

Simo J Saarakkala

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

192
papers

3,985
citations

34
h-index

53
g-index

247
ext. papers

4,854
ext. citations

3.6
avg, IF

5.57
L-index

#	Paper	IF	Citations
192	Preprocessing Strategies for Sparse Infrared Spectroscopy: A Case Study on Cartilage Diagnostics.. <i>Molecules</i> , 2022 , 27,	4.8	2
191	Changes in subchondral bone structure and mechanical properties do not substantially affect cartilage mechanical responses - A finite element study.. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022 , 128, 105129	4.1	0
190	Machine learning based texture analysis of patella from X-rays for detecting patellofemoral osteoarthritis. <i>International Journal of Medical Informatics</i> , 2022 , 157, 104627	5.3	4
189	Rapid X-Ray-Based 3-D Finite Element Modeling of Medial Knee Joint Cartilage Biomechanics During Walking.. <i>Annals of Biomedical Engineering</i> , 2022 , 1	4.7	
188	Subchondral bone plate thickness is associated with micromechanical and microstructural changes in the bovine patella osteochondral junction with different levels of cartilage degeneration.. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022 , 129, 105158	4.1	0
187	Early changes in osteochondral tissues in a rabbit model of post-traumatic osteoarthritis. <i>Journal of Orthopaedic Research</i> , 2021 , 39, 2556-2567	3.8	2
186	Automated analysis of rabbit knee calcified cartilage morphology using micro-computed tomography and deep learning. <i>Journal of Anatomy</i> , 2021 , 239, 251-263	2.9	2
185	Medical Physics and Imaging: A Timely Perspective. <i>Frontiers in Physics</i> , 2021 , 9,	3.9	2
184	Discrimination of Low-Energy Acetabular Fractures from Controls Using Computed Tomography-Based Bone Characteristics. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 367-381	4.7	3
183	The effect of body configuration on the strain magnitude and distribution within the acetabulum during sideways falls: A finite element approach. <i>Journal of Biomechanics</i> , 2021 , 114, 110156	2.9	3
182	Mineralization of dental tissues and caries lesions detailed with Raman microspectroscopic imaging. <i>Analyst, The</i> , 2021 , 146, 1705-1713	5	7
181	Integrin $\alpha 11$ is a receptor for collagen XIII. <i>Cell and Tissue Research</i> , 2021 , 383, 1135-1153	4.2	3
180	Effect of Impact Velocity, Flooring Material, and Trochanteric Soft-Tissue Quality on Acetabular Fracture during a Sideways Fall: A Parametric Finite Element Approach. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 365	2.6	1
179	Infrared Fiber-Optic Spectroscopy Detects Bovine Articular Cartilage Degeneration. <i>Cartilage</i> , 2021 , 1947603521993221		
178	High-resolution infrared microspectroscopic characterization of cartilage cell microenvironment. <i>Acta Biomaterialia</i> , 2021 , 134, 252-260	10.8	0
177	Trabecular bone texture analysis of conventional radiographs in the assessment of knee osteoarthritis: review and viewpoint. <i>Arthritis Research and Therapy</i> , 2021 , 23, 208	5.7	3
176	Ultrasonographic Assessment of the Normal Femoral Articular Cartilage of the Knee Joint: Comparison with 3D MRI. <i>Scientific World Journal, The</i> , 2021 , 2021, 9978819	2.2	0

175	Elastic, Dynamic Viscoelastic and Model-Derived Fibril-Reinforced Poroelastic Mechanical Properties of Normal and Osteoarthritic Human Femoral Condyle Cartilage. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 2622-2634	4.7	1
174	Automated detection of patellofemoral osteoarthritis from knee lateral view radiographs using deep learning: data from the Multicenter Osteoarthritis Study (MOST). <i>Osteoarthritis and Cartilage</i> , 2021 , 29, 1432-1447	6.2	4
173	Raman spectroscopy is sensitive to biochemical changes related to various cartilage injuries. <i>Journal of Raman Spectroscopy</i> , 2021 , 52, 796-804	2.3	1
172	Automatic grading of individual knee osteoarthritis features in plain radiographs using deep convolutional neural networks. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, S308	6.2	6
171	Deep semi-supervised learning for knee osteoarthritis severity assessment from plain radiographs. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, S311-S312	6.2	2
170	State of the Art: Imaging of Osteoarthritis-Revisited 2020. <i>Radiology</i> , 2020 , 296, 5-21	20.5	27
169	Relating MR relaxation times of meniscus to tissue degeneration through comparison with histopathology. <i>Osteoarthritis and Cartilage Open</i> , 2020 , 2, 100061-100061	1.5	
168	Bright ultrashort echo time SWIFT MRI signal at the osteochondral junction is not located in the calcified cartilage. <i>Journal of Orthopaedic Research</i> , 2020 , 38, 2649-2656	3.8	2
167	Machine Learning Classification of Articular Cartilage Integrity Using Near Infrared Spectroscopy. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 219-228	3.9	12
166	Development of osteoarthritis in patients with degenerative meniscal tears treated with exercise therapy or surgery: a randomized controlled trial. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 897-906	6.2	9
165	Nanotechnological Strategies for Osteoarthritis Diagnosis, Monitoring, Clinical Management, and Regenerative Medicine: Recent Advances and Future Opportunities. <i>Current Rheumatology Reports</i> , 2020 , 22, 12	4.9	23
164	Multiparametric MR imaging reveals early cartilage degeneration at 2 and 8 weeks after ACL transection in a rabbit model. <i>Journal of Orthopaedic Research</i> , 2020 , 38, 1974-1986	3.8	4
163	Raman microspectroscopic analysis of the tissue-specific composition of the human osteochondral junction in osteoarthritis: A pilot study. <i>Acta Biomaterialia</i> , 2020 , 106, 145-155	10.8	12
162	Near Infrared Spectroscopy Enables Differentiation of Mechanically and Enzymatically Induced Cartilage Injuries. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2343-2353	4.7	6
161	A Lightweight CNN and Joint Shape-Joint Space (JS^2) Descriptor for Radiological Osteoarthritis Detection. <i>Communications in Computer and Information Science</i> , 2020 , 331-345	0.3	3
160	Clinical Contrast-Enhanced Computed Tomography With Semi-Automatic Segmentation Provides Feasible Input for Computational Models of the Knee Joint. <i>Journal of Biomechanical Engineering</i> , 2020 , 142,	2.1	1
159	Deep-Learning for Tidemark Segmentation in Human Osteochondral Tissues Imaged with Micro-computed Tomography. <i>Lecture Notes in Computer Science</i> , 2020 , 131-138	0.9	3
158	Automating three-dimensional osteoarthritis histopathological grading of human osteochondral tissue using machine learning on contrast-enhanced micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 1133-1144	6.2	5

157	Association between grayscale sonographic and clinical findings in severe knee osteoarthritis. <i>Journal of Clinical Ultrasound</i> , 2020 , 48, 75-81	1	0
156	Anterior cruciate ligament transection of rabbits alters composition, structure and biomechanics of articular cartilage and chondrocyte deformation 2 weeks post-surgery in a site-specific manner. <i>Journal of Biomechanics</i> , 2020 , 98, 109450	2.9	11
155	Automatic Grading of Individual Knee Osteoarthritis Features in Plain Radiographs Using Deep Convolutional Neural Networks. <i>Diagnostics</i> , 2020 , 10,	3.8	16
154	Rapid CT-based Estimation of Articular Cartilage Biomechanics in the Knee Joint Without Cartilage Segmentation. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2965-2975	4.7	6
153	Structure-Function Relationships of Healthy and Osteoarthritic Human Tibial Cartilage: Experimental and Numerical Investigation. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2887-2900	4.7	10
152	Semixup: In- and Out-of-Manifold Regularization for Deep Semi-Supervised Knee Osteoarthritis Severity Grading From Plain Radiographs. <i>IEEE Transactions on Medical Imaging</i> , 2020 , 39, 4346-4356	11.7	7
151	. <i>IEEE Sensors Journal</i> , 2020 , 20, 143-148	4	3
150	Quantifying Subresolution 3D Morphology of Bone with Clinical Computed Tomography. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 595-605	4.7	4
149	Adaptive segmentation of knee radiographs for selecting the optimal ROI in texture analysis. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 941-952	6.2	6
148	Elastic, Viscoelastic and Fibril-Reinforced Poroelastic Material Properties of Healthy and Osteoarthritic Human Tibial Cartilage. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 953-966	4.7	17
147	Collagen XIII-derived ectodomain regulates bone angiogenesis and intracortical remodeling. <i>Matrix Biology</i> , 2019 , 83, 6-25	11.4	11
146	Anterior cruciate ligament transection alters the n-3/n-6 fatty acid balance in the lapine infrapatellar fat pad. <i>Lipids in Health and Disease</i> , 2019 , 18, 67	4.4	10
145	Automatic knee cartilage and menisci segmentation from 3D-DESS MRI using deep semi-supervised learning. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, S390-S391	6.2	2
144	Predicting total knee replacement from ultrasound using machine learning. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, S360-S361	6.2	2
143	Quantifying Complex Micro-Topography of Degenerated Articular Cartilage Surface by Contrast-Enhanced Micro-Computed Tomography and Parametric Analyses. <i>Journal of Orthopaedic Research</i> , 2019 , 37, 855-866	3.8	4
142	Quantitative Assessment of Osteoarthritic Knee Instability: Comparison with Conventional Imaging Modalities. <i>IFMBE Proceedings</i> , 2019 , 703-708	0.2	1
141	An Automatic Regularization Method: An Application for 3-D X-Ray Micro-CT Reconstruction Using Sparse Data. <i>IEEE Transactions on Medical Imaging</i> , 2019 , 38, 417-425	11.7	4
140	Three-dimensional microstructure of human meniscus posterior horn in health and osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 1790-1799	6.2	6

139	Structural risk factors for low-energy acetabular fractures. <i>Bone</i> , 2019 , 127, 334-342	4.7	4
138	WS and MoS thin film gas sensors with high response to NH in air at low temperature. <i>Nanotechnology</i> , 2019 , 30, 405501	3.4	52
137	Histochemical quantification of collagen content in articular cartilage. <i>PLoS ONE</i> , 2019 , 14, e0224839	3.7	19
136	Recent advances in understanding the phenotypes of osteoarthritis. <i>F1000Research</i> , 2019 , 8,	3.6	45
135	Bone Density and Texture from Minimally Post-Processed Knee Radiographs in Subjects with Knee Osteoarthritis. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 1181-1190	4.7	7
134	KNEEL: Knee Anatomical Landmark Localization Using Hourglass Networks 2019 ,		7
133	Improving Robustness of Deep Learning Based Knee MRI Segmentation: Mixup and Adversarial Domain Adaptation 2019 ,		24
132	Multimodal Machine Learning-based Knee Osteoarthritis Progression Prediction from Plain Radiographs and Clinical Data. <i>Scientific Reports</i> , 2019 , 9, 20038	4.9	61
131	Localized delivery of compounds into articular cartilage by using high-intensity focused ultrasound. <i>Scientific Reports</i> , 2019 , 9, 15937	4.9	1
130	Osteoarthritis year in review 2018: imaging. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 401-411	6.2	19
129	Effect of centrifugal force on the development of articular neocartilage with bovine primary chondrocytes. <i>Cell and Tissue Research</i> , 2019 , 375, 629-639	4.2	
128	3D morphometric analysis of calcified cartilage properties using micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 172-180	6.2	10
127	Trabecular and subchondral bone development of the talus and distal tibia from foal to adult in the warmblood horse. <i>Journal of Veterinary Medicine Series C: Anatomia Histologia Embryologia</i> , 2018 , 47, 206-215	1.1	4
126	Quantitative susceptibility mapping of articular cartilage: Ex vivo findings at multiple orientations and following different degradation treatments. <i>Magnetic Resonance in Medicine</i> , 2018 , 80, 2702-2716	4.4	15
125	Automatic Knee Osteoarthritis Diagnosis from Plain Radiographs: A Deep Learning-Based Approach. <i>Scientific Reports</i> , 2018 , 8, 1727	4.9	192
124	Clinimetrics of ultrasound pathologies in osteoarthritis: systematic literature review and meta-analysis. <i>Osteoarthritis and Cartilage</i> , 2018 , 26, 601-611	6.2	20
123	Estimation of the Effect of Body Weight on the Development of Osteoarthritis Based on Cumulative Stresses in Cartilage: Data from the Osteoarthritis Initiative. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 334-344	4.7	9
122	Load-dependent NMR low-field profiling and relaxation dispersion study of osteoarthritic articular cartilage. <i>Microporous and Mesoporous Materials</i> , 2018 , 269, 160-165	5.3	2

121	Variable angle gray level co-occurrence matrix analysis of T relaxation time maps reveals degenerative changes of cartilage in knee osteoarthritis: Oulu knee osteoarthritis study. <i>Journal of Magnetic Resonance Imaging</i> , 2018 , 47, 1316-1327	5.6	10
120	Site-specific glycosaminoglycan content is better maintained in the pericellular matrix than the extracellular matrix in early post-traumatic osteoarthritis. <i>PLoS ONE</i> , 2018 , 13, e0196203	3.7	14
119	Composition, structure and tensile biomechanical properties of equine articular cartilage during growth and maturation. <i>Scientific Reports</i> , 2018 , 8, 11357	4.9	20
118	Alterations in structural macromolecules and chondrocyte deformations in lapine retropatellar cartilage 9 weeks after anterior cruciate ligament transection. <i>Journal of Orthopaedic Research</i> , 2018 , 36, 342-350	3.8	7
117	Deep Learning Classification of Cartilage Integrity Using Near Infrared Spectroscopy 2018 ,		2
116	Early arthritis induces disturbances at bone nanostructural level reflected in decreased tissue hardness in an animal model of arthritis. <i>PLoS ONE</i> , 2018 , 13, e0190920	3.7	7
115	Volumetric Assessment of Bone Microstructures by a 3D Local Binary Patterns Based Method: Bone Changes with Osteoarthritis. <i>IFMBE Proceedings</i> , 2018 , 900-903	0.2	1
114	Low-Field NMR Relaxation Times Distributions and Their Magnetic Field Dependence as a Possible Biomarker in Cartilage. <i>IFMBE Proceedings</i> , 2018 , 952-955	0.2	2
113	Cellulose nanofiber aerogels impregnated with bio-based epoxy using vacuum infusion: Structure, orientation and mechanical properties. <i>Composites Science and Technology</i> , 2018 , 155, 64-71	8.6	35
112	Effects of tofacitinib in early arthritis-induced bone loss in an adjuvant-induced arthritis rat model. <i>Rheumatology</i> , 2018 , 57, 1461-1471	3.9	20
111	Delivery of Agents Into Articular Cartilage With Electric Spark-Induced Sound Waves. <i>Frontiers in Physics</i> , 2018 , 6,	3.9	1
110	Ultrasonography of the late-stage knee osteoarthritis prior to total knee arthroplasty: comparison of the ultrasonographic, radiographic and intra-operative findings. <i>Scientific Reports</i> , 2018 , 8, 17742	4.9	10
109	Comparison of bone texture between normal individuals and patients with Kashin-Beck disease from plain radiographs in knee. <i>Scientific Reports</i> , 2018 , 8, 17510	4.9	4
108	Method for Segmentation of Knee Articular Cartilages Based on Contrast-Enhanced CT Images. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 1756-1767	4.7	6
107	Iterative and discrete reconstruction in the evaluation of the rabbit model of osteoarthritis. <i>Scientific Reports</i> , 2018 , 8, 12051	4.9	4
106	In vitro method for 3D morphometry of human articular cartilage chondrons based on micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2018 , 26, 1118-1126	6.2	9
105	Raccoon dog model shows preservation of bone during prolonged catabolism and reduced physical activity. <i>Journal of Experimental Biology</i> , 2017 , 220, 2196-2202	3	2
104	Differences in tibial subchondral bone structure evaluated using plain radiographs between knees with and without cartilage damage or bone marrow lesions - the Oulu Knee Osteoarthritis study. <i>European Radiology</i> , 2017 , 27, 4874-4882	8	13

103	Elevated adiabatic T and T ₂ in articular cartilage are associated with cartilage and bone lesions in early osteoarthritis: A preliminary study. <i>Journal of Magnetic Resonance Imaging</i> , 2017 , 46, 678-689	5.6	16
102	Structure-symptom relationship with wide-area ultrasound scanning of knee osteoarthritis. <i>Scientific Reports</i> , 2017 , 7, 44470	4.9	6
101	Infrared microspectroscopic determination of collagen cross-links in articular cartilage. <i>Journal of Biomedical Optics</i> , 2017 , 22, 35007	3.5	6
100	Structure-function relationships of human meniscus. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017 , 67, 51-60	4.1	27
99	Effect of celastrol on bone structure and mechanics in arthritic rats. <i>RMD Open</i> , 2017 , 3, e000438	5.9	18
98	Reversible Data Hiding in FTIR Microspectroscopy Images with Tamper Indication and Payload Error Correction. <i>BioMed Research International</i> , 2017 , 2017, 7584852	3	1
97	Subchondral bone histology and grading in osteoarthritis. <i>PLoS ONE</i> , 2017 , 12, e0173726	3.7	53
96	Combination of optical coherence tomography and near infrared spectroscopy enhances determination of articular cartilage composition and structure. <i>Scientific Reports</i> , 2017 , 7, 10586	4.9	13
95	Simulation of Subject-Specific Progression of Knee Osteoarthritis and Comparison to Experimental Follow-up Data: Data from the Osteoarthritis Initiative. <i>Scientific Reports</i> , 2017 , 7, 9177	4.9	30
94	Application of a semi-automatic cartilage segmentation method for biomechanical modeling of the knee joint. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017 , 20, 1453-1463	2.1	22
93	Orientation anisotropy of quantitative MRI relaxation parameters in ordered tissue. <i>Scientific Reports</i> , 2017 , 7, 9606	4.9	33
92	Correlations of low-field NMR and variable-field NMR parameters with osteoarthritis in human articular cartilage under load. <i>NMR in Biomedicine</i> , 2017 , 30, e3738	4.4	5
91	Laser-ultrasonic delivery of agents into articular cartilage. <i>Scientific Reports</i> , 2017 , 7, 3991	4.9	4
90	Contrast-Enhanced Computed Tomography Enables Quantitative Evaluation of Tissue Properties at Intra-joint Regions in Cadaveric Knee Cartilage. <i>Cartilage</i> , 2017 , 8, 391-399	3	17
89	Association between subchondral bone structure and osteoarthritis histopathological grade. <i>Journal of Orthopaedic Research</i> , 2017 , 35, 785-792	3.8	56
88	Vibrational spectroscopy of articular cartilage. <i>Applied Spectroscopy Reviews</i> , 2017 , 52, 249-266	4.5	28
87	Micro-Scale Distribution of CA4+ in Ex vivo Human Articular Cartilage Detected with Contrast-Enhanced Micro-Computed Tomography Imaging. <i>Frontiers in Physics</i> , 2017 , 5,	3.9	8
86	Effects of Articular Cartilage Constituents on Phosphotungstic Acid Enhanced Micro-Computed Tomography. <i>PLoS ONE</i> , 2017 , 12, e0171075	3.7	20

85	A Novel Method for Automatic Localization of Joint Area on Knee Plain Radiographs. <i>Lecture Notes in Computer Science</i> , 2017 , 290-301	0.9	19
84	Automatic Segmentation of Bone Tissue from Computed Tomography Using a Volumetric Local Binary Patterns Based Method. <i>Lecture Notes in Computer Science</i> , 2017 , 221-232	0.9	
83	Comparison of different material models of articular cartilage in 3D computational modeling of the knee: Data from the Osteoarthritis Initiative (OAI). <i>Journal of Biomechanics</i> , 2016 , 49, 3891-3900	2.9	29
82	Optical coherence tomography enables accurate measurement of equine cartilage thickness for determination of speed of sound. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2016 , 87, 418-24	4.3	5
81	Cationic Contrast Agent Diffusion Differs Between Cartilage and Meniscus. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 2913-2921	4.7	15
80	Correlation of Subchondral Bone Density and Structure from Plain Radiographs with Micro Computed Tomography Ex Vivo. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 1698-709	4.7	17
79	Association between quantitative MRI and ICRS arthroscopic grading of articular cartilage. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2016 , 24, 2046-54	5.5	24
78	Bone healing in rabbit calvarial critical-sized defects filled with stem cells and growth factors combined with granular or solid scaffolds. <i>Childs Nervous System</i> , 2016 , 32, 681-8	1.7	14
77	Micro-CT Analysis of Bone Healing in Rabbit Calvarial Critical-Sized Defects with Solid Bioactive Glass, Tricalcium Phosphate Granules or Autogenous Bone. <i>Journal of Oral & Maxillofacial Research</i> , 2016 , 7, e4	2.1	13
76	Imaging of subchondral bone by optical coherence tomography upon optical clearing of articular cartilage. <i>Journal of Biophotonics</i> , 2016 , 9, 270-5	3.1	26
75	Comparison of Diagnostic Performance of Semi-Quantitative Knee Ultrasound and Knee Radiography with MRI: Oulu Knee Osteoarthritis Study. <i>Scientific Reports</i> , 2016 , 6, 22365	4.9	42
74	Delivering Agents Locally into Articular Cartilage by Intense MHz Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 2259-65	3.5	11
73	Multiparametric MRI assessment of human articular cartilage degeneration: Correlation with quantitative histology and mechanical properties. <i>Magnetic Resonance in Medicine</i> , 2015 , 74, 249-259	4.4	45
72	Determining collagen distribution in articular cartilage using contrast-enhanced micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2015 , 23, 1613-21	6.2	46
71	Local Binary Patterns to Evaluate Trabecular Bone Structure from Micro-CT Data: Application to Studies of Human Osteoarthritis. <i>Lecture Notes in Computer Science</i> , 2015 , 63-79	0.9	4
70	Quantification of differences in bone texture from plain radiographs in knees with and without osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2014 , 22, 1724-31	6.2	31
69	Ultrasound arthroscopy of human knee cartilage and subchondral bone in vivo. <i>Ultrasound in Medicine and Biology</i> , 2014 , 40, 2039-47	3.5	30
68	Assessment of risk of femoral neck fracture with radiographic texture parameters: a retrospective study. <i>Radiology</i> , 2014 , 272, 184-91	20.5	22

67	Cell-tissue interactions in osteoarthritic human hip joint articular cartilage. <i>Connective Tissue Research</i> , 2014 , 55, 282-91	3.3	7
66	Optimal variable selection for Fourier transform infrared spectroscopic analysis of articular cartilage composition. <i>Journal of Biomedical Optics</i> , 2014 , 19, 027003	3.5	11
65	Assessment of myocardial perfusion with MRI using a modified dual bolus method. <i>Physiological Measurement</i> , 2014 , 35, 533-47	2.9	2
64	Dependence of light attenuation and backscattering on collagen concentration and chondrocyte density in agarose scaffolds. <i>Physics in Medicine and Biology</i> , 2014 , 59, 6537-48	3.8	5
63	Comparison of nonlinear mechanical properties of bovine articular cartilage and meniscus. <i>Journal of Biomechanics</i> , 2014 , 47, 200-6	2.9	53
62	Standard radiography: untapped potential in the assessment of osteoporotic fracture risk. <i>European Radiology</i> , 2013 , 23, 1375-82	8	8
61	In vivo comparison of delayed gadolinium-enhanced MRI of cartilage and delayed quantitative CT arthrography in imaging of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2013 , 21, 434-42	6.2	33
60	Cluster analysis of infrared spectra can differentiate intact and repaired articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2013 , 21, 462-9	6.2	12
59	Infrared spectroscopic analysis of human and bovine articular cartilage proteoglycans using carbohydrate peak or its second derivative. <i>Journal of Biomedical Optics</i> , 2013 , 18, 097006	3.5	14
58	The effect of collagen degradation on chondrocyte volume and morphology in bovine articular cartilage following a hypotonic challenge. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013 , 12, 417-29 ⁸	3.8	12
57	Arthroscopic ultrasound technique for simultaneous quantitative assessment of articular cartilage and subchondral bone: an in vitro and in vivo feasibility study. <i>Ultrasound in Medicine and Biology</i> , 2013 , 39, 1460-8	3.5	25
56	Prediction of compressive stiffness of articular cartilage using Fourier transform infrared spectroscopy. <i>Journal of Biomechanics</i> , 2013 , 46, 1269-75	2.9	13
55	Trabecular homogeneity index derived from plain radiograph to evaluate bone quality. <i>Journal of Bone and Mineral Research</i> , 2013 , 28, 2584-91	6.3	14
54	In vivo quantitative ultrasound image analysis of femoral subchondral bone in knee osteoarthritis. <i>Scientific World Journal, The</i> , 2013 , 2013, 182562	2.2	5
53	Application of second derivative spectroscopy for increasing molecular specificity of Fourier transform infrared spectroscopic imaging of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 451-459	6.2	141
52	Clustering of infrared spectra reveals histological zones in intact articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 460-468	6.2	15
51	Diagnostic performance of knee ultrasonography for detecting degenerative changes of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 376-381	6.2	80
50	Age-related changes in organization and content of the collagen matrix in rabbit cortical bone. <i>Journal of Orthopaedic Research</i> , 2012 , 30, 435-42	3.8	14

49	Hypotonic challenge modulates cell volumes differently in the superficial zone of intact articular cartilage and cartilage explant. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012 , 11, 665-75	3.8	13
48	Fourier transform infrared spectroscopic imaging and multivariate regression for prediction of proteoglycan content of articular cartilage. <i>PLoS ONE</i> , 2012 , 7, e32344	3.7	34
47	Ultrasound evaluation of mechanical injury of bovine knee articular cartilage under arthroscopic control. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011 , 58, 148-55	3.2	24
46	Comparison between infrared and Raman spectroscopic analysis of maturing rabbit cortical bone. <i>Applied Spectroscopy</i> , 2011 , 65, 595-603	3.1	44
45	Optical spectral reflectance of human articular cartilage - relationships with tissue structure, composition and mechanical properties. <i>Biomedical Optics Express</i> , 2011 , 2, 1394-402	3.5	13
44	Structural and Compositional Changes in Peri- and Extracellular Matrix of Osteoarthritic Cartilage Modulate Chondrocyte Morphology. <i>Cellular and Molecular Bioengineering</i> , 2011 , 4, 484-494	3.9	13
43	Characterization of center frequency and bandwidth of broadband ultrasound reflected by the articular cartilage to subchondral bone interface. <i>Ultrasound in Medicine and Biology</i> , 2011 , 37, 112-21	3.5	14
42	Effects of optical beam angle on quantitative optical coherence tomography (OCT) in normal and surface degenerated bovine articular cartilage. <i>Physics in Medicine and Biology</i> , 2011 , 56, 491-509	3.8	13
41	Arthroscopic Ultrasound Assessment of Articular Cartilage in the Human Knee Joint: A Potential Diagnostic Method. <i>Cartilage</i> , 2011 , 2, 246-53	3	33
40	Quantification of stiffness change in degenerated articular cartilage using optical coherence tomography-based air-jet indentation. <i>Connective Tissue Research</i> , 2011 , 52, 433-43	3.3	8
39	Infrared spectroscopy reveals both qualitative and quantitative differences in equine subchondral bone during maturation. <i>Journal of Biomedical Optics</i> , 2010 , 15, 067003	3.5	6
38	Ability of ultrasound imaging to detect erosions in a bone phantom model. <i>Annals of the Rheumatic Diseases</i> , 2010 , 69, 1618-22	2.4	11
37	Specificity of Fourier Transform Infrared (FTIR) Microspectroscopy to Estimate Depth-Wise Proteoglycan Content in Normal and Osteoarthritic Human Articular Cartilage. <i>Cartilage</i> , 2010 , 1, 262-9	3	24
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