mechanical Forces in Cell Biology. Advanced Functional Materials, 2019, 29, 1903114.	14.9	40
86	Melt electrospinning writing of defined scaffolds using polylactide-poly(ethylene glycol) blends with 45S5 bioactive glass particles. Materials Letters, 2017, 205, 257-260.	2.6	39
87	In Vitro and In Vivo Evaluation of a Hydrogel Reservoir as a Continuous Drug Delivery System for Inner Ear Treatment. PLoS ONE, 2014, 9, e104564.	2.5	39
88	Side-Chain Cysteine-Functionalized Poly(2-oxazoline)s for Multiple Peptide Conjugation by Native Chemical Ligation. Biomacromolecules, 2015, 16, 1088-1094.	5.4	38
89	Development of Endothelial Cell Networks in 3D Tissues by Combination of Melt Electrospinning Writing with Cellâ€Accumulation Technology. Small, 2018, 14, 1701521.	10.0	38
90	Mechanical integrin stress and magnetic forces induce biological responses in mesenchymal stem cells which depend on environmental factors. Journal of Cellular Biochemistry, 2010, 111, 1586-1597.	2.6	37

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91	Tissue Mimicry in Morphology and Composition Promotes Hierarchical Matrix Remodeling of Invading Stem Cells in Osteochondral and Meniscus Scaffolds. Advanced Materials, 2018, 30, e1706754.	21.0	37
92	The Impact of Melt Electrowritten Scaffold Design on Porosity Determined by X-Ray Microtomography. Tissue Engineering - Part C: Methods, 2019, 25, 367-379.	2.1	37
93	Stepwise Control of Crosslinking in a Oneâ€Pot System for Bioprinting of Lowâ€Density Bioinks. Advanced Healthcare Materials, 2020, 9, e1901544.	7.6	37
94	A Bioinspired in vitro Lung Model to Study Particokinetics of Nano-/Microparticles Under Cyclic Stretch and Air-Liquid Interface Conditions. Frontiers in Bioengineering and Biotechnology, 2021, 9, 616830.	4.1	37
95	Strong and tough magnesium wire reinforced phosphate cement composites for load-bearing bone replacement. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 20, 36-44.	3.1	36
96	Controlled intramyocardial release of engineered chemokines by biodegradable hydrogels as a treatment approach of myocardial infarction. Journal of Cellular and Molecular Medicine, 2014, 18, 790-800.	3.6	36
97	Melt Electrospinning of Nanofibers from Medicalâ€Grade Poly(Îµâ€Caprolactone) with a Modified Nozzle. Small, 2020, 16, e2003471.	10.0	35
98	Functionalization of electrospun fibers of poly(Îµ-caprolactone) with star shaped NCO-poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Materials in Medicine, 2010, 21, 2637-2651.	3.6	34
99	Evaluation of Hydrogels Based on Oxidized Hyaluronic Acid for Bioprinting. Gels, 2018, 4, 82.	4.5	34
100	Tenside-free Preparation of Nanogels with High Functional Î²-Cyclodextrin Content. ACS Nano, 2012, 6, 8087-8093.	14.6	33
101	Improving printability of a thermoresponsive hydrogel biomaterial ink by nanoclay addition. Journal of Materials Science, 2021, 56, 691-705.	3.7	32
102	Nanostructured Ordering of Fluorescent Markers and Single Proteins on Substrates. ChemBioChem, 2005, 6, 1782-1787.	2.6	29
103	Tailored hyaluronic acid hydrogels through hydrophilic prepolymer cross-linkers. Soft Matter, 2010, 6, 618-629.	2.7	29
104	Novel bone wax based on poly(ethylene glycol)â€“calcium phosphate cement mixtures. Acta Biomaterialia, 2016, 33, 252-263.	8.3	29
105	BMP-7-Loaded PGLA Microspheres as a New Delivery System for the Cultivation of Human Chondrocytes in a Collagen Type I Gel: The Common Nude Mouse Model. International Journal of Artificial Organs, 2010, 33, 45-53.	1.4	28
106	Dual setting Î±-tricalcium phosphate cements. Journal of Materials Science: Materials in Medicine, 2013, 24, 573-581.	3.6	28
107	A Biomimetic, Copolymeric Membrane for Cellâ€Stretch Experiments with Pulmonary Epithelial Cells at the Airâ€Liquid Interface. Advanced Functional Materials, 2021, 31, 2004707.	14.9	28
108	Ultrathin Functional Star PEG Coatings for DNA Microarrays. Biomacromolecules, 2005, 6, 1819-1823.	5.4	27

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109	Dual-setting brushiteâ€“silica gel cements. Acta Biomaterialia, 2015, 11, 467-476.	8.3	27
110	Artificial inorganic biohybrids: The functional combination of microorganisms and cells with inorganic materials. Acta Biomaterialia, 2018, 74, 17-35.	8.3	27
111	Polysaccharide based covalently linked multi-membrane hydrogels. Soft Matter, 2012, 8, 1643-1647.	2.7	26
112	Chelate Bonding Mechanism in a Novel Magnesium Phosphate Bone Cement. Journal of the American Ceramic Society, 2015, 98, 694-697.	3.8	26
113	Tethered TGF-Î²1 in a Hyaluronic Acid-Based Bioink for Bioprinting Cartilaginous Tissues. International Journal of Molecular Sciences, 2022, 23, 924.	4.1	26
114	Electrospun, Biofunctionalized Fibers as Tailored in vitro Substrates for Keratinocyte Cell Culture. Macromolecular Bioscience, 2010, 10, 1022-1027.	4.1	25
115	TGFâ€Î²1â€Modified Hyaluronic Acid/Poly(glycidol) Hydrogels for Chondrogenic Differentiation of Human Mesenchymal Stromal Cells. Macromolecular Bioscience, 2018, 18, e1700390.	4.1	25
116	In situ guided tissue regeneration in musculoskeletal diseases and aging. Cell and Tissue Research, 2012, 347, 725-735.	2.9	24
117	Nanogels with High Active Î²-Cyclodextrin Content as Physical Coating System with Sustained Release Properties. ACS Applied Materials & Interfaces, 2014, 6, 2300-2311.	8.0	24
118	A Printâ€andâ€Fuse Strategy for Sacrificial Filaments Enables Biomimetically Structured Perfusable Microvascular Networks with Functional Endothelium Inside 3D Hydrogels. Advanced Materials, 2022, 34, .	21.0	24
119	Ultrathin Coatings with Change in Reactivity over Time Enable Functional In Vitro Networks Of Insect Neurons. Advanced Materials, 2008, 20, 2751-2755.	21.0	23
120	Polymeric Electrospun Scaffolds: Neuregulin Encapsulation and Biocompatibility Studies in a Model of Myocardial Ischemia. Tissue Engineering - Part A, 2015, 21, 1654-1661.	3.1	23
121	DNA Nanogels To Snare Carcinogens: A Bioinspired Generic Approach with High Efficiency. Angewandte Chemie - International Edition, 2016, 55, 12210-12213.	13.8	23
122	Via precise interface engineering towards bioinspired composites with improved 3D printing processability and mechanical properties. Journal of Materials Chemistry B, 2017, 5, 5037-5047.	5.8	23
123	A Bone Glue with Sustained Adhesion under Wet Conditions. Advanced Healthcare Materials, 2017, 6, 1600902.	7.6	23
124	Permanent Hydrophilization and Generic Bioactivation of Melt Electrowritten Scaffolds. Advanced Healthcare Materials, 2019, 8, e1801544.	7.6	23
125	Translation of Collagen Ultrastructure to Biomaterial Fabrication for Materialâ€Independent but Highly Efficient Topographic Immunomodulation. Advanced Materials, 2021, 33, e2101228.	21.0	23
126	Phosphorylation of RS1 (RSC1A1) Steers Inhibition of Different Exocytotic Pathways for Glucose Transporter SGLT1 and Nucleoside Transporter CNT1, and an RS1-Derived Peptide Inhibits Glucose Absorption. Molecular Pharmacology, 2016, 89, 118-132.	2.3	22

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127	Multimodal Bioactivation of Hydrophilic Electrospun Nanofibers Enables Simultaneous Tuning of Cell Adhesivity and Immunomodulatory Effects. Advanced Functional Materials, 2017, 27, 1702903.	14.9	22
128	Platelet lysate outperforms FCS and human serum for co-culture of primary human macrophages and hMSCs. Scientific Reports, 2019, 9, 3533.	3.3	20
129	Isotropic Versus Bipolar Functionalized Biomimetic Artificial Basement Membranes and Their Evaluation in Longâ€Term Human Cell Coâ€Culture. Advanced Healthcare Materials, 2016, 5, 1939-1948.	7.6	19
130	An in vitro and in vivo study of peptide-functionalized nanoparticles for brain targeting: The importance of selective bloodâ€“brain barrier uptake. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 1289-1300.	3.3	19
131	P2RX7 genotype association in severe sepsis identified by a novel Multi-Individual Array for rapid screening and replication of risk SNPs. Clinica Chimica Acta, 2012, 413, 39-47.	1.1	18
132	In vitro ion adsorption and cytocompatibility of dicalcium phosphate ceramics. Biomaterials Research, 2017, 21, 10.	6.9	18
133	Catechol-modified poly(oxazoline)s with tunable degradability facilitate cell invasion and lateral cartilage integration. Journal of Industrial and Engineering Chemistry, 2019, 80, 757-769.	5.8	18
134	Magnesium Phosphate Cement as Mineral Bone Adhesive. Materials, 2019, 12, 3819.	2.9	18
135	A comparative analysis of detachment forces and energies in initial and mature cell-material interaction. Colloids and Surfaces B: Biointerfaces, 2020, 190, 110894.	5.0	18
136	Bleaching of plasmon-resonance absorption of gold nanorods decreases efficiency of cell destruction. Journal of Biomedical Optics, 2012, 17, 058003.	2.6	17
137	Mild Oxidation of Thiofunctional Polymers to Cytocompatible and Stimuliâ€Sensitive Hydrogels and Nanogels. Macromolecular Bioscience, 2013, 13, 470-482.	4.1	17
138	Chemical characterization of hydroxyapatite obtained by wet chemistry in the presence of V, Co, and Cu ions. Materials Science and Engineering C, 2013, 33, 1654-1661.	7.3	17
139	Unidirectional Control of Anisotropic Wetting through Surface Modification of PDMS Microstructures. Langmuir, 2013, 29, 12331-12336.	3.5	17
140	The Next Step in Biomimetic Material Design: Polyâ€LacNAcâ€Mediated Reversible Exposure of Extra Cellular Matrix Components. Advanced Healthcare Materials, 2013, 2, 306-311.	7.6	17
141	Cysteineâ€Functional Polymers via Thiolâ€ene Conjugation. Macromolecular Rapid Communications, 2015, 36, 472-476.	3.9	17
142	Anisotropic Cryostructured Collagen Scaffolds for Efficient Delivery of RhBMPâ€“2 and Enhanced Bone Regeneration. Materials, 2019, 12, 3105.	2.9	17
143	Bioprinting with bioactive alginate dialdehyde-gelatin (ADA-GEL) composite bioinks: Time-dependent in-situ crosslinking via addition of calcium-silicate particles tunes in vitro stability of 3D bioprinted constructs. Bioprinting, 2022, 26, e00200.	5.8	17
144	A Step Towards Clinical Translation of Biofabrication. Trends in Biotechnology, 2016, 34, 356-357.	9.3	16

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145	A novel human artery model to assess the magnetic accumulation of SPIONs under flow conditions. Scientific Reports, 2017, 7, 42314.	3.3	16
146	Activated Polyhydroxyalkanoate Meshes Prevent Bacterial Adhesion and Biofilm Development in Regenerative Medicine Applications. Frontiers in Bioengineering and Biotechnology, 2020, 8, 442.	4.1	16
147	Differential cellular responses to adhesive interactions with galectin-8- and fibronectin-coated substrates. Journal of Cell Science, 2021, 134, .	2.0	16
148	Actin cytoskeleton deregulation confers midostaurin resistance in FLT3-mutant acute myeloid leukemia. Communications Biology, 2021, 4, 799.	4.4	16
149	A hydrogel-based versatile screening platform for specific biomolecular recognition in a well plate format. Analytical and Bioanalytical Chemistry, 2012, 403, 517-526.	3.7	15
150	Electrochemically assisted deposition of strontium modified magnesium phosphate on titanium surfaces. Materials Science and Engineering C, 2016, 67, 65-71.	7.3	15
151	Simultaneous structuring and mineralization of silk fibroin scaffolds. Journal of Tissue Engineering, 2018, 9, 204173141878850.	5.5	15
152	Extracellular Matrix-Modified Fiber Scaffolds as a Proadipogenic Mesenchymal Stromal Cell Delivery Platform. ACS Biomaterials Science and Engineering, 2019, 5, 6655-6666.	5.2	15
153	Treatment of Focal Cartilage Defects in Minipigs with Zonal Chondrocyte/Mesenchymal Progenitor Cell Constructs. International Journal of Molecular Sciences, 2019, 20, 653.	4.1	15
154	Periosteumâ€derived mesenchymal progenitor cells in engineered implants promote fracture healing in a criticalâ€size defect rat model. Journal of Tissue Engineering and Regenerative Medicine, 2019, 13, 742-752.	2.7	15
155	Tuning the Thermogelation and Rheology of Poly(2-Oxazoline)/Poly(2-Oxazine)s Based Thermosensitive Hydrogels for 3D Bioprinting. Gels, 2021, 7, 78.	4.5	15
156	Hydrogelâ€“fibre composites with independent control over cell adhesion to gel and fibres as an integral approach towards a biomimetic artificial ECM. Biofabrication, 2014, 6, 024106.	7.1	14
157	Highly flexible and degradable dual setting systems based on PEG-hydrogels and brushite cement. Acta Biomaterialia, 2018, 79, 182-201.	8.3	14
158	Nanogels Enable Efficient miRNA Delivery and Target Gene Downregulation in Transfection-Resistant Multiple Myeloma Cells. Biomacromolecules, 2019, 20, 916-926.	5.4	14
159	Guidance of Mesenchymal Stem Cells on Fibronectin Structured Hydrogel Films. PLoS ONE, 2014, 9, e109411.	2.5	14
160	Oxygen diffusion hardening of tantalum coatings on cp-titanium for biomedical applications. Surface and Coatings Technology, 2013, 216, 46-51.	4.8	13
161	Bilateral <scp>PLA</scp>/alginate membranes for the prevention of postsurgical adhesions. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 1563-1570.	3.4	13
162	Thiolâ€ene Crossâ€Linkable Hydrogels as Bioinks for Biofabrication. Macromolecular Symposia, 2017, 372, 102-107.	0.7	13

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163	The Challenging Pharmacokinetics of Mitotane: An Old Drug in Need of New Packaging. European Journal of Drug Metabolism and Pharmacokinetics, 2021, 46, 575-593.	1.6	13
164	Rheological analysis of the interplay between the molecular weight and concentration of hyaluronic acid in formulations of supramolecular HA/FmocFF hybrid hydrogels. Polymer Journal, 2020, 52, 1007-1012.	2.7	13
165	BMP-7-loaded PGLA microspheres as a new delivery system for the cultivation of human chondrocytes in a collagen type I gel: the common nude mouse model. International Journal of Artificial Organs, 2010, 33, 45-53.	1.4	13
166	Nano- and Microgels Through Addition Reactions of Functional Oligomers and Polymers. Advances in Polymer Science, 2010, , 65-93.	0.8	12
167	Intrinsic 3D Prestressing: A New Route for Increasing Strength and Improving Toughness of Hybrid Inorganic Biocements. Advanced Materials, 2017, 29, 1701035.	21.0	12
168	Thioetherâ€“Polyglycidol as Multivalent and Multifunctional Coating System for Gold Nanoparticles. Advanced Materials, 2018, 30, 1704972.	21.0	12
169	Influence of charged groups on the cross-linking efficiency and release of guest molecules from thiolâ€“ene cross-linked poly(2-oxazoline) hydrogels. Journal of Materials Chemistry B, 2019, 7, 1782-1794.	5.8	12
170	Differential Responses to Bioink-Induced Oxidative Stress in Endothelial Cells and Fibroblasts. International Journal of Molecular Sciences, 2021, 22, 2358.	4.1	12
171	Appreciating the First Line of the Human Innate Immune Defense: A Strategy to Model and Alleviate the Neutrophil Elastaseâ€Mediated Attack toward Bioactivated Biomaterials. Small, 2021, 17, e2007551.	10.0	12
172	Extrusion-Based 3D Printing of Calcium Magnesium Phosphate Cement Pastes for Degradable Bone Implants. Materials, 2021, 14, 5197.	2.9	12
173	The Importance of Interfaces in Multiâ€Material Biofabricated Tissue Structures. Advanced Healthcare Materials, 2021, 10, e2101021.	7.6	12
174	Bioink Platform Utilizing Dualâ€Stage Crosslinking of Hyaluronic Acid Tailored for Chondrogenic Differentiation of Mesenchymal Stromal Cells. Macromolecular Bioscience, 2022, 22, e2100331.	4.1	12
175	Star Polymer Surface Passivation for Single-Molecule Detection. Methods in Enzymology, 2010, 472, 1-18.	1.0	11
176	Biocompatibility of PLGA/sP(EO-stat-PO)-Coated Mesh Surfaces under Constant Shearing Stress. European Surgical Research, 2011, 47, 118-129.	1.3	11
177	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
178	Mechanical activation and cement formation of trimagnesium phosphate. Journal of the American Ceramic Society, 2018, 101, 1830-1834.	3.8	10
179	Easy-to-Prepare Coating of Standard Cell Culture Dishes for Cell-Sheet Engineering Using Aqueous Solutions of Poly(2-n-propyl-oxazoline). ACS Biomaterials Science and Engineering, 2019, 5, 1509-1517.	5.2	10
180	Low temperature fabrication of spherical brushite granules by cement paste emulsion. Journal of Materials Science: Materials in Medicine, 2012, 23, 2631-2637.	3.6	9

#	Article	IF	Citations
181	Controlled Ringâ€Opening Polymerization of Substituted Episulfides for Sideâ€Chain Functional Polysulfideâ€Based Amphiphiles. Macromolecular Rapid Communications, 2012, 33, 1482-1486.	3.9	9
182	siRNA release from gold nanoparticles by nanosecond pulsed laser irradiation and analysis of the involved temperature increase. Journal of Biophotonics, 2018, 11, e201700329.	2.3	9
183	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
184	Melt Electrowriting of Isomalt for Highâ€Resolution Templating of Embedded Microchannels. Advanced Materials Technologies, 2021, 6, 2100221.	5.8	9
185	Calcium phosphate-based biomaterials trigger human macrophages to release extracellular traps. Biomaterials, 2022, 285, 121521.	11.4	9
186	NCO-sP(EO-stat-PO) Coatings on Gold Sensorsâ€"a QCM Study of Hemocompatibility. Sensors, 2011, 11, 5253-5269.	3.8	8
187	The role of substrate morphology for the cytokine release profile of immature human primary macrophages. Materials Science and Engineering C, 2013, 33, 5109-5114.	7.3	8
188	Fabrication and cytocompatibility of spherical magnesium ammonium phosphate granules. Materials Science and Engineering C, 2014, 42, 130-136.	7.3	8
189	Protein RS1 (RSC1A1) Downregulates the Exocytotic Pathway of Glucose Transporter SGLT1 at Low Intracellular Glucose via Inhibition of Ornithine Decarboxylase. Molecular Pharmacology, 2016, 90, 508-521.	2.3	8
190	Simultaneous formation and mineralization of star-P(EO-stat-PO) hydrogels. Materials Science and Engineering C, 2017, 75, 471-477.	7.3	8
191	Influence of MMP inhibitor GM6001 loading of fibre coated polypropylene meshes on wound healing: Implications for hernia repair. Journal of Biomaterials Applications, 2018, 32, 1343-1359.	2.4	8
192	Subtle changes in network composition impact the biodistribution and tumor accumulation of nanogels. Chemical Communications, 2018, 54, 11777-11780.	4.1	8
193	Nanotopographical Coatings Induce an Early Phenotype-Specific Response of Primary Material-Resident M1 and M2 Macrophages. Materials, 2020, 13, 1142.	2.9	8
194	Engineering Nanogels for Drug Delivery to Pathogenic Fungi Aspergillus fumigatus by Tuning Polymer Amphiphilicity. Biomacromolecules, 2020, 21, 3112-3121.	5.4	8
195	Inducing Immunomodulatory Effects on Human Macrophages by Multifunctional NCO-sP(EO-stat-PO)/Gelatin Hydrogel Nanofibers. ACS Biomaterials Science and Engineering, 2021, 7, 3166-3178.	5.2	8
196	Morphological Control of Freezeâ€Structured Scaffolds by Selective Temperature and Material Control in the Iceâ€Templating Process. Advanced Engineering Materials, 2022, 24, 2100860.	3.5	8
197	Controlling Topography and Crystallinity of Melt Electrowritten Poly(É›-Caprolactone) Fibers. 3D Printing and Additive Manufacturing, 2021, 8, 315-321.	2.9	8
198	Preservation of the naÃ¯ve features of mesenchymal stromal cells in vitro: Comparison of cell- and bone-derived decellularized extracellular matrix. Journal of Tissue Engineering, 2022, 13, 204173142210744.	5.5	8

#	Article	IF	Citations
199	Stable Biochemically Micro-patterned Hydrogel Layers Control Specific Cell Adhesion and Allow Long Term Cyclic Tensile Strain Experiments. Macromolecular Bioscience, 2014, 14, 1547-1555.	4.1	7
200	Quantifying ligandâ€“cell interactions and determination of the surface concentrations of ligands on hydrogel films: The measurement challenge. Biointerphases, 2015, 10, 021007.	1.6	7
201	Real-time measurement of protein adsorption on electrophoretically deposited hydroxyapatite coatings and magnetron sputtered metallic films using the surface acoustic wave technique. Materials Science and Engineering C, 2016, 61, 351-354.	7.3	7
202	Special issue on bioinks. Biofabrication, 2019, 11, 010201.	7.1	7
203	Innovative therapies for invasive fungal infections in preclinical and clinical development. Expert Opinion on Investigational Drugs, 2020, 29, 961-971.	4.1	7
204	Phase Conversion of Iceâ€Templated Î±â€Tricalcium Phosphate Scaffolds into Lowâ€Temperature Calcium Phosphates with Anisotropic Open Porosity. Advanced Engineering Materials, 2021, 23, 2001417.	3.5	7
205	Human iPSC-derived mesodermal progenitor cells preserve their vasculogenesis potential after extrusion and form hierarchically organized blood vessels. Biofabrication, 2021, 13, 045028.	7.1	7
206	Ultrathin sP(EO-stat-PO) hydrogel coatings are biocompatible and preserve functionality of surface bound growth factors in vivo. Journal of Materials Science: Materials in Medicine, 2013, 24, 2417-2427.	3.6	6
207	Covalently layer-by-layer assembled homogeneous nanolayers with switchable wettability. Polymer Chemistry, 2015, 6, 4690-4697.	3.9	6
208	Dispersity control of linear poly(glycidyl ether)s by slow monomer addition. RSC Advances, 2015, 5, 67323-67326.	3.6	6
209	Nanogels as Antifungalâ€Drug Delivery System Against Aspergillus Fumigatus. Advanced NanoBiomed Research, 2021, 1, 2000060.	3.6	6
210	Nanostructuring of Refractory Metal Surfaces by Electrochemical Oxidation: Nb and the Binary Systems Ti-Ta and Nb-Ta. Current Nanoscience, 2013, 9, 132-138.	1.2	6
211	Plasma-Assisted Hydrophilization of Cochlear Implant Electrode Array Surfaces Enables Adhesion of Neurotrophin-Secreting Cells. Orl, 2014, 76, 257-265.	1.1	5
212	Dreidimensional gedruckte, zellbeladene Konstrukte aus Spinnenseide. Angewandte Chemie, 2015, 127, 2858-2862.	2.0	5
213	Biofabrication: From Additive Manufacturing to Bioprinting. , 2019, , 41-41.		5
214	Crosslinked Coating Improves the Signalâ€toâ€Noise Ratio of Iron Oxide Nanoparticles in Magnetic Particle Imaging (MPI). ChemNanoMat, 2020, 6, 755-758.	2.8	5
215	A thermogelling organic-inorganic hybrid hydrogel with excellent printability, shape fidelity and cytocompatibility for 3D bioprinting. Biofabrication, 2022, 14, 025005.	7.1	5
216	Freeform printing of thermoresponsive poly(2-cyclopropyl-oxazoline) as cytocompatible and on-demand dissolving template of hollow channel networks in cell-laden hydrogels. Biofabrication, 2022, 14, 025019.	7.1	5

#	Article	IF	Citations
217	Structural Optimization of Macroporous Magnesium Phosphate Scaffolds and their Cytocompatibility. Key Engineering Materials, 0, 493-494, 813-819.	0.4	4
218	Expansion and Differentiation of Germline-Derived Pluripotent Stem Cells on Biomaterials. Tissue Engineering - Part A, 2013, 19, 1067-1080.	3.1	4
219	Age Macular Degeneration: Etiology, Prevention, Individualized Therapies, Cell Therapy, and Tissue Engineering. Journal of Ophthalmology, 2014, 2014, 1-2.	1.3	4
220	Physical and chemical characterization of Ag-doped Ti coatings produced by magnetron sputtering of modular targets. Materials Science and Engineering C, 2014, 44, 126-131.	7.3	4
221	Application of Linear and Branched Poly(Ethylene Glycol)â€Poly(Lactide) Block Copolymers for the Preparation of Films and Solution Electrospun Meshes. Macromolecular Bioscience, 2016, 16, 441-450.	4.1	4
222	Reactive Selfâ€Assembly and Specific Cellular Delivery of NCOâ€sP(EOâ€statâ€PO)â€Derived Nanogels. Macromolecular Bioscience, 2018, 18, e1800094.	4.1	4
223	In Situ Polymer Analogue Generation of Azlactone Functions at Poly(oxazoline)s for Peptide Conjugation. Macromolecular Chemistry and Physics, 2020, 221, 1900500.	2.2	4
224	Preclinical Testing of New Hydrogel Materials for Cartilage Repair: Overcoming Fixation Issues in a Large Animal Model. International Journal of Biomaterials, 2021, 2021, 1-14.	2.4	4
225	Covalently Crossâ€Linked Pig Gastric Mucin Hydrogels Prepared by Radicalâ€Based Chainâ€Growth and Thiolâ€ene Mechanisms. Macromolecular Bioscience, 2022, 22, e2100274.	4.1	4
226	Dual setting brushiteâ€"gelatin cement with increased ductility and sustained drug release. Journal of Biomaterials Applications, 2022, 36, 1882-1898.	2.4	4
227	Live-cell super-resolution imaging of intrinsically fast moving flagellates. Journal Physics D: Applied Physics, 2017, 50, 074004.	2.8	3
228	Building Blocks for Biofabricated Models. Advanced Healthcare Materials, 2019, 8, e1900326.	7.6	3
229	Tough and Elastic Î±-Tricalcium Phosphate Cement Composites with Degradable PEG-Based Cross-Linker. Materials, 2019, 12, 53.	2.9	3
230	Thioetherâ€Polymer Coating for Colloidal Stabilization of Silver Nanoparticles. Advanced NanoBiomed Research, 2021, 1, 2000074.	3.6	3
231	TEMPO/TCC as a Chemo Selective Alternative for the Oxidation of Hyaluronic Acid. Molecules, 2021, 26, 5963.	3.8	3
232	Cell Adhesion Assessment Reveals a Higher Force per Contact Area on Fibrous Structures Compared to Flat Substrates. ACS Biomaterials Science and Engineering, 2022, 8, 649-658.	5.2	3
233	NCO-sP(EO-stat-PO) surface coatings preserve biochemical properties of RGD peptides. International Journal of Molecular Medicine, 2010, 27, 139-45.	4.0	2
234	Mechanically Strong Microstructured Hydrogels Based on Reactive Starâ€Shaped Prepolymers. Macromolecular Symposia, 2015, 358, 148-156.	0.7	2

#	Article	IF	Citations
235	Polyoxazolines with a Vicinally Double-Bioactivated Terminus for Biomacromolecular Affinity Assessment. Sensors, 2021, 21, 3153.	3.8	2
236	Tailored Macromolecules Versus Nanoparticles as Additives for Mechanical Reinforcement of NCO-sP(EO-stat-PO) Hydrogels. , 2013, , 77-89.		1
237	In situ formation of multilayer biocomposite with anisotropic crystal orientation. Materials Letters, 2014, 120, 111-114.	2.6	1
238	Kontrolle der Freisetzungskinetik von Nanopartikeln aus 3Dâ€gedruckten HydrogelgerÃ¼sten. Angewandte Chemie, 2017, 129, 4694-4699.	2.0	1
239	Cell communication modes and bidirectional mitochondrial exchange in direct and indirect macrophage/hMSC co-culture models. BioNanoMaterials, 2017, 18, .	1.4	1
240	Tissue Engineering: Melt Electrospinning Writing of Polyâ€Hydroxymethylglycolideâ€coâ€Œâ€Caprolactoneâ€Based Scaffolds for Cardiac Tissue Engineering (Adv. Healthcare Mater. 18/2017). Advanced Healthcare Materials, 2017, 6, .	7.6	1
241	Hydrophilic (AB) n Segmented Copolymers for Melt Extrusionâ€Based Additive Manufacturing. Macromolecular Chemistry and Physics, 2021, 222, 2000265.	2.2	1
242	Makromolekulare Chemie 2010. Nachrichten Aus Der Chemie, 2011, 59, 324-334.	0.0	0
243	Surface Passivation for Single Molecule Detection. , 2013, , 2531-2536.		0
244	Emulsion synthesis of dicalcium phosphate particles for the preparation of calcium phosphate cements with improved compressive strengths and reduced setting times. BioNanoMaterials, 2013, 14, .	1.4	0
245	Stimuli-Sensitive Microgels from Native Elastin: An Easy Approach for a Drug Release System. Advances in Polymer Science, 2013, , 415-430.	0.8	0
246	DNAâ€Nanogele als Falle fÃ¼r Karzinogene: ein bioinspiriertes, generisches Konzept mit hoher Effizienz. Angewandte Chemie, 2016, 128, 12398-12401.	2.0	0
247	Biofabrication: Development of Endothelial Cell Networks in 3D Tissues by Combination of Melt Electrospinning Writing with Cellâ€Accumulation Technology (Small 2/2018). Small, 2018, 14, 1870010.	10.0	0
248	Hydraulic reactivity and cement formation of baghdadite. Journal of the American Ceramic Society, 2021, 104, 3554-3561.	3.8	0
249	Star Polymers as Biofunctional Coatings. , 2013, , 1-8.		0
250	The Role of NRAS G12D Mutations in the Response to Conventional Chemotherapy and 5-Azacitidine in Secondary AML. Blood, 2018, 132, 5148-5148.	1.4	0
251	Evaluation of the Influence of Biosurface Design on the Interaction between the Regulatory Peptide RS1â€reg and ODC1 Reveals a Membraneâ€Dependent Affinity Increase. Advanced Biology, 0, , 2101108.	2.5	0
252	Correlative Analysis of Intraâ€Versus Extracellular Cell Detachment Events via the Alignment of Optical Imaging and Detachment Force Quantification. Advanced Materials Technologies, 0, , 2200195.	5.8	0