Mustafa Unal

List of Publications by Year
in descending order

25 papers	638 citations	623734 14 h-index	642732 23 g-index
26 all docs	26 docs citations	26 times ranked	791 citing authors

#	Article	IF	Citations
1	The Role of Matrix Composition in the Mechanical Behavior of Bone. Current Osteoporosis Reports, 2018, 16, 205-215.	3.6	87
2	Raman spectral classification of mineral- and collagen-bound water's associations to elastic and post-yield mechanical properties of cortical bone. Bone, 2015, 81, 315-326.	2.9	75
3	Novel Raman Spectroscopic Biomarkers Indicate That Postyield Damage Denatures Bone's Collagen. Journal of Bone and Mineral Research, 2016, 31, 1015-1025.	2.8	65
4	Molecular spectroscopic identification of the water compartments in bone. Bone, 2014, 67, 228-236.	2.9	56
5	Assessing matrix quality by Raman spectroscopy helps predict fracture toughness of human cortical bone. Scientific Reports, 2019, 9, 7195.	3.3	45
6	Assessing glycation€mediated changes in human cortical bone with Raman spectroscopy. Journal of Biophotonics, 2018, 11, e201700352.	2.3	41
7	Compositional assessment of bone by Raman spectroscopy. Analyst, The, 2021, 146, 7464-7490.	3.5	34
8	Micro and Nano-Scale Technologies for Cell Mechanics. Nanobiomedicine, 2014, 1, 5.	5.7	33
9	Raman spectral markers of collagen denaturation and hydration in human cortical bone tissue are affected by radiation sterilization and high cycle fatigue damage. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 314-321.	3.1	27
10	The age-related decrease in material properties of BALB/c mouse long bones involves alterations to the extracellular matrix. Bone, 2020, 130, 115126.	2.9	25
11	Low bone toughness in the TallyHO model of juvenile type 2 diabetes does not worsen with age. Bone, 2018, 110, 204-214.	2.9	21
12	Interrelationships between electrical, mechanical and hydration properties of cortical bone. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 12-23.	3.1	21
13	Manipulating the Amount and Structure of the Organic Matrix Affects the Water Compartments of Human Cortical Bone. JBMR Plus, 2019, 3, e10135.	2.7	21
14	Raman spectroscopy-based water content is a negative predictor of articular human cartilage mechanical function. Osteoarthritis and Cartilage, 2019, 27, 304-313.	1.3	16
15	Shortwave-infrared Raman spectroscopic classification of water fractions in articular cartilage ex vivo. Journal of Biomedical Optics, 2018, 23, 1.	2.6	16
16	Effects of losartan treatment on the physicochemical properties of diabetic rat bone. Journal of Bone and Mineral Metabolism, 2017, 35, 161-170.	2.7	15
17	Miniscrew biomechanics: Guidelines for the use of rigid indirect anchorage mechanics. American Journal of Orthodontics and Dentofacial Orthopedics, 2017, 152, 413-419.	1.7	10
18	Raman spectroscopic determination of bone matrix quantity and quality augments prediction of human cortical bone mechanical properties. Journal of Biomechanics, 2021, 119, 110342.	2.1	9

#	Article	IF	Citations
19	Constitutive activation of MEK1 in osteoprogenitors increases strength of bone despite impairing mineralization. Bone, 2020, 130, 115106.	2.9	6
20	Fundamentals of Musculoskeletal Biomechanics. , 2016, , 15-36.		4
21	Repetitive short‑span application of extracellular calcium is osteopromotive to osteoprogenitor cells. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e1349-e1359.	2.7	3
22	LETTER TO THE EDITOR. Connective Tissue Research, 2020, 61, 420-422.	2.3	3
23	Raman spectroscopy‑based water measurements identify the origin of <scp>MRI T2</scp> signal in human articular cartilage zones and predict histopathologic score. Journal of Biophotonics, 2022, 15, e202100212.	2.3	3
24	Chemical characterization of Maltese-cross birefringent particles in synovial fluid samples collected from symptomatic joints. Joint Bone Spine, 2018, 85, 501-503.	1.6	2
25	Bound Water and Hydroxyproline are the essential contributors to collagen molecular stability: A Computational Analysis. Academic Platform Journal of Engineering and Science, 2019, 7, 373-380.	0.6	0