Georg Duda

List of Publications by Year in descending order

500	28,779	5569 82	9334 143
papers	citations	h-index	g-index

547	547	547	25162
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hip contact forces and gait patterns from routine activities. Journal of Biomechanics, 2001, 34, 859-871.	0.9	1,839
2	Hydrogels with tunable stress relaxation regulate stem cell fate and activity. Nature Materials, 2016, 15, 326-334.	13.3	1,650
3	Macrophages in bone fracture healing: Their essential role in endochondral ossification. Bone, 2018, 106, 78-89.	1.4	413
4	Matrix elasticity of void-forming hydrogels controls transplanted-stem-cell-mediated boneÂformation. Nature Materials, 2015, 14, 1269-1277.	13.3	390
5	Musculo-skeletal loading conditions at the hip during walking and stair climbing. Journal of Biomechanics, 2001, 34, 883-893.	0.9	389
6	The challenge of establishing preclinical models for segmental bone defect research. Biomaterials, 2009, 30, 2149-2163.	5.7	351
7	Biomaterials based strategies for skeletal muscle tissue engineering: Existing technologies and future trends. Biomaterials, 2015, 53, 502-521.	5.7	347
8	A review of biomaterials in bone defect healing, remaining shortcomings and future opportunities for bone tissue engineering. Bone and Joint Research, 2018, 7, 232-243.	1.3	345
9	A survey of formal methods for determining the centre of rotation of ball joints. Journal of Biomechanics, 2006, 39, 2798-2809.	0.9	342
10	The Early Fracture Hematoma and Its Potential Role in Fracture Healing. Tissue Engineering - Part B: Reviews, 2010, 16, 427-434.	2.5	316
11	Tibio-femoral loading during human gait and stair climbing. Journal of Orthopaedic Research, 2004, 22, 625-632.	1.2	311
12	Influence of muscle forces on femoral strain distribution. Journal of Biomechanics, 1998, 31, 841-846.	0.9	302
13	A Tissue Engineering Solution for Segmental Defect Regeneration in Load-Bearing Long Bones. Science Translational Medicine, 2012, 4, 141ra93.	5.8	301
14	Standardized Loads Acting in Hip Implants. PLoS ONE, 2016, 11, e0155612.	1.1	297
15	Determination of muscle loading at the hip joint for use in pre-clinical testing. Journal of Biomechanics, 2005, 38, 1155-1163.	0.9	285
16	Architecture of the osteocyte network correlates with bone material quality. Journal of Bone and Mineral Research, 2013, 28, 1837-1845.	3.1	285
17	Terminally Differentiated CD8 ⁺ T Cells Negatively Affect Bone Regeneration in Humans. Science Translational Medicine, 2013, 5, 177ra36.	5.8	250
18	Internal forces and moments in the femur during walking. Journal of Biomechanics, 1997, 30, 933-941.	0.9	240

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19	Altered cartilage mechanics and histology in knee osteoarthritis: relation to clinical assessment (ICRS Grade). Osteoarthritis and Cartilage, 2005, 13, 958-963.	0.6	234
20	Proximal humeral fractures: how stiff should an implant be?. Archives of Orthopaedic and Trauma Surgery, 2003, 123, 74-81.	1.3	227
21	A survey of formal methods for determining functional joint axes. Journal of Biomechanics, 2007, 40, 2150-2157.	0.9	225
22	The initial phase of fracture healing is specifically sensitive to mechanical conditions. Journal of Orthopaedic Research, 2003, 21, 662-669.	1.2	224
23	Biomaterials that promote cell-cell interactions enhance the paracrine function of MSCs. Biomaterials, 2017, 140, 103-114.	5.7	220
24	Inflammatory phase of bone healing initiates the regenerative healing cascade. Cell and Tissue Research, 2012, 347, 567-573.	1.5	215
25	Surface Curvature Differentially Regulates Stem Cell Migration and Differentiation via Altered Attachment Morphology and Nuclear Deformation. Advanced Science, 2017, 4, 1600347.	5.6	212
26	Biomaterial delivery of morphogens to mimic the natural healing cascade in bone. Advanced Drug Delivery Reviews, 2012, 64, 1257-1276.	6.6	210
27	Insights into Mesenchymal Stem Cell Aging: Involvement of Antioxidant Defense and Actin Cytoskeleton. Stem Cells, 2009, 27, 1288-1297.	1.4	203
28	Mechanobiologically optimized 3D titanium-mesh scaffolds enhance bone regeneration in critical segmental defects in sheep. Science Translational Medicine, 2018, 10, .	5.8	199
29	Mesenchymal Stem Cells Regulate Angiogenesis According to Their Mechanical Environment. Stem Cells, 2007, 25, 903-910.	1.4	194
30	The organization of the osteocyte network mirrors the extracellular matrix orientation in bone. Journal of Structural Biology, 2011, 173, 303-311.	1.3	192
31	Fracture healing is accelerated in the absence of the adaptive immune system. Journal of Bone and Mineral Research, 2011, 26, 113-124.	3.1	188
32	The course of bone healing is influenced by the initial shear fixation stability. Journal of Orthopaedic Research, 2005, 23, 1022-1028.	1.2	173
33	Physiologically based boundary conditions in finite element modelling. Journal of Biomechanics, 2007, 40, 2318-2323.	0.9	173
34	T and B cells participate in bone repair by infiltrating the fracture callus in a two-wave fashion. Bone, 2014, 64, 155-165.	1.4	162
35	Human Early Fracture Hematoma Is Characterized by Inflammation and Hypoxia. Clinical Orthopaedics and Related Research, 2011, 469, 3118-3126.	0.7	159
36	Initial vascularization and tissue differentiation are influenced by fixation stability. Journal of Orthopaedic Research, 2005, 23, 639-645.	1.2	157

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37	Hypoxia Promotes Osteogenesis but Suppresses Adipogenesis of Human Mesenchymal Stromal Cells in a Hypoxia-Inducible Factor-1 Dependent Manner. PLoS ONE, 2012, 7, e46483.	1.1	157
38	Increased calcium content and inhomogeneity of mineralization render bone toughness in osteoporosis: Mineralization, morphology and biomechanics of human single trabeculae. Bone, 2009, 45, 1034-1043.	1.4	150
39	Functional Comparison of Chronological and In Vitro Aging: Differential Role of the Cytoskeleton and Mitochondria in Mesenchymal Stromal Cells. PLoS ONE, 2012, 7, e52700.	1.1	150
40	On the influence of soft tissue coverage in the determination of bone kinematics using skin markers. Journal of Orthopaedic Research, 2005, 23, 726-734.	1.2	146
41	The haematoma and its role in bone healing. Journal of Experimental Orthopaedics, 2017, 4, 5.	0.8	143
42	Biologic-free mechanically induced muscle regeneration. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1534-1539.	3.3	142
43	Realistic loads for testing hip implants. Bio-Medical Materials and Engineering, 2010, 20, 65-75.	0.4	138
44	Boon and Bane of Inflammation in Bone Tissue Regeneration and Its Link with Angiogenesis. Tissue Engineering - Part B: Reviews, 2015, 21, 354-364.	2.5	127
45	Instability prolongs the chondral phase during bone healing in sheep. Bone, 2006, 38, 864-870.	1.4	126
46	A biomaterial with a channel-like pore architecture induces endochondral healing of bone defects. Nature Communications, 2018, 9, 4430.	5.8	126
47	Variability of femoral muscle attachments. Journal of Biomechanics, 1996, 29, 1185-1190.	0.9	123
48	Diminished response to in vivo mechanical loading in trabecular and not cortical bone in adulthood of female C57Bl/6 mice coincides with a reduction in deformation to load. Bone, 2013, 55, 335-346.	1.4	123
49	Initial immune reaction and angiogenesis in bone healing. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 120-130.	1.3	123
50	Differential regulation of blood vessel formation between standard and delayed bone healing. Journal of Orthopaedic Research, 2009, 27, 1133-1140.	1.2	122
51	Optimization of cell-laden bioinks for 3D bioprinting and efficient infection with influenza A virus. Scientific Reports, 2018, 8, 13877.	1.6	121
52	Polycaprolactone scaffold and reduced rhBMP-7 dose for the regeneration of critical-sized defects in sheep tibiae. Biomaterials, 2013, 34, 9960-9968.	5.7	120
53	Custom-made composite scaffolds for segmental defect repair in long bones. International Orthopaedics, 2011, 35, 1229-1236.	0.9	118
54	Comparison of three different plating techniques for the dorsum of the distal radius: A biomechanical study. Journal of Hand Surgery, 2000, 25, 29-33.	0.7	116

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55	Influence of femoral anteversion on proximal femoral loading: measurement and simulation in four patients. Clinical Biomechanics, 2001, 16, 644-649.	0.5	116
56	Where Should Implants Be Anchored in the Humeral Head?. Clinical Orthopaedics and Related Research, 2003, 415, 139-147.	0.7	114
57	Spatial and temporal variations of mechanical properties and mineral content of the external callus during bone healing. Bone, 2009, 45, 185-192.	1.4	114
58	Biomechanical Comparison of Cervical Spine Interbody Fusion Cages. Spine, 2001, 26, 1850-1857.	1.0	113
59	The multifaceted roles of macrophages in bone regeneration: A story of polarization, activation and time. Acta Biomaterialia, 2021, 133, 46-57.	4.1	113
60	The effects of external mechanical stimulation on the healing of diaphyseal osteotomies fixed by flexible external fixation. Clinical Biomechanics, 1998, 13, 359-364.	0.5	111
61	Mechanical boundary conditions of fracture healing: borderline indications in the treatment of unreamed tibial nailing. Journal of Biomechanics, 2001, 34, 639-650.	0.9	111
62	Aging Leads to a Dysregulation in Mechanically Driven Bone Formation and Resorption. Journal of Bone and Mineral Research, 2015, 30, 1864-1873.	3.1	111
63	Analysis of inter-fragmentary movement as a function of musculoskeletal loading conditions in sheep. Journal of Biomechanics, 1997, 31, 201-210.	0.9	110
64	Tibio-femoral joint contact forces in sheep. Journal of Biomechanics, 2006, 39, 791-798.	0.9	109
65	Osteoclastic activity begins early and increases over the course of bone healing. Bone, 2006, 38, 547-554.	1.4	106
66	Timely Fracture-Healing Requires Optimization of Axial Fixation Stability. Journal of Bone and Joint Surgery - Series A, 2007, 89, 1575-1585.	1.4	106
67	Matrix Metalloprotease Activity Is an Essential Link Between Mechanical Stimulus and Mesenchymal Stem Cell Behavior. Stem Cells, 2007, 25, 1985-1994.	1.4	104
68	Substrate Stressâ€Relaxation Regulates Scaffold Remodeling and Bone Formation In Vivo. Advanced Healthcare Materials, 2017, 6, 1601185.	3.9	104
69	One Step Creation of Multifunctional 3D Architectured Hydrogels Inducing Bone Regeneration. Advanced Materials, 2015, 27, 1738-1744.	11.1	100
70	Presentation of BMP-2 Mimicking Peptides in 3D Hydrogels Directs Cell Fate Commitment in Osteoblasts and Mesenchymal Stem Cells. Biomacromolecules, 2014, 15, 445-455.	2.6	99
71	Cell therapy to improve regeneration of skeletal muscle injuries. Journal of Cachexia, Sarcopenia and Muscle, 2019, 10, 501-516.	2.9	99
72	Zfp521 controls bone mass by HDAC3-dependent attenuation of Runx2 activity. Journal of Cell Biology, 2010, 191, 1271-1283.	2.3	97

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73	Porous scaffold architecture guides tissue formation. Journal of Bone and Mineral Research, 2012, 27, 1275-1288.	3.1	97
74	Enzymatically-degradable alginate hydrogels promote cell spreading and in vivo tissue infiltration. Biomaterials, 2019, 217, 119294.	5.7	95
75	The influence of age on adaptive bone formation and bone resorption. Biomaterials, 2014, 35, 9290-9301.	5.7	94
76	BMP2 and mechanical loading cooperatively regulate immediate early signalling events in the BMP pathway. BMC Biology, 2012, 10, 37.	1.7	91
77	Mechanical conditions in the initial phase of bone healing. Clinical Biomechanics, 2006, 21, 646-655.	0.5	90
78	Working length of locking plates determines interfragmentary movement in distal femur fractures under physiological loading. Clinical Biomechanics, 2015, 30, 391-396.	0.5	90
79	Timely Fracture-Healing Requires Optimization of Axial Fixation Stability. Journal of Bone and Joint Surgery - Series A, 2007, 89, 1575-1585.	1.4	90
80	Mineralizing surface is the main target of mechanical stimulation independent of age: 3D dynamic in vivo morphometry. Bone, 2014, 66, 15-25.	1.4	89
81	Joint line elevation in revision TKA leads to increased patellofemoral contact forces. Journal of Orthopaedic Research, 2010, 28, 1-5.	1.2	88
82	Designing biomimetic scaffolds for bone regeneration: why aim for a copy of mature tissue properties if nature uses a different approach?. Soft Matter, 2010, 6, 4976.	1.2	88
83	Synthetic niche to modulate regenerative potential of MSCs and enhance skeletal muscle regeneration. Biomaterials, 2016, 99, 95-108.	5.7	87
84	Chondrocyte Death Precedes Structural Damage in Blunt Impact Trauma. Clinical Orthopaedics and Related Research, 2001, 393, 302-309.	0.7	86
85	BMPs in bone regeneration: Less is more effective, a paradigm-shift. Cytokine and Growth Factor Reviews, 2016, 27, 141-148.	3.2	85
86	Stair climbing is more critical than walking in pre-clinical assessment of primary stability in cementless THA in vitro. Journal of Biomechanics, 2005, 38, 1143-1154.	0.9	84
87	CD73 and CD29 concurrently mediate the mechanically induced decrease of migratory capacity of mesenchymal stromal cells. , 2011, 22, 26-42.		83
88	Initiation and early control of tissue regeneration â€“ bone healing as a model system for tissue regeneration. Expert Opinion on Biological Therapy, 2014, 14, 247-259.	1.4	82
89	Immune modulation as a therapeutic strategy in bone regeneration. Journal of Experimental Orthopaedics, 2015, 2, 1.	0.8	82
90	A comprehensive assessment of the musculoskeletal system: The CAMS-Knee data set. Journal of Biomechanics, 2017, 65, 32-39.	0.9	82

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91	Interfragmentary Motion in Tibial Osteotomies Stabilized With Ring Fixators. Clinical Orthopaedics and Related Research, 2002, 396, 163-172.	0.7	79
92	The effect of design parameters of dynamic pedicle screw systems on kinematics and load bearing: an in vitro study. European Spine Journal, 2011, 20, 297-307.	1.0	79
93	Hydrolytically-degradable click-crosslinked alginate hydrogels. Biomaterials, 2018, 181, 189-198.	5.7	79
94	Influence of Scaffold Stiffness on Subchondral Bone and Subsequent Cartilage Regeneration in an Ovine Model of Osteochondral Defect Healing. American Journal of Sports Medicine, 2008, 36, 2379-2391.	1.9	78
95	Cellular composition of the initial fracture hematoma compared to a muscle hematoma: A study in sheep. Journal of Orthopaedic Research, 2009, 27, 1147-1151.	1.2	78
96	Patellofemoral joint contact forces during activities with high knee flexion. Journal of Orthopaedic Research, 2012, 30, 408-415.	1.2	77
97	Establishment of a Preclinical Ovine Model for Tibial Segmental Bone Defect Repair by Applying Bone Tissue Engineering Strategies. Tissue Engineering - Part B: Reviews, 2010, 16, 93-104.	2.5	76
98	Influence of age and mechanical stability on bone defect healing: Age reverses mechanical effects. Bone, 2008, 42, 758-764.	1.4	75
99	Skeletal maturity leads to a reduction in the strain magnitudes induced within the bone: A murine tibia study. Acta Biomaterialia, 2015, 13, 301-310.	4.1	75
100	The Periosteal Bone Surface is Less Mechano-Responsive than the Endocortical. Scientific Reports, 2016, 6, 23480.	1.6	75
101	CD73/5â€™-ecto-nucleotidase acts as a regulatory factor in osteo-/chondrogenic differentiation of mechanically stimulated mesenchymal stromal cells. , 2013, 25, 37-47.		74
102	Angle Stable Locking Reduces Interfragmentary Movements and Promotes Healing After Unreamed Nailing. Journal of Bone and Joint Surgery - Series A, 2005, 87, 2028-2037.	1.4	73
103	Cartilage viability after trochleoplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2007, 15, 161-167.	2.3	73
104	Repeatability and reproducibility of OSSCA, a functional approach for assessing the kinematics of the lower limb. Gait and Posture, 2010, 32, 231-236.	0.6	72
105	Influences of age and mechanical stability on volume, microstructure, and mineralization of the fracture callus during bone healing: Is osteoclast activity the key to age-related impaired healing?. Bone, 2010, 47, 219-228.	1.4	71
106	Comparative evaluation of a novel measurement tool to assess lumbar spine posture and range of motion. European Spine Journal, 2012, 21, 2170-2180.	1.0	69
107	THA loading arising from increased femoral anteversion and offset may lead to critical cement stresses. Journal of Orthopaedic Research, 2003, 21, 767-774.	1.2	68
108	Digital image correlation: A technique for determining local mechanical conditions within early bone callus. Medical Engineering and Physics, 2007, 29, 820-823.	0.8	68

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109	Absolute and functional iron deficiency in professional athletes during training and recovery. International Journal of Cardiology, 2012, 156, 186-191.	0.8	68
110	Sex-specific compromised bone healing in female rats might be associated with a decrease in mesenchymal stem cell quantity. Bone, 2009, 45, 1065-1072.	1.4	67
111	Doseâ€"Response Relationship of Mesenchymal Stem Cell Transplantation and Functional Regeneration After Severe Skeletal Muscle Injury in Rats. Tissue Engineering - Part A, 2009, 15, 487-492.	1.6	67
112	Toward biomimetic materials in bone regeneration: Functional behavior of mesenchymal stem cells on a broad spectrum of extracellular matrix components. Journal of Biomedical Materials Research - Part A, 2010, 95A, 1114-1124.	2.1	67
113	Mechanobiology of bone healing and regeneration:<i>in vivo</i>models. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2010, 224, 1543-1553.	1.0	67
114	Inter-species investigation of the mechano-regulation of bone healing: Comparison of secondary bone healing in sheep and rat. Journal of Biomechanics, 2011, 44, 1237-1245.	0.9	67
115	Longitudinal intravital imaging of the femoral bone marrow reveals plasticity within marrow vasculature. Nature Communications, 2017, 8, 2153.	5.8	67
116	Clinical and Research Approaches to Treat Non-union Fracture. Current Osteoporosis Reports, 2018, 16, 155-168.	1.5	67
117	Immunology Guides Skeletal Muscle Regeneration. International Journal of Molecular Sciences, 2018, 19, 835.	1.8	67
118	Mechanical quality of tissue engineered cartilage: Results after 6 and 12 weeksin vivo. Journal of Biomedical Materials Research Part B, 2000, 53, 673-677.	3.0	66
119	Mechanical Load Modulates the Stimulatory Effect of BMP2 in a Rat Nonunion Model. Tissue Engineering - Part A, 2013, 19, 247-254.	1.6	66
120	Geometry-Driven Cell Organization Determines Tissue Growths in Scaffold Pores: Consequences for Fibronectin Organization. PLoS ONE, 2013, 8, e73545.	1.1	66
121	Comparison of unreamed nailing and external fixation of tibial diastasesâ€"mechanical conditions during healing and biological outcome. Journal of Orthopaedic Research, 2004, 22, 1072-1078.	1.2	65
122	T Lymphocytes Influence the Mineralization Process of Bone. Frontiers in Immunology, 2017, 8, 562.	2.2	65
123	Multi-Parameter Analysis of Biobanked Human Bone Marrow Stromal Cells Shows Little Influence for Donor Age and Mild Comorbidities on Phenotypic and Functional Properties. Frontiers in Immunology, 2019, 10, 2474.	2.2	64
124	Composite transcriptome assembly of RNA-seq data in a sheep model for delayed bone healing. BMC Genomics, 2011, 12, 158.	1.2	63
125	The Impact of Substrate Stiffness and Mechanical Loading on Fibroblast-Induced Scaffold Remodeling. Tissue Engineering - Part A, 2012, 18, 1804-1817.	1.6	63
126	The emergence of extracellular matrix mechanics and cell traction forces as important regulators of cellular self-organization. Biomechanics and Modeling in Mechanobiology, 2015, 14, 1-13.	1.4	63

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127	Immunological characterization of the early human fracture hematoma. Immunologic Research, 2016, 64, 1195-1206.	1.3	63
128	Influence of particulate and dissociated metal-on-metal hip endoprosthesis wear on mesenchymal stromal cells inÂvivo and inÂvitro. Biomaterials, 2016, 98, 31-40.	5.7	62
129	Scaffold curvature-mediated novel biomineralization process originates a continuous soft tissue-to-bone interface. Acta Biomaterialia, 2017, 60, 64-80.	4.1	62
130	In-situ tissue regeneration through SDF-1Î± driven cell recruitment and stiffness-mediated bone regeneration in a critical-sized segmental femoral defect. Acta Biomaterialia, 2017, 60, 50-63.	4.1	62
131	Size and habit of mineral particles in bone and mineralized callus during bone healing in sheep. Journal of Bone and Mineral Research, 2010, 25, 2029-2038.	3.1	61
132	Polarized Raman Anisotropic Response of Collagen in Tendon: Towards 3D Orientation Mapping of Collagen in Tissues. PLoS ONE, 2013, 8, e63518.	1.1	61
133	Mechanical induction of critically delayed bone healing in sheep: Radiological and biomechanical results. Journal of Biomechanics, 2008, 41, 3066-3072.	0.9	60
134	Engineered pH-Responsive Mesoporous Carbon Nanoparticles for Drug Delivery. ACS Applied Materials & Interfaces, 2020, 12, 14946-14957.	4.0	59
135	A method to determine the 3-D stiffness of fracture fixation devices and its application to predict inter-fragmentary movement. Journal of Biomechanics, 1997, 31, 247-252.	0.9	58
136	The Metabolic Microenvironment Steers Bone Tissue Regeneration. Trends in Endocrinology and Metabolism, 2018, 29, 99-110.	3.1	58
137	Influence of changes in stem positioning on femoral loading after THR using a short-stemmed hip implant. Clinical Biomechanics, 2007, 22, 431-439.	0.5	57
138	Monitoring in vivo (re)modeling: A computational approach using 4D microCT data to quantify bone surface movements. Bone, 2015, 75, 210-221.	1.4	57
139	Compromised Bone Healing in Aged Rats Is Associated With Impaired M2 Macrophage Function. Frontiers in Immunology, 2019, 10, 2443.	2.2	57
140	Experience in the Adaptive Immunity Impacts Bone Homeostasis, Remodeling, and Healing. Frontiers in Immunology, 2019, 10, 797.	2.2	57
141	Autologous Bone Marrow-Derived Cells Enhance Muscle Strength Following Skeletal Muscle Crush Injury in Rats. Tissue Engineering, 2006, 12, 361-367.	4.9	56
142	Pressure, oxygen tension and temperature in the periosteal callus during bone healingâ€"An in vivo study in sheep. Bone, 2008, 43, 734-739.	1.4	55
143	Age-Related Loss of Lumbar Spinal Lordosis and Mobility â€" A Study of 323 Asymptomatic Volunteers. PLoS ONE, 2014, 9, e116186.	1.1	55
144	BMP delivery complements the guiding effect of scaffold architecture without altering bone microstructure in critical-sized long bone defects: A multiscale analysis. Acta Biomaterialia, 2015, 23, 282-294.	4.1	55

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145	Multiscale characterization of the mineral phase at skeletal sites of breast cancer metastasis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10542-10547.	3.3	55
146	Collagen Fibrils Mechanically Contribute to Tissue Contraction in an In Vitro Wound Healing Scenario. Advanced Science, 2019, 6, 1801780.	5.6	55
147	Vascular bioprinting with enzymatically degradable bioinks via multi-material projection-based stereolithography. Acta Biomaterialia, 2020, 117, 121-132.	4.1	55
148	The influence of alignment on the musculo-skeletal loading conditions at the knee. Langenbeck's Archives of Surgery, 2003, 388, 291-297.	0.8	54
149	Straining of the intact and fractured proximal humerus under physiological-like loading. Journal of Biomechanics, 2003, 36, 1865-1873.	0.9	54
150	On the influence of mechanical conditions in osteochondral defect healing. Journal of Biomechanics, 2005, 38, 843-851.	0.9	54
151	Compressive Residual Strains in Mineral Nanoparticles as a Possible Origin of Enhanced Crack Resistance in Human Tooth Dentin. Nano Letters, 2015, 15, 3729-3734.	4.5	53
152	Immunomodulatory placentalâ€expanded, mesenchymal stromal cells improve muscle function following hip arthroplasty. Journal of Cachexia, Sarcopenia and Muscle, 2018, 9, 880-897.	2.9	53
153	Interfragmentary movements in the early phase of healing in distraction and correction osteotomies stabilized with ring fixators. Langenbeck's Archives of Surgery, 2003, 387, 433-440.	0.8	52
154	The Expression of Proinflammatory Cytokines and Matrix Metalloproteinases in the Synovial Membranes of Patients With Osteoarthritis Compared With Traumatic Knee Disorders. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2010, 26, 1096-1104.	1.3	52
155	The SCoRE residual: A quality index to assess the accuracy of joint estimations. Journal of Biomechanics, 2011, 44, 1400-1404.	0.9	52
156	Insight into the Molecular Pathophysiology of Delayed Bone Healing in a Sheep Model. Tissue Engineering - Part A, 2010, 16, 191-199.	1.6	51
157	Towards multi-dynamic mechano-biological optimization of 3D-printed scaffolds to foster bone regeneration. Acta Biomaterialia, 2020, 101, 117-127.	4.1	51
158	Muscle and tendon adaptation in adolescent athletes: AÂlongitudinal study. Scandinavian Journal of Medicine and Science in Sports, 2017, 27, 75-82.	1.3	50
159	Individual Effector/Regulator T Cell Ratios Impact Bone Regeneration. Frontiers in Immunology, 2019, 10, 1954.	2.2	50
160	Effect of Mechanical Stimulation on Osteoblast- and Osteoclast-Like Cells in vitro. Cells Tissues Organs, 2009, 190, 61-68.	1.3	49
161	A 5-mm femoral defect in female but not in male rats leads to a reproducible atrophic non-union. Archives of Orthopaedic and Trauma Surgery, 2011, 131, 121-129.	1.3	49
162	Increased unilateral tendon stiffness and its effect on gait 2â€"6 years after <scp>A</scp>chilles tendon rupture. Scandinavian Journal of Medicine and Science in Sports, 2015, 25, 860-867.	1.3	49

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163	Metalâ€Specific Biomaterial Accumulation in Human Periâ€Implant Bone and Bone Marrow. Advanced Science, 2020, 7, 2000412.	5.6	48
164	Locally Applied Osteogenic Predifferentiated Progenitor Cells Are More Effective Than Undifferentiated Mesenchymal Stem Cells in the Treatment of Delayed Bone Healing. Tissue Engineering - Part A, 2009, 15, 2947-2954.	1.6	47
165	Does aquatic exercise reduce hip and knee joint loading? In vivo load measurements with instrumented implants. PLoS ONE, 2017, 12, e0171972.	1.1	47
166	Mechanical conditions in the internal stabilization of proximal tibial defects. Clinical Biomechanics, 2002, 17, 64-72.	0.5	46
167	CYR61 (CCN1) Protein Expression during Fracture Healing in an Ovine Tibial Model and Its Relation to the Mechanical Fixation Stability. Journal of Orthopaedic Research, 2006, 24, 254-262.	1.2	46
168	Anterior Cruciate Ligamentâ€"Deficient Patients With Passive Knee Joint Laxity Have a Decreased Range of Anterior-Posterior Motion During Active Movements. American Journal of Sports Medicine, 2013, 41, 1051-1057.	1.9	46
169	MALDI imaging mass spectrometry: Discrimination of pathophysiological regions in traumatized skeletal muscle by characteristic peptide signatures. Proteomics, 2014, 14, 2249-2260.	1.3	46
170	Gait evaluation: A tool to monitor bone healing?. Clinical Biomechanics, 2005, 20, 883-891.	0.5	45
171	In serum veritasâ€"in serum sanitas? Cell non-autonomous aging compromises differentiation and survival of mesenchymal stromal cells via the oxidative stress pathway. Cell Death and Disease, 2013, 4, e970-e970.	2.7	45
172	A Pronounced Inflammatory Activity Characterizes the Early Fracture Healing Phase in Immunologically Restricted Patients. International Journal of Molecular Sciences, 2017, 18, 583.	1.8	45
173	Loadâ€induced osteogenic differentiation of mesenchymal stromal cells is caused by mechanoâ€regulated autocrine signaling. Journal of Tissue Engineering and Regenerative Medicine, 2019, 13, 1992-2008.	1.3	45
174	Mechanical Behavior of Articular Cartilage after Osteochondral Autograft Transfer in an Ovine Model. American Journal of Sports Medicine, 2007, 35, 555-563.	1.9	44
175	Intra-operatively customized implant coating strategies for local and controlled drug delivery to bone. Advanced Drug Delivery Reviews, 2012, 64, 1142-1151.	6.6	44
176	High-Tech Hip Implant for Wireless Temperature Measurements In Vivo. PLoS ONE, 2012, 7, e43489.	1.1	44
177	Time course of skeletal muscle regeneration after severe trauma. Monthly Notices of the Royal Astronomical Society: Letters, 2011, 82, 102-111.	1.2	43
178	The weighted optimal common shape technique improves identification of the hip joint center of rotation in vivo. Journal of Orthopaedic Research, 2011, 29, 1470-1475.	1.2	43
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