

Robert L Sah

List of Publications by Year in descending order

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55
papers

2,841
citations

186265

28
h-index

175258

52
g-index

57
all docs

57
docs citations

57
times ranked

4350
citing authors

#	ARTICLE	IF	CITATIONS
1	Matrix stiffness drives epithelial-mesenchymal transition and tumour metastasis through a TWIST1-G3BP2 mechanotransduction pathway. <i>Nature Cell Biology</i> , 2015, 17, 678-688.	10.3	699
2	Boundary lubrication of articular cartilage: Role of synovial fluid constituents. <i>Arthritis and Rheumatism</i> , 2007, 56, 882-891.	6.7	447
3	Video microscopy to quantitate the inhomogeneous equilibrium strain within articular cartilage during confined compression. <i>Annals of Biomedical Engineering</i> , 1996, 24, 500-512.	2.5	150
4	Matrix Rigidity Controls Epithelial-Mesenchymal Plasticity and Tumor Metastasis via a Mechanoresponsive EPHA2/LYN Complex. <i>Developmental Cell</i> , 2020, 54, 302-316.e7.	7.0	128
5	Hyaluronan concentration and size distribution in human knee synovial fluid: variations with age and cartilage degeneration. <i>Arthritis Research and Therapy</i> , 2016, 18, 18.	3.5	94
6	Integrative cartilage repair: Inhibition by γ -aminopropionitrile. <i>Journal of Orthopaedic Research</i> , 1999, 17, 850-857.	2.3	66
7	Simultaneous Enhancement of Photoluminescence, MRI Relaxivity, and CT Contrast by Tuning the Interfacial Layer of Lanthanide Heteroepitaxial Nanoparticles. <i>Nano Letters</i> , 2017, 17, 4873-4880.	9.1	61
8	A Novel, Direct NO Donor Regulates Osteoblast and Osteoclast Functions and Increases Bone Mass in Ovariectomized Mice. <i>Journal of Bone and Mineral Research</i> , 2017, 32, 46-59.	2.8	60
9	The Effects of Hyaluronan on Tissue Healing after Meniscus Injury and Repair in a Rabbit Model. <i>American Journal of Sports Medicine</i> , 2000, 28, 90-97.	4.2	58
10	Addition of Mesenchymal Stem Cells to Autologous Platelet-Enhanced Fibrin Scaffolds in Chondral Defects. <i>Journal of Bone and Joint Surgery - Series A</i> , 2016, 98, 23-34.	3.0	56
11	Skeletal Mineralization Deficits and Impaired Biogenesis and Function of Chondrocyte-Derived Matrix Vesicles in <i>Phospho1</i> and <i>Phospho1/Pit1</i> Double-Knockout Mice. <i>Journal of Bone and Mineral Research</i> , 2016, 31, 1275-1286.	2.8	53
12	Effects of equine joint injury on boundary lubrication of articular cartilage by synovial fluid: Role of hyaluronan. <i>Arthritis and Rheumatism</i> , 2012, 64, 2917-2926.	6.7	52
13	Formulation of PEG-based hydrogels affects tissue-engineered cartilage construct characteristics. <i>Journal of Materials Science: Materials in Medicine</i> , 2001, 12, 983-990.	3.6	50
14	Protein Kinase G Activation Reverses Oxidative Stress and Restores Osteoblast Function and Bone Formation in Male Mice With Type 1 Diabetes. <i>Diabetes</i> , 2018, 67, 607-623.	0.6	50
15	Novel Method for the Quantitative Assessment of Cell Migration: A Study on the Motility of Rabbit Anterior Cruciate (ACL) and Medial Collateral Ligament (MCL) Cells. <i>Tissue Engineering</i> , 2000, 6, 29-38.	4.6	49
16	Streaming potentials during the confined compression creep test of normal and proteoglycan-depleted cartilage. <i>Annals of Biomedical Engineering</i> , 1997, 25, 269-277.	2.5	45
17	Targeting phosphatase-dependent proteoglycan switch for rheumatoid arthritis therapy. <i>Science Translational Medicine</i> , 2015, 7, 288ra76.	12.4	44
18	Development of a Comprehensive Osteochondral Allograft MRI Scoring System (OCAMRISS) With Histopathologic, Micro-Computed Tomography, and Biomechanical Validation. <i>Cartilage</i> , 2014, 5, 16-27.	2.7	43

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19	Effect of seeding duration on the strength of chondrocyte adhesion to articular cartilage. <i>Journal of Orthopaedic Research</i> , 1999, 17, 121-129.	2.3	42
20	Detecting stress injury (fatigue fracture) in fibular cortical bone using quantitative ultrashort echo time magnetization transfer (UTE-MT): An ex vivo study. <i>NMR in Biomedicine</i> , 2018, 31, e3994.	2.8	39
21	Inhibition of dual-specificity tyrosine phosphorylation-regulated kinase 2 perturbs 26S proteasome-addicted neoplastic progression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 24881-24891.	7.1	39
22	Translational Models for Musculoskeletal Tissue Engineering and Regenerative Medicine. <i>Tissue Engineering - Part B: Reviews</i> , 2010, 16, 1-3.	4.8	34
23	Collagen proton fraction from ultrashort echo time magnetization transfer (UTE-MT) MRI modelling correlates significantly with cortical bone porosity measured with micro-computed tomography (μ CT). <i>NMR in Biomedicine</i> , 2019, 32, e4045.	2.8	34
24	Correlations of cortical bone microstructural and mechanical properties with water proton fractions obtained from ultrashort echo time (UTE) MRI tricomponent T2* model. <i>NMR in Biomedicine</i> , 2020, 33, e4233.	2.8	33
25	Disc degeneration reduces the delamination strength of the annulus fibrosus in the rabbit annular disc puncture model. <i>Spine Journal</i> , 2014, 14, 1265-1271.	1.3	32
26	Assessing cortical bone mechanical properties using collagen proton fraction from ultrashort echo time magnetization transfer (UTE-MT) MRI modeling. <i>Bone Reports</i> , 2019, 11, 100220.	0.4	32
27	Effect of Tibial Plateau Fracture on Lubrication Function and Composition of Synovial Fluid. <i>Journal of Bone and Joint Surgery - Series A</i> , 2012, 94, e64.	3.0	31
28	The effects of focal articular defects on intra-tissue strains in the surrounding and opposing cartilage. <i>Biorheology</i> , 2008, 45, 193-207.	0.4	30
29	Stress physiology and weapon integrity of intertidal mantis shrimp under future ocean conditions. <i>Scientific Reports</i> , 2016, 6, 38637.	3.3	23
30	Creep of trabecular bone from the human proximal tibia. <i>Materials Science and Engineering C</i> , 2014, 40, 219-227.	7.3	21
31	Semi-permeable membrane retention of synovial fluid lubricants hyaluronan and proteoglycan 4 for a biomimetic bioreactor. <i>Biotechnology and Bioengineering</i> , 2010, 106, 149-160.	3.3	20
32	3-dimensional metrics of proximal femoral shape deformities in Legg-Calvé-Perthes disease and slipped capital femoral epiphysis. <i>Journal of Orthopaedic Research</i> , 2018, 36, 1526-1535.	2.3	19
33	Combinatorial targeting of cancer bone metastasis using mRNA engineered stem cells. <i>EBioMedicine</i> , 2019, 45, 39-57.	6.1	18
34	Pulsed lavage cleansing of osteochondral grafts depends on lavage duration, flow intensity, and graft storage condition. <i>PLoS ONE</i> , 2017, 12, e0176934.	2.5	17
35	Connectivity of the Superficial Muscles of the Human Perineum: A Diffusion Tensor Imaging-Based Global Tractography Study. <i>Scientific Reports</i> , 2018, 8, 17867.	3.3	16
36	cGMP-dependent protein kinase-2 regulates bone mass and prevents diabetic bone loss. <i>Journal of Endocrinology</i> , 2018, 238, 203-219.	2.6	15

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37	Tailoring hydrogel surface properties to modulate cellular response to shear loading. <i>Acta Biomaterialia</i> , 2017, 52, 105-117.	8.3	14
38	Association of 3-Dimensional Cartilage and Bone Structure with Articular Cartilage Properties in and Adjacent to Autologous Osteochondral Grafts after 6 and 12 Months in a Goat Model. <i>Cartilage</i> , 2012, 3, 255-266.	2.7	13
39	The biophysical mechanisms of altered hyaluronan concentration in synovial fluid after anterior cruciate ligament transection. <i>Arthritis and Rheumatism</i> , 2012, 64, 3993-4003.	6.7	13
40	Synovial Fluid Lubricant Properties Are Transiently Deficient After Arthroscopic Articular Cartilage Defect Repair With Platelet-Enriched Fibrin Alone and With Mesenchymal Stem Cells. <i>Orthopaedic Journal of Sports Medicine</i> , 2014, 2, 232596711454258.	1.7	12
41	Ex vivo loading of trussed implants for spine fusion induces heterogeneous strains consistent with homeostatic bone mechanobiology. <i>Journal of Biomechanics</i> , 2016, 49, 4090-4097.	2.1	12
42	Biomechanics of osteochondral impact with cushioning and graft Insertion: Cartilage damage is correlated with delivered energy. <i>Journal of Biomechanics</i> , 2018, 73, 127-136.	2.1	10
43	Protein kinase G1 regulates bone regeneration and rescues diabetic fracture healing. <i>JCI Insight</i> , 2020, 5, .	5.0	10
44	Impact insertion of osteochondral grafts: Interference fit and central graft reduction affect biomechanics and cartilage damage. <i>Journal of Orthopaedic Research</i> , 2018, 36, 377-386.	2.3	8
45	Cholla cactus frames as lightweight and torsionally tough biological materials. <i>Acta Biomaterialia</i> , 2020, 112, 213-224.	8.3	8
46	Evaluation of Autogenous Engineered Septal Cartilage Grafts in Rabbits: A Minimally Invasive Preclinical Model. <i>Advances in Otolaryngology</i> , 2014, 2014, 1-7.	1.1	6
47	Specific bone region localization of osteolytic versus osteoblastic lesions in a patient-derived xenograft model of bone metastatic prostate cancer. <i>Asian Journal of Urology</i> , 2016, 3, 229-239.	1.2	6
48	Strains in trussed spine interbody fusion implants are modulated by load and design. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 80, 203-208.	3.1	5
49	A Single-Blind Study Evaluating the Efficacy of Gold Nanoparticle Photothermal-Assisted Liposuction in an Ex Vivo Human Tissue Model. <i>Aesthetic Surgery Journal</i> , 2018, 38, 1213-1224.	1.6	5
50	Ultrashort echo time adiabatic T1 ρ (UTE-Adiab-T1 ρ) is sensitive to human cadaveric knee joint deformation induced by mechanical loading and unloading. <i>Magnetic Resonance Imaging</i> , 2021, 80, 98-105.	1.8	5
51	Tissue Engineering of Articular Cartilage. , 2006, , 157-189.		4
52	Novel magnetic resonance technique for characterizing mesoscale structure of trabecular bone. <i>Royal Society Open Science</i> , 2018, 5, 180563.	2.4	4
53	Effect of hyaluronidase on tissue-engineered human septal cartilage. <i>Laryngoscope</i> , 2016, 126, 1984-1989.	2.0	3
54	Effects of an articular cartilage lubrication with a viscosupplement in vitro and in vivo following osteochondral fractures in horses. <i>American Journal of Veterinary Research</i> , 2021, 82, 611-618.	0.6	2

#	ARTICLE	IF	CITATIONS
55	10.4172/2324-8785.1000172. Journal of Otology & Rhinology, 2014, 03, .	0.1	1