Liyun Wang

List of Publications by Year
in descending order

78 papers	3,436 citations	125106 35 h-index	169272 56 g-index
78 all docs	78 docs citations	78 times ranked	4038 citing authors

#	Article	IF	Citations
1	Osteocytic Pericellular Matrix (PCM): Accelerated Degradation under In Vivo Loading and Unloading Conditions Using a Novel Imaging Approach. Genes, 2022, 13, 72.	1.0	2
2	Breast Cancer Induced Bone Osteolysis Prediction Using Temporal Variational Autoencoders. BME Frontiers, 2022, 2022, .	2.2	3
3	Bio-orthogonal Click Chemistry Methods to Evaluate the Metabolism of Inflammatory Challenged Cartilage after Traumatic Overloading. ACS Biomaterials Science and Engineering, 2022, 8, 2564-2573.	2.6	4
4	Yoda1 Enhanced Low-Magnitude High-Frequency Vibration on Osteocytes in Regulation of MDA-MB-231 Breast Cancer Cell Migration. Cancers, 2022, 14, 3395.	1.7	13
5	High-Performance Structural Supercapacitors Based on Aligned Discontinuous Carbon Fiber Electrodes and Solid Polymer Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 11774-11782.	4.0	32
6	Extracellular Calcium Ion Concentration Regulates Chondrocyte Elastic Modulus and Adhesion Behavior. International Journal of Molecular Sciences, 2021, 22, 10034.	1.8	9
7	Lactation alters fluid flow and solute transport in maternal skeleton: A multiscale modeling study on the effects of microstructural changes and loading frequency. Bone, 2021, 151, 116033.	1.4	13
8	Maternal bone adaptation to mechanical loading during pregnancy, lactation, and post-weaning recovery. Bone, 2021, 151, 116031.	1.4	11
9	Moderate tibial loading and treadmill running, but not overloading, protect adult murine bone from destruction by metastasized breast cancer. Bone, 2021, 153, 116100.	1.4	18
10	Targeted Ptpn11 deletion in mice reveals the essential role of SHP2 in osteoblast differentiation and skeletal homeostasis. Bone Research, 2021, 9, 6.	5.4	17
11	All bone metastases are not created equal: Revisiting treatment resistance in renal cell carcinoma. Journal of Bone Oncology, 2021, 31, 100399.	1.0	12
12	On the characterization of interstitial fluid flow in the skeletal muscle endomysium. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 102, 103504.	1.5	13
13	Decreased pericellular matrix production and selection for enhanced cell membrane repair may impair osteocyte responses to mechanical loading in the aging skeleton. Aging Cell, 2020, 19, e13056.	3.0	18
14	Perlecan/Hspg2 deficiency impairs boneâ€™s calcium signaling and associated transcriptome in response to mechanical loading. Bone, 2020, 131, 115078.	1.4	19
15	A Novel Peptide, CK2.3, Improved Bone Formation in Ovariectomized Sprague Dawley Rats. International Journal of Molecular Sciences, 2020, 21, 4874.	1.8	2
16	Low Tortuous, Highly Conductive, and High-Areal-Capacity Battery Electrodes Enabled by Through-thickness Aligned Carbon Fiber Framework. Nano Letters, 2020, 20, 5504-5512.	4.5	64
17	Trabecular Bone Deficit and Enhanced Anabolic Response to Re-Ambulation after Disuse in Perlecan-Deficient Skeleton. Biomolecules, 2020, 10, 198.	1.8	2
18	Mechanical and electrochemical performance of hybrid laminated structural composites with carbon fiber/ solid electrolyte supercapacitor interleaves. Composites Science and Technology, 2020, 196, 108234.	3.8	29

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19	Remotely and Sequentially Controlled Actuation of Electroactivated Carbon Nanotube/Shape Memory Polymer Composites. Advanced Materials Technologies, 2019, 4, 1900600.	3.0	50
20	Synergistic effect enhanced shape recovery behavior of metal-4D printed shape memory polymer hybrid composites. Composites Part B: Engineering, 2019, 179, 107536.	5.9	31
21	Microfluidic platform for studying osteocyte mechanoregulation of breast cancer bone metastasis. Integrative Biology (United Kingdom), 2019, 11, 119-129.	0.6	61
22	Microstructural design for enhanced shape memory behavior of 4D printed composites based on carbon nanotube/polylactic acid filament. Composites Science and Technology, 2019, 181, 107692.	3.8	69
23	CK2.3, a Mimetic Peptide of the BMP Type I Receptor, Increases Activity in Osteoblasts over BMP2. International Journal of Molecular Sciences, 2019, 20, 5877.	1.8	12
24	Mechanical Regulation of the Maternal Skeleton during Reproduction and Lactation. Current Osteoporosis Reports, 2019, 17, 375-386.	1.5	17
25	Spontaneous calcium signaling of cartilage cells: from spatiotemporal features to biophysical modeling. FASEB Journal, 2019, 33, 4675-4687.	0.2	24
26	Identification of Chondrocyte Genes and Signaling Pathways in Response to Acute Joint Inflammation. Scientific Reports, 2019, 9, 93.	1.6	43
27	Elevated solute transport at sites of diffuse matrix damage in cortical bone: Implications on bone repair. Journal of Orthopaedic Research, 2018, 36, 692-698.	1.2	6
28	Solute Transport in the Bone Lacunar-Canalicular System (LCS). Current Osteoporosis Reports, 2018, 16, 32-41.	1.5	56
29	Calcium signaling of in situ chondrocytes in articular cartilage under compressive loading: Roles of calcium sources and cell membrane ion channels. Journal of Orthopaedic Research, 2018, 36, 730-738.	1.2	55
30	Mechanically induced autophagy is associated with ATP metabolism and cellular viability in osteocytes in vitro. Redox Biology, 2018, 14, 492-498.	3.9	62
31	Synthetic Peptide CK2.3 Enhances Bone Mineral Density in Senile Mice. Journal of Bone Research, 2018, 06, .	0.0	8
32	Direct Quantification of Solute Diffusivity in Agarose and Articular Cartilage Using Correlation Spectroscopy. Annals of Biomedical Engineering, 2017, 45, 2461-2474.	1.3	13
33	A multiscale 3D finite element analysis of fluid/solute transport in mechanically loaded bone. Bone Research, 2016, 4, 16032.	5.4	39
34	Single molecule force measurements of perlecan/HSPG2: A key component of the osteocyte pericellular matrix. Matrix Biology, 2016, 50, 27-38.	1.5	51
35	Effects of Osmolarity on the Spontaneous Calcium Signaling of In Situ Juvenile and Adult Articular Chondrocytes. Annals of Biomedical Engineering, 2016, 44, 1138-1147.	1.3	21
36	Determining Tensionâ€"Compression Nonlinear Mechanical Properties of Articular Cartilage from Indentation Testing. Annals of Biomedical Engineering, 2016, 44, 1148-1158.	1.3	26

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37	The dependences of osteocyte network on bone compartment, age, and disease. Bone Research, 2015, 3, .	5.4	84
38	Inhibition of T-Type Voltage Sensitive Calcium Channel Reduces Load-Induced OA in Mice and Suppresses the Catabolic Effect of Bone Mechanical Stress on Chondrocytes. PLoS ONE, 2015, 10, e0127290.	1.1	24
39	Bisphosphonates rescue articular cartilage from trauma damage. , 2015, , .		1
40	Bone's responses to mechanical loading are impaired in type 1 diabetes. Bone, 2015, 81, 152-160.	1.4	53
41	The effect of chemically defined medium on spontaneous calcium signaling of in situ chondrocytes during long-term culture. Journal of Biomechanics, 2015, 48, 990-996.	0.9	19
42	Roles of the Fibrous Superficial Zone in the Mechanical Behavior of TMJ Condylar Cartilage. Annals of Biomedical Engineering, 2015, 43, 2652-2662.	1.3	38
43	Prostaglandin E₂ modulates F-actin stress fiber in FSS-stimulated MC3T3-E1 cells in a PKA-dependent manner. Acta Biochimica Et Biophysica Sinica, 2014, 46, 40-47.	0.9	14
44	<i>In situ</i> intracellular calcium oscillations in osteocytes in intact mouse long bones under dynamic mechanical loading. FASEB Journal, 2014, 28, 1582-1592.	0.2	93
45	Deficiency in Perlecan/HSPG2 During Bone Development Enhances Osteogenesis and Decreases Quality of Adult Bone in Mice. Calcified Tissue International, 2014, 95, 29-38.	1.5	26
46	Hydraulic Pressure During Fluid Flow Regulates Purinergic Signaling and Cytoskeleton Organization of Osteoblasts. Cellular and Molecular Bioengineering, 2014, 7, 266-277.	1.0	16
47	Perlecan-Containing Pericellular Matrix Regulates Solute Transport and Mechanosensing Within the Osteocyte Lacunar-Canalicular System. Journal of Bone and Mineral Research, 2014, 29, 878-891.	3.1	82
48	Imaging and quantifying solute transport across periosteum: Implications for muscleâ€“bone crosstalk. Bone, 2014, 66, 82-89.	1.4	24
49	Quantifying load-induced solute transport and solute-matrix interaction within the osteocyte lacunar-canalicular system. Journal of Bone and Mineral Research, 2013, 28, 1075-1086.	3.1	47
50	Elevated cross-talk between subchondral bone and cartilage in osteoarthritic joints. Bone, 2012, 51, 212-217.	1.4	136
51	Experimental study on the lift generation inside a random synthetic porous layer under rapid compaction. Experimental Thermal and Fluid Science, 2012, 36, 205-216.	1.5	17
52	Casein kinase 2 regulates in vivo bone formation through its interaction with bone morphogenetic protein receptor type Ia. Bone, 2011, 49, 944-954.	1.4	35
53	Effect of lowâ€magnitude, highâ€frequency vibration on osteogenic differentiation of rat mesenchymal stromal cells. Journal of Orthopaedic Research, 2011, 29, 1075-1080.	1.2	49
54	Real-time measurement of solute transport within the lacunar-canalicular system of mechanically loaded bone: Direct evidence for load-induced fluid flow. Journal of Bone and Mineral Research, 2011, 26, 277-285.	3.1	225

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55	Perlecan/<i>Hspg2</i> deficiency alters the pericellular space of the lacunocanalicular system surrounding osteocytic processes in cortical bone. Journal of Bone and Mineral Research, 2011, 26, 618-629.	3.1	104
56	Stepwise Increasing and Decreasing Fluid Shear Stresses Differentially Regulate the Functions of Osteoblasts. Cellular and Molecular Bioengineering, 2010, 3, 376-386.	1.0	9
57	An inâ€situ fluorescenceâ€based optical extensometry system for imaging mechanically loaded bone. Journal of Orthopaedic Research, 2010, 28, 805-811.	1.2	15
58	Quantifying fluid shear stress in a rocking culture dish. Journal of Biomechanics, 2010, 43, 1598-1602.	0.9	45
59	In situ permeability measurement of the mammalian lacunarâ€"canalicular system. Bone, 2010, 46, 1075-1081.	1.4	69
60	Effects of cyclic hydraulic pressure on osteocytes. Bone, 2010, 46, 1449-1456.	1.4	69
61	Effect of low-magnitude, high-frequency vibration on osteocytes in the regulation of osteoclasts. Bone, 2010, 46, 1508-1515.	1.4	149
62	Does blood pressure enhance solute transport in the bone lacunarâ€"canalicular system?. Bone, 2010, 47, 353-359.	1.4	18
63	Mechanics-based analysis of selected features of the exoskeletal microstructure of<i>Popillia japonica</i>. Journal of Materials Research, 2009, 24, 3253-3267.	1.2	38
64	Ribosomal protein L29/HIP deficiency delays osteogenesis and increases fragility of adult bone in mice. Journal of Orthopaedic Research, 2009, 27, 28-35.	1.2	23
65	In situ measurement of transport between subchondral bone and articular cartilage. Journal of Orthopaedic Research, 2009, 27, 1347-1352.	1.2	186
66	Cyclic Hydraulic Pressure and Fluid Flow Differentially Modulate Cytoskeleton Re-Organization in MC3T3 Osteoblasts. Cellular and Molecular Bioengineering, 2009, 2, 133-143.	1.0	47
67	Anatomic variations of the lacunarâ€"canalicular system influence solute transport in bone. Bone, 2009, 45, 704-710.	1.4	29
68	The dependency of solute diffusion on molecular weight and shape in intact bone. Bone, 2009, 45, 1017-1023.	1.4	40
69	Effects of diminished protein synthesis on bone anabolic response to load in RPL29â€deficient mice. FASEB Journal, 2009, 23, 496.3.	0.2	0
70	Modeling Fluorescence Recovery After Photobleaching in Loaded Bone: Potential Applications in Measuring Fluid and Solute Transport in the Osteocytic Lacunar-Canalicular System. Annals of Biomedical Engineering, 2008, 36, 1961-1977.	1.3	42
71	Image analyses of two crustacean exoskeletons and implications of the exoskeletal microstructure on the mechanical behavior. Journal of Materials Research, 2008, 23, 2854-2872.	1.2	61
72	In situ measurement of solute transport in the bone lacunarâ€canalicular system. FASEB Journal, 2006, 20, A418.	0.2	0

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73	In situ measurement of solute transport in the bone lacunar-canalicular system. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11911-11916.	3.3	182
74	Delineating bone's interstitial fluid pathway in vivo. Bone, 2004, 34, 499-509.	1.4	121
75	On bone adaptation due to venous stasis. Journal of Biomechanics, 2003, 36, 1439-1451.	0.9	74
76	In Response to â€œMixing Mechanisms and Net Solute Transport in Boneâ€•by M. L. Knothe Tate. Annals of Biomedical Engineering, 2001, 29, 812-816.	1.3	7
77	Modeling Tracer Transport in an Osteon under Cyclic Loading. Annals of Biomedical Engineering, 2000, 28, 1200-1209.	1.3	96
78	Fluid pressure relaxation depends upon osteonal microstructure: modeling an oscillatory bending experiment. Journal of Biomechanics, 1999, 32, 663-672.	0.9	104