Peter A Torzilli

List of Publications by Year
in descending order

56 papers	1,720 citations	279487 23 h-index	276539 41 g-index
56 all docs	56 docs citations	56 times ranked	1689 citing authors

#	Article	IF	Citations
1	Effect of Articular Surface Compression on Cartilage Extracellular Matrix Deformation. Journal of Biomechanical Engineering, 2022, 144, .	0.6	6
2	Squeeze-film properties of synovial fluid and hyaluronate-based viscosupplements. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1919-1940.	1.4	1
3	Ultraviolet light (365â€‰nm) transmission properties of articular cartilage as a function of depth, extracellular matrix, and swelling. Journal of Biomedical Materials Research - Part A, 2020, 108, 327-339.	2.1	3
4	Collagen peptide simulated bending after applied axial deformation. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 108, 103835.	1.5	1
5	Effect of interface mechanical discontinuities on scaffoldâ€cartilage integration. Journal of Orthopaedic Research, 2019, 37, 845-854.	1.2	12
6	Light Absorptive Properties of Articular Cartilage, ECM Molecules, Synovial Fluid, and Photoinitiators as Potential Barriers to Light-Initiated Polymer Scaffolding Procedures. Cartilage, 2019, 10, 82-93.	1.4	6
7	Influence of the pericellular and extracellular matrix structural properties on chondrocyte mechanics. Journal of Orthopaedic Research, 2018, 36, 721-729.	1.2	34
8	Articular cartilage response to a sliding load using two different-sized spherical indenters 1. Biorheology, 2018, 54, 109-126.	1.2	4
9	Photocrosslinked tyramine-substituted hyaluronate hydrogels with tunable mechanical properties improve immediate tissue-hydrogel interfacial strength in articular cartilage. Journal of Biomaterials Science, Polymer Edition, 2017, 28, 582-600.	1.9	36
10	Use of novel chitosan hydrogels for chemical tissue bonding of autologous chondral transplants. Journal of Orthopaedic Research, 2016, 34, 1139-1146.	1.2	6
11	A Model to Study Articular Cartilage Mechanical and Biological Responses to Sliding Loads. Annals of Biomedical Engineering, 2016, 44, 2577-2588.	1.3	16
12	Shape of chondrocytes within articular cartilage affects the solid but not the fluid microenvironment under unconfined compression. Acta Biomaterialia, 2016, 29, 170-179.	4.1	15
13	Mechanical Loading of Cartilage Explants with Compression and Sliding Motion Modulates Gene Expression of Lubricin and Catabolic Enzymes. Cartilage, 2015, 6, 185-193.	1.4	19
14	In Vitro Cartilage Explant Injury Models. , 2015, , 29-40.		3
15	Resurfacing damaged articular cartilage to restore compressive properties. Journal of Biomechanics, 2015, 48, 122-129.	0.9	20
16	A biphasic finite element study on the role of the articular cartilage superficial zone in confined compression. Journal of Biomechanics, 2015, 48, 166-170.	0.9	23
17	Dynamic contact stress patterns on the tibial plateaus during simulated gait: A novel application of normalized cross correlation. Journal of Biomechanics, 2014, 47, 568-574.	0.9	44
18	Glycation cross-linking induced mechanicalâ€“enzymatic cleavage of microscale tendon fibers. Matrix Biology, 2014, 34, 179-184.	1.5	40

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19	A biphasic multiscale study of the mechanical microenvironment of chondrocytes within articular cartilage under unconfined compression. Journal of Biomechanics, 2014, 47, 2721-2729.	0.9	22
20	Deep Tissue Injury in Development of Pressure Ulcers: A Decrease of Inflammasome Activation and Changes in Human Skin Morphology in Response to Aging and Mechanical Load. PLoS ONE, 2013, 8, e69223.	1.1	63
21	A new paradigm for mechanobiological mechanisms in tumor metastasis. Seminars in Cancer Biology, 2012, 22, 385-395.	4.3	68
22	Covalent Cross-Linking Accelerates Collagen Enzyme Mechano-Kinetic Cleavage: Nanomechanics Predicts Microscale Behavior. , 2012, , .		0
23	Development of an In Vitro Cartilage Degradation Model to Emulate Early-Stage Osteoarthritis. , 2012, , .		0
24	Molecular simulations predict novel collagen conformations during cross-link loading. Matrix Biology, 2011, 30, 356-360.	1.5	21
25	In Silico Molecular Modeling of Collagen Crosslink Loading. , 2011, , .		0
26	Deformation-Dependent Enzyme Mechanokinetic Cleavage of Type I Collagen. Journal of Biomechanical Engineering, 2009, 131, 051004.	0.6	55
27	Collagen Molecular Conformation Exhibits Strain-Rate Dependent Response to Axial Deformation in Silico. , 2009, , .		0
28	A Novel Joint Loading System to Investigate the Effect of Daily Mechanical Load on a Healing Anterior Cruciate Ligament (ACL) Reconstruction. , 2009, , .		0
29	Deformation-Dependent Enzyme Cleavage of Collagen. , 2007, , .		0
30	Load Down-Regulates TNF-Alpha Induced Cartilage Degradation in Part Through NF-KB and P38 Pathways. , 2007, , .		0
31	Leukocytes Cause Inflammatory Response to Traumatized Articular Cartilage in Acute Phase of Joint Injury. , 2007, , .		0
32	Effect of tissue maturity on cell viability in load-injured articular cartilage explants. Osteoarthritis and Cartilage, 2005, 13, 488-496.	0.6	31
33	Influence of stress rate on water loss, matrix deformation and chondrocyte viability in impacted articular cartilage. Journal of Biomechanics, 2005, 38, 493-502.	0.9	85
34	Increased stromelysin-1 (MMP-3), proteoglycan degradation (3B3- and 7D4) and collagen damage in cyclically load-injured articular cartilage. Osteoarthritis and Cartilage, 2004, 12, 485-496.	0.6	141
35	The effect of mechanical load on integrin subunits ?5 and ?1 in chondrocytes from mature and immature cartilage explants. Cell and Tissue Research, 2004, 315, 385-391.	1.5	46
36	Time, stress, and location dependent chondrocyte death and collagen damage in cyclically loaded articular cartilage. Journal of Orthopaedic Research, 2003, 21, 888-898.	1.2	132

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37	Strain Is the Major Factor for Chondrocyte Death in Articular Cartilage Under Static Load. , 2003, , .		2
38	Hypo-Osmolarity Decreases the Ability of Cells in Articular Cartilage to Survive a Load-Induced Injury. , 2003, , .		0
39	Chondrocyte Death in Articular Cartilage Due to Excessive Mechanical Loading in the Axial and Transverse Directions. , 2002, , .		1
40	Development of an In Vivo Rabbit Model for Cartilage Trauma: Influence of Impact Stress Magnitude on Chondrocyte Death. , 2001, , .		0
41	Effect of Serum and Platelet-Derived Growth Factor on Chondrocytes Grown in Collagen Gels. Tissue Engineering, 1999, 5, 533-544.	4.9	63
42	Thermal Modification of Collagen. , 1999, , .		0
43	Continuous cyclic load reduces proteoglycan release from articular cartilage. Osteoarthritis and Cartilage, 1998, 6, 260-268.	0.6	34
44	Characterization of cartilage metabolic response to static and dynamic stress using a mechanical explant test system. Journal of Biomechanics, 1997, 30, 1-9.	0.9	139
45	Effect of proteoglycan removal on solute mobility in articular cartilage. Journal of Biomechanics, 1997, 30, 895-902.	0.9	107
46	Effects of misoprostol and prostaglandin E2 on proteoglycan biosynthesis and loss in unloaded and loaded articular cartilage explants. Prostaglandins, 1996, 52, 157-173.	1.2	24
47	Gross, Histological, and Microvascular Anatomy and Biomechanical Testing of the Spring Ligament Complex. Foot and Ankle International, 1996, 17, 95-102.	1.1	140
48	Letters to the editors. Journal of Orthopaedic Research, 1995, 13, 642-642.	1.2	0
49	A new pressure chamber to study the biosynthetic response of articular cartilage to mechanical loading. Research in Experimental Medicine, 1993, 193, 137-142.	0.7	15
50	Mechanical Evaluation of Three Methods of Plating Distal Radial Osteotomies. Veterinary Surgery, 1992, 21, 99-106.	0.5	15
51	Measurement reproducibility of two commercial knee test devices. Journal of Orthopaedic Research, 1991, 9, 730-737.	1.2	40
52	Prevention of ligament and meniscus atrophy by active joint motion in a non-weight-bearing model. Journal of Orthopaedic Research, 1989, 7, 80-85.	1.2	44
53	Water content and equilibrium water partition in immature cartilage. Journal of Orthopaedic Research, 1988, 6, 766-769.	1.2	23
54	Mechanical response of articular cartilage to an oscillating load. Mechanics Research Communications, 1984, 11, 75-82.	1.0	29

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55	Movement of interstitial water through loaded articular cartilage. Journal of Biomechanics, 1983, 16, 169-179.	0.9	51
56	Equilibrium water partition in articular cartilage. Biorheology, 1982, 19, 519-537.	1.2	40