

Yang Xia

List of Publications by Year in descending order

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106
papers

3,493
citations

182225

30
h-index

175968

55
g-index

107
all docs

107
docs citations

107
times ranked

2379
citing authors

#	ARTICLE	IF	CITATIONS
1	The interface region between articular cartilage and bone by μ MRI and PLM at microscopic resolutions. <i>Microscopy Research and Technique</i> , 2022, 85, 1483-1493.	1.2	3
2	Structural differences between immature and mature articular cartilage of rabbits by microscopic MRI and polarized light microscopy. <i>Journal of Anatomy</i> , 2022, 240, 1141-1151.	0.9	3
3	Location-Specific Study of Young Rabbit Femoral Cartilage by Quantitative μ MRI and Polarized Light Microscopy. <i>Cartilage</i> , 2022, 13, 194760352210851.	1.4	0
4	Determining the internal orientation, degree of ordering, and volume of elongated nanocavities by NMR: Application to studies of plant stem. <i>Journal of Magnetic Resonance</i> , 2022, 341, 107258.	1.2	4
5	Structural Morphology of Rabbit Patella and Suprapatella Cartilage by Microscopic MRI and Polarized Light Microscopy. <i>Cartilage</i> , 2021, 13, 356S-366S.	1.4	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. <i>Journal of Magnetic Resonance</i> , 2021, 325, 106933.	1.2	3
7	Topographical and zonal patterns of T2 relaxation in osteoarthritic tibial cartilage by low- and high-resolution MRI. <i>Magnetic Resonance Imaging</i> , 2021, 78, 98-108.	1.0	4
8	Anisotropy of transverse and longitudinal relaxations in liquids entrapped in nano- and micro-cavities of a plant stem. <i>Journal of Magnetic Resonance</i> , 2021, 331, 107051.	1.2	8
9	Anisotropy of transverse spin relaxation in H ₂ O-D ₂ O liquid entrapped in Nanocavities: application to studies of connective tissues. <i>Hyperfine Interactions</i> , 2021, 242, 1.	0.2	0
10	Quantitative μ MRI and PLM study of rabbit humeral and femoral head cartilage at sub- 10% μ m resolutions. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1052-1062.	1.2	4
11	Spin-lattice relaxation in liquid entrapped in a nanocavity. <i>Journal of Magnetic Resonance</i> , 2020, 311, 106669.	1.2	9
12	Resolution-dependent influences of compressed sensing in quantitative T2 mapping of articular cartilage. <i>NMR in Biomedicine</i> , 2020, 33, e4260.	1.6	2
13	Spin locking in liquid entrapped in nanocavities: Application to study connective tissues. <i>Journal of Magnetic Resonance</i> , 2019, 299, 66-73.	1.2	9
14	Experimental Influences in the Accurate Measurement of Cartilage Thickness in MRI. <i>Cartilage</i> , 2019, 10, 278-287.	1.4	11
15	Functional properties of chondrocytes and articular cartilage using optical imaging to scanning probe microscopy. <i>Journal of Orthopaedic Research</i> , 2018, 36, 620-631.	1.2	10
16	Compressed sensing in quantitative determination of GAG concentration in cartilage by microscopic MRI. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 3163-3171.	1.9	15
17	Quantitative measurement of T ₂ , T ₁ ρ and T ₁ relaxation times in articular cartilage and cartilage-bone interface by SE and UTE imaging at microscopic resolution. <i>Journal of Magnetic Resonance</i> , 2018, 297, 76-85.	1.2	19
18	Therapeutic Potential of Mesenchymal Cell-Derived miRNA-150-5p-Expressing Exosomes in Rheumatoid Arthritis Mediated by the Modulation of MMP14 and VEGF. <i>Journal of Immunology</i> , 2018, 201, 2472-2482.	0.4	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. <i>Journal of Orthopaedic Surgery</i> , 2018, 26, 230949901877835.	0.4	5
20	Image interpolation improves the zonal analysis of cartilage T2 relaxation in MRI. <i>Quantitative Imaging in Medicine and Surgery</i> , 2017, 7, 227-237.	1.1	4
21	Discrimination of healthy and osteoarthritic articular cartilage by Fourier transform infrared imaging and Fisher's discriminant analysis. <i>Biomedical Optics Express</i> , 2016, 7, 448.	1.5	10
22	The influences of different spatial resolutions on the characteristics of T2 relaxation times in articular cartilage: A coarse-graining study of the microscopic magnetic resonance imaging data. <i>Microscopy Research and Technique</i> , 2016, 79, 754-765.	1.2	3
23	The First Study of Cartilage by Magnetic Resonance. <i>Cartilage</i> , 2016, 7, 293-297.	1.4	1
24	EGFR signaling is critical for maintaining the superficial layer of articular cartilage and preventing osteoarthritis initiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14360-14365.	3.3	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. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2016, 29, 681-690.	1.1	10
26	Introduction to Cartilage. <i>New Developments in NMR</i> , 2016, , 1-43.	0.1	5
27	Physical Properties of Cartilage by Relaxation Anisotropy. <i>New Developments in NMR</i> , 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 surgery—a microscopic imaging study. <i>Quantitative Imaging in Medicine and Surgery</i> , 2016, 6, 648-660.	1.1	6
29	Meniscus Induced Cartilaginous Damage and Non-linear Gross Anatomical Progression of Early-stage Osteoarthritis in a Canine Model. <i>The Open Orthopaedics Journal</i> , 2016, 10, 690-705.	0.1	8
30	MRI properties of a unique hypo-intense layer in degraded articular cartilage. <i>Physics in Medicine and Biology</i> , 2015, 60, 8709-8721.	1.6	14
31	Discrimination of healthy and osteoarthritic articular cartilages by Fourier transform infrared imaging and partial least squares-discriminant analysis. <i>Journal of Biomedical Optics</i> , 2015, 20, 060501.	1.4	10
32	Fourier Transform Infrared Microscopic Imaging and Fisher Discriminant Analysis for Identification of Healthy and Degenerated Articular Cartilage. <i>Chinese Journal of Analytical Chemistry</i> , 2015, 43, 518-522.	0.9	12
33	Effects of Cryopreservation on the Depth-Dependent Elastic Modulus in Articular Cartilage and Implications for Osteochondral Grafting. <i>Journal of Biomechanical Engineering</i> , 2015, 137, 054502.	0.6	13
34	Loading-induced changes on topographical distributions of the zonal properties of osteoarthritic tibial cartilage — A study by magnetic resonance imaging at microscopic resolution. <i>Journal of Biomechanics</i> , 2015, 48, 3625-3633.	0.9	12
35	Molecular origin of a loading-induced black layer in the deep region of articular cartilage at the magic angle. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 41, 1281-1290.	1.9	16
36	Depth-Dependent Glycosaminoglycan Concentration in Articular Cartilage by Quantitative Contrast-Enhanced Micro-Computed Tomography. <i>Cartilage</i> , 2015, 6, 216-225.	1.4	14

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37	Proteoglycan concentrations in healthy and diseased articular cartilage by Fourier transform infrared imaging and principal component regression. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014, 133, 825-830.	2.0	23
38	Topographical variations of the strain-dependent zonal properties of tibial articular cartilage by microscopic MRI. <i>Connective Tissue Research</i> , 2014, 55, 205-216.	1.1	26
39	Concentration determination of collagen and proteoglycan in bovine nasal cartilage by Fourier transform infrared imaging and PLS. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
40	T1•Magnetic Resonance Imaging for Detection of Early Cartilage Changes in Knees of Asymptomatic Collegiate Female Impact and Nonimpact Athletes. <i>Clinical Journal of Sport Medicine</i> , 2014, 24, 218-225.	0.9	19
41	Anisotropic analysis of multi•component T₂ and T_{1•} relaxations in achilles tendon by NMR spectroscopy and microscopic MRI. <i>Journal of Magnetic Resonance Imaging</i> , 2013, 38, 625-633.	1.9	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. <i>Physics in Medicine and Biology</i> , 2013, 58, 4535-4547.	1.6	20
43	Experimental issues in the measurement of multi-component relaxation times in articular cartilage by microscopic MRI. <i>Journal of Magnetic Resonance</i> , 2013, 235, 15-25.	1.2	32
44	Quantitative zonal differentiation of articular cartilage by microscopic magnetic resonance imaging, polarized light microscopy, and Fourier•transform infrared imaging. <i>Microscopy Research and Technique</i> , 2013, 76, 625-632.	1.2	35
45	COMPARISON OF MACROMOLECULAR COMPONENT DISTRIBUTIONS IN OSTEOARTHROTIC AND HEALTHY CARTILAGES BY FOURIER TRANSFORM INFRARED IMAGING. <i>Journal of Innovative Optical Health Sciences</i> , 2013, 06, 1350048.	0.5	5
46	Fourier-transform infrared spectroscopic imaging of articular cartilage and biomaterials: A review. <i>Trends in Applied Spectroscopy</i> , 2013, 10, 1-23.	0.0	2
47	Orientalional dependent sensitivities of T2 and T1•towards trypsin degradation and Gd-DTPA2•• presence in bovine nasal cartilage. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2012, 25, 297-304.	1.1	15
48	Concentration profiles of collagen and proteoglycan in articular cartilage by Fourier transform infrared imaging and principal component regression. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2012, 88, 90-96.	2.0	41
49	Depth and orientational dependencies of MRI T2 and T1•sensitivities towards trypsin degradation and Gd-DTPA2•• presence in articular cartilage at microscopic resolution. <i>Magnetic Resonance Imaging</i> , 2012, 30, 361-370.	1.0	35
50	Anisotropic properties of bovine nasal cartilage. <i>Microscopy Research and Technique</i> , 2012, 75, 300-306.	1.2	30
51	Direct Visualisation of the Depth-Dependent Mechanical Properties of Full-Thickness Articular Cartilage. <i>Open Journal of Orthopedics</i> , 2012, 02, 34-39.	0.0	14
52	Quantitative Determination of Morphological and Territorial Structures of Articular Cartilage from Both Perpendicular and Parallel Sections by Polarized Light Microscopy. <i>Connective Tissue Research</i> , 2011, 52, 512-522.	1.1	21
53	Chemical visualization of individual chondrocytes in articular cartilage by attenuated-total-reflection Fourier Transform Infrared Microimaging. <i>Biomedical Optics Express</i> , 2011, 2, 937.	1.5	15
54	Dependencies of multi-component T2 and T1•relaxation on the anisotropy of collagen fibrils in bovine nasal cartilage. <i>Journal of Magnetic Resonance</i> , 2011, 212, 124-132.	1.2	53

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55	Depth-dependent anisotropy of proteoglycan in articular cartilage by Fourier transform infrared imaging. <i>Vibrational Spectroscopy</i> , 2011, 57, 338-341.	1.2	18
56	Further studies on the anisotropic distribution of collagen in articular cartilage by ^{13}C MRI. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 656-663.	1.9	23
57	Strain-dependent T_2 relaxation profiles in articular cartilage by MRI at microscopic resolutions. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 1733-1737.	1.9	35
58	Depth-dependent anisotropies of amides and sugar in perpendicular and parallel sections of articular cartilage by Fourier transform infrared imaging. <i>Microscopy Research and Technique</i> , 2011, 74, 122-132.	1.2	9
59	Reversed laminar appearance of articular cartilage by T_1 -weighting in 3D fat-suppressed spoiled gradient recalled echo (SPGR) imaging. <i>Journal of Magnetic Resonance Imaging</i> , 2010, 32, 733-737.	1.9	12
60	The impact of the relaxivity definition on the quantitative measurement of glycosaminoglycans in cartilage by the MRI dGEMRIC method. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 25-32.	1.9	40
61	On the measurement of multi-component T_2 relaxation in cartilage by MR spectroscopy and imaging. <i>Magnetic Resonance Imaging</i> , 2010, 28, 537-545.	1.0	38
62	Morphological Changes of Chondrocytes in Compressed Articular Cartilage Using Polarized Light Microscopy. <i>International Conference on Bioinformatics and Biomedical Engineering: [proceedings]</i> 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. <i>Applied Spectroscopy</i> , 2010, 64, 1199-1208.	1.2	29
64	Changes in Proton Dynamics in Articular Cartilage Caused by Phosphate Salts and Fixation Solutions. <i>Cartilage</i> , 2010, 1, 55-64.	1.4	11
65	Effect of phosphate electrolyte buffer on the dynamics of water in tendon and cartilage. <i>NMR in Biomedicine</i> , 2009, 22, 158-164.	1.6	25
66	Damages to the extracellular matrix in articular cartilage due to cryopreservation by microscopic magnetic resonance imaging and biochemistry. <i>Magnetic Resonance Imaging</i> , 2009, 27, 648-655.	1.0	49
67	Multi-components of T_2 relaxation in ex vivo cartilage and tendon. <i>Journal of Magnetic Resonance</i> , 2009, 198, 188-196.	1.2	55
68	Fourier-transform infrared anisotropy in cross and parallel sections of tendon and articular cartilage. <i>Journal of Orthopaedic Surgery and Research</i> , 2008, 3, 48.	0.9	15
69	Depth-dependent profiles of glycosaminoglycans in articular cartilage by ^{13}C MRI and histochemistry. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 151-157.	1.9	67
70	Averaged and Depth-Dependent Anisotropy of Articular Cartilage by Microscopic Imaging. <i>Seminars in Arthritis and Rheumatism</i> , 2008, 37, 317-327.	1.6	37
71	Topographical variations in the polarization sensitivity of articular cartilage as determined by polarization-sensitive optical coherence tomography and polarized light microscopy. <i>Journal of Biomedical Optics</i> , 2008, 13, 054034.	1.4	21
72	Imaging the Depth-Dependent Anisotropies in Articular Cartilage by Multidisciplinary Microscopies (^{13}C MRI, PLM, FTIRI)., 2007, , .		0

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73	Morphological Changes in Articular Cartilage Due to Static Compression: Polarized Light Microscopy Study. <i>Connective Tissue Research</i> , 2007, 48, 76-84.	1.1	24
74	Polarized IR microscopic imaging of articular cartilage. <i>Physics in Medicine and Biology</i> , 2007, 52, 4601-4614.	1.6	26
75	Determination of Zonal Boundaries in Articular Cartilage Using Infrared Dichroism. <i>Applied Spectroscopy</i> , 2007, 61, 1404-1409.	1.2	22
76	The depth-dependent anisotropy of articular cartilage by Fourier-transform infrared imaging (FTIRI). <i>Osteoarthritis and Cartilage</i> , 2007, 15, 780-788.	0.6	54
77	Orientalional dependence of trimethyl ammonium signal in human muscles by 1H magnetic resonance spectroscopic imaging. <i>Magnetic Resonance Imaging</i> , 2005, 23, 97-104.	1.0	10
78	Modifications of orientational dependence of microscopic magnetic resonance imaging T2 anisotropy in compressed articular cartilage. <i>Journal of Magnetic Resonance Imaging</i> , 2005, 22, 665-673.	1.9	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 (1/4MRI) T2 anisotropy. <i>Osteoarthritis and Cartilage</i> , 2004, 12, 887-894.	0.6	59
81	Significant differences in proton trimethyl ammonium signals between human gastrocnemius and soleus muscle. <i>Journal of Magnetic Resonance Imaging</i> , 2004, 19, 617-622.	1.9	9
82	Spectral pattern of total creatine and trimethyl ammonium in multiple sclerosis. <i>Magnetic Resonance Imaging</i> , 2004, 22, 427-429.	1.0	7
83	Analysis of multi-exponential relaxation data with very short components using linear regularization. <i>Journal of Magnetic Resonance</i> , 2004, 167, 36-41.	1.2	27
84	Imaging the physical and morphological properties of a multi-zone young articular cartilage at microscopic resolution. <i>Journal of Magnetic Resonance Imaging</i> , 2003, 17, 365-374.	1.9	88
85	Imaging the velocity profiles in tubeless siphon flow by NMR microscopy. <i>Journal of Magnetic Resonance</i> , 2003, 164, 365-368.	1.2	15
86	Characteristics of topographical heterogeneity of articular cartilage over the joint surface of a humeral head. <i>Osteoarthritis and Cartilage</i> , 2002, 10, 370-380.	0.6	52
87	Orientalional dependence of T2 relaxation in articular cartilage: A microscopic MRI (1/4MRI) study. <i>Magnetic Resonance in Medicine</i> , 2002, 48, 460-469.	1.9	202
88	High spatial resolution in vivo 2D 1H magnetic resonance spectroscopic imaging of human muscles with a band-selective technique. <i>Magnetic Resonance Imaging</i> , 2001, 19, 1091-1096.	1.0	8
89	Quantitative in situ correlation between microscopic MRI and polarized light microscopy studies of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2001, 9, 393-406.	0.6	251
90	Biochemical (and Functional) Imaging of Articular Cartilage. <i>Seminars in Musculoskeletal Radiology</i> , 2001, 05, 329-344.	0.4	80

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91	Magic-Angle Effect in Magnetic Resonance Imaging of Articular Cartilage. <i>Investigative Radiology</i> , 2000, 35, 602-621.	3.5	271
92	Heterogeneity of cartilage laminae in MR imaging. <i>Journal of Magnetic Resonance Imaging</i> , 2000, 11, 686-693.	1.9	63
93	Relaxation anisotropy in cartilage by NMR microscopy (^1H MRI) at 14- μm resolution. <i>Magnetic Resonance in Medicine</i> , 1998, 39, 941-949.	1.9	232
94	Origin of cartilage laminae in MRI. <i>Journal of Magnetic Resonance Imaging</i> , 1997, 7, 887-894.	1.9	166
95	Contrast in NMR imaging and microscopy. <i>Concepts in Magnetic Resonance</i> , 1996, 8, 205-225.	1.3	53
96	Diffusion and relaxation mapping of cartilage-bone plugs and excised disks using microscopic magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 1994, 31, 273-282.	1.9	145
97	“One-shot” velocity microscopy: NMR imaging of motion using a single phase-encoding step. <i>Magnetic Resonance in Medicine</i> , 1992, 23, 138-153.	1.9	31
98	Imaging velocity profiles: Flow through an abrupt contraction and expansion. <i>AIChE Journal</i> , 1992, 38, 1408-1420.	1.8	39
99	Velocity and diffusion imaging in dynamic NMR microscopy. <i>Journal of Magnetic Resonance</i> , 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. <i>New Developments in NMR</i> , 0, , 347-372.	0.1	0
102	CHAPTER 16. Loading-Induced Changes in Cartilage Studied by NMR and MRI. <i>New Developments in NMR</i> , 0, , 433-454.	0.1	0
103	CHAPTER 17. The Critical Role of High Imaging Resolution in MRI of Cartilage—The MRI Microscope. <i>New Developments in NMR</i> , 0, , 455-470.	0.1	0
104	CHAPTER 18. Multicomponent Relaxation in NMR and MRI of Cartilage. <i>New Developments in NMR</i> , 0, , 471-493.	0.1	0
105	CHAPTER 21. Complementary Imaging in MRI of Cartilage. <i>New Developments in NMR</i> , 0, , 552-574.	0.1	0
106	Microscopic Imaging of Structured Macromolecules in Articular Cartilage. , 0, , 303-314.		0