Yang Xia

List of Publications by Year
in descending order

106 papers	3,493 citations	159585 30 h-index	155660 55 g-index
107 all docs	107 docs citations	107 times ranked	2175 citing authors

#	Article	IF	Citations
1	The interface region between articular cartilage and bone by <scp>Î¼MRI</scp> and <scp>PLM</scp> at microscopic resolutions. Microscopy Research and Technique, 2022, 85, 1483-1493.	2.2	3
2	Structural differences between immature and mature articular cartilage of rabbits by microscopic MRI and polarized light microscopy. Journal of Anatomy, 2022, 240, 1141-1151.	1.5	3
3	Location-Specific Study of Young Rabbit Femoral Cartilage by Quantitative ÂµMRI and Polarized Light Microscopy. Cartilage, 2022, 13, 194760352210851.	2.7	0
4	Determining the internal orientation, degree of ordering, and volume of elongated nanocavities by NMR: Application to studies of plant stem. Journal of Magnetic Resonance, 2022, 341, 107258.	2.1	4
5	Structural Morphology of Rabbit Patella and Suprapatella Cartilage by Microscopic MRI and Polarized Light Microscopy. Cartilage, 2021, 13, 356S-366S.	2.7	1
6	Dynamics of Zeeman and dipolar states in the spin locking in a liquid entrapped in nano-cavities: Application to study of biological systems. Journal of Magnetic Resonance, 2021, 325, 106933.	2.1	3
7	Topographical and zonal patterns of T2 relaxation in osteoarthritic tibial cartilage by low- and high-resolution MRI. Magnetic Resonance Imaging, 2021, 78, 98-108.	1.8	4
8	Anisotropy of transverse and longitudinal relaxations in liquids entrapped in nano- and micro-cavities of a plant stem. Journal of Magnetic Resonance, 2021, 331, 107051.	2.1	8
9	Anisotropy of transverse spin relaxation in H2O-D2O liquid entrapped in Nanocavities: application to studies of connective tissues. Hyperfine Interactions, 2021, 242, 1.	0.5	0
10	Quantitative ÂµMRI and PLM study of rabbit humeral and femoral head cartilage at subâ€•10â€‰Âµm resolutions. Journal of Orthopaedic Research, 2020, 38, 1052-1062.	2.3	4
11	Spin-lattice relaxation in liquid entrapped in a nanocavity. Journal of Magnetic Resonance, 2020, 311, 106669.	2.1	9
12	Resolutionâ€•dependent influences of compressed sensing in quantitative T2 mapping of articular cartilage. NMR in Biomedicine, 2020, 33, e4260.	2.8	2
13	Spin locking in liquid entrapped in nanocavities: Application to study connective tissues. Journal of Magnetic Resonance, 2019, 299, 66-73.	2.1	9
14	Experimental Influences in the Accurate Measurement of Cartilage Thickness in MRI. Cartilage, 2019, 10, 278-287.	2.7	11
15	Functional properties of chondrocytes and articular cartilage using optical imaging to scanning probe microscopy. Journal of Orthopaedic Research, 2018, 36, 620-631.	2.3	10
16	Compressed sensing in quantitative determination of GAG concentration in cartilage by microscopic MRI. Magnetic Resonance in Medicine, 2018, 79, 3163-3171.	3.0	15
17	Quantitative measurement of T2, T1Ï•and T1 relaxation times in articular cartilage and cartilage-bone interface by SE and UTE imaging at microscopic resolution. Journal of Magnetic Resonance, 2018, 297, 76-85.	2.1	19
18	Therapeutic Potential of Mesenchymal Cellâ€"Derived miRNA-150-5pâ€"Expressing Exosomes in Rheumatoid Arthritis Mediated by the Modulation of MMP14 and VEGF. Journal of Immunology, 2018, 201, 2472-2482.	0.8	211

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19	Detection of early osteoarthritis in canine knee joints 3 weeks post ACL transection by microscopic MRI and biomechanical measurement. Journal of Orthopaedic Surgery, 2018, 26, 230949901877835.	1.0	5
20	Image interpolation improves the zonal analysis of cartilage T2 relaxation in MRI. Quantitative Imaging in Medicine and Surgery, 2017, 7, 227-237.	2.0	4
21	Discrimination of healthy and osteoarthritic articular cartilage by Fourier transform infrared imaging and Fisherâ€™s discriminant analysis. Biomedical Optics Express, 2016, 7, 448.	2.9	10
22	The influences of different spatial resolutions on the characteristics of T2 relaxation times in articular cartilage: A coarseâ€graining study of the microscopic magnetic resonance imaging data. Microscopy Research and Technique, 2016, 79, 754-765.	2.2	3
23	The First Study of Cartilage by Magnetic Resonance. Cartilage, 2016, 7, 293-297.	2.7	1
24	EGFR signaling is critical for maintaining the superficial layer of articular cartilage and preventing osteoarthritis initiation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14360-14365.	7.1	83
25	Topographical variations in zonal properties of canine tibial articular cartilage due to early osteoarthritis: a study using 7-T magnetic resonance imaging at microscopic resolution. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2016, 29, 681-690.	2.0	10
26	Introduction to Cartilage. New Developments in NMR, 2016, , 1-43.	0.1	5
27	Physical Properties of Cartilage by Relaxation Anisotropy. New Developments in NMR, 2016, , 145-175.	0.1	2
28	Topographical and depth-dependent glycosaminoglycan concentration in canine medial tibial cartilage 3 weeks after anterior cruciate ligament transection surgeryâ€"a microscopic imaging study. Quantitative Imaging in Medicine and Surgery, 2016, 6, 648-660.	2.0	6
29	Meniscus Induced Cartilaginous Damage and Non-linear Gross Anatomical Progression of Early-stage Osteoarthritis in a Canine Model. The Open Orthopaedics Journal, 2016, 10, 690-705.	0.2	8
30	MRI properties of a unique hypo-intense layer in degraded articular cartilage. Physics in Medicine and Biology, 2015, 60, 8709-8721.	3.0	14
31	Discrimination of healthy and osteoarthritic articular cartilages by Fourier transform infrared imaging and partial least squares-discriminant analysis. Journal of Biomedical Optics, 2015, 20, 060501.	2.6	10
32	Fourier Transform Infrared Microscopic Imaging and Fisher Discriminant Analysis for Identification of Healthy and Degenerated Articular Cartilage. Chinese Journal of Analytical Chemistry, 2015, 43, 518-522.	1.7	12
33	Effects of Cryopreservation on the Depth-Dependent Elastic Modulus in Articular Cartilage and Implications for Osteochondral Grafting. Journal of Biomechanical Engineering, 2015, 137, 054502.	1.3	13
34	Loading-induced changes on topographical distributions of the zonal properties of osteoarthritic tibial cartilage â€" A study by magnetic resonance imaging at microscopic resolution. Journal of Biomechanics, 2015, 48, 3625-3633.	2.1	12
35	Molecular origin of a loading-induced black layer in the deep region of articular cartilage at the magic angle. Journal of Magnetic Resonance Imaging, 2015, 41, 1281-1290.	3.4	16
36	Depth-Dependent Glycosaminoglycan Concentration in Articular Cartilage by Quantitative Contrast-Enhanced Microâ€"Computed Tomography. Cartilage, 2015, 6, 216-225.	2.7	14

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37	Proteoglycan concentrations in healthy and diseased articular cartilage by Fourier transform infrared imaging and principal component regression. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 133, 825-830.	3.9	23
38	Topographical variations of the strain-dependent zonal properties of tibial articular cartilage by microscopic MRI. Connective Tissue Research, 2014, 55, 205-216.	2.3	26
39	Concentration determination of collagen and proteoglycan in bovine nasal cartilage by Fourier transform infrared imaging and PLS. Proceedings of SPIE, 2014, , .	0.8	0
40	T1Ï•Magnetic Resonance Imaging for Detection of Early Cartilage Changes in Knees of Asymptomatic Collegiate Female Impact and Nonimpact Athletes. Clinical Journal of Sport Medicine, 2014, 24, 218-225.	1.8	19
41	Anisotropic analysis of multiâ€component T₂ and T_{1Ï} relaxations in achilles tendon by NMR spectroscopy and microscopic MRI. Journal of Magnetic Resonance Imaging, 2013, 38, 625-633.	3.4	40
42	The effects of mechanical loading and gadolinium concentration on the change of T1 and quantification of glycosaminoglycans in articular cartilage by microscopic MRI. Physics in Medicine and Biology, 2013, 58, 4535-4547.	3.0	20
43	Experimental issues in the measurement of multi-component relaxation times in articular cartilage by microscopic MRI. Journal of Magnetic Resonance, 2013, 235, 15-25.	2.1	32
44	Quantitative zonal differentiation of articular cartilage by microscopic magnetic resonance imaging, polarized light microscopy, and Fourierâ€transform infrared imaging. Microscopy Research and Technique, 2013, 76, 625-632.	2.2	35
45	COMPARISON OF MACROMOLECULAR COMPONENT DISTRIBUTIONS IN OSTEOARTHRITIC AND HEALTHY CARTILAGES BY FOURIER TRANSFORM INFRARED IMAGING. Journal of Innovative Optical Health Sciences, 2013, 06, 1350048.	1.0	5
46	Fourier-transform infrared spectroscopic imaging of articular cartilage and biomaterials: A review. Trends in Applied Spectroscopy, 2013, 10, 1-23.	0.0	2
47	Orientational dependent sensitivities of T2 and T1Ï•towards trypsin degradation and Gd-DTPA2âˆ’ presence in bovine nasal cartilage. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2012, 25, 297-304.	2.0	15
48	Concentration profiles of collagen and proteoglycan in articular cartilage by Fourier transform infrared imaging and principal component regression. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 88, 90-96.	3.9	41
49	Depth and orientational dependencies of MRI T2 and T1Ï•sensitivities towards trypsin degradation and Gd-DTPA2âˆ’ presence in articular cartilage at microscopic resolution. Magnetic Resonance Imaging, 2012, 30, 361-370.	1.8	35
50	Anisotropic properties of bovine nasal cartilage. Microscopy Research and Technique, 2012, 75, 300-306.	2.2	30
51	Direct Visualisation of the Depth-Dependent Mechanical Properties of Full-Thickness Articular Cartilage. Open Journal of Orthopedics, 2012, 02, 34-39.	0.1	14
52	Quantitative Determination of Morphological and Territorial Structures of Articular Cartilage from Both Perpendicular and Parallel Sections by Polarized Light Microscopy. Connective Tissue Research, 2011, 52, 512-522.	2.3	21
53	Chemical visualization of individual chondrocytes in articular cartilage by attenuated-total-reflection Fourier Transform Infrared Microimaging. Biomedical Optics Express, 2011, 2, 937.	2.9	15
54	Dependencies of multi-component T2 and T1Ï•relaxation on the anisotropy of collagen fibrils in bovine nasal cartilage. Journal of Magnetic Resonance, 2011, 212, 124-132.	2.1	53

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55	Depth-dependent anisotropy of proteoglycan in articular cartilage by Fourier transform infrared imaging. Vibrational Spectroscopy, 2011, 57, 338-341.	2.2	18
56	Further studies on the anisotropic distribution of collagen in articular cartilage by Î¼MRI. Magnetic Resonance in Medicine, 2011, 65, 656-663.	3.0	23
57	Strainâ€dependent <i>T</i>₁ relaxation profiles in articular cartilage by MRI at microscopic resolutions. Magnetic Resonance in Medicine, 2011, 65, 1733-1737.	3.0	35
58	Depthâ€dependent anisotropies of amides and sugar in perpendicular and parallel sections of articular cartilage by Fourier transform infrared imaging. Microscopy Research and Technique, 2011, 74, 122-132.	2.2	9
59	Reversed laminar appearance of articular cartilage by T1â€weighting in 3D fatâ€suppressed spoiled gradient recalled echo (SPGR) imaging. Journal of Magnetic Resonance Imaging, 2010, 32, 733-737.	3.4	12
60	The impact of the relaxivity definition on the quantitative measurement of glycosaminoglycans in cartilage by the MRI dGEMRIC method. Magnetic Resonance in Medicine, 2010, 63, 25-32.	3.0	40
61	On the measurement of multi-component T2 relaxation in cartilage by MR spectroscopy and imaging. Magnetic Resonance Imaging, 2010, 28, 537-545.	1.8	38
62	Morphological Changes of Chondrocytes in Compressed Articular Cartilage Using Polarized Light Microscopy. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	1
63	Macromolecular Concentrations in Bovine Nasal Cartilage by Fourier Transform Infrared Imaging and Principal Component Regression. Applied Spectroscopy, 2010, 64, 1199-1208.	2.2	29
64	Changes in Proton Dynamics in Articular Cartilage Caused by Phosphate Salts and Fixation Solutions. Cartilage, 2010, 1, 55-64.	2.7	11
65	Effect of phosphate electrolyte buffer on the dynamics of water in tendon and cartilage. NMR in Biomedicine, 2009, 22, 158-164.	2.8	25
66	Damages to the extracellular matrix in articular cartilage due to cryopreservation by microscopic magnetic resonance imaging and biochemistry. Magnetic Resonance Imaging, 2009, 27, 648-655.	1.8	49
67	Multi-components of T2 relaxation in ex vivo cartilage and tendon. Journal of Magnetic Resonance, 2009, 198, 188-196.	2.1	55
68	Fourier-transform infrared anisotropy in cross and parallel sections of tendon and articular cartilage. Journal of Orthopaedic Surgery and Research, 2008, 3, 48.	2.3	15
69	Depthâ€dependent profiles of glycosaminoglycans in articular cartilage by Î¼MRI and histochemistry. Journal of Magnetic Resonance Imaging, 2008, 28, 151-157.	3.4	67
70	Averaged and Depth-Dependent Anisotropy of Articular Cartilage by Microscopic Imaging. Seminars in Arthritis and Rheumatism, 2008, 37, 317-327.	3.4	37
71	Topographical variations in the polarization sensitivity of articular cartilage as determined by polarization-sensitive optical coherence tomography and polarized light microscopy. Journal of Biomedical Optics, 2008, 13, 054034.	2.6	21
72	Imaging the Depth-Dependent Anisotropies in Articular Cartilage by Multidisciplinary Microscopies (μMRI, PLM, FTIRI). , 2007, , .		0

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73	Morphological Changes in Articular Cartilage Due to Static Compression: Polarized Light Microscopy Study. Connective Tissue Research, 2007, 48, 76-84.	2.3	24
74	Polarized IR microscopic imaging of articular cartilage. Physics in Medicine and Biology, 2007, 52, 4601-4614.	3.0	26
75	Determination of Zonal Boundaries in Articular Cartilage Using Infrared Dichroism. Applied Spectroscopy, 2007, 61, 1404-1409.	2.2	22
76	The depth-dependent anisotropy of articular cartilage by Fourier-transform infrared imaging (FTIRI). Osteoarthritis and Cartilage, 2007, 15, 780-788.	1.3	54
77	Orientational dependence of trimethyl ammonium signal in human muscles by 1H magnetic resonance spectroscopic imaging. Magnetic Resonance Imaging, 2005, 23, 97-104.	1.8	10
78	Modifications of orientational dependence of microscopic magnetic resonance imaging T2 anisotropy in compressed articular cartilage. Journal of Magnetic Resonance Imaging, 2005, 22, 665-673.	3.4	33
79	Averaged Properties of Articular Cartilage from Multidisciplinary Microscopic Imaging Study. , 2005, 2005, 3161-4.		1
80	The structural adaptations in compressed articular cartilage by microscopic MRI (Î¼MRI) T2 anisotropy. Osteoarthritis and Cartilage, 2004, 12, 887-894.	1.3	59
81	Significant differences in proton trimethyl ammonium signals between human gastrocnemius and soleus muscle. Journal of Magnetic Resonance Imaging, 2004, 19, 617-622.	3.4	9
82	Spectral pattern of total creatine and trimethyl ammonium in multiple sclerosis. Magnetic Resonance Imaging, 2004, 22, 427-429.	1.8	7
83	Analysis of multi-exponential relaxation data with very short components using linear regularization. Journal of Magnetic Resonance, 2004, 167, 36-41.	2.1	27
84	Imaging the physical and morphological properties of a multi-zone young articular cartilage at microscopic resolution. Journal of Magnetic Resonance Imaging, 2003, 17, 365-374.	3.4	88
85	Imaging the velocity profiles in tubeless siphon flow by NMR microscopy. Journal of Magnetic Resonance, 2003, 164, 365-368.	2.1	15
86	Characteristics of topographical heterogeneity of articular cartilage over the joint surface of a humeral head. Osteoarthritis and Cartilage, 2002, 10, 370-380.	1.3	52
87	Orientational dependence ofT2 relaxation in articular cartilage: A microscopic MRI (?MRI) study. Magnetic Resonance in Medicine, 2002, 48, 460-469.	3.0	202
88	High spatial resolution in vivo 2D 1H magnetic resonance spectroscopic imaging of human muscles with a band-selective technique. Magnetic Resonance Imaging, 2001, 19, 1091-1096.	1.8	8
89	Quantitative in situ correlation between microscopic MRI and polarized light microscopy studies of articular cartilage. Osteoarthritis and Cartilage, 2001, 9, 393-406.	1.3	251
90	Biochemical (and Functional) Imaging of Articular Cartilage. Seminars in Musculoskeletal Radiology, 2001, 05, 329-344.	0.7	80

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91	Magic-Angle Effect in Magnetic Resonance Imaging of Articular Cartilage. Investigative Radiology, 2000, 35, 602-621.	6.2	271
92	Heterogeneity of cartilage laminae in MR imaging. Journal of Magnetic Resonance Imaging, 2000, 11, 686-693.	3.4	63
93	Relaxation anisotropy in cartilage by NMR microscopy (Î¼MRI) at 14-Î¼m resolution. Magnetic Resonance in Medicine, 1998, 39, 941-949.	3.0	232
94	Origin of cartilage laminae in MRI. Journal of Magnetic Resonance Imaging, 1997, 7, 887-894.	3.4	166
95	Contrast in NMR imaging and microscopy. Concepts in Magnetic Resonance, 1996, 8, 205-225.	1.3	53
96	Diffusion and relaxation mapping of cartilage-bone plugs and excised disks using microscopic magnetic resonance imaging. Magnetic Resonance in Medicine, 1994, 31, 273-282.	3.0	145
97	â€œOne-shotâ€•velocity microscopy: NMR imaging of motion using a single phase-encoding step. Magnetic Resonance in Medicine, 1992, 23, 138-153.	3.0	31
98	Imaging velocity profiles: Flow through an abrupt contraction and expansion. AICHE Journal, 1992, 38, 1408-1420.	3.6	39
99	Velocity and diffusion imaging in dynamic NMR microscopy. Journal of Magnetic Resonance, 1991, 91, 326-352.	0.5	66
100	Relaxation Anisotropy as a Possible Marker for Macromolecular Orientations in Articular Cartilage. , 0, , 351-362.		4
101	CHAPTER 13. The Influence of Specimen and Experimental Conditions on NMR and MRI of Cartilage. New Developments in NMR, 0, , 347-372.	0.1	0
102	CHAPTER 16. Loading-Induced Changes in Cartilage Studied by NMR and MRI. New Developments in NMR, 0, , 433-454.	0.1	0
103	CHAPTER 17. The Critical Role of High Imaging Resolution in MRI of Cartilageâ€"The MRI Microscope. New Developments in NMR, 0, , 455-470.	0.1	0
104	CHAPTER 18. Multicomponent Relaxation in NMR and MRI of Cartilage. New Developments in NMR, 0, , 471-493.	0.1	0
105	CHAPTER 21. Complementary Imaging in MRI of Cartilage. New Developments in NMR, 0, , 552-574.	0.1	0
106	Microscopic Imaging of Structured Macromolecules in Articular Cartilage. , 0, , 303-314.		0