

Peter A Torzilli

List of Publications by Year in descending order

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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	Increased stromelysin-1 (MMP-3), proteoglycan degradation (3B3- and 7D4) and collagen damage in cyclically load-injured articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2004, 12, 485-496.	0.6	141
2	Gross, Histological, and Microvascular Anatomy and Biomechanical Testing of the Spring Ligament Complex. <i>Foot and Ankle International</i> , 1996, 17, 95-102.	1.1	140
3	Characterization of cartilage metabolic response to static and dynamic stress using a mechanical explant test system. <i>Journal of Biomechanics</i> , 1997, 30, 1-9.	0.9	139
4	Time, stress, and location dependent chondrocyte death and collagen damage in cyclically loaded articular cartilage. <i>Journal of Orthopaedic Research</i> , 2003, 21, 888-898.	1.2	132
5	Effect of proteoglycan removal on solute mobility in articular cartilage. <i>Journal of Biomechanics</i> , 1997, 30, 895-902.	0.9	107
6	Influence of stress rate on water loss, matrix deformation and chondrocyte viability in impacted articular cartilage. <i>Journal of Biomechanics</i> , 2005, 38, 493-502.	0.9	85
7	A new paradigm for mechanobiological mechanisms in tumor metastasis. <i>Seminars in Cancer Biology</i> , 2012, 22, 385-395.	4.3	68
8	Effect of Serum and Platelet-Derived Growth Factor on Chondrocytes Grown in Collagen Gels. <i>Tissue Engineering</i> , 1999, 5, 533-544.	4.9	63
9	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. <i>PLoS ONE</i> , 2013, 8, e69223.	1.1	63
10	Deformation-Dependent Enzyme Mechanokinetic Cleavage of Type I Collagen. <i>Journal of Biomechanical Engineering</i> , 2009, 131, 051004.	0.6	55
11	Movement of interstitial water through loaded articular cartilage. <i>Journal of Biomechanics</i> , 1983, 16, 169-179.	0.9	51
12	The effect of mechanical load on integrin subunits $\alpha 5$ and $\beta 1$ in chondrocytes from mature and immature cartilage explants. <i>Cell and Tissue Research</i> , 2004, 315, 385-391.	1.5	46
13	Prevention of ligament and meniscus atrophy by active joint motion in a non-weight-bearing model. <i>Journal of Orthopaedic Research</i> , 1989, 7, 80-85.	1.2	44
14	Dynamic contact stress patterns on the tibial plateaus during simulated gait: A novel application of normalized cross correlation. <i>Journal of Biomechanics</i> , 2014, 47, 568-574.	0.9	44
15	Equilibrium water partition in articular cartilage. <i>Biorheology</i> , 1982, 19, 519-537.	1.2	40
16	Measurement reproducibility of two commercial knee test devices. <i>Journal of Orthopaedic Research</i> , 1991, 9, 730-737.	1.2	40
17	Glycation cross-linking induced mechanical α enzymatic cleavage of microscale tendon fibers. <i>Matrix Biology</i> , 2014, 34, 179-184.	1.5	40
18	Photocrosslinked tyramine-substituted hyaluronate hydrogels with tunable mechanical properties improve immediate tissue-hydrogel interfacial strength in articular cartilage. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2017, 28, 582-600.	1.9	36

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19	Continuous cyclic load reduces proteoglycan release from articular cartilage. <i>Osteoarthritis and Cartilage</i> , 1998, 6, 260-268.	0.6	34
20	Influence of the pericellular and extracellular matrix structural properties on chondrocyte mechanics. <i>Journal of Orthopaedic Research</i> , 2018, 36, 721-729.	1.2	34
21	Effect of tissue maturity on cell viability in load-injured articular cartilage explants. <i>Osteoarthritis and Cartilage</i> , 2005, 13, 488-496.	0.6	31
22	Mechanical response of articular cartilage to an oscillating load. <i>Mechanics Research Communications</i> , 1984, 11, 75-82.	1.0	29
23	Effects of misoprostol and prostaglandin E2 on proteoglycan biosynthesis and loss in unloaded and loaded articular cartilage explants. <i>Prostaglandins</i> , 1996, 52, 157-173.	1.2	24
24	Water content and equilibrium water partition in immature cartilage. <i>Journal of Orthopaedic Research</i> , 1988, 6, 766-769.	1.2	23
25	A biphasic finite element study on the role of the articular cartilage superficial zone in confined compression. <i>Journal of Biomechanics</i> , 2015, 48, 166-170.	0.9	23
26	A biphasic multiscale study of the mechanical microenvironment of chondrocytes within articular cartilage under unconfined compression. <i>Journal of Biomechanics</i> , 2014, 47, 2721-2729.	0.9	22
27	Molecular simulations predict novel collagen conformations during cross-link loading. <i>Matrix Biology</i> , 2011, 30, 356-360.	1.5	21
28	Resurfacing damaged articular cartilage to restore compressive properties. <i>Journal of Biomechanics</i> , 2015, 48, 122-129.	0.9	20
29	Mechanical Loading of Cartilage Explants with Compression and Sliding Motion Modulates Gene Expression of Lubricin and Catabolic Enzymes. <i>Cartilage</i> , 2015, 6, 185-193.	1.4	19
30	A Model to Study Articular Cartilage Mechanical and Biological Responses to Sliding Loads. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2577-2588.	1.3	16
31	Mechanical Evaluation of Three Methods of Plating Distal Radial Osteotomies. <i>Veterinary Surgery</i> , 1992, 21, 99-106.	0.5	15
32	A new pressure chamber to study the biosynthetic response of articular cartilage to mechanical loading. <i>Research in Experimental Medicine</i> , 1993, 193, 137-142.	0.7	15
33	Shape of chondrocytes within articular cartilage affects the solid but not the fluid microenvironment under unconfined compression. <i>Acta Biomaterialia</i> , 2016, 29, 170-179.	4.1	15
34	Effect of interface mechanical discontinuities on scaffold-cartilage integration. <i>Journal of Orthopaedic Research</i> , 2019, 37, 845-854.	1.2	12
35	Use of novel chitosan hydrogels for chemical tissue bonding of autologous chondral transplants. <i>Journal of Orthopaedic Research</i> , 2016, 34, 1139-1146.	1.2	6
36	Light Absorptive Properties of Articular Cartilage, ECM Molecules, Synovial Fluid, and Photoinitiators as Potential Barriers to Light-Initiated Polymer Scaffolding Procedures. <i>Cartilage</i> , 2019, 10, 82-93.	1.4	6

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37	Effect of Articular Surface Compression on Cartilage Extracellular Matrix Deformation. Journal of Biomechanical Engineering, 2022, 144, .	0.6	6
38	Articular cartilage response to a sliding load using two different-sized spherical indenters 1. Biorheology, 2018, 54, 109-126.	1.2	4
39	In Vitro Cartilage Explant Injury Models. , 2015, , 29-40.		3
40	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
41	Strain Is the Major Factor for Chondrocyte Death in Articular Cartilage Under Static Load. , 2003, , .		2
42	Collagen peptide simulated bending after applied axial deformation. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 108, 103835.	1.5	1
43	Squeeze-film properties of synovial fluid and hyaluronate-based viscosupplements. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1919-1940.	1.4	1
44	Chondrocyte Death in Articular Cartilage Due to Excessive Mechanical Loading in the Axial and Transverse Directions. , 2002, , .		1
45	Letters to the editors. Journal of Orthopaedic Research, 1995, 13, 642-642.	1.2	0
46	Collagen Molecular Conformation Exhibits Strain-Rate Dependent Response to Axial Deformation in Silico. , 2009, , .		0
47	In Silico Molecular Modeling of Collagen Crosslink Loading. , 2011, , .		0
48	Hypo-Osmolarity Decreases the Ability of Cells in Articular Cartilage to Survive a Load-Induced Injury. , 2003, , .		0
49	Deformation-Dependent Enzyme Cleavage of Collagen. , 2007, , .		0
50	Load Down-Regulates TNF-Alpha Induced Cartilage Degradation in Part Through NF-KB and P38 Pathways. , 2007, , .		0
51	Leukocytes Cause Inflammatory Response to Traumatized Articular Cartilage in Acute Phase of Joint Injury. , 2007, , .		0
52	A Novel Joint Loading System to Investigate the Effect of Daily Mechanical Load on a Healing Anterior Cruciate Ligament (ACL) Reconstruction. , 2009, , .		0
53	Covalent Cross-Linking Accelerates Collagen Enzyme Mechano-Kinetic Cleavage: Nanomechanics Predicts Microscale Behavior. , 2012, , .		0
54	Development of an In Vitro Cartilage Degradation Model to Emulate Early-Stage Osteoarthritis. , 2012, , .		0

#	ARTICLE	IF	CITATIONS
55	Development of an In Vivo Rabbit Model for Cartilage Trauma: Influence of Impact Stress Magnitude on Chondrocyte Death. , 2001, , .		0
56	Thermal Modification of Collagen. , 1999, , .		0