Thomas L Willett

List of Publications by Year
in descending order

46 papers	1,035 citations	331670 21 h-index	434195 31 g-index
46 all docs	46 docs citations	46 times ranked	1239 citing authors

#	Article	IF	Citations
1	A linear systems model of the hydrothermal isometric tension test for assessing collagenous tissue quality. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104916.	3.1	1
2	Enhanced Mechanical Properties of 3D Printed Nanocomposites Composed of Functionalized Plant-Derived Biopolymers and Calcium-Deficient Hydroxyapatite Nanoparticles. Frontiers in Materials, 2022, 9, .	2.4	11
3	Empirical evidence that bone collagen molecules denature as a result of bone fracture. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 131, 105220.	3.1	4
4	The importance of rate-dependent effects in modelling the micro-damage process zone in cortical bone fracture. Engineering Fracture Mechanics, 2022, 264, 108351.	4.3	4
5	Causative or associative: A critical review of the role of advanced glycation end-products in bone fragility. Bone, 2022, 163, 116485.	2.9	14
6	A Carbodiimide Coupling Approach for PEGylating GelMA and Further Tuning GelMA Composite Properties. Macromolecular Materials and Engineering, 2021, 306, 2000604.	3.6	3
7	Acrylated epoxidized soybean oil/hydroxyapatite-based nanocomposite scaffolds prepared by additive manufacturing for bone tissue engineering. Materials Science and Engineering C, 2021, 118, 111400.	7.3	28
8	mSLA-based 3D printing of acrylated epoxidized soybean oil - nano-hydroxyapatite composites for bone repair. Materials Science and Engineering C, 2021, 130, 112456.	7.3	28
9	Modelling the micro-damage process zone during cortical bone fracture. Engineering Fracture Mechanics, 2020, 224, 106811.	4.3	18
10	Effect of sterilization treatment on mechanical properties, biodegradation, bioactivity and printability of GelMA hydrogels. Biomedical Materials (Bristol), 2020, 15, 065017.	3.3	36
11	Mechanical properties of nanocomposite biomaterials improved by extrusion during direct ink writing. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 104, 103653.	3.1	28
12	Triethyleneglycol dimethacrylate addition improves the 3D-printability and construct properties of a GelMA-nHA composite system towards tissue engineering applications. Materials Science and Engineering C, 2020, 112, 110937.	7.3	18
13	A Continuum Damage Mechanics Model Of The Microdamage Process Zone During Cortical Bone Fracture. Materials Today: Proceedings, 2019, 7, 402-409.	1.8	1
14	Generating realistic representative microstructure of biomimetic composite materials for computational assessment of mechanical properties. Materials Today: Proceedings, 2019, 7, 373-381.	1.8	1
15	Ribose pre-treatment can protect the fatigue life of Î³-irradiation sterilized bone. Cell and Tissue Banking, 2019, 20, 287-295.	1.1	3
16	Printability of Methacrylated Gelatin upon Inclusion of a Chloride Salt and Hydroxyapatite Nanoâ€Particles. Macromolecular Materials and Engineering, 2019, 304, 1900142.	3.6	13
17	Extrudable hydroxyapatite/plant oil-based biopolymer nanocomposites for biomedical applications: Mechanical testing and modeling. Materials and Design, 2019, 174, 107790.	7.0	25
18	Preâ€clinical evaluation of bone allograft toughened with a novel sterilization method: An in vivo rabbit study. Journal of Orthopaedic Research, 2019, 37, 832-844.	2.3	0

#	Article	IF	Citations
19	An Alternative Approach to the Surface Methacrylation of Non-stoichiometric Hydroxyapatite Nanoparticles for Use in Bone-Inspired Composites. Frontiers in Materials, 2019, 6, .	2.4	2
20	Three-dimensional micromechanical assessment of bio-inspired composites with non-uniformly dispersed inclusions. Composite Structures, 2019, 212, 484-499.	5.8	12
21	Bone collagen network integrity and transverse fracture toughness of human cortical bone. Bone, 2019, 120, 187-193.	2.9	42
22	Three-dimensional microscopic assessment of randomly distributed representative volume elements for high fiber volume fraction unidirectional composites. Composite Structures, 2018, 192, 153-164.	5.8	38
23	Impact of Side Chain Polarity on Non-Stoichiometric Nano-Hydroxyapatite Surface Functionalization with Amino Acids. Scientific Reports, 2018, 8, 12700.	3.3	30
24	Development of a novel method for the strengthening and toughening of irradiation-sterilized bone allografts. Cell and Tissue Banking, 2017, 18, 323-334.	1.1	16
25	The effect of ribose pre-treatment of cortical bone on Î³-irradiation sterilization effectiveness. Cell and Tissue Banking, 2017, 18, 555-560.	1.1	2
26	The micro-damage process zone during transverse cortical bone fracture: No ears at crack growth initiation. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 371-382.	3.1	20
27	Maximum load to failure and tensile displacement of an all-suture glenoid anchor compared with a screw-in glenoid anchor. Knee Surgery, Sports Traumatology, Arthroscopy, 2016, 24, 357-364.	4.2	41
28	Biomechanical comparison of the human cadaveric pelvis with a fourth generation composite model. Journal of Biomechanics, 2016, 49, 537-542.	2.1	18
29	Elasticâ€"plastic fracture toughness and rising J R -curve behavior of cortical bone is partially protected from irradiationâ€"sterilization-induced degradation by ribose protectant. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 64, 53-64.	3.1	28
30	Adynamic Bone Decreases Bone Toughness During Aging by Affecting Mineral and Matrix. Journal of Bone and Mineral Research, 2016, 31, 369-379.	2.8	28
31	Î³-Irradiation sterilized bone strengthened and toughened by ribose pre-treatment. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 44, 147-155.	3.1	22
32	Periprosthetic supracondylar femoral fractures following knee arthroplasty: a biomechanical comparison of four methods of fixation. International Orthopaedics, 2015, 39, 1737-1742.	1.9	35
33	Can OP-1 stimulate union in a rat model of pathological fracture post treatment for soft tissue sarcoma?. Journal of Orthopaedic Research, 2014, 32, 1252-1263.	2.3	5
34	Development, validation and characterization of a novel mouse model of Adynamic Bone Disease (ABD). Bone, 2014, 68, 57-66.	2.9	8
35	Collagen Modifications in Postmenopausal Osteoporosis: Advanced Glycation Endproducts May Affect Bone Volume, Structure and Quality. Current Osteoporosis Reports, 2014, 12, 329-337.	3.6	38
36	Bone embrittlement and collagen modifications due to high-dose gamma-irradiation sterilization. Bone, 2014, 61, 71-81.	2.9	69

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37	Effects of radiation and surgery on healing of femoral fractures in a rat model. Journal of Orthopaedic Research, 2013, 31, 1323-1331.	2.3	18
38	In vitro non-enzymatic ribation reduces post-yield strain accommodation in cortical bone. Bone, 2013, 52, 611-622.	2.9	45
39	Changes in bone fatigue resistance due to collagen degradation. Journal of Orthopaedic Research, 2011, 29, 197-203.	2.3	11
40	Chlorthalidone improves vertebral bone quality in genetic hypercalciuric stone-forming rats. Journal of Bone and Mineral Research, 2011, 26, 1904-1912.	2.8	24
41	Effect of Rosiglitazone on Bone Quality in a Rat Model of Insulin Resistance and Osteoporosis. Diabetes, 2011, 60, 3271-3278.	0.6	34
42	Phenotypic Variation of Fluoride Responses between Inbred Strains of Mice. Cells Tissues Organs, 2011, 194, 261-267.	2.3	10
43	3BP2-deficient mice are osteoporotic with impaired osteoblast and osteoclast functions. Journal of Clinical Investigation, 2011, 121, 3244-3257.	8.2	67
44	Changes in Collagen With Aging Maintain Molecular Stability After Overload: Evidence From an In Vitro Tendon Model. Journal of Biomechanical Engineering, 2010, 132, 031002.	1.3	32
45	Mechanical overload decreases the thermal stability of collagen in an in vitro tensile overload tendon model. Journal of Orthopaedic Research, 2008, 26, 1605-1610.	2.3	40
46	Increased Proteolysis of Collagen in an InÂVitro Tensile Overload Tendon Model. Annals of Biomedical Engineering, 2007, 35, 1961-1972.	2.5	64