Michael Buschmann

List of Publications by Year
in descending order

163	13,361	19636 61	22808 112
papers	citations	h-index	g-index

166	166	166	12329
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Novel injectable neutral solutions of chitosan form biodegradable gels in situ. Biomaterials, 2000, 21, 2155-2161.	5.7	1,237
2	A validated 1H NMR method for the determination of the degree of deacetylation of chitosan. Journal of Pharmaceutical and Biomedical Analysis, 2003, 32, 1149-1158.	1.4	536
3	Chondrocytes in agarose culture synthesize a mechanically functional extracellular matrix. Journal of Orthopaedic Research, 1992, 10, 745-758.	1.2	473
4	Rheological characterisation of thermogelling chitosan/glycerol-phosphate solutions. Carbohydrate Polymers, 2001, 46, 39-47.	5.1	465
5	High efficiency gene transfer using chitosan/DNA nanoparticles with specific combinations of molecular weight and degree of deacetylation. Biomaterials, 2006, 27, 4815-4824.	5.7	407
6	Tissue engineering of cartilage using an injectable and adhesive chitosan-based cell-delivery vehicle. Osteoarthritis and Cartilage, 2005, 13, 318-329.	0.6	323
7	Optical and mechanical determination of poisson's ratio of adult bovine humeral articular cartilage. Journal of Biomechanics, 1997, 30, 235-241.	0.9	311
8	Nanomaterial Delivery Systems for mRNA Vaccines. Vaccines, 2021, 9, 65.	2.1	310
9	A Molecular Model of Proteoglycan-Associated Electrostatic Forces in Cartilage Mechanics. Journal of Biomechanical Engineering, 1995, 117, 179-192.	0.6	275
10	Chitosan-Glycerol Phosphate/Blood Implants Improve Hyaline Cartilage Repair in Ovine Microfracture Defects. Journal of Bone and Joint Surgery - Series A, 2005, 87, 2671-2686.	1.4	241
11	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
12	Drilling and microfracture lead to different bone structure and necrosis during boneâ€marrow stimulation for cartilage repair. Journal of Orthopaedic Research, 2009, 27, 1432-1438.	1.2	224
13	Nonlinear analysis of cartilage in unconfined ramp compression using a fibril reinforced poroelastic model. Clinical Biomechanics, 1999, 14, 673-682.	0.5	219
14	Fibroblast Growth Factor (FGF) 18 Signals through FGF Receptor 3 to Promote Chondrogenesis*. Journal of Biological Chemistry, 2005, 280, 20509-20515.	1.6	218
15	A Fibril-Network-Reinforced Biphasic Model of Cartilage in Unconfined Compression. Journal of Biomechanical Engineering, 1999, 121, 340-347.	0.6	212
16	Chitosanâ€“glycerol phosphate/blood implants elicit hyaline cartilage repair integrated with porous subchondral bone in microdrilled rabbit defects. Osteoarthritis and Cartilage, 2007, 15, 78-89.	0.6	207
17	Chitosans for delivery of nucleic acids. Advanced Drug Delivery Reviews, 2013, 65, 1234-1270.	6.6	185
18	Mechanical compression modulates matrix biosynthesis in chondrocyte/agarose culture. Journal of Cell Science, 1995, 108 (Pt 4), 1497-508.	1.2	174

#	Article	IF	Citations
19	Vitrification of articular cartilage by highâ€pressure freezing. Journal of Microscopy, 1995, 179, 321-322.	0.8	172
20	Meniscus structure in human, sheep, and rabbit for animal models of meniscus repair. Journal of Orthopaedic Research, 2009, 27, 1197-1203.	1.2	168
21	Chitosanâ€“glycerol phosphate/blood implants increase cell recruitment, transient vascularization and subchondral bone remodeling in drilled cartilage defects. Osteoarthritis and Cartilage, 2007, 15, 316-327.	0.6	165
22	Ionization and structural properties of mRNA lipid nanoparticles influence expression in intramuscular and intravascular administration. Communications Biology, 2021, 4, 956.	2.0	151
23	Chondrocyte biosynthesis correlates with local tissue strain in statically compressed adult articular cartilage. Journal of Orthopaedic Research, 1997, 15, 189-196.	1.2	150
24	A fibril reinforced nonhomogeneous poroelastic model for articular cartilage: inhomogeneous response in unconfined compression. Journal of Biomechanics, 2000, 33, 1533-1541.	0.9	149
25	Ionization Behavior of Chitosan and Chitosanâ€“DNA Polyplexes Indicate That Chitosan Has a Similar Capability to Induce a Proton-Sponge Effect as PEI. Biomacromolecules, 2013, 14, 1732-1740.	2.6	149
26	Mechanical anisotropy of the human knee articular cartilage in compression. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2003, 217, 215-219.	1.0	145
27	A Multivalent Assay to Detect Glycosaminoglycan, Protein, Collagen, RNA, and DNA Content in Milligram Samples of Cartilage or Hydrogel-Based Repair Cartilage. Analytical Biochemistry, 2002, 300, 1-10.	1.1	144
28	New Insights into Chitosanâ˜'DNA Interactions Using Isothermal Titration Microcalorimetry. Biomacromolecules, 2009, 10, 1490-1499.	2.6	137
29	Depth of subchondral perforation influences the outcome of bone marrow stimulation cartilage repair. Journal of Orthopaedic Research, 2011, 29, 1178-1184.	1.2	136
30	International Cartilage Repair Society (ICRS) Recommended Guidelines for Histological Endpoints for Cartilage Repair Studies in Animal Models and Clinical Trials. Cartilage, 2011, 2, 153-172.	1.4	130
31	Ionization and Solubility of Chitosan Solutions Related to Thermosensitive Chitosan/Glycerol-Phosphate Systems. Biomacromolecules, 2007, 8, 3224-3234.	2.6	123
32	Rotator cuff repair: a review of surgical techniques, animal models, and new technologies under development. Journal of Shoulder and Elbow Surgery, 2016, 25, 2078-2085.	1.2	123
33	Cyclic compression of cartilage/bone explants in vitro leads to physical weakening, mechanical breakdown of collagen and release of matrix fragments. Journal of Orthopaedic Research, 2002, 20, 1265-1273.	1.2	119
34	The TGF-Î² co-receptor, CD109, promotes internalization and degradation of TGF-Î² receptors. Biochimica Et Biophysica Acta - Molecular Cell Research, 2011, 1813, 742-753.	1.9	115
35	Preclinical Studies for Cartilage Repair. Cartilage, 2011, 2, 137-152.	1.4	110
36	Effects of steam sterilization on thermogelling chitosan-based gels. Journal of Biomedical Materials Research Part B, 2001, 58, 127-135.	3.0	109

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37	Strain-rate Dependent Stiffness of Articular Cartilage in Unconfined Compression. Journal of Biomechanical Engineering, 2003, 125, 161-168.	0.6	108
38	Heat-Induced Transfer of Protons from Chitosan to Glycerol Phosphate Produces Chitosan Precipitation and Gelation. Biomacromolecules, 2008, 9, 640-650.	2.6	108
39	Enhanced Gene Delivery Mediated by Low Molecular Weight Chitosan/DNA Complexes: Effect of pH and Serum. Molecular Biotechnology, 2010, 46, 182-196.	1.3	107
40	Characterization of Subchondral Bone Repair for Marrow-Stimulated Chondral Defects and Its Relationship to Articular Cartilage Resurfacing. American Journal of Sports Medicine, 2011, 39, 1731-1741.	1.9	107
41	The Chondrocyte Cytoskeleton in Mature Articular Cartilage: Structure and Distribution of Actin, Tubulin, and Vimentin Filaments. Journal of Histochemistry and Cytochemistry, 2000, 48, 1307-1320.	1.3	106
42	Aged bovine chondrocytes display a diminished capacity to produce a collagen-rich, mechanically functional cartilage extracellular matrix. Journal of Orthopaedic Research, 2005, 23, 1354-1362.	1.2	100
43	Cytocompatible gel formation of chitosan-glycerol phosphate solutions supplemented with hydroxyl ethyl cellulose is due to the presence of glyoxal. Journal of Biomedical Materials Research - Part A, 2007, 83A, 521-529.	2.1	96
44	Intracellular Trafficking and Decondensation Kinetics of Chitosanâ€“pDNA Polyplexes. Molecular Therapy, 2010, 18, 1787-1795.	3.7	93
45	siRNA Delivery with Chitosan: Influence of Chitosan Molecular Weight, Degree of Deacetylation, and Amine to Phosphate Ratio on in Vitro Silencing Efficiency, Hemocompatibility, Biodistribution, and in Vivo Efficacy. Biomacromolecules, 2018, 19, 112-131.	2.6	91
46	Unconfined Compression of Articular Cartilage: Nonlinear Behavior and Comparison With a Fibril-Reinforced Biphasic Model. Journal of Biomechanical Engineering, 2000, 122, 189-195.	0.6	89
47	Nonlinear Tensile Properties of Bovine Articular Cartilage and Their Variation With Age and Depth. Journal of Biomechanical Engineering, 2004, 126, 129-137.	0.6	88
48	Fibronectin, Vitronectin, and Collagen I Induce Chemotaxis and Haptotaxis of Human and Rabbit Mesenchymal Stem Cells in a Standardized Transmembrane Assay. Stem Cells and Development, 2007, 16, 489-502.	1.1	86
49	Extracellular matrix mineralization in murine MC3T3-E1 osteoblast cultures: An ultrastructural, compositional and comparative analysis with mouse bone. Bone, 2015, 71, 244-256.	1.4	86
50	Effects of Refrigeration and Freezing on the Electromechanical and Biomechanical Properties of Articular Cartilage. Journal of Biomechanical Engineering, 2010, 132, 064502.	0.6	82
51	CHITOSAN-GLYCEROL PHOSPHATE/BLOOD IMPLANTS IMPROVE HYALINE CARTILAGE REPAIR IN OVINE MICROFRACTURE DEFECTS. Journal of Bone and Joint Surgery - Series A, 2005, 87, 2671-2686.	1.4	82
52	Defects in articular cartilage metabolism and early arthritis in fibroblast growth factor receptor 3 deficient mice. Human Molecular Genetics, 2006, 15, 1783-1792.	1.4	78
53	Structural characteristics of the collagen network in human normal, degraded and repair articular cartilages observed in polarized light and scanning electron microscopies. Osteoarthritis and Cartilage, 2011, 19, 1458-1468.	0.6	76
54	Excess polycation mediates efficient chitosan-based gene transfer by promoting lysosomal release of the polyplexes. Biomaterials, 2011, 32, 4639-4646.	5.7	76

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55	CD109â€mediated degradation of TGFâ€Î²2 receptors and inhibition of TGFâ€Î²2 responses involve regulation of SMAD7 and Smurf2 localization and function. Journal of Cellular Biochemistry, 2012, 113, 238-246.	1.2	72
56	Precise derivatization of structurally distinct chitosans with rhodamine B isothiocyanate. Carbohydrate Polymers, 2008, 72, 616-624.	5.1	66
57	Improved reproducibility in the determination of the molecular weight of chitosan by analytical size exclusion chromatography. Carbohydrate Polymers, 2009, 75, 528-533.	5.1	66
58	Mechanical properties of mammalian cells in suspension measured by electro-deformation. Journal of Micromechanics and Microengineering, 2010, 20, 065007.	1.5	66
59	Chitosanâ€“plasmid nanoparticle formulations for IM and SC delivery of recombinant FGF-2 and PDGF-BB or generation of antibodies. Gene Therapy, 2009, 16, 1097-1110.	2.3	65
60	Fractionation and characterization of chitosan by analytical SEC and 1H NMR after semi-preparative SEC. Carbohydrate Polymers, 2009, 75, 636-645.	5.1	65
61	A polarized light microscopy method for accurate and reliable grading of collagen organization in cartilage repair. Osteoarthritis and Cartilage, 2011, 19, 126-135.	0.6	64
62	Chitosan-based therapeutic nanoparticles for combination gene therapy and gene silencing of in vitro cell lines relevant to type 2 diabetes. European Journal of Pharmaceutical Sciences, 2012, 45, 138-149.	1.9	64
63	Confined compression of articular cartilage. Journal of Biomechanics, 1997, 31, 171-178.	0.9	62
64	Creep behavior of the intact and meniscectomy knee joints. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1351-1358.	1.5	60
65	Mature Full-thickness Articular Cartilage Explants Attached to Bone are Physiologically Stable over Long-term Culture in Serum-free Media. Connective Tissue Research, 1999, 40, 259-272.	1.1	58
66	The fate of Pluronic Fâ€68 in chondrocytes and CHO cells. Biotechnology and Bioengineering, 2008, 100, 975-987.	1.7	58
67	Streaming potentials maps are spatially resolved indicators of amplitude, frequency and ionic strength dependant responses of articular cartilage to load. Journal of Biomechanics, 2002, 35, 207-216.	0.9	57
68	High Frequency Acoustic Parameters of Human and Bovine Articular Cartilage following Experimentally-Induced Matrix Degradation. Ultrasonic Imaging, 2001, 23, 106-116.	1.4	56
69	Dynamic measurement of internal solid displacement in articular cartilage using ultrasound backscatter. Journal of Biomechanics, 2003, 36, 443-447.	0.9	54
70	BST-CarGel: In Situ ChondroInduction for Cartilage Repair. Operative Techniques in Orthopaedics, 2006, 16, 271-278.	0.2	54
71	Monolithic gelation of chitosan solutions via enzymatic hydrolysis of urea. Carbohydrate Polymers, 2006, 64, 419-424.	5.1	50
72	Detection and analysis of cartilage degeneration by spatially resolved streaming potentials. Journal of Orthopaedic Research, 2002, 20, 819-826.	1.2	49

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73	One-Step Analysis of DNA/Chitosan Complexes by Field-Flow Fractionation Reveals Particle Size and Free Chitosan Content. Biomacromolecules, 2010, 11, 549-554.	2.6	49
74	Low molecular weight chitosan nanoparticulate system at low N:P ratio for nontoxic polynucleotide delivery. International Journal of Nanomedicine, 2012, 7, 1399.	3.3	49
75	Osteochondral Biopsy Analysis Demonstrates That BST-CarGel Treatment Improves Structural and Cellular Characteristics of Cartilage Repair Tissue Compared With Microfracture. Cartilage, 2016, 7, 16-28.	1.4	49
76	Human corneal epithelial cell response to epidermal growth factor tethered via coiled-coil interactions. Biomaterials, 2010, 31, 7021-7031.	5.7	47
77	Interspecies comparison of subchondral bone properties important for cartilage repair. Journal of Orthopaedic Research, 2015, 33, 63-70.	1.2	46
78	Chondrocyte Aggregation in Suspension Culture Is GFOGER-GPP- and Î²1 Integrin-dependent. Journal of Biological Chemistry, 2008, 283, 31522-31530.	1.6	45
79	Degree of crosslinking and mechanical properties of crosslinked poly(vinyl alcohol) beads for use in solid-phase organic synthesis. Polymer, 2004, 45, 8201-8210.	1.8	44
80	Chitosan modified with gadolinium diethylenetriaminepentaacetic acid for magnetic resonance imaging of DNA/chitosan nanoparticles. Carbohydrate Polymers, 2010, 80, 1137-1146.	5.1	43
81	Temporal and spatial modulation of chondrogenic foci in subchondral microdrill holes by chitosan-glycerol phosphate/blood implants. Osteoarthritis and Cartilage, 2011, 19, 136-144.	0.6	43
82	Partial Meniscectomy Changes Fluid Pressurization in Articular Cartilage in Human Knees. Journal of Biomechanical Engineering, 2012, 134, 021001.	0.6	42
83	Increasing strain and strain rate strengthen transient stiffness but weaken the response to subsequent compression for articular cartilage in unconfined compression. Journal of Biomechanics, 2003, 36, 853-859.	0.9	40
84	Effective and safe gene-based delivery of GLP-1 using chitosan/plasmid-DNA therapeutic nanocomplexes in an animal model of type 2 diabetes. Gene Therapy, 2011, 18, 807-816.	2.3	40
85	Kinetics and efficiency of chitosan reacetylation. Carbohydrate Polymers, 2012, 87, 1192-1198.	5.1	40
86	Tyrosinase-Catalyzed Synthesis of a Universal Coil-Chitosan Bioconjugate for Protein Immobilization. Bioconjugate Chemistry, 2008, 19, 1849-1854.	1.8	39
87	Gene delivery by electroporation after dielectrophoretic positioning of cells in a non-uniform electric field. Bioelectrochemistry, 2008, 72, 141-148.	2.4	38
88	Augmentation Techniques for Meniscus Repair. Journal of Knee Surgery, 2018, 31, 099-116.	0.9	37
89	Mechanical properties and structure of swollen crosslinked high amylose starch tablets. Carbohydrate Polymers, 2002, 47, 259-266.	5.1	36
90	Microdrilled Cartilage Defects Treated with Thrombin-Solidified Chitosan/Blood Implant Regenerate a More Hyaline, Stable, and Structurally Integrated Osteochondral Unit Compared to Drilled Controls. Tissue Engineering - Part A, 2012, 18, 508-519.	1.6	36

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91	Low calcium levels in serum-free media maintain chondrocyte phenotype in monolayer culture and reduce chondrocyte aggregation in suspension culture. Osteoarthritis and Cartilage, 2005, 13, 1012-1024.	0.6	35
92	Ultrastructure of hybrid chitosanâ€“glycerol phosphate blood clots by environmental scanning electron microscopy. Microscopy Research and Technique, 2008, 71, 236-247.	1.2	35
93	Mesenchymal stem cell transplantation to promote bone healing. Journal of Orthopaedic Research, 2012, 30, 1183-1189.	1.2	35
94	Non-destructive electromechanical assessment (Arthro-BST) of human articular cartilage correlates with histological scores and biomechanical properties. Osteoarthritis and Cartilage, 2014, 22, 1926-1935.	0.6	35
95	Electromechanical probe and automated indentation maps are sensitive techniques in assessing early degenerated human articular cartilage. Journal of Orthopaedic Research, 2017, 35, 858-867.	1.2	35
96	Lyophilisation and concentration of chitosan/siRNA polyplexes: Influence of buffer composition, oligonucleotide sequence, and hyaluronic acid coating. Journal of Colloid and Interface Science, 2018, 512, 335-345.	5.0	34
97	Perturbation of adhesion molecule-mediated chondrocyte-matrix interactions by 4-hydroxynonenal binding: implication in osteoarthritis pathogenesis. Arthritis Research and Therapy, 2010, 12, R201.	1.6	32
98	Optimization of Histoprocessing Methods to Detect Glycosaminoglycan, Collagen Type II, and Collagen Type I in Decalcified Rabbit Osteochondral Sections. Journal of Histotechnology, 2005, 28, 165-175.	0.2	31
99	Complete Physicochemical Characterization of DNA/Chitosan Complexes by Multiple Detection Using Asymmetrical Flow Field-Flow Fractionation. Analytical Chemistry, 2010, 82, 9636-9643.	3.2	28
100	Streaming Potential-Based Arthroscopic Device is Sensitive to Cartilage Changes Immediately Post-Impact in an Equine Cartilage Injury Model. Journal of Biomechanical Engineering, 2011, 133, 061005.	0.6	28
101	Chondroinduction Is the Main Cartilage Repair Response to Microfracture and Microfracture With BST-CarGel. American Journal of Sports Medicine, 2015, 43, 2469-2480.	1.9	28
102	A method of quantitative autoradiography for the spatial localization of proteoglycan synthesis rates in cartilage.. Journal of Histochemistry and Cytochemistry, 1996, 44, 423-431.	1.3	27
103	Preparation of Concentrated Chitosan/DNA Nanoparticle Formulations by Lyophilization for Gene Delivery at Clinically Relevant Dosages. Journal of Pharmaceutical Sciences, 2016, 105, 88-96.	1.6	27
104	Stability and binding affinity of DNA/chitosan complexes by polyanion competition. Carbohydrate Polymers, 2017, 176, 167-176.	5.1	27
105	Electromechanical deformation of mammalian cells in suspension depends on their cortical actin thicknesses. Journal of Biomechanics, 2012, 45, 2797-2803.	0.9	26
106	Chondrocytes Cultured in Stirred Suspension with Serum-Free Medium Containing Pluronic-68 Aggregate and Proliferate While Maintaining Their Differentiated Phenotype. Tissue Engineering - Part A, 2009, 15, 2237-2248.	1.6	25
107	Bone marrow stimulation induces greater chondrogenesis in trochlear vs condylar cartilage defects in skeletally mature rabbits. Osteoarthritis and Cartilage, 2013, 21, 999-1007.	0.6	25
108	Efficiency of Chitosan/Hyaluronan-Based mRNA Delivery Systems InÂVitro: Influence of Composition and Structure. Journal of Pharmaceutical Sciences, 2020, 109, 1581-1593.	1.6	25

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109	Tetrapolar Measurement of Electrical Conductivity and Thickness of Articular Cartilage. Journal of Biomechanical Engineering, 2004, 126, 475-484.	0.6	24
110	Alterations in Mechanical Behaviour of Articular Cartilage due to Changes in Depth Varying Material Properties--a Nonhomogeneous Poroelastic Model Study. Computer Methods in Biomechanics and Biomedical Engineering, 2002, 5, 45-52.	0.9	22
111	Chitosanase-based method for RNA isolation from cells transfected with chitosan/siRNA nanocomplexes for real-time RT-PCR in gene silencing. International Journal of Nanomedicine, 2010, 5, 473.	3.3	21
112	Combined Analysis of Polycation/ODN Polyplexes by Analytical Ultracentrifugation and Dynamic Light Scattering Reveals their Size, Refractive Index Increment, Stoichiometry, Porosity, and Molecular Weight. Biomacromolecules, 2014, 15, 940-947.	2.6	21
113	The role of fibril reinforcement in the mechanical behavior of cartilage. Biorheology, 2002, 39, 89-96.	1.2	21
114	The Asymmetry of Transient Response in Compression Versus Release for Cartilage in Unconfined Compression. Journal of Biomechanical Engineering, 2001, 123, 519-522.	0.6	20
115	Standardized Three-Dimensional Volumes of Interest with Adapted Surfaces for More Precise Subchondral Bone Analyses by Micro-Computed Tomography. Tissue Engineering - Part C: Methods, 2011, 17, 475-484.	1.1	19
116	3D morphometric analysis of calcified cartilage properties using micro-computed tomography. Osteoarthritis and Cartilage, 2019, 27, 172-180.	0.6	19
117	Chitosan inhibits platelet-mediated clot retraction, increases platelet-derived growth factor release, and increases residence time and bioactivity of platelet-rich plasmain vivo. Biomedical Materials (Bristol), 2018, 13, 015005.	1.7	17
118	Bilayer Implants. Cartilage, 2016, 7, 346-360.	1.4	15
119	Automated in-line mixing system for large scale production of chitosan-based polyplexes. Journal of Colloid and Interface Science, 2017, 500, 253-263.	5.0	15
120	InÂvitro method for 3D morphometry of human articular cartilage chondrons based on micro-computed tomography. Osteoarthritis and Cartilage, 2018, 26, 1118-1126.	0.6	15
121	Fabrication and Characterization of Nonplanar Microelectrode Array Circuits for Use in Arthroscopic Diagnosis of Cartilage Diseases. IEEE Transactions on Biomedical Engineering, 2004, 51, 2164-2173.	2.5	14
122	A transport model of electrolyte convection through a charged membrane predicts generation of net charge at membrane/electrolyte interfaces. Journal of Membrane Science, 2005, 265, 60-73.	4.1	14
123	Electroarthrography: a novel method to assess articular cartilage and diagnose osteoarthritis by non-invasive measurement of load-induced electrical potentials at the surface of the knee. Osteoarthritis and Cartilage, 2013, 21, 1731-1737.	0.6	14
124	Chitosanâ€“glycerol-phosphate (GP) gels release freely diffusible GP and possess titratable fixed charge. Carbohydrate Polymers, 2013, 98, 813-819.	5.1	13
125	Regioselective thioacetylation of chitosan end-groups for nanoparticle gene delivery systems. Chemical Science, 2015, 6, 4650-4664.	3.7	13
126	Ruthenium Hexaammine Trichloride Chemography for Aggrecan Mapping in Cartilage Is a Sensitive Indicator of Matrix Degradation. Journal of Histochemistry and Cytochemistry, 2000, 48, 81-88.	1.3	12

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127	Translating the Genomics Revolution: The Need for an International Gene Therapy Consortium for Monogenic Diseases. Molecular Therapy, 2013, 21, 266-268.	3.7	12
128	Soluble Recombinant Neprilysin Induces Aggrecanase-Mediated Cleavage of Aggrecan in Cartilage Explant Cultures. Archives of Biochemistry and Biophysics, 2001, 396, 178-186.	1.4	11
129	Cartilage Repair With Chitosan-Glycerol Phosphate-Stabilized Blood Clots. , 2007, , 85-104.		11
130	Development of an Electromechanical Grade to Assess Human Knee Articular Cartilage Quality. Annals of Biomedical Engineering, 2017, 45, 2410-2421.	1.3	11
131	Electromechanical properties of human osteoarthritic and asymptomatic articular cartilage are sensitive and early detectors of degeneration. Osteoarthritis and Cartilage, 2018, 26, 405-413.	0.6	11
132	Numerical conversion of transient to harmonic response functions for linear viscoelastic materials. Journal of Biomechanics, 1997, 30, 197-202.	0.9	10
133	Optimal Processing Method to Obtain Four-color Confocal Fluorescent Images of the Cytoskeleton and Nucleus in Three-dimensional Chondrocyte Cultures. Journal of Histochemistry and Cytochemistry, 2005, 53, 1171-1175.	1.3	10
134	Young Adult Chondrocytes Proliferate Rapidly and Produce a Cartilaginous Tissue at the Gel-Media Interface in Agarose Cultures. Connective Tissue Research, 2010, 51, 216-223.	1.1	10
135	Electro-manipulation of biological cells in microdevices. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1261-1268.	1.8	10
136	Freeze-Dried Chitosan-Platelet-Rich Plasma Implants for Rotator Cuff Tear Repair: Pilot Ovine Studies. ACS Biomaterials Science and Engineering, 2018, 4, 3737-3746.	2.6	10
137	Injectable freezeâ€dried chitosanâ€plateletâ€richâ€plasma implants improve marrowâ€stimulated cartilage repair in a chronicâ€defect rabbit model. Journal of Tissue Engineering and Regenerative Medicine, 2019, 13, 599-611.	1.3	10
138	Freeze-dried chitosan-platelet-rich plasma implants improve supraspinatus tendon attachment in a transosseous rotator cuff repair model in the rabbit. Journal of Biomaterials Applications, 2019, 33, 792-807.	1.2	10
139	Adva-27a, a novel podophyllotoxin derivative found to be effective against multidrug resistant human cancer cells. Anticancer Research, 2012, 32, 4423-32.	0.5	10
140	<title>Cross-correlation of ultrasound A-lines to obtain dynamic displacement profiles within poroelastic materials undergoing stress relaxation</title>. , 2000, 3982, 286.		9
141	Aged bovine chondrocytes display a diminished capacity to produce a collagen-rich, mechanically functional cartilage extracellular matrix. Journal of Orthopaedic Research, 2005, 23, 1354-1362.	1.2	9
142	CHO Cells Adhering to Nitrogenâ€Rich Plasmaâ€Polymerised Ethylene Exhibit High Production of a Specific Recombinant Protein. Macromolecular Bioscience, 2009, 9, 979-988.	2.1	9
143	Bone marrow stimulation of the medial femoral condyle produces inferior cartilage and bone repair compared to the trochlea in a rabbit surgical model. Journal of Orthopaedic Research, 2013, 31, 1757-1764.	1.2	9
144	Quality of Cartilage Repair from Marrow Stimulation Correlates with Cell Number, Clonogenic, Chondrogenic, and Matrix Production Potential of Underlying Bone Marrow Stromal Cells in a Rabbit Model. Cartilage, 2021, 12, 237-250.	1.4	9

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145	NMR chemical shift imaging. Computerized Medical Imaging and Graphics, 1989, 13, 93-104.	3.5	8
146	Structure Dependence of Lysosomal Transit of Chitosan-Based Polyplexes for Gene Delivery. Molecular Biotechnology, 2016, 58, 648-656.	1.3	8
147	The Forward Problem of Electroarthrography: Modeling Load-Induced Electrical Potentials at the Surface of the Knee. IEEE Transactions on Biomedical Engineering, 2014, 61, 2020-2027.	2.5	6
148	Bone Marrow Progenitor Cells Isolated from Young Rabbit Trochlea Are More Numerous and Exhibit Greater Clonogenic, Chondrogenic, and Osteogenic Potential than Cells Isolated from Condyles. Cartilage, 2018, 9, 378-390.	1.4	6
149	Migration of bone marrow stromal cells in 3D: 4 Color methodology reveals spatially and temporally coordinated events. Cytoskeleton, 2006, 63, 725-740.	4.4	5
150	Decrease of the electrical potentials measured on the surface of the knee and produced by cartilage compression during successive loading cycles. Journal of Biomechanics, 2016, 49, 3587-3591.	0.9	5
151	Guided bone marrow stimulation for articular cartilage repair through a freeze-dried chitosan microparticle approach. Materialia, 2020, 9, 100609.	1.3	5
152	Regioselective chitosan end-group activation: the triskelion approach. RSC Advances, 2017, 7, 18628-18638.	1.7	4
153	Electro-deformation of individual mammalian cells in suspension. , 2010, , .		3
154	Introduction to the International Cartilage Repair Society Recommendation Papers. Cartilage, 2011, 2, 99-99.	1.4	3
155	Effect of Corneal Hydration on the Quality of the Femtosecond Laser Anterior Lamellar Cut. PLoS ONE, 2014, 9, e98852.	1.1	3
156	Mechanical loading of knee articular cartilage induced by muscle contraction can be assessed by measuring electrical potentials at the surface of the knee. Journal of Biomechanics, 2016, 49, 338-343.	0.9	3
157	Non-invasive Electroarthrography Measures Load-Induced Cartilage Streaming Potentials via Electrodes Placed on Skin Surrounding an Articular Joint. Cartilage, 2020, , 194760352092858.	1.4	3
158	Electrical potentials measured on the surface of the knee reflect the changes of the contact force in the knee joint produced by postural sway. Gait and Posture, 2017, 52, 159-164.	0.6	2
159	Multiple platelet-rich plasma preparations can solubilize freeze-dried chitosan formulations to form injectable implants for orthopedic indications. Bio-Medical Materials and Engineering, 2019, 30, 349-364.	0.4	2
160	Paper # 149: An International Randomized Clinical Trial Evaluating BST-CarGel: A New Gel Implant for Cartilage Repair. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2011, 27, e168.	1.3	1
161	Electric-field-based methods for the manipulation and modification of biological cells in suspension. , 2011, , .		1
162	Extracellular Matrix of Cartilage and Meniscus by ESEM and Immunogold Labeling. Microscopy and Microanalysis, 2009, 15, 970-971.	0.2	0

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163	Electro-mechanical manipulation of mammalian cells in suspension. , 2011, , .		0