Maria Ann Woodruff

List of Publications by Year
in descending order

132 papers	8,870 citations	94269 37 h-index	43802 91 g-index
139 all docs	139 docs citations	139 times ranked	12509 citing authors

#	Article	IF	Citations
1	Personalized Offloading Treatments for Healing Plantar Diabetic Foot Ulcers. Journal of Diabetes Science and Technology, 2023, 17, 99-106.	1.3	4
2	Capturing patient anatomy for designing and manufacturing personalized prostheses. Current Opinion in Biotechnology, 2022, 73, 282-289.	3.3	10
3	Ultrasound Imaging Offers Promising Alternative to Create 3-D Models for Personalised Auricular Implants. Ultrasound in Medicine and Biology, 2022, 48, 450-459.	0.7	2
4	Mechanical behaviour of flexible 3D printed gyroid structures as a tuneable replacement for soft padding foam. Additive Manufacturing, 2022, 50, 102555.	1.7	8
5	Development of 3D Printed Biodegradable Mesh with Antimicrobial Properties for Pelvic Organ Prolapse. Polymers, 2022, 14, 763.	2.0	10
6	Dissolvable 3D printed PVA moulds for melt electrowriting tubular scaffolds with patient-specific geometry. Materials and Design, 2022, 215, 110466.	3.3	11
7	Image analyses for engineering advanced tissue biomanufacturing processes. Biomaterials, 2022, 284, 121514.	5.7	7
8	Melt electro-written scaffolds with box-architecture support orthogonally oriented collagen. Biofabrication, 2022, 14, 015015.	3.7	8
9	In vitro and in vivo investigation of a zonal microstructured scaffold for osteochondral defect repair. Biomaterials, 2022, 286, 121548.	5.7	19
10	Inexpensive 3D Printed Trainer for Combined Retrograde Intrarenal Surgery and Percutaneous Nephrolithotomy. Videourology (New Rochelle, N Y), 2022, 36, .	0.1	0
11	3D Plotting of Calcium Phosphate Cement and Melt Electrowriting of Polycaprolactone Microfibers in One Scaffold: A Hybrid Additive Manufacturing Process. Journal of Functional Biomaterials, 2022, 13, 75.	1.8	8
12	Laser Sintering Approaches for Bone Tissue Engineering. Polymers, 2022, 14, 2336.	2.0	7
13	Exploiting Nonlinear Fiber Patterning to Control Tubular Scaffold Mechanical Behavior. Advanced Materials Technologies, 2022, 7, .	3.0	11
14	Personalized Volumetric Tissue Generation by Enhancing Multiscale Mass Transport through 3D Printed Scaffolds in Perfused Bioreactors. Advanced Healthcare Materials, 2022, 11, .	3.9	5
15	Enzymeâ€Degradable 3D Multiâ€Material Microstructures. Advanced Functional Materials, 2021, 31, 2006998.	7.8	11
16	Using bespoke 3D-printed models to improve patient understanding of an encrusted ureteric stent. Journal of Clinical Urology, 2021, 14, 137-139.	0.1	4
17	Bactericidal efficiency of micro- and nanostructured surfaces: a critical perspective. RSC Advances, 2021, 11, 1883-1900.	1.7	19
18	Systematic design of an advanced open-source 3D bioprinter for extrusion and electrohydrodynamic-based processes. International Journal of Advanced Manufacturing Technology, 2021, 113, 2539-2554.	1.5	13

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19	Rapid Segmentation of Renal Tumours to Calculate Volume Using 3D Interpolation. Journal of Digital Imaging, 2021, 34, 351-356.	1.6	2
20	Additive manufacturing enables personalised porous high-density polyethylene surgical implant manufacturing with improved tissue and vascular ingrowth. Applied Materials Today, 2021, 22, 100965.	2.3	10
21	3D Printing Improved Testicular Prostheses: Using Lattice Infill Structure to Modify Mechanical Properties. Frontiers in Surgery, 2021, 8, 626143.	0.6	2
22	Transform the uniform: designing fashion for the hospital of the future. International Journal of Fashion Design, Technology and Education, 2021, 14, 232-242.	0.9	2
23	Detection of clustered anomalies in single-voxel morphometry as a rapid automated method for identifying intracranial aneurysms. Computerized Medical Imaging and Graphics, 2021, 89, 101888.	3.5	6
24	Evaluating the safety and effectiveness of novel personal protective equipment during the COVIDâ€19 pandemic. Medical Journal of Australia, 2021, 214, 496.	0.8	2
25	Frugal 3D scanning using smartphones provides an accessible framework for capturing the external ear. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2021, 74, 3066-3072.	0.5	8
26	Expanding material printability for electrowriting. Journal of 3D Printing in Medicine, 2021, 5, 61-64.	1.0	1
27	Using melt-electrowritten microfibres for tailoring scaffold mechanics of 3D bioprinted chondrocyte-laden constructs. Bioprinting, 2021, 23, e00158.	2.9	7
28	A quantitative analysis of cell bridging kinetics on a scaffold using computer vision algorithms. Acta Biomaterialia, 2021, 136, 429-440.	4.1	8
29	Model-based data analysis of tissue growth in thin 3D printed scaffolds. Journal of Theoretical Biology, 2021, 528, 110852.	0.8	23
30	Novel resin tissue array system reduces sample preparation time, labour and reagent costs in bone tissue histology. Bone, 2021, 153, 116155.	1.4	2
31	Scaffold-guided bone regeneration in large volume tibial segmental defects. Bone, 2021, 153, 116163.	1.4	29
32	A Protocol for Clinically Accessible Three-Dimensional Ear Scanning Using Smartphones. Plastic and Reconstructive Surgery, 2021, 148, 863e-865e.	0.7	1
33	Poly-Îµ-Caprolactone/Fibrin-Alginate Scaffold: A New Pro-Angiogenic Composite Biomaterial for the Treatment of Bone Defects. Polymers, 2021, 13, 3399.	2.0	10
34	Degradation of Melt Electrowritten PCL Scaffolds Following Melt Processing and Plasma Surface Treatment. Macromolecular Rapid Communications, 2021, 42, e2100433.	2.0	7
35	Highly substituted calcium silicates 3D printed with complex architectures to produce stiff, strong and bioactive scaffolds for bone regeneration. Applied Materials Today, 2021, 25, 101230.	2.3	12
36	Current applications of threeâ€dimensional printing in urology. BJU International, 2020, 125, 17-27.	1.3	44

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37	Development of Mechanically Enhanced Polycaprolactone Composites by a Functionalized Titanate Nanofiller for Melt Electrowriting in 3D Printing. ACS Applied Materials & Interfaces, 2020, 12, 47993-48006.	4.0	20
38	Cell proliferation and migration explain pore bridging dynamics in 3D printed scaffolds of different pore size. Acta Biomaterialia, 2020, 114, 285-295.	4.1	61
39	An advanced prosthetic manufacturing framework for economic personalised ear prostheses. Scientific Reports, 2020, 10, 11453.	1.6	12
40	Guidelines for establishing a 3-D printing biofabrication laboratory. Biotechnology Advances, 2020, 45, 107652.	6.0	11
41	A Method for Economical Smartphoneâ€Based Clinical 3D Facial Scanning. Journal of Prosthodontics, 2020, 29, 818-825.	1.7	18
42	Variability in accuracy of prostate cancer segmentation among radiologists, urologists, and scientists. Cancer Medicine, 2020, 9, 7172-7182.	1.3	16
43	Past, Present, and Future of Softâ€Tissue Prosthetics: Advanced Polymers and Advanced Manufacturing. Advanced Materials, 2020, 32, e2001122.	11.1	32
44	Auxetic tubular scaffolds via melt electrowriting. Materials and Design, 2020, 193, 108787.	3.3	36
45	Multi-colour extrusion fused deposition modelling: a low-cost 3D printing method for anatomical prostate cancer models. Scientific Reports, 2020, 10, 10004.	1.6	30
46	Design of an Open-Source, Low-Cost Bioink and Food Melt Extrusion 3D Printer. Journal of Visualized Experiments, 2020, , .	0.2	2
47	Effect of Gate Conductance on Hygroscopic Insulator Organic Fieldâ€Effect Transistors. Advanced Electronic Materials, 2020, 6, 1901079.	2.6	8
48	Three-dimensional printing versus conventional machining in the creation of a meatal urethral dilator: development and mechanical testing. BioMedical Engineering OnLine, 2020, 19, 55.	1.3	7
49	A preclinical large-animal model for the assessment of critical-size load-bearing bone defect reconstruction. Nature Protocols, 2020, 15, 877-924.	5.5	75
50	Pre-screening the intrinsic angiogenic capacity of biomaterials in an optimised <i>ex ovo</i> chorioallantoic membrane model. Journal of Tissue Engineering, 2020, 11, 204173142090162.	2.3	23
51	Augmented and Virtual Reality in Surgery. Computing in Science and Engineering, 2020, 22, 18-26.	1.2	48
52	Design tools for patient specific and highly controlled melt electrowritten scaffolds. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 105, 103695.	1.5	39
53	Advancements in Soft-Tissue Prosthetics Part B: The Chemistry of Imitating Life. Frontiers in Bioengineering and Biotechnology, 2020, 8, 147.	2.0	12
54	Characterisation and evaluation of the regenerative capacity of Stro-4+ enriched bone marrow mesenchymal stromal cells using bovine extracellular matrix hydrogel and a novel biocompatible melt electro-written medical-grade polycaprolactone scaffold. Biomaterials, 2020, 247, 119998.	5.7	29

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55	Advancements in Soft-Tissue Prosthetics Part A: The Art of Imitating Life. Frontiers in Bioengineering and Biotechnology, 2020, 8, 121.	2.0	16
56	Bone morphogenetic proteinâ€“assisted bone regeneration and applications in biofabrication. , 2020, , 363-391.		2
57	Polymer-based composites for musculoskeletal regenerative medicine. , 2020, , 33-82.		2
58	Spectral changes associated with transmission of OLED emission through human skin. Scientific Reports, 2019, 9, 9875.	1.6	11
59	Investigation of Sustained BMP Delivery in the Prevention of Medicationâ€Related Osteonecrosis of the Jaw (MRONJ) in a Rat Model. Macromolecular Bioscience, 2019, 19, e1900226.	2.1	16
60	Tissue Morphology and Antigenicity in Mouse and Rat Tibia: Comparing 12 Different Decalcification Conditions. Journal of Histochemistry and Cytochemistry, 2019, 67, 545-561.	1.3	16
61	Biomedical applications of polyethylene. European Polymer Journal, 2019, 118, 412-428.	2.6	107
62	A highly porous and conductive composite gate electrode for OTFT sensors. RSC Advances, 2019, 9, 7278-7284.	1.7	8
63	Rheological Characterization of Biomaterials Directs Additive Manufacturing of Strontiumâ€Substituted Bioactive Glass/Polycaprolactone Microfibers. Macromolecular Rapid Communications, 2019, 40, e1900019.	2.0	38
64	Biofabrication of personalised anatomical models and tools for the clinic. Journal of Cystic Fibrosis, 2019, 18, 161-162.	0.3	3
65	Histomorphometric Evaluation of Critical-Sized Bone Defects Using Osteomeasure and Aperio Image Analysis Systems. Tissue Engineering - Part C: Methods, 2019, 25, 732-741.	1.1	8
66	3D Printing Chocolate. , 2019, , 151-173.		15
67	Melt Electrospun Bilayered Scaffolds for Tissue Integration of a Sutureâ€Less Inflow Cannula for Rotary Blood Pumps. Artificial Organs, 2018, 42, E43-E54.	1.0	7
68	Aesthetic reconstruction of microtia: a review of current techniques and new 3D printing approaches. Virtual and Physical Prototyping, 2018, 13, 117-130.	5.3	22
69	Facile and Dynamic Color-Tuning Approach for Organic Light-Emitting Diodes Using Anisotropic Filters. ACS Photonics, 2018, 5, 2760-2766.	3.2	3
70	Electrofluidodynamic technologies for biomaterials and medical devices. , 2018, , 37-69.		14
71	Comparison of three-dimensional surface scanning techniques for capturing the external ear. Virtual and Physical Prototyping, 2018, 13, 255-265.	5.3	25
72	Smartphones for frugal three-dimensional scanning of the external ear with application to microtiaâ‹†. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2018, 71, 1362-1380.	0.5	8

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73	Scaffold-cell bone engineering in a validated preclinical animal model: precursors vs differentiated cell source. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2081-2089.	1.3	39
74	Comparison of Different Decalcification Methods Using Rat Mandibles as a Model. Journal of Histochemistry and Cytochemistry, 2017, 65, 705-722.	1.3	61
75	3D printing complex chocolate objects: Platform design, optimization and evaluation. Journal of Food Engineering, 2017, 215, 13-22.	2.7	157
76	Characterization of Normal Murine Carpal Bone Development Prompts Re-Evaluation of Pathologic Osteolysis as the Cause of Human Carpal-Tarsal Osteolysis Disorders. American Journal of Pathology, 2017, 187, 1923-1934.	1.9	11
77	Challenges in engineering large customized bone constructs. Biotechnology and Bioengineering, 2017, 114, 1129-1139.	1.7	49
78	Effects of Topical Icing on Inflammation, Angiogenesis, Revascularization, and Myofiber Regeneration in Skeletal Muscle Following Contusion Injury. Frontiers in Physiology, 2017, 8, 93.	1.3	46
79	Everyday Creative Uses of Smartphone Images in Biomedical Engineering Laboratories. Lecture Notes in Computer Science, 2017, , 335-343.	1.0	0
80	Microparticles for Sustained Growth Factor Delivery in the Regeneration of Critically-Sized Segmental Tibial Bone Defects. Materials, 2016, 9, 259.	1.3	25
81	A Hydrogel Model Incorporating 3D-Plotted Hydroxyapatite for Osteochondral Tissue Engineering. Materials, 2016, 9, 285.	1.3	29
82	Numerical prediction of thrombus risk in an anatomically dilated left ventricle: the effect of inflow cannula designs. BioMedical Engineering OnLine, 2016, 15, 136.	1.3	21
83	Effect of humidity on melt electrospun polycaprolactone scaffolds. BioNanoMaterials, 2016, 17, .	1.4	2
84	Critical Sized Mandibular Defect Regeneration in Preclinical In Vivo Models. Current Molecular Biology Reports, 2016, 2, 83-89.	0.8	20
85	Biofabrication: The Future of Regenerative Medicine. Techniques in Orthopaedics, 2016, 31, 190-203.	0.1	24
86	Data for accelerated degradation of calcium phosphate surface-coated polycaprolactone and polycaprolactone/bioactive glass composite scaffolds. Data in Brief, 2016, 7, 923-926.	0.5	7
87	In vitro and in vivo bone formation potential of surface calcium phosphate-coated polycaprolactone and polycaprolactone/bioactive glass composite scaffolds. Acta Biomaterialia, 2016, 30, 319-333.	4.1	137
88	Growth Factor-Loaded Microparticles for Tissue Engineering: The Discrepancies of In Vitro Characterization Assays. Tissue Engineering - Part C: Methods, 2016, 22, 142-154.	1.1	8
89	Delayed Minimally Invasive Injection of Allogenic Bone Marrow Stromal Cell Sheets Regenerates Large Bone Defects in an Ovine Preclinical Animal Model. Stem Cells Translational Medicine, 2015, 4, 503-512.	1.6	61
90	An Assessment of Cell Culture Plate Surface Chemistry for in Vitro Studies of Tissue Engineering Scaffolds. Journal of Functional Biomaterials, 2015, 6, 1054-1063.	1.8	7

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91	Tailoring Hydrogel Viscoelasticity with Physical and Chemical Crosslinking. Polymers, 2015, 7, 2650-2669.	2.0	56
92	Estrogen Deficiency-Associated Bone Loss in the Maxilla: A Methodology to Quantify the Changes in the Maxillary Intra-radicular Alveolar Bone in an Ovariectomized Rat Osteoporosis Model. Tissue Engineering - Part C: Methods, 2015, 21, 458-466.	1.1	23
93	Improved fabrication of melt electrospun tissue engineering scaffolds using direct writing and advanced electric field control. Biointerphases, 2015, 10, 011006.	0.6	67
94	Protective effects of reactive functional groups on chondrocytes in photocrosslinkable hydrogel systems. Acta Biomaterialia, 2015, 27, 66-76.	4.1	51
95	Characterization of the Microarchitecture of Direct Writing Melt Electrospun Tissue Engineering Scaffolds Using Diffusion Tensor and Computed Tomography Microimaging. 3D Printing and Additive Manufacturing, 2014, 1, 95-103.	1.4	7
96	Effects of scaffold architecture on mechanical characteristics and osteoblast response to static and perfusion bioreactor cultures. Biotechnology and Bioengineering, 2014, 111, 1440-1451.	1.7	56
97	Composites for Delivery of Therapeutics: Combining Melt Electrospun Scaffolds with Loaded Electrosprayed Microparticles. Macromolecular Bioscience, 2014, 14, 202-214.	2.1	27
98	Meltâ€electrospun polycaprolactone strontiumâ€substituted bioactive glass scaffolds for bone regeneration. Journal of Biomedical Materials Research - Part A, 2014, 102, 3140-3153.	2.1	77
99	Controlling microencapsulation and release of micronized proteins using poly(ethylene glycol) and electrospraying. European Journal of Pharmaceutics and Biopharmaceutics, 2014, 87, 366-377.	2.0	39
100	Effects of scaffold architecture on cranial bone healing. International Journal of Oral and Maxillofacial Surgery, 2014, 43, 506-513.	0.7	72
101	A collagen network phase improves cell seeding of open-pore structure scaffolds under perfusion. Journal of Tissue Engineering and Regenerative Medicine, 2013, 7, 183-191.	1.3	26
102	Autologous vs. allogenic mesenchymal progenitor cells for the reconstruction of critical sized segmental tibial bone defects in aged sheep. Acta Biomaterialia, 2013, 9, 7874-7884.	4.1	90
103	Fabrication and <i>in vitro</i> characterization of bioactive glass composite scaffolds for bone regeneration. Biofabrication, 2013, 5, 045005.	3.7	81
104	Nanoâ€•to Macroscale Remodeling of Functional Tissueâ€Engineered Bone. Advanced Healthcare Materials, 2013, 2, 546-551.	3.9	17
105	Bone Regeneration Based on Tissue Engineering Conceptions â€" A 21st Century Perspective. Bone Research, 2013, 1, 216-248.	5.4	625
106	Melt-electrospun polycaprolactone-strontium substituted bioactive glass scaffolds for bone regeneration. Journal of Biomedical Materials Research - Part A, 2013, 102, n/a-n/a.	2.1	2
107	A Tissue Engineering Solution for Segmental Defect Regeneration in Load-Bearing Long Bones. Science Translational Medicine, 2012, 4, 141ra93.	5.8	301
108	Electrospraying of polymers with therapeutic molecules: State of the art. Progress in Polymer Science, 2012, 37, 1510-1551.	11.8	363

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109	Bone tissue engineering: from bench to bedside. Materials Today, 2012, 15, 430-435.	8.3	144
110	Scaffolds for Growth Factor Delivery as Applied to Bone Tissue Engineering. International Journal of Polymer Science, 2012, 2012, 1-25.	1.2	73
111	Biomimetic tubular nanofiber mesh and platelet rich plasma-mediated delivery of BMP-7 for large bone defect regeneration. Cell and Tissue Research, 2012, 347, 603-612.	1.5	74
112	Differentiation potential of mesenchymal progenitor cells following transplantation into calvarial defects. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 132-142.	1.5	16
113	Direct Fabrication as a Patient-Targeted Therapeutic in a Clinical Environment. Methods in Molecular Biology, 2012, 868, 327-340.	0.4	4
114	Cell sourcing for bone tissue engineering: Amniotic fluid stem cells have a delayed, robust differentiation compared to mesenchymal stem cells. Stem Cell Research, 2011, 7, 17-27.	0.3	45
115	Myocyte Enhancer Factor 2C, an Osteoblast Transcription Factor Identified by Dimethyl Sulfoxide (DMSO)-enhanced Mineralization. Journal of Biological Chemistry, 2011, 286, 30071-30086.	1.6	38
116	PLGA-Based Microparticles for the Sustained Release of BMP-2. Polymers, 2011, 3, 571-586.	2.0	59
117	Electrospraying, a Reproducible Method for Production of Polymeric Microspheres for Biomedical Applications. Polymers, 2011, 3, 131-149.	2.0	262
118	The return of a forgotten polymerâ€"Polycaprolactone in the 21st century. Progress in Polymer Science, 2010, 35, 1217-1256.	11.8	3,051
119	The effect of unlocking RGD-motifs in collagen I on pre-osteoblast adhesion and differentiation. Biomaterials, 2010, 31, 2827-2835.	5.7	121
120	Ovine bone- and marrow-derived progenitor cells and their potential for scaffold-based bone tissue engineering applications in vitro and in vivo. Journal of Tissue Engineering and Regenerative Medicine, 2010, 4, 565-576.	1.3	38
121	Evaluation of polycaprolactone scaffold degradation for 6 months <i>in vitro</i> and <i>in vivo</i>. Journal of Biomedical Materials Research - Part A, 2009, 90A, 906-919.	2.1	455
122	The stimulation of healing within a rat calvarial defect by mPCLâ€"TCP/collagen scaffolds loaded with rhBMP-2. Biomaterials, 2009, 30, 2479-2488.	5.7	190
123	Porcine bone marrow stromal cell differentiation on heparin-adsorbed poly(e-caprolactone)â€"tricalcium phosphateâ€"collagen scaffolds. Acta Biomaterialia, 2009, 5, 3305-3315.	4.1	14
124	Heparan Sulfate Mediates the Proliferation and Differentiation of Rat Mesenchymal Stem Cells. Stem Cells and Development, 2009, 18, 661-670.	1.1	84
125	Osteogenic and Adipogenic Induction Potential of Human Periodontal Cells. Journal of Periodontology, 2008, 79, 525-534.	1.7	43
126	The Osteogenic Differentiation of Adipose Tissue-Derived Precursor Cells in a 3D Scaffold/Matrix Environment. Current Drug Discovery Technologies, 2008, 5, 319-327.	0.6	33

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127	Design, Fabrication, and Characterization of Scaffolds via Solid Free-Form Fabrication Techniques. , 2008, , 45-67.		1
128	Combined marrow stromal cell-sheet techniques and high-strength biodegradable composite scaffolds for engineered functional bone grafts. Biomaterials, 2007, 28, 814-824.	5.7	193
129	Engineering tubular bone constructs. Journal of Biomechanics, 2007, 40, S73-S79.	0.9	27
130	Sustained release and osteogenic potential of heparan sulfate-doped fibrin glue scaffolds within a rat cranial model. Journal of Molecular Histology, 2007, 38, 425-433.	1.0	40
131	Human osteoblast cell spreading and vinculin expression upon biomaterial surfaces. Journal of Molecular Histology, 2007, 38, 491-499.	1.0	26
132	A Quantitative Analysis of Cell Bridging Kinetics on a Scaffold Using Computer Vision Algorithms. SSRN Electronic Journal, 0, , .	0.4	0