Gerard A Ateshian

List of Publications by Year
in descending order

		36691	36203
175 papers	11,483 citations	53 h-index	101 g-index
181 all docs	181 docs citations	181 times ranked	7475 citing authors

#	Article	IF	Citations
1	Functional Tissue Engineering of Articular Cartilage Through Dynamic Loading of Chondrocyte-Seeded Agarose Gels. Journal of Biomechanical Engineering, 2000, 122, 252-260.	0.6	836
2	FEBio: Finite Elements for Biomechanics. Journal of Biomechanical Engineering, 2012, 134, 011005.	0.6	779
3	Experimental verification and theoretical prediction of cartilage interstitial fluid pressurization at an impermeable contact interface in confined compression. Journal of Biomechanics, 1998, 31, 927-934.	0.9	425
4	The role of interstitial fluid pressurization in articular cartilage lubrication. Journal of Biomechanics, 2009, 42, 1163-1176.	0.9	387
5	Knee cartilage topography, thickness, and contact areas from MRI: in-vitro calibration and in-vivo measurements. Osteoarthritis and Cartilage, 1999, 7, 95-109.	0.6	335
6	Synergistic Action of Growth Factors and Dynamic Loading for Articular Cartilage Tissue Engineering. Tissue Engineering, 2003, 9, 597-611.	4.9	309
7	A Conewise Linear Elasticity Mixture Model for the Analysis of Tension-Compression Nonlinearity in Articular Cartilage. Journal of Biomechanical Engineering, 2000, 122, 576-586.	0.6	281
8	Experimental verification of the role of interstitial fluid pressurization in cartilage lubrication. Journal of Orthopaedic Research, 2004, 22, 565-570.	1.2	261
9	A Paradigm for Functional Tissue Engineering of Articular Cartilage via Applied Physiologic Deformational Loading. Annals of Biomedical Engineering, 2004, 32, 35-49.	1.3	225
10	Cartilage interstitial fluid load support in unconfined compression. Journal of Biomechanics, 2003, 36, 1785-1796.	0.9	203
11	Anatomically shaped osteochondral constructs for articular cartilage repair. Journal of Biomechanics, 2003, 36, 1853-1864.	0.9	195
12	The Role of Flow-Independent Viscoelasticity in the Biphasic Tensile and Compressive Responses of Articular Cartilage. Journal of Biomechanical Engineering, 2001, 123, 410-417.	0.6	193
13	Modeling of Neutral Solute Transport in a Dynamically Loaded Porous Permeable Gel: Implications for Articular Cartilage Biosynthesis and Tissue Engineering. Journal of Biomechanical Engineering, 2003, 125, 602-614.	0.6	193
14	An Automated Approach for Direct Measurement of Two-Dimensional Strain Distributions Within Articular Cartilage Under Unconfined Compression. Journal of Biomechanical Engineering, 2002, 124, 557-567.	0.6	187
15	Interstitial Fluid Pressurization During Confined Compression Cyclical Loading of Articular Cartilage. Annals of Biomedical Engineering, 2000, 28, 150-159.	1.3	182
16	A theoretical solution for the frictionless rolling contact of cylindrical biphasic articular cartilage layers. Journal of Biomechanics, 1995, 28, 1341-1355.	0.9	178
17	Modeling the Matrix of Articular Cartilage Using a Continuous Fiber Angular Distribution Predicts Many Observed Phenomena. Journal of Biomechanical Engineering, 2009, 131, 061003.	0.6	178
18	Anisotropy, inhomogeneity, and tensionâ€"compression nonlinearity of human glenohumeral cartilage in finite deformation. Journal of Biomechanics, 2005, 38, 799-809.	0.9	174

#	Article	IF	Citations
19	On the theory of reactive mixtures for modeling biological growth. Biomechanics and Modeling in Mechanobiology, 2007, 6, 423-445.	1.4	170
20	Experimental Verification of the Roles of Intrinsic Matrix Viscoelasticity and Tension-Compression Nonlinearity in the Biphasic Response of Cartilage. Journal of Biomechanical Engineering, 2003, 125, 84-93.	0.6	169
21	Large, stratified, and mechanically functional human cartilage grown in vitro by mesenchymal condensation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6940-6945.	3.3	166
22	Anisotropic strain-dependent material properties of bovine articular cartilage in the transitional range from tension to compression. Journal of Biomechanics, 2004, 37, 1251-1261.	0.9	153
23	Biomechanical and Topographic Considerations for Autologous Osteochondral Grafting in the Knee. American Journal of Sports Medicine, 2001, 29, 201-206.	1.9	145
24	Contact analysis of biphasic transversely isotropic cartilage layers and correlations with tissue failure. Journal of Biomechanics, 1999, 32, 1037-1047.	0.9	140
25	Optical determination of anisotropic material properties of bovine articular cartilage in compression. Journal of Biomechanics, 2003, 36, 339-353.	0.9	140
26	Spatial and temporal development of chondrocyte-seeded agarose constructs in free-swelling and dynamically loaded cultures. Journal of Biomechanics, 2006, 39, 1489-1497.	0.9	131
27	Microscale frictional response of bovine articular cartilage from atomic force microscopy. Journal of Biomechanics, 2004, 37, 1679-1687.	0.9	123
28	Heterogeneous transmural proteoglycan distribution provides a mechanism for regulating residual stresses in the aorta. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 294, H1197-H1205.	1.5	121
29	Patellofemoral Stresses during Open and Closed Kinetic Chain Exercises. American Journal of Sports Medicine, 2001, 29, 480-487.	1.9	119
30	Computer Simulations of Patellofemoral Joint Surgery. American Journal of Sports Medicine, 2003, 31, 87-98.	1.9	118
31	Dynamic Mechanical Loading Enhances Functional Properties of Tissue-Engineered Cartilage Using Mature Canine Chondrocytes. Tissue Engineering - Part A, 2010, 16, 1781-1790.	1.6	109
32	Equivalence Between Short-Time Biphasic and Incompressible Elastic Material Responses. Journal of Biomechanical Engineering, 2007, 129, 405-412.	0.6	108
33	Inhomogeneous Cartilage Properties Enhance Superficial Interstitial Fluid Support and Frictional Properties, But Do Not Provide a Homogeneous State of Stress. Journal of Biomechanical Engineering, 2003, 125, 569-577.	0.6	107
34	Direct Measurement of Osmotic Pressure of Glycosaminoglycan Solutions by Membrane Osmometry at Room Temperature. Biophysical Journal, 2005, 89, 1543-1550.	0.2	99
35	The correspondence between equilibrium biphasic and triphasic material properties in mixture models of articular cartilage. Journal of Biomechanics, 2004, 37, 391-400.	0.9	90
36	Contact areas in the thumb carpometacarpal joint. Journal of Orthopaedic Research, 1995, 13, 450-458.	1.2	88

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37	Zonal Chondrocytes Seeded in a Layered Agarose Hydrogel Create Engineered Cartilage with Depth-Dependent Cellular and Mechanical Inhomogeneity. Tissue Engineering - Part A, 2009, 15, 2315-2324.	1.6	80
38	On the Electric Potentials Inside a Charged Soft Hydrated Biological Tissue: Streaming Potential Versus Diffusion Potential. Journal of Biomechanical Engineering, 2000, 122, 336-346.	0.6	76
39	Effect of dynamic loading on the frictional response of bovine articular cartilage. Journal of Biomechanics, 2005, 38, 1665-1673.	0.9	70
40	A mixture theory analysis for passive transport in osmotic loading of cells. Journal of Biomechanics, 2006, 39, 464-475.	0.9	70
41	Electrostatic and non-electrostatic contributions of proteoglycans to the compressive equilibrium modulus of bovine articular cartilage. Journal of Biomechanics, 2010, 43, 1343-1350.	0.9	69
42	Wear and damage of articular cartilage with friction against orthopedic implant materials. Journal of Biomechanics, 2015, 48, 1957-1964.	0.9	68
43	Functional tissue engineering of chondral and osteochondral constructs. Biorheology, 2004, 41, 577-90.	1.2	65
44	Multigenerational interstitial growth of biological tissues. Biomechanics and Modeling in Mechanobiology, 2010, 9, 689-702.	1.4	64
45	Dynamic loading of deformable porous media can induce active solute transport. Journal of Biomechanics, 2008, 41, 3152-3157.	0.9	63
46	Passaged Adult Chondrocytes Can Form Engineered Cartilage with Functional Mechanical Properties: A Canine Model. Tissue Engineering - Part A, 2010, 16, 1041-1051.	1.6	63
47	Continuum Mixture Models of Biological Growth and Remodeling: Past Successes and Future Opportunities. Annual Review of Biomedical Engineering, 2012, 14, 97-111.	5.7	63
48	Cartilage Interstitial Fluid Load Support in Unconfined Compression Following Enzymatic Digestion. Journal of Biomechanical Engineering, 2004, 126, 779-786.	0.6	62
49	Dynamic Response of Immature Bovine Articular Cartilage in Tension and Compression, and Nonlinear Viscoelastic Modeling of the Tensile Response. Journal of Biomechanical Engineering, 2006, 128, 623-630.	0.6	62
50	Heterogeneous engineered cartilage growth results from gradients of media-supplemented active TGF-Î² and is ameliorated by the alternative supplementation of latent TGF-Î². Biomaterials, 2016, 77, 173-185.	5.7	62
51	Title is missing!. Transport in Porous Media, 2003, 50, 5-33.	1.2	59
52	Accumulation of Exogenous Activated TGF-Î² in the Superficial Zone ofÂArticular Cartilage. Biophysical Journal, 2013, 104, 1794-1804.	0.2	57
53	Sustained low-dose dexamethasone delivery via a PLGA microsphere-embedded agarose implant for enhanced osteochondral repair. Acta Biomaterialia, 2020, 102, 326-340.	4.1	57
54	Anisotropic Hydraulic Permeability Under Finite Deformation. Journal of Biomechanical Engineering, 2010, 132, 111004.	0.6	56

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55	Effects of enzymatic degradation on the frictional response of articular cartilage in stress relaxation. Journal of Biomechanics, 2005, 38, 1343-1349.	0.9	54
56	Differences in Interleukin-1 Response Between Engineered and Native Cartilage. Tissue Engineering - Part A, 2008, 14, 1721-1730.	1.6	53
57	Multiphasic Finite Element Framework for Modeling Hydrated Mixtures With Multiple Neutral and Charged Solutes. Journal of Biomechanical Engineering, 2013, 135, 111001.	0.6	53
58	Influence of Temporary Chondroitinase ABC-Induced Glycosaminoglycan Suppression on Maturation of Tissue-Engineered Cartilage. Tissue Engineering - Part A, 2009, 15, 2065-2072.	1.6	52
59	Finite Element Algorithm for Frictionless Contact of Porous Permeable Media Under Finite Deformation and Sliding. Journal of Biomechanical Engineering, 2010, 132, 061006.	0.6	52
60	Patellofemoral Joint Biomechanics and Tissue Engineering. Clinical Orthopaedics and Related Research, 2005, &NA;, 81-90.	0.7	51
61	Chondroitin sulfate reduces the friction coefficient of articular cartilage. Journal of Biomechanics, 2007, 40, 1847-1854.	0.9	49
62	High seeding density of human chondrocytes in agarose produces tissue-engineered cartilage approaching native mechanical and biochemical properties. Journal of Biomechanics, 2016, 49, 1909-1917.	0.9	49
63	Anatomy of the human patellofemoral joint articular cartilage: Surface curvature analysis. Journal of Orthopaedic Research, 1997, 15, 468-472.	1.2	45
64	Frictional Response of Bovine Articular Cartilage Under Creep Loading Following Proteoglycan Digestion With Chondroitinase ABC. Journal of Biomechanical Engineering, 2006, 128, 131-134.	0.6	45
65	A Theoretical Analysis of Water Transport Through Chondrocytes. Biomechanics and Modeling in Mechanobiology, 2007, 6, 91-101.	1.4	45
66	Effect of Dynamic Loading on the Transport of Solutes into Agarose Hydrogels. Biophysical Journal, 2009, 97, 968-975.	0.2	44
67	Insulin, Ascorbate, and Glucose Have a Much Greater Influence Than Transferrin and Selenous Acid on the <i>In Vitro</i> Growth of Engineered Cartilage in Chondrogenic Media. Tissue Engineering - Part A, 2013, 19, 1941-1948.	1.6	42
68	FEBio: History and Advances. Annual Review of Biomedical Engineering, 2017, 19, 279-299.	5.7	40
69	Dependence of Zonal Chondrocyte Water Transport Properties on Osmotic Environment. Cellular and Molecular Bioengineering, 2008, 1, 339-348.	1.0	39
70	Duty Cycle of Deformational Loading Influences the Growth of Engineered Articular Cartilage. Cellular and Molecular Bioengineering, 2009, 2, 386-394.	1.0	39
71	Tissue-engineered articular cartilage exhibits tensionâ€“compression nonlinearity reminiscent of the native cartilage. Journal of Biomechanics, 2013, 46, 1784-1791.	0.9	38
72	The effect of devitalized trabecular bone on the formation of osteochondral tissue-engineered constructs. Biomaterials, 2008, 29, 4292-4299.	5.7	37

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73	Tissue engineered autologous cartilage-bone grafts for temporomandibular joint regeneration. Science Translational Medicine, 2020, 12, .	5.8	37
74	Sliding contact loading enhances the tensile properties of mesenchymal stem cell-seeded hydrogels. , 2012, 24, 29-45.		37
75	Continuum Modeling of Biological Tissue Growth by Cell Division, and Alteration of Intracellular Osmolytes and Extracellular Fixed Charge Density. Journal of Biomechanical Engineering, 2009, 131, 101001.	0.6	35
76	Porous titanium bases for osteochondral tissue engineering. Acta Biomaterialia, 2015, 27, 286-293.	4.1	35
77	Continuum theory of fibrous tissue damage mechanics using bond kinetics: application to cartilage tissue engineering. Interface Focus, 2016, 6, 20150063.	1.5	35
78	Anisotropy of Fibrous Tissues in Relation to the Distribution of Tensed and Buckled Fibers. Journal of Biomechanical Engineering, 2007, 129, 240-249.	0.6	33
79	Transient Supplementation of Anabolic Growth Factors Rapidly Stimulates Matrix Synthesis in Engineered Cartilage. Annals of Biomedical Engineering, 2011, 39, 2491-2500.	1.3	33
80	Toward patient-specific articular contact mechanics. Journal of Biomechanics, 2015, 48, 779-786.	0.9	33
81	Hydrostatic Pressurization and Depletion of Trapped Lubricant Pool During Creep Contact of a Rippled Indenter Against a Biphasic Articular Cartilage Layer. Journal of Biomechanical Engineering, 2003, 125, 585-593.	0.6	32
82	The temporal response of the friction coefficient of articular cartilage depends on the contact area. Journal of Biomechanics, 2007, 40, 3257-3260.	0.9	32
83	Finite Element Implementation of Mechanochemical Phenomena in Neutral Deformable Porous Media Under Finite Deformation. Journal of Biomechanical Engineering, 2011, 133, 081005.	0.6	32
84	Toward Engineering a Biological Joint Replacement. Journal of Knee Surgery, 2012, 25, 187-196.	0.9	32
85	Computational modeling of chemical reactions and interstitial growth and remodeling involving charged solutes and solid-bound molecules. Biomechanics and Modeling in Mechanobiology, 2014, 13, 1105-1120.	1.4	32
86	Matrix Production in Large Engineered Cartilage Constructs Is Enhanced by Nutrient Channels and Excess Media Supply. Tissue Engineering - Part C: Methods, 2015, 21, 747-757.	1.1	32
87	Two-dimensional strain fields on the cross-section of the bovine humeral head under contact loading. Journal of Biomechanics, 2008, 41, 3145-3151.	0.9	31
88	Microbubbles as biocompatible porogens for hydrogel scaffolds. Acta Biomaterialia, 2012, 8, 4334-4341.	4.1	31
89	Interstitial growth and remodeling of biological tissues: Tissue composition as state variables. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 544-556.	1.5	31
90	Toward understanding the role of cartilage particulates in synovial inflammation. Osteoarthritis and Cartilage, 2017, 25, 1353-1361.	0.6	31

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91	Two-dimensional strain fields on the cross-section of the human patellofemoral joint under physiological loading. Journal of Biomechanics, 2009, 42, 1275-1281.	0.9	30
92	Synthesis rates and binding kinetics of matrix products in engineered cartilage constructs using chondrocyte-seeded agarose gels. Journal of Biomechanics, 2014, 47, 2165-2172.	0.9	30
93	A frame-invariant formulation of Fung elasticity. Journal of Biomechanics, 2009, 42, 781-785.	0.9	29
94	Finite Element Prediction of Transchondral Stress and Strain in the Human Hip. Journal of Biomechanical Engineering, 2014, 136, 021021.	0.6	29
95	Characterization of the Concentration-Dependence of Solute Diffusivity and Partitioning in a Model Dextranâ€"Agarose Transport System. Cellular and Molecular Bioengineering, 2009, 2, 295-305.	1.0	28
96	Nutrient channels and stirring enhanced the composition and stiffness of large cartilage constructs. Journal of Biomechanics, 2014, 47, 3847-3854.	0.9	27
97	Viscoelasticity using reactive constrained solid mixtures. Journal of Biomechanics, 2015, 48, 941-947.	0.9	27
98	Osmotic Loading of Spherical Gels: A Biomimetic Study of Hindered Transport in the Cell Protoplasm. Journal of Biomechanical Engineering, 2007, 129, 503-510.	0.6	26
99	Low-Serum Media and Dynamic Deformational Loading in Tissue Engineering of Articular Cartilage. Annals of Biomedical Engineering, 2008, 36, 769-779.	1.3	26
100	Dynamic loading of immature epiphyseal cartilage pumps nutrients out of vascular canals. Journal of Biomechanics, 2011, 44, 1654-1659.	0.9	26
101	Effects of Hypertonic (NaCl) Two-Dimensional and Three-Dimensional Culture Conditions on the Properties of Cartilage Tissue Engineered from an Expanded Mature Bovine Chondrocyte Source. Tissue Engineering - Part C: Methods, 2011, 17, 1041-1049.	1.1	24
102	Dexamethasone Release from Within Engineered Cartilage as a Chondroprotective Strategy Against Interleukin-1Î±. Tissue Engineering - Part A, 2016, 22, 621-632.	1.6	24
103	Mechanics of cell growth. Mechanics Research Communications, 2012, 42, 118-125.	1.0	23
104	Dynamic mechanical compression of devitalized articular cartilage does not activate latent TGF-Î². Journal of Biomechanics, 2013, 46, 1433-1439.	0.9	23
105	Human chondrocyte migration behaviour to guide the development of engineered cartilage. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 877-886.	1.3	23
106	Growth Factor Priming Differentially Modulates Components of the Extracellular Matrix Proteome in Chondrocytes and Synovium-Derived Stem Cells. PLoS ONE, 2014, 9, e88053.	1.1	22
107	Weaving in three dimensions. Nature Materials, 2007, 6, 89-90.	13.3	21
108	Validation of theoretical framework explaining active solute uptake in dynamically loaded porous media. Journal of Biomechanics, 2010, 43, 2267-2273.	0.9	21

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109	Finite Element Framework for Computational Fluid Dynamics in FEBio. Journal of Biomechanical Engineering, 2018, 140, .	0.6	21
110	A Surface-to-Surface Finite Element Algorithm for Large Deformation Frictional Contact in febio. Journal of Biomechanical Engineering, 2018, 140, .	0.6	21
111	Biphasic Analysis of Cartilage Stresses in the Patellofemoral Joint. Journal of Knee Surgery, 2016, 29, 092-098.	0.9	20
112	Nutrient Channels Aid the Growth of Articular Surface-Sized Engineered Cartilage Constructs. Tissue Engineering - Part A, 2016, 22, 1063-1074.	1.6	20
113	Fibroblast-like synoviocyte mechanosensitivity to fluid shear is modulated by interleukin-1Î±. Journal of Biomechanics, 2017, 60, 91-99.	0.9	20
114	Solute transport across a contact interface in deformable porous media. Journal of Biomechanics, 2012, 45, 1023-1027.	0.9	19
115	Integrative biomechanics: A paradigm for clinical applications of fundamental mechanics. Journal of Biomechanics, 2009, 42, 1444-1451.	0.9	18
116	A Functional Tissue-Engineered Synovium Model to Study Osteoarthritis Progression and Treatment. Tissue Engineering - Part A, 2019, 25, 538-553.	1.6	18
117	Hip chondrolabral mechanics during activities of daily living: Role of the labrum and interstitial fluid pressurization. Journal of Biomechanics, 2018, 69, 113-120.	0.9	17
118	Influence of the Partitioning of Osmolytes by the Cytoplasm on the Passive Response of Cells to Osmotic Loading. Biophysical Journal, 2009, 97, 2886-2893.	0.2	16
119	Articular Cartilage Wear Characterization With a Particle Sizing and Counting Analyzer. Journal of Biomechanical Engineering, 2013, 135, 024501.	0.6	16
120	Effect of glutaraldehyde fixation on the frictional response of immature bovine articular cartilage explants. Journal of Biomechanics, 2014, 47, 694-701.	0.9	16
121	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. Journal of Biomechanical Engineering, 2018, 140, .	0.6	16
122	Pulsed electromagnetic fields promote repair of focal articular cartilage defects with engineered osteochondral constructs. Biotechnology and Bioengineering, 2020, 117, 1584-1596.	1.7	16
123	Influence of chondroitin sulfate on the biochemical, mechanical and frictional properties of cartilage explants in long-term culture. Journal of Biomechanics, 2009, 42, 286-290.	0.9	15
124	Cartilage Wear Particles Induce an Inflammatory Response Similar to Cytokines in Human Fibroblastâ€Like Synoviocytes. Journal of Orthopaedic Research, 2019, 37, 1979-1987.	1.2	15
125	A Formulation for Fluidâ€“Structure Interactions in febio Using Mixture Theory. Journal of Biomechanical Engineering, 2019, 141, .	0.6	15
126	Longâ€term storage and preservation of tissue engineered articular cartilage. Journal of Orthopaedic Research, 2016, 34, 141-148.	1.2	14

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127	A Plugin Framework for Extending the Simulation Capabilities of FEBio. Biophysical Journal, 2018, 115, 1630-1637.	0.2	14
128	Direct Osmotic Pressure Measurements in Articular Cartilage Demonstrate Nonideal and Concentration-Dependent Phenomena. Journal of Biomechanical Engineering, 2021, 143, .	0.6	13
129	Fabrication of tissue engineered osteochondral grafts for restoring the articular surface of diarthrodial joints. Methods, 2015, 84, 103-108.	1.9	12
130	A Gauss-Kronrod-Trapezoidal integration scheme for modeling biological tissues with continuous fiber distributions. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 883-893.	0.9	12
131	How Does Chondrolabral Damage and Labral Repair Influence the Mechanics of the Hip in the Setting of Cam Morphology? A Finite-Element Modeling Study. Clinical Orthopaedics and Related Research, 2022, 480, 602-615.	0.7	12
132	The Role of Mass Balance Equations in Growth Mechanics Illustrated in Surface and Volume Dissolutions. Journal of Biomechanical Engineering, 2011, 133, 011010.	0.6	11
133	The friction coefficient of shoulder joints remains remarkably low over 24h of loading. Journal of Biomechanics, 2015, 48, 3945-3949.	0.9	11
134	<sup />Constrained Cage Culture Improves Engineered Cartilage Functional Properties by Enhancing Collagen Network Stability. Tissue Engineering - Part A, 2017, 23, 847-858.	1.6	11
135	Finite Element Formulation of Multiphasic Shell Elements for Cell Mechanics Analyses in FEBio. Journal of Biomechanical Engineering, 2018, 140, .	0.6	11
136	Grading of osteoarthritic cartilage: Correlations between histology and biomechanics. Journal of Orthopaedic Research, 2016, 34, 8-9.	1.2	10
137	Finite Element Implementation of Biphasic-Fluid Structure Interactions in <scp>febio</scp>. Journal of Biomechanical Engineering, 2021, 143, .	0.6	10
138	Immature bovine cartilage wear by fatigue failure and delamination. Journal of Biomechanics, 2020, 107, 109852.	0.9	10
139	Spatially Varying Material Properties of the Rat Caudal Intervertebral Disc. Spine, 2006, 31, E486-E493.	1.0	9
140	Modeling of Active Transmembrane Transport in a Mixture Theory Framework. Annals of Biomedical Engineering, 2010, 38, 1801-1814.	1.3	9
141	Sustained Delivery of SB-431542, a Type I Transforming Growth Factor Beta-1 Receptor Inhibitor, to Prevent Arthrofibrosis. Tissue Engineering - Part A, 2021, 27, 1411-1421.	1.6	9
142	Cytokine preconditioning of engineered cartilage provides protection against interleukin-1 insult. Arthritis Research and Therapy, 2015, 17, 361.	1.6	8
143	Optimizing nutrient channel spacing and revisiting TGF-beta in large engineered cartilage constructs. Journal of Biomechanics, 2016, 49, 2089-2094.	0.9	8
144	A puzzle assembly strategy for fabrication of large engineered cartilage tissue constructs. Journal of Biomechanics, 2016, 49, 668-677.	0.9	8

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145	Transient expression of the diseased phenotype of osteoarthritic chondrocytes in engineered cartilage. Journal of Orthopaedic Research, 2017, 35, 829-836.	1.2	8
146	Mixture Theory for Modeling Biological Tissues: Illustrations from Articular Cartilage. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2017, , 1-51.	0.7	8
147	Chondrocyte nuclear response to osmotic loading. , 2006, 2006, 3659-61.		7
148	Reactive Constrained Mixtures for Modeling the Solid Matrix of Biological Tissues. Journal of Elasticity, 2017, 129, 69-105.	0.9	7
149	Simulating cerebral edema and delayed fatality after traumatic brain injury using triphasic swelling biomechanics. Traffic Injury Prevention, 2019, 20, 820-825.	0.6	7
150	Attachment of cartilage wear particles to the synovium negatively impacts friction properties. Journal of Biomechanics, 2021, 127, 110668.	0.9	7
151	Modeling Pulse Wave Propagation Through a Stenotic Artery With Fluid Structure Interaction: A Validation Study Using Ultrasound Pulse Wave Imaging. Journal of Biomechanical Engineering, 2021, 143, .	0.6	6
152	PRELIMINARY VALIDATION OF MRI-BASED MODELING FOR EVALUATION OF JOINT MECHANICS. Journal of Musculoskeletal Research, 2008, 11, 161-171.	0.1	5
153	Prediction of probability of fatality due to brain injury in traffic accidents. Traffic Injury Prevention, 2019, 20, S27-S31.	0.6	5
154	On the use of constrained reactive mixtures of solids to model finite deformation isothermal elastoplasticity and elastoplastic damage mechanics. Journal of the Mechanics and Physics of Solids, 2021, 155, 104534.	2.3	5
155	Sliding Tractions on a Deformable Porous Layer. Journal of Tribology, 1998, 120, 89-96.	1.0	4
156	High intensity focused ultrasound as a tool for tissue engineering: Application to cartilage. Medical Engineering and Physics, 2016, 38, 192-198.	0.8	4
157	A Finite Element Algorithm for Large Deformation Biphasic Frictional Contact Between Porous-Permeable Hydrated Soft Tissues. Journal of Biomechanical Engineering, 2022, 144, .	0.6	4
158	Continuum Thermodynamics of Constrained Reactive Mixtures. Journal of Biomechanical Engineering, 2022, 144, .	0.6	4
159	Finite Element Modeling of Solutes in Hydrated Deformable Biological Tissues. , 2013, , 231-249.		3
160	Toward Development of a Diabetic Synovium Culture Model. Frontiers in Bioengineering and Biotechnology, 2022, 10, 825046.	2.0	3
161	Determination of Poissonâ€™s Ratios of Bovine Articular Cartilage in Tension and Compression Using Osmotic and Mechanical Loading. , 2002, , 203.		2
162	Effects of Media Stirring and Presence of Nutrient Channels on Functional Properties of Large Engineered Cartilage Constructs. , 2013, , .		2

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163	Physiologic Medium Maintains the Homeostasis of Immature Bovine Articular Cartilage Explants in Long-Term Culture. Journal of Biomechanical Engineering, 2019, 141, .	0.6	2
164	A hybrid biphasic mixture formulation for modeling dynamics in porous deformable biological tissues. Archive of Applied Mechanics, 2022, 92, 491-511.	1.2	2
165	A Hybrid Reactive Multiphasic Mixture With a Compressible Fluid Solvent. Journal of Biomechanical Engineering, 2022, 144, .	0.6	2
166	A Numerical Scheme for Anisotropic Reactive Nonlinear Viscoelasticity. Journal of Biomechanical Engineering, 2023, 145, .	0.6	2
167	Special Issue on Cartilage (Part II). Biomechanics and Modeling in Mechanobiology, 2007, 6, 1-3.	1.4	1
168	Functional Tissue Engineering of Articular Cartilage With Adult Chondrocytes. , 2009, , .		1
169	Discussion. Plastic and Reconstructive Surgery, 2018, 142, 1226-1228.	0.7	1
170	Special Issue on Cartilage (Part I). Biomechanics and Modeling in Mechanobiology, 2006, 5, 63-63.	1.4	0
171	Continuum Modeling of Biological Tissue Growth by Cell Division. , 2009, , .		0
172	Modeling the Matrix of Articular Cartilage Using a Continuous Fiber Angular Distribution Predicts Many Observed Phenomena. , 2009, , .		0
173	Title is missing!. , 2018, , .		0
174	The Effect of Applied Compressive Loading on Tissue-Engineered Cartilage Constructs Cultured with TGF-ÃŸ3. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
175	Chondrocyte Nuclear Response to Osmotic Loading. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0