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	Bone embrittlement and collagen modifications due to high-dose gamma-irradiation sterilization. Bone, 2014, 61, 71-81.	2.9	69
2	3BP2-deficient mice are osteoporotic with impaired osteoblast and osteoclast functions. Journal of Clinical Investigation, 2011, 121, 3244-3257.	8.2	67
3	Increased Proteolysis of Collagen in an InÂVitro Tensile Overload Tendon Model. Annals of Biomedical Engineering, 2007, 35, 1961-1972.	2.5	64
4	In vitro non-enzymatic ribation reduces post-yield strain accommodation in cortical bone. Bone, 2013, 52, 611-622.	2.9	45
5	Bone collagen network integrity and transverse fracture toughness of human cortical bone. Bone, 2019, 120, 187-193.	2.9	42
6	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
7	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
8	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
9	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
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	Periprosthetic supracondylar femoral fractures following knee arthroplasty: a biomechanical comparison of four methods of fixation. International Orthopaedics, 2015, 39, 1737-1742.	1.9	35
12	Effect of Rosiglitazone on Bone Quality in a Rat Model of Insulin Resistance and Osteoporosis. Diabetes, 2011, 60, 3271-3278.	0.6	34
13	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
14	Impact of Side Chain Polarity on Non-Stoichiometric Nano-Hydroxyapatite Surface Functionalization with Amino Acids. Scientific Reports, 2018, 8, 12700.	3.3	30
15	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
16	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
17	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
18	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

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19	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
20	Extrudable hydroxyapatite/plant oil-based biopolymer nanocomposites for biomedical applications: Mechanical testing and modeling. Materials and Design, 2019, 174, 107790.	7.0	25
21	Chlorthalidone improves vertebral bone quality in genetic hypercalciuric stone-forming rats. Journal of Bone and Mineral Research, 2011, 26, 1904-1912.	2.8	24
22	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
23	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
24	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
25	Biomechanical comparison of the human cadaveric pelvis with a fourth generation composite model. Journal of Biomechanics, 2016, 49, 537-542.	2.1	18
26	Modelling the micro-damage process zone during cortical bone fracture. Engineering Fracture Mechanics, 2020, 224, 106811.	4.3	18
27	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
28	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
29	Causative or associative: A critical review of the role of advanced glycation end-products in bone fragility. Bone, 2022, 163, 116485.	2.9	14
30	Printability of Methacrylated Gelatin upon Inclusion of a Chloride Salt and Hydroxyapatite Nanoâ€Particles. Macromolecular Materials and Engineering, 2019, 304, 1900142.	3.6	13
31	Three-dimensional micromechanical assessment of bio-inspired composites with non-uniformly dispersed inclusions. Composite Structures, 2019, 212, 484-499.	5.8	12
32	Changes in bone fatigue resistance due to collagen degradation. Journal of Orthopaedic Research, 2011, 29, 197-203.	2.3	11
33	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
34	Phenotypic Variation of Fluoride Responses between Inbred Strains of Mice. Cells Tissues Organs, 2011, 194, 261-267.	2.3	10
35	Development, validation and characterization of a novel mouse model of Adynamic Bone Disease (ABD). Bone, 2014, 68, 57-66.	2.9	8
36	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

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37	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
38	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
39	Ribose pre-treatment can protect the fatigue life of Î³-irradiation sterilized bone. Cell and Tissue Banking, 2019, 20, 287-295.	1.1	3
40	A Carbodiimide Coupling Approach for PEGylating GelMA and Further Tuning GelMA Composite Properties. Macromolecular Materials and Engineering, 2021, 306, 2000604.	3.6	3
41	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
42	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
43	A Continuum Damage Mechanics Model Of The Microdamage Process Zone During Cortical Bone Fracture. Materials Today: Proceedings, 2019, 7, 402-409.	1.8	1
44	Generating realistic representative microstructure of biomimetic composite materials for computational assessment of mechanical properties. Materials Today: Proceedings, 2019, 7, 373-381.	1.8	1
45	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
46	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