Thomas B. Kirk

List of Publications by Year
in descending order

61	2,104	236612	243296
papers	citations	25 h-index	44 g-index

61	61	61	2944
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Muscle and external load contribution to knee joint contact loads during normal gait. Journal of Biomechanics, 2009, 42, 2294-2300.	0.9	298
2	Green synthesis of lignin nanoparticle in aqueous hydrotropic solution toward broadening the window for its processing and application. Chemical Engineering Journal, 2018, 346, 217-225.	6.6	146
3	Programmable mechanical stimulation influences tendon homeostasis in a bioreactor system. Biotechnology and Bioengineering, 2013, 110, 1495-1507.	1.7	99
4	A polyamidoamne dendrimer functionalized graphene oxide for DOX and MMP-9 shRNA plasmid co-delivery. Materials Science and Engineering C, 2017, 70, 572-585.	3.8	91
5	Evaluation of different analytical methods for subject-specific scaling of musculotendon parameters. Journal of Biomechanics, 2008, 41, 1682-1688.	0.9	86
6	Star-Shaped Amphiphilic Hyperbranched Polyglycerol Conjugated with Dendritic Poly(<scp>l</scp>-lysine) for the Codelivery of Docetaxel and MMP-9 siRNA in Cancer Therapy. ACS Applied Materials & Interfaces, 2016, 8, 12609-12619.	4.0	82
7	Bioreactor Design for Tendon/Ligament Engineering. Tissue Engineering - Part B: Reviews, 2013, 19, 133-146.	2.5	79
8	Reduction-Responsive Codelivery System Based on a Metalâ€“Organic Framework for Eliciting Potent Cellular Immune Response. ACS Applied Materials & Interfaces, 2018, 10, 12463-12473.	4.0	73
9	Injectable supramolecular hydrogel formed from Î±-cyclodextrin and PEGylated arginine-functionalized poly(l-lysine) dendron for sustained MMP-9 shRNA plasmid delivery. Acta Biomaterialia, 2017, 49, 456-471.	4.1	70
10	Three-dimensional printing of shape memory hydrogels with internal structure for drug delivery. Materials Science and Engineering C, 2018, 84, 44-51.	3.8	69
11	Computer image analysis of wear particles in three-dimensions for machine condition monitoring. Wear, 1998, 223, 157-166.	1.5	63
12	Matrixâ€induced autologous chondrocyte implantation in sheep: objective assessments including confocal arthroscopy. Journal of Orthopaedic Research, 2008, 26, 292-303.	1.2	61
13	Confocal laser scanning microscopy in orthopaedic research. Progress in Histochemistry and Cytochemistry, 2005, 40, 1-71.	5.1	57
14	Study of the collagen structure in the superficial zone and physiological state of articular cartilage using a 3D confocal imaging technique. Journal of Orthopaedic Surgery and Research, 2008, 3, 29.	0.9	57
15	High-resolution measurements of the multilayer ultra-structure of articular cartilage and their translational potential. Arthritis Research and Therapy, 2014, 16, 205.	1.6	49
16	Construction of a High-Efficiency Drug and Gene Co-Delivery System for Cancer Therapy from a pH-Sensitive Supramolecular Inclusion between Oligoethylenimine-graft-Î²-cyclodextrin and Hyperbranched Polyglycerol Derivative. ACS Applied Materials & Interfaces, 2018, 10, 35812-35829.	4.0	48
17	Fractal parameters and computer image analysis applied to wear particles isolated by ferrography. Wear, 1991, 145, 347-365.	1.5	46
18	Injectable and Self-Healing Hydrogels with Double-Dynamic Bond Tunable Mechanical, Gelâ€“Sol Transition and Drug Delivery Properties for Promoting Periodontium Regeneration in Periodontitis. ACS Applied Materials & Interfaces, 2021, 13, 61638-61652.	4.0	45

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19	Correlation between EMG-based co-activation measures and medial and lateral compartment loads of the knee during gait. Clinical Biomechanics, 2013, 28, 1014-1019.	0.5	44
20	Cyclic mechanical stimulation rescues achilles tendon from degeneration in a bioreactor system. Journal of Orthopaedic Research, 2015, 33, 1888-1896.	1.2	44
21	Hemostasis mechanism and applications of N-alkylated chitosan sponge. Polymers for Advanced Technologies, 2017, 28, 1107-1114.	1.6	41
22	Double network shape memory hydrogels activated by near-infrared with high mechanical toughness, nontoxicity, and 3D printability. Chemical Engineering Journal, 2019, 356, 934-949.	6.6	40
23	Three dimensional microstructural network of elastin, collagen, and cells in Achilles tendons. Journal of Orthopaedic Research, 2017, 35, 1203-1214.	1.2	35
24	Microstructural analysis of collagen and elastin fibres in the kangaroo articular cartilage reveals a structural divergence depending on its local mechanical environment. Osteoarthritis and Cartilage, 2013, 21, 237-245.	0.6	27
25	Biocompatible hyperbranched polyglycerol modified Î²-cyclodextrin derivatives for docetaxel delivery. Materials Science and Engineering C, 2017, 71, 965-972.	3.8	27
26	Computer image analysis of wear debris for machine condition monitoring and fault diagnosis. Wear, 1995, 181-183, 717-722.	1.5	26
27	Elastin fibers display a versatile microfibril network in articular cartilage depending on the mechanical microenvironments. Journal of Orthopaedic Research, 2013, 31, 1345-1353.	1.2	23
28	Synthesis of Janus Au nanorods/polydivinylbenzene hybrid nanoparticles for chemo-photothermal therapy. Journal of Materials Chemistry B, 2018, 6, 2481-2488.	2.9	22
29	Laser scanning confocal arthroscopy of a fresh cadaveric knee joint. Osteoarthritis and Cartilage, 2007, 15, 1388-1396.	0.6	20
30	Numerical descriptors for the analysis of wear surfaces using laser scanning confocal microscopy. Wear, 1995, 181-183, 771-776.	1.5	19
31	Ferrography and fractal analysis of contamination particles in unused lubricating oils. Tribology International, 1991, 24, 329-334.	3.0	18
32	HISTOLOGICAL ASSESSMENT OF THE CHONDRAL AND CONNECTIVE TISSUES OF THE KNEE BY CONFOCAL ARTHROSCOPE. Journal of Musculoskeletal Research, 2004, 08, 75-86.	0.1	16
33	Protein kinase C delta null mice exhibit structural alterations in articular surface, intra-articular and subchondral compartments. Arthritis Research and Therapy, 2015, 17, 210.	1.6	13
34	A review of methods to measure tendon dimensions. Journal of Orthopaedic Surgery and Research, 2019, 14, 18.	0.9	13
35	Utilizing confocal microscopy to measure refractive index of articular cartilage. Journal of Microscopy, 2012, 248, 281-291.	0.8	12
36	Microstructural and Compositional Features of the Fibrous and Hyaline Cartilage on the Medial Tibial Plateau Imply a Unique Role for the Hopping Locomotion of Kangaroo. PLoS ONE, 2013, 8, e74303.	1.1	11

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37	Application of confocal, SHG and atomic force microscopy for characterizing the structure of the most superficial layer of articular cartilage. Journal of Microscopy, 2019, 275, 159-171.	0.8	11
38	QUANTIFICATION OF CHONDROCYTE MORPHOLOGY BY CONFOCAL ARTHROSCOPY. Journal of Musculoskeletal Research, 2004, 08, 145-154.	0.1	9
39	The development of confocal arthroscopy as optical histology for rotator cuff tendinopathy. Journal of Microscopy, 2015, 259, 269-275.	0.8	9
40	ASSESSMENT OF THREE-DIMENSIONAL ARCHITECTURE OF COLLAGEN FIBERS IN THE SUPERFICIAL ZONE OF BOVINE ARTICULAR CARTILAGE. Journal of Musculoskeletal Research, 2004, 08, 167-179.	0.1	8
41	UTILIZATION OF TWO-DIMENSIONAL FAST FOURIER TRANSFORM AND POWER SPECTRAL ANALYSIS FOR ASSESSMENT OF EARLY DEGENERATION OF ARTICULAR CARTILAGE. Journal of Musculoskeletal Research, 2005, 09, 119-131.	0.1	8
42	Depth-dependent refractive index of normal and early degenerated articular cartilage. Journal of Biomedical Optics, 2013, 18, 105003.	1.4	8
43	The Study of Three-Dimensional Analysis Techniques and Automatic Classification Systems for Wear Particles. Journal of Tribology, 1999, 121, 169-176.	1.0	7
44	Redox-responsive chemosensitive polyspermine delivers ursolic acid targeting to human breast tumor cells: The depletion of intracellular GSH contents arouses chemosensitizing effects. Colloids and Surfaces B: Biointerfaces, 2018, 170, 293-302.	2.5	7
45	Confocal arthroscopy-based patient-specific constitutive models of cartilaginous tissuesâ€”I: development of a microstructural model. Computer Methods in Biomechanics and Biomedical Engineering, 2007, 10, 307-316.	0.9	6
46	Structured white light scanning of rabbit Achilles tendon. Journal of Biomechanics, 2016, 49, 3753-3758.	0.9	6
47	Characterizing depth-dependent refractive index of articular cartilage subjected to mechanical wear or enzymic degeneration. Journal of Biomedical Optics, 2016, 21, 095002.	1.4	6
48	Highâ€resolution study of the 3D collagen fibrillary matrix of Achilles tendons without tissue labelling and dehydrating. Journal of Microscopy, 2017, 266, 273-287.	0.8	6
49	Confocal Arthroscopic Assessment of Osteoarthritis In Situ. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2008, 24, 423-429.	1.3	5
50	Texture analysis of the 3D collagen network and automatic classification of the physiology of articular cartilage. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 931-943.	0.9	5
51	A multiscale study of morphological changes in tendons following repeated cyclic loading. Journal of Biomechanics, 2021, 128, 110790.	0.9	5
52	Contribution of glycosaminoglycans to the structural and mechanical properties of tendons â€“ A multiscale study. Journal of Biomechanics, 2021, 128, 110796.	0.9	5
53	Confocal arthroscopy-based patient-specific constitutive models of cartilaginous tissuesâ€”II: prediction of reaction force history of meniscal cartilage specimens. Computer Methods in Biomechanics and Biomedical Engineering, 2007, 10, 327-336.	0.9	4
54	Pull-out strength comparison of a novel expanding fastener against an orthopaedic screw in an ovine vertebral body: anex-vivostudy. Journal of Medical Engineering and Technology, 2016, 40, 43-51.	0.8	4

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55	The influence of glycosaminoglycan proteoglycan side chains on tensile force transmission and the nanostructural properties of Achilles tendons. Microscopy Research and Technique, 2022, 85, 233-243.	1.2	4
56	Identifying Collagen Bundles in the Most Superficial Layer of Normal Articular Cartilage. , 2009, , .		3
57	An AFM study of the nanostructural response of New Zealand white rabbit Achilles tendons to cyclic loading. Microscopy Research and Technique, 2022, 85, 728-737.	1.2	3
58	QUANTITATIVE CHARACTERIZATION OF COLLAGEN ORIENTATION IN THE SUPERFICIAL ZONE FOR STUDYING EARLY DEGENERATIVE CHANGES IN ARTICULAR CARTILAGE. Journal of Musculoskeletal Research, 2006, 10, 1-12.	0.1	2
59	Rotated Hough Filtering for Automatically Distinguishing the Collagen Bundles in the Most Superficial Layer of Articular Cartilage. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 922-927.	3.9	2
60	Corrigendum to â€œMicrostructural analysis of collagen and elastin fibres in the kangaroo articular cartilage reveals a structural divergence depending on its local mechanical environmentâ€• [Osteoarthritis and Cartilage 2013; 21:237â€“245]. Osteoarthritis and Cartilage, 2013, 21, 782.	0.6	1
61	Influence of bone morphological properties on a new expandable orthopaedic fastener. Journal of Physics: Conference Series, 2016, 694, 012064.	0.3	0