Pascal Laugier

List of Publications by Year
in descending order

308 papers	9,216 citations	30070 54 h-index	64796 79 g-index
318 all docs	318 docs citations	318 times ranked	3744 citing authors

#	Article	IF	Citations
1	Three-dimensional simulations of ultrasonic axial transmission velocity measurement on cortical bone models. Journal of the Acoustical Society of America, 2004, 115, 2314-2324.	1.1	248
2	Ultrasonic characterization of human cancellous bone using transmission and backscatter measurements: relationships to density and microstructure. Bone, 2002, 30, 229-237.	2.9	179
3	Effect of bone cortical thickness on velocity measurements using ultrasonic axial transmission: A 2D simulation study. Journal of the Acoustical Society of America, 2002, 112, 297-307.	1.1	173
4	In vitro assessment of the relationship between acoustic properties and bone mass density of the calcaneus by comparison of ultrasound parametric imaging and quantitative computed tomography. Bone, 1997, 20, 157-165.	2.9	170
5	Velocity dispersion of acoustic waves in cancellous bone. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1998, 45, 581-592.	3.0	154
6	Three-dimensional simulation of ultrasound propagation through trabecular bone structures measured by synchrotron microtomography. Physics in Medicine and Biology, 2005, 50, 5545-5556.	3.0	153
7	Three-Dimensional High-Frequency Backscatter and Envelope Quantification of Cancerous Human Lymph Nodes. Ultrasound in Medicine and Biology, 2011, 37, 345-357.	1.5	139
8	Instrumentation for in vivo ultrasonic characterization of bone strength. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1179-1196.	3.0	136
9	Evaluation of Acoustical Parameter Sensitivity to Age-Related and Osteoarthritic Changes in Articular Cartilage Using 50-MHz Ultrasound. Ultrasound in Medicine and Biology, 1998, 24, 341-354.	1.5	122
10	Bidirectional axial transmission can improve accuracy and precision of ultrasonic velocity measurement in cortical bone: a validation on test materials. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 71-79.	3.0	122
11	Bone microstructure and elastic tissue properties are reflected in QUS axial transmission measurements. Ultrasound in Medicine and Biology, 2005, 31, 1225-1235.	1.5	121
12	Nonlinear resonant ultrasound spectroscopy (NRUS) applied to damage assessment in bone. Journal of the Acoustical Society of America, 2005, 118, 3946-3952.	1.1	117
13	Change in porosity is the major determinant of the variation of cortical bone elasticity at the millimeter scale in aged women. Bone, 2011, 49, 1020-1026.	2.9	116
14	In vitro measurement of the frequency-dependent attenuation in cancellous bone between 0.2 and 2 MHz. Journal of the Acoustical Society of America, 2000, 108, 1281.	1.1	112
15	Variation of Ultrasonic Parameters With Microstructure and Material Properties of Trabecular Bone: A 3D Model Simulation. Journal of Bone and Mineral Research, 2007, 22, 665-674.	2.8	112
16	An In Vitro Study of the Ultrasonic Axial Transmission Technique at the Radius: 1-MHz Velocity Measurements Are Sensitive to Both Mineralization and Intracortical Porosity. Journal of Bone and Mineral Research, 2004, 19, 1548-1556.	2.8	109
17	Comparison of three ultrasonic axial transmission methods for bone assessment. Ultrasound in Medicine and Biology, 2005, 31, 633-642.	1.5	105
18	Assessment of the relationship between broadband ultrasound attenuation and bone mineral density at the calcaneus using BUA imaging and DXA. Osteoporosis International, 1997, 7, 316-322.	3.1	97

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19	Derivation of elastic stiffness from site-matched mineral density and acoustic impedance maps. Physics in Medicine and Biology, 2006, 51, 747-758.	3.0	95
20	Guided wave phase velocity measurement using multi-emitter and multi-receiver arrays in the axial transmission configuration. Journal of the Acoustical Society of America, 2010, 127, 2913-2919.	1.1	92
21	Ultrasonic Backscatter and Transmission Parameters at the Os Calcis in Postmenopausal Osteoporosis. Journal of Bone and Mineral Research, 2001, 16, 1353-1362.	2.8	91
22	Accurate measurement of cortical bone elasticity tensor with resonant ultrasound spectroscopy. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 18, 12-19.	3.1	91
23	Fast wave ultrasonic propagation in trabecular bone: Numerical study of the influence of porosity and structural anisotropy. Journal of the Acoustical Society of America, 2008, 123, 1694-1705.	1.1	88
24	Relationships of trabecular bone structure with quantitative ultrasound parameters: In vitro study on human proximal femur using transmission and backscatter measurements. Bone, 2008, 42, 1193-1202.	2.9	84
25	Three-Dimensional High-Frequency Characterization of Cancerous Lymph Nodes. Ultrasound in Medicine and Biology, 2010, 36, 361-375.	1.5	84
26	Combined estimation of thickness and velocities using ultrasound guided waves: a pioneering study on in vitro cortical bone samples. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1478-1488.	3.0	83
27	Assessment of Articular Cartilage and Subchondral Bone: Subtle and Progressive Changes in Experimental Osteoarthritis Using 50 MHz Echography In Vitro. Journal of Bone and Mineral Research, 1997, 12, 1378-1386.	2.8	82
28	In vivo Performance Evaluation of Bi-Directional Ultrasonic Axial Transmission for Cortical Bone Assessment. Ultrasound in Medicine and Biology, 2009, 35, 912-919.	1.5	82
29	Broadband ultrasound attenuation imaging: A new imaging method in osteoporosis. Journal of Bone and Mineral Research, 1996, 11, 1112-1118.	2.8	81
30	Analysis of the axial transmission technique for the assessment of skeletal status. Journal of the Acoustical Society of America, 2000, 108, 3058-3065.	1.1	80
31	Propagation of two longitudinal waves in human cancellous bone: An in vitro study. Journal of the Acoustical Society of America, 2009, 125, 3460-3466.	1.1	79
32	A Novel Ultrasound Methodology for Estimating Spine Mineral Density. Ultrasound in Medicine and Biology, 2015, 41, 281-300.	1.5	79
33	Site-matched assessment of structural and tissue properties of cortical bone using scanning acoustic microscopy and synchrotron radiation Î¼CT. Physics in Medicine and Biology, 2006, 51, 733-746.	3.0	75
34	In vitroultrasonic characterization of human cancellous femoral bone using transmission and backscatter measurements: Relationships to bone mineral density. Journal of the Acoustical Society of America, 2006, 119, 654-663.	1.1	75
35	Broadband ultrasonic attenuation imaging: A new imaging technique of the os calcis. Calcified Tissue International, 1994, 54, 83-86.	3.1	71
36	Ultrasound to Assess Bone Quality. Current Osteoporosis Reports, 2014, 12, 154-162.	3.6	68

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37	In vivo ultrasound imaging of the bone cortex. Physics in Medicine and Biology, 2018, 63, 125010.	3.0	68
38	Prediction of frequency-dependent ultrasonic backscatter in cancellous bone using statistical weak scattering model. Ultrasound in Medicine and Biology, 2003, 29, 455-464.	1.5	67
39	Velocity dispersion in trabecular bone: Influence of multiple scattering and of absorption. Journal of the Acoustical Society of America, 2008, 124, 4047-4058.	1.1	66
40	Absolute backscatter coefficient over a wide range of frequencies in a tissue-mimicking phantom containing two populations of scatterers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1996, 43, 970-978.	3.0	64
41	Computerized ultrasound B-scan characterization of breast nodules. Ultrasound in Medicine and Biology, 2000, 26, 1421-1428.	1.5	64
42	High-accuracy acoustic detection of nonclassical component of material nonlinearity. Journal of the Acoustical Society of America, 2011, 130, 2654-2661.	1.1	62
43	Quantitative ultrasound imaging at the calcaneus using an automatic region of interest. Osteoporosis International, 1997, 7, 363-369.	3.1	61
44	Sparse SVD Method for High-Resolution Extraction of the Dispersion Curves of Ultrasonic Guided Waves. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1514-1524.	3.0	61
45	Application of autoregressive spectral analysis for ultrasound attenuation estimation: interest in highly attenuating medium. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1995, 42, 99-110.	3.0	60
46	Assessment of rat articular cartilage maturation using 50-MHz quantitative ultrasonography. Osteoarthritis and Cartilage, 2001, 9, 178-186.	1.3	60
47	Effect of articular cartilage proteoglycan depletion on high frequency ultrasound backscatter. Osteoarthritis and Cartilage, 2002, 10, 535-541.	1.3	60
48	Prediction of backscatter coefficient in trabecular bones using a numerical model of three-dimensional microstructure. Journal of the Acoustical Society of America, 2003, 113, 1122-1129.	1.1	59
49	Attenuation in trabecular bone: A comparison between numerical simulation and experimental results in human femur. Journal of the Acoustical Society of America, 2007, 122, 2469-2475.	1.1	59
50	Apparent Young's modulus of human radius using inverse finite-element method. Journal of Biomechanics, 2007, 40, 2022-2028.	2.1	59
51	Nonlinear elastodynamics in micro-inhomogeneous solids observed by head-wave based dynamic acoustoelastic testing. Journal of the Acoustical Society of America, 2011, 130, 3583-3589.	1.1	58
52	Impact of attenuation on guided mode wavenumber measurement in axial transmission on bone mimicking plates. Journal of the Acoustical Society of America, 2011, 130, 3574-3582.	1.1	57
53	A determination of the minimum sizes of representative volume elements for the prediction of cortical bone elastic properties. Biomechanics and Modeling in Mechanobiology, 2011, 10, 925-937.	2.8	57
54	Phase and group velocities of fast and slow compressional waves in trabecular bone. Journal of the Acoustical Society of America, 2000, 108, 1949-1952.	1.1	56

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55	A method for the estimation of femoral bone mineral density from variables of ultrasound transmission through the human femur. Bone, 2007, 40, 37-44.	2.9	56
56	Microfibril Orientation Dominates the Microelastic Properties of Human Bone Tissue at the Lamellar Length Scale. PLoS ONE, 2013, 8, e58043.	2.5	56
57	Predicting bone strength with ultrasonic guided waves. Scientific Reports, 2017, 7, 43628.	3.3	55
58	Effects of frequency-dependent attenuation and velocity dispersion on in vitro ultrasound velocity measurements in intact human femur specimens. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 39-51.	3.0	54
59	Singular spectrum analysis applied to backscattered ultrasound signals from in vitro human cancellous bone specimens. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 302-312.	3.0	53
60	In vitro chronic hepatic disease characterization with a multiparametric ultrasonic approach. Ultrasonics, 2005, 43, 305-313.	3.9	53
61	Quantitative ultrasound ofÂbone: looking ahead. Joint Bone Spine, 2006, 73, 125-128.	1.6	52
62	Application of Biotâ€™s theory to ultrasonic characterization of human cancellous bones: Determination of structural, material, and mechanical properties. Journal of the Acoustical Society of America, 2008, 123, 2415-2423.	1.1	52
63	True stress and Poisson's ratio of tendons during loading. Journal of Biomechanics, 2011, 44, 719-724.	2.1	52
64	Anisotropy of dynamic acoustoelasticity in limestone, influence of conditioning, and comparison with nonlinear resonance spectroscopy. Journal of the Acoustical Society of America, 2013, 133, 3706-3718.	1.1	51
65	Resonant ultrasound spectroscopy for viscoelastic characterization of anisotropic attenuative solid materials. Journal of the Acoustical Society of America, 2014, 135, 2601-2613.	1.1	51
66	<italic>In Vivo</italic> Characterization of Cortical Bone Using Guided Waves Measured by Axial Transmission. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1361-1371.	3.0	51
67	Modeling the impact of soft tissue on axial transmission measurements of ultrasonic guided waves in human radius. Journal of the Acoustical Society of America, 2008, 124, 2364-2373.	1.1	50
68	Assessment of cortical bone elasticity and strength: Mechanical testing and ultrasound provide complementary data. Medical Engineering and Physics, 2009, 31, 1140-1147.	1.7	50
69	Automatic detection of the boundary of the calcaneus from ultrasound parametric images using an active contour model; clinical assessment. IEEE Transactions on Medical Imaging, 1998, 17, 45-52.	8.9	48
70	Ultrasound Measurement on the Calcaneus: Influence of Immersion Time and Rotation of the Foot. Osteoporosis International, 1999, 9, 318-326.	3.1	48
71	In vitro speed of sound measurement at intact human femur specimens. Ultrasound in Medicine and Biology, 2005, 31, 987-996.	1.5	48
72	Femur ultrasound (FemUS)â€”first clinical results on hip fracture discrimination and estimation of femoral BMD. Osteoporosis International, 2010, 21, 969-976.	3.1	47

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73	Ultrasonically determined thickness of long cortical bones: Two-dimensional simulations ofin vitroexperiments. Journal of the Acoustical Society of America, 2007, 122, 1818-1826.	1.1	45
74	Elasticityâ€“density and viscoelasticityâ€“density relationships at the tibia mid-diaphysis assessed from resonant ultrasound spectroscopy measurements. Biomechanics and Modeling in Mechanobiology, 2016, 15, 97-109.	2.8	45
75	Ultrasonically determined thickness of long cortical bones: Three-dimensional simulations of in vitro experiments. Journal of the Acoustical Society of America, 2007, 122, 2439-2445.	1.1	44
76	Relationship between ultrasonic parameters and apparent trabecular bone elastic modulus: A numerical approach. Journal of Biomechanics, 2009, 42, 2033-2039.	2.1	44
77	Evaluation of Error Bounds on Calcaneal Speed of Sound Caused by Surrounding Soft Tissue. Journal of Clinical Densitometry, 2000, 3, 121-131.	1.2	43
78	Effect of porosity on effective diagonal stiffness coefficients (cii) and elastic anisotropy of cortical bone at 1MHz: A finite-difference time domain study. Journal of the Acoustical Society of America, 2007, 122, 1810-1817.	1.1	43
79	Bayesian normal modes identification and estimation of elastic coefficients in resonant ultrasound spectroscopy. Inverse Problems, 2015, 31, 065010.	2.0	43
80	A two-parameter model of the effective elastic tensor for cortical bone. Journal of Biomechanics, 2011, 44, 1621-1625.	2.1	42
81	Spatial distribution of tissue level properties in a human femoral cortical bone. Journal of Biomechanics, 2012, 45, 2264-2270.	2.1	42
82	Genetic algorithms-based inversion of multimode guided waves for cortical bone characterization. Physics in Medicine and Biology, 2016, 61, 6953-6974.	3.0	42
83	Characterization of in vitro healthy and pathological human liver tissue periodicity using backscattered ultrasound signals. Ultrasound in Medicine and Biology, 2006, 32, 649-657.	1.5	41
84	Prediction of bone mechanical properties using QUS and pQCT: Study of the human distal radius. Medical Engineering and Physics, 2008, 30, 761-767.	1.7	41
85	Optimal Prediction of Bone Mineral Density with Ultrasonic Measurements in Excised Human Femur. Calcified Tissue International, 2005, 77, 186-192.	3.1	40
86	Introduction to the Physics of Ultrasound. , 2011, , 29-45.		40
87	A device for in vivo measurements of quantitative ultrasound variables at the human proximal femur. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1197-1204.	3.0	39
88	Nonlinear ultrasound can detect accumulated damage in human bone. Journal of Biomechanics, 2008, 41, 1062-1068.	2.1	38
89	Additive Effect of RGD Coating to Functionalized Titanium Surfaces on Human Osteoprogenitor Cell Adhesion and Spreading. Tissue Engineering - Part A, 2008, 14, 1445-1455.	3.1	38
90	Trabecular and cortical bone separately assessed at radius with a new ultrasound device, in a young adult population with various physical activities. Bone, 2010, 46, 1620-1625.	2.9	38

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91	Influence of the filling fluid on frequency-dependent velocity and attenuation in cancellous bones between 0.35 and 2.5 MHz. Journal of the Acoustical Society of America, 2009, 126, 3301-3310.	1.1	37
92	Estimation of Trabecular Thickness Using Ultrasonic Backcatter. Ultrasonic Imaging, 2006, 28, 3-22.	2.6	36
93	Variations of microstructure, mineral density and tissue elasticity in B6/C3H mice. Bone, 2007, 41, 1017-1024.	2.9	36
94	Assessment of Microelastic Properties of Bone Using Scanning Acoustic Microscopy: A Face-to-Face Comparison with Nanoindentation. Japanese Journal of Applied Physics, 2009, 48, 07GK01.	1.5	36
95	Inverse problems in cancellous bone: Estimation of the ultrasonic properties of fast and slow waves using Bayesian probability theory. Journal of the Acoustical Society of America, 2010, 128, 2940-2948.	1.1	36
96	Quantitative ultrasound of cortical bone in the femoral neck predicts femur strength: Results of a pilot study. Journal of Bone and Mineral Research, 2013, 28, 302-312.	2.8	36
97	Wideband dispersion reversal of lamb waves. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 997-1005.	3.0	36
98	Reproducibility of skin characterization with backscattered spectra (12â€“25 MHz) in healthy subjects. Ultrasound in Medicine and Biology, 2001, 27, 603-610.	1.5	35
99	High resolution ultrasound elastomicroscopy imaging of soft tissues: system development and feasibility. Physics in Medicine and Biology, 2004, 49, 3925-3938.	3.0	35
100	Monitoring cell adhesion processes on bioactive polymers with the quartz crystal resonator technique. Biomaterials, 2005, 26, 4197-4205.	11.4	35
101	Three-dimensional quantitative ultrasound for detecting lymph node metastases. Journal of Surgical Research, 2013, 183, 258-269.	1.6	34
102	An overview of bone sonometry. International Congress Series, 2004, 1274, 23-32.	0.2	33
103	Dynamic coherent backscattering in a heterogeneous absorbing medium: Application to human trabecular bone characterization. Applied Physics Letters, 2005, 87, 114101.	3.3	33
104	Spatial distribution of anisotropic acoustic impedance assessed by time-resolved 50-MHz scanning acoustic microscopy and its relation to porosity in human cortical bone. Bone, 2008, 43, 187-194.	2.9	32
105	Computational Evaluation of the Compositional Factors in Fracture Healing Affecting Ultrasound Axial Transmission Measurements. Ultrasound in Medicine and Biology, 2010, 36, 1314-1326.	1.5	32
106	Experimental and simulation results on the effect of cortical bone mineralization in ultrasound axial transmission measurements: A model for fracture healing ultrasound monitoring. Bone, 2011, 48, 1202-1209.	2.9	32
107	Measurement of guided mode wavenumbers in soft tissueâ€“bone mimicking phantoms using ultrasonic axial transmission. Physics in Medicine and Biology, 2012, 57, 3025-3037.	3.0	32
108	Ultrasound Attenuation Imaging in the Os Calcis: An Improved Method. Ultrasonic Imaging, 1994, 16, 65-76.	2.6	31

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109	Non Destructive Characterization of Cortical Bone Micro-Damage by Nonlinear Resonant Ultrasound Spectroscopy. PLoS ONE, 2014, 9, e83599.	2.5	31
110	Dispersive Radon transform. Journal of the Acoustical Society of America, 2018, 143, 2729-2743.	1.1	31
111	Anisotropic elastic properties of human femoral cortical bone and relationships with composition and microstructure in elderly. Acta Biomaterialia, 2019, 90, 254-266.	8.3	31
112	In Vivo Measurements of Ultrasound Transmission Through the Human Proximal Femur. Ultrasound in Medicine and Biology, 2008, 34, 1186-1190.	1.5	29
113	Potential of First Arriving Signal to Assess Cortical Bone Geometry at the Hip with QUS: A Model Based Study. Ultrasound in Medicine and Biology, 2010, 36, 656-666.	1.5	29
114	Measuring the wavenumber of guided modes in waveguides with linearly varying thickness. Journal of the Acoustical Society of America, 2014, 135, 2614-2624.	1.1	29
115	Multichannel processing for dispersion curves extraction of ultrasonic axial-transmission signals: Comparisons and case studies. Journal of the Acoustical Society of America, 2016, 140, 1758-1770.	1.1	29
116	Effects of antiinflammatory drugs on arthritic cartilage: A high-frequency quantitative ultrasound study in rats. Arthritis and Rheumatism, 2003, 48, 1594-1601.	6.7	28
117	Progress towardsin vitroquantitative imaging of human femur using compound quantitative ultrasonic tomography. Physics in Medicine and Biology, 2005, 50, 2633-2649.	3.0	28
118	Application of nonlinear dynamics to monitoring progressive fatigue damage in human cortical bone. Applied Physics Letters, 2007, 91, .	3.3	28
119	A capacitive micromachined ultrasonic transducer probe for assessment of cortical bone. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 710-723.	3.0	28
120	In Vitro Ultrasound Measurement at the Human Femur. Calcified Tissue International, 2004, 75, 421-430.	3.1	27
121	Numerical simulation of wave propagation in cancellous bone. Ultrasonics, 2006, 44, e239-e243.	3.9	27
122	Singular value decomposition-based wave extraction in axial transmission: application to cortical bone ultrasonic characterization [correspondence]. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1328-1332.	3.0	27
123	Analysis of the most energetic late arrival in axially transmitted signals in cortical bone. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 2463-2470.	3.0	26
124	In vivo performance of a matrix-based quantitative ultrasound imaging device dedicated to calcaneus investigation. Ultrasound in Medicine and Biology, 2002, 28, 1285-1293.	1.5	25
125	Ultrasonic Backscatter and Attenuation (11â€“27 MHz) Variation with Collagen Fiber Distribution in Ex Vivo Human Dermis. Ultrasonic Imaging, 2006, 28, 23-40.	2.6	25
126	Axial speed of sound is related to tendon's nonlinear elasticity. Journal of Biomechanics, 2012, 45, 263-268.	2.1	25

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127	A free plate model can predict guided modes propagating in tubular bone-mimicking phantoms. Journal of the Acoustical Society of America, 2015, 137, EL98-EL104.	1.1	25
128	Numerical simulation of the dependence of quantitative ultrasonic parameters on trabecular bone microarchitecture and elastic constants. Ultrasonics, 2006, 44, e289-e294.	3.9	24
129	Simulation of Ultrasound Propagation Through Three-Dimensional Trabecular Bone Structures: Comparison with Experimental Data. Japanese Journal of Applied Physics, 2006, 45, 6496-6500.	1.5	24
130	Sensitivity of QUS parameters to controlled variations of bone strength assessed with a cellular model. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1488-1496.	3.0	24
131	Influence of porosity, pore size, and cortical thickness on the propagation of ultrasonic waves guided through the femoral neck cortex: a simulation study. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 302-313.	3.0	24
132	Ex vivo cortical porosity and thickness predictions at the tibia using full-spectrum ultrasonic guided-wave analysis. Archives of Osteoporosis, 2019, 14, 21.	2.4	24
133	Parametric analysis of carotid plaque using a clinical ultrasound imaging system. Ultrasound in Medicine and Biology, 2003, 29, 1521-1530.	1.5	23
134	Relative contributions of porosity and mineralized matrix properties to the bulk axial ultrasonic wave velocity in human cortical bone. Ultrasonics, 2012, 52, 467-471.	3.9	23
135	A critical assessment of the in-vitro measurement of cortical bone stiffness with ultrasound. Ultrasonics, 2017, 80, 119-126.	3.9	23
136	Recent developments in trabecular bone characterization using ultrasound. Current Osteoporosis Reports, 2005, 3, 64-69.	3.6	22
137	Derivation of the mesoscopic elasticity tensor of cortical bone from quantitative impedance images at the micron scale. Computer Methods in Biomechanics and Biomedical Engineering, 2008, 11, 147-157.	1.6	22
138	InÂVivo Gene Transfer into the Ocular Ciliary Muscle Mediated byÂUltrasound and Microbubbles. Ultrasound in Medicine and Biology, 2011, 37, 1814-1827.	1.5	22
139	Computed tomography porosity and spherical indentation for determining cortical bone millimetre-scale mechanical properties. Scientific Reports, 2019, 9, 7416.	3.3	22
140	Milestones on the road to higher resolution, quantitative, and functional ultrasonic imaging. Proceedings of the IEEE, 2003, 91, 1543-1561.	21.3	21
141	Experimental evaluation of bone quality measuring speed of sound in cadaver mandibles. Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics, 2006, 102, 782-791.	1.4	21
142	High-frequency ultrasound detection and follow-up of Wilmsâ€™ tumor in the mouse. Ultrasound in Medicine and Biology, 2006, 32, 183-190.	1.5	21
143	To what extent can cortical bone millimeter-scale elasticity be predicted by a two-phase composite model with variable porosity?. Acta Biomaterialia, 2015, 12, 207-215.	8.3	20
144	Homogenization of cortical bone reveals that the organization and shape of pores marginally affect elasticity. Journal of the Royal Society Interface, 2019, 16, 20180911.	3.4	20

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145	Specular reflector noise: Effect and correction for in vivo attenuation estimation. Ultrasonic Imaging, 1985, 7, 277-292.	2.6	19
146	Model-based estimation of quantitative ultrasound variables at the proximal femur. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1304-1315.	3.0	19
147	Nonlinear acoustic resonances to probe a threaded interface. Journal of Applied Physics, 2010, 107, .	2.5	19
148	Accurate measurement of guided modes in a plate using a bidirectional approach. Journal of the Acoustical Society of America, 2014, 135, EL15-EL21.	1.1	19
149	Modeling of Femoral Neck Cortical Bone for the Numerical Simulation of Ultrasound Propagation. Ultrasound in Medicine and Biology, 2014, 40, 1015-1026.	1.5	19
150	Quantitative Ultrasound Instrumentation for Bone In Vivo Characterization. , 2011, , 47-71.		19
151	Optimal precision in ultrasound attenuation estimation and application to the detection of Duchenne Muscular Dystrophy carriers. Ultrasonic Imaging, 1987, 9, 1-17.	2.6	17
152	Quantitative Ultrasound Imaging of the Calcaneus: Precision and Variations During a 120-Day Bed Rest. Calcified Tissue International, 2000, 66, 16-21.	3.1	17
153	Wavelet-Based Signal Processing of In Vitro Ultrasonic Measurements at the Proximal Femur. Ultrasound in Medicine and Biology, 2007, 33, 970-980.	1.5	17
154	Comparative ultrasound evaluation of human trabecular bone graft properties after treatment with different sterilization procedures. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 90B, 430-437.	3.4	17
155	Real-time Chirp-Coded Imaging With a Programmable Ultrasound Biomicroscope. IEEE Transactions on Biomedical Engineering, 2010, 57, 654-664.	4.2	17
156	An alternative quantitative acoustical and electrical method for detection of cell adhesion process in realâ€time. Biotechnology and Bioengineering, 2011, 108, 947-962.	3.3	17
157	Quantification of stiffness measurement errors in resonant ultrasound spectroscopy of human cortical bone. Journal of the Acoustical Society of America, 2017, 142, 2755-2765.	1.1	17
158	Bone micro-damage assessment using non-linear resonant ultrasound spectroscopy (NRUS) techniques: A feasibility study. Ultrasonics, 2006, 44, e245-e249.	3.9	16
159	Effects of gamma irradiation on mechanical properties of defatted trabecular bone allografts assessed by speed-of-sound measurement. Cell and Tissue Banking, 2007, 8, 205-210.	1.1	16
160	A Linear Laser Scanner to Measure Cross-Sectional Shape and Area of Biological Specimens During Mechanical Testing. Journal of Biomechanical Engineering, 2010, 132, 105001.	1.3	16
161	Comparative investigation of elastic properties in a trabecula using micro-Brillouin scattering and scanning acoustic microscopy. Journal of the Acoustical Society of America, 2012, 132, EL54-EL60.	1.1	16
162	Diffraction correction for focused transducers in attenuation measurements ?. Ultrasonic Imaging, 1987, 9, 248-259.	2.6	15

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163	Optimization of attenuation estimation in reflection for in vivo human dermis characterization at 20 MHz. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 408-418.	3.0	15
164	Three-dimensional segmentation of high-frequency ultrasound echo signals from dissected lymph nodes. , 2008, , .		15
165	Influence of the precision of spectral backscatter measurements on the estimation of scatterers size in cancellous bone. Ultrasonics, 2006, 44, e57-e60.	3.9	14
166	Cell Attachment and Spreading Processes Monitored by the Thickness Shear-Mode Quartz Sensor. IEEE Sensors Journal, 2004, 4, 535-542.	4.7	13
167	High-resolution ultrasonography of subretinal structure and assessment of retina degeneration in rat. Experimental Eye Research, 2005, 81, 592-601.	2.6	13
168	Dispersion characteristics of the flexural wave assessed using low frequency (50â€“150 kHz) point-contact transducers: A feasibility study on bone-mimicking phantoms. Ultrasonics, 2017, 81, 1-9.	3.9	13
169	Assessment of trabecular bone tissue elasticity with resonant ultrasound spectroscopy. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 106-110.	3.1	13
170	Bulk Wave Velocities in Cortical Bone Reflect Porosity and Compression Strength. Ultrasound in Medicine and Biology, 2021, 47, 799-808.	1.5	13
171	Guided Waves in Cortical Bone. , 2011, , 147-179.		13
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