

Amy J Wagoner Johnson

List of Publications by Year in descending order

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Version: 2024-02-01

82
papers

4,055
citations

218592

26
h-index

118793

62
g-index

84
all docs

84
docs citations

84
times ranked

5481
citing authors

#	ARTICLE	IF	CITATIONS
1	The mechanical properties and osteoconductivity of hydroxyapatite bone scaffolds with multi-scale porosity. <i>Biomaterials</i> , 2007, 28, 45-54.	5.7	698
2	Bone regeneration strategies: Engineered scaffolds, bioactive molecules and stem cells current stage and future perspectives. <i>Biomaterials</i> , 2018, 180, 143-162.	5.7	605
3	A review of the mechanical behavior of CaP and CaP/polymer composites for applications in bone replacement and repair. <i>Acta Biomaterialia</i> , 2011, 7, 16-30.	4.1	534
4	Multiscale osteointegration as a new paradigm for the design of calcium phosphate scaffolds for bone regeneration. <i>Biomaterials</i> , 2010, 31, 3552-3563.	5.7	190
5	Accelerated wound closure of pressure ulcers in aged mice by chitosan scaffolds with and without bFGF. <i>Acta Biomaterialia</i> , 2009, 5, 1926-1936.	4.1	136
6	The influence of micropore size on the mechanical properties of bulk hydroxyapatite and hydroxyapatite scaffolds. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2009, 2, 560-570.	1.5	125
7	The effect of keratoconus on the structural, mechanical, and optical properties of the cornea. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 223-236.	1.5	115
8	The effect of BMP-2 on micro- and macroscale osteointegration of biphasic calcium phosphate scaffolds with multiscale porosity. <i>Acta Biomaterialia</i> , 2010, 6, 3283-3291.	4.1	103
9	Analysis of the roles of microporosity and BMP-2 on multiple measures of bone regeneration and healing in calcium phosphate scaffolds. <i>Acta Biomaterialia</i> , 2011, 7, 1760-1771.	4.1	95
10	Basis Task Approach to Iterative Learning Control With Applications to Micro-Robotic Deposition. <i>IEEE Transactions on Control Systems Technology</i> , 2011, 19, 1138-1148.	3.2	94
11	Mineralization in micropores of calcium phosphate scaffolds. <i>Acta Biomaterialia</i> , 2019, 83, 435-455.	4.1	91
12	Micropore-induced capillarity enhances bone distribution in vivo in biphasic calcium phosphate scaffolds. <i>Acta Biomaterialia</i> , 2016, 44, 144-154.	4.1	80
13	Patterned Hydrogel Substrates for Cell Culture with Electrohydrodynamic Jet Printing. <i>Macromolecular Bioscience</i> , 2011, 11, 1164-1168.	2.1	74
14	The influence of microstructure and strain rate on the compressive deformation behavior of Ti-6Al-4V. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2003, 34, 295-306.	1.1	70
15	The effect of chitosan on the migration of neutrophil-like HL60 cells, mediated by IL-8. <i>Biomaterials</i> , 2009, 30, 436-444.	5.7	60
16	A mechanism for effective cell-seeding in rigid, microporous substrates. <i>Acta Biomaterialia</i> , 2013, 9, 7977-7986.	4.1	60
17	A Modular, Hydroxyapatite-Binding Version of Vascular Endothelial Growth Factor. <i>Advanced Materials</i> , 2010, 22, 5494-5498.	11.1	54
18	Modular Peptide Growth Factors for Substrate-Mediated Stem Cell Differentiation. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 6266-6269.	7.2	44

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19	Geometric microenvironment directs cell morphology on topographically patterned hydrogel substrates. <i>Acta Biomaterialia</i> , 2010, 6, 3514-3523.	4.1	42
20	Cross-coupled iterative learning control of systems with dissimilar dynamics: design and implementation. <i>International Journal of Control</i> , 2011, 84, 1223-1233.	1.2	40
21	Multiscale Porosity Directs Bone Regeneration in Biphasic Calcium Phosphate Scaffolds. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2768-2778.	2.6	33
22	Micro-robotic deposition guidelines by a design of experiments approach to maximize fabrication reliability for the bone scaffold application. <i>Acta Biomaterialia</i> , 2008, 4, 897-912.	4.1	32
23	Large reduction in critical stress in Co/Ni/Al upon repeated transformation. <i>Scripta Materialia</i> , 2004, 51, 979-985.	2.6	30
24	Direct process feedback in extrusion-based 3D bioprinting. <i>Biofabrication</i> , 2020, 12, 015017.	3.7	30
25	Application of Fourier transform second harmonic generation imaging to the rat cervix. <i>Journal of Microscopy</i> , 2013, 251, 77-83.	0.8	28
26	Deformation mechanisms in Ti-6Al-4V/TiC composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2003, 34, 1869-1877.	1.1	27
27	Human endothelial colony forming cells undergo vasculogenesis within biphasic calcium phosphate bone tissue engineering constructs. <i>Acta Biomaterialia</i> , 2011, 7, 4222-4228.	4.1	27
28	Tendon-derived progenitor cells improve healing of collagenase-induced flexor tendinitis. <i>Journal of Orthopaedic Research</i> , 2016, 34, 2162-2171.	1.2	27
29	Impact of bone geometry on effective properties of bone scaffolds. <i>Acta Biomaterialia</i> , 2009, 5, 680-692.	4.1	25
30	A Computational and Cellular Solids Approach to the Stiffness-Based Design of Bone Scaffolds. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 091003.	0.6	24
31	1D and 2D error assessment and correction for extrusion-based bioprinting using process sensing and control strategies. <i>Biofabrication</i> , 2020, 12, 045023.	3.7	22
32	Analysis of multistep transformations in single-crystal NiTi. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005, 36, 919-928.	1.1	21
33	An Improved Approach to Iterative Learning Control for Uncertain Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2021, 29, 546-555.	3.2	20
34	Process monitoring and control strategies in extrusion-based bioprinting to fabricate spatially graded structures. <i>Bioprinting</i> , 2021, 21, e00126.	2.9	20
35	Iterative Learning Control for robotic deposition using machine vision. , 2008, , .		19
36	Characterizing and Patterning Polyacrylamide Substrates Functionalized with N-Hydroxysuccinimide. <i>Cellular and Molecular Bioengineering</i> , 2013, 6, 299-309.	1.0	19

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37	Bumpless Transfer Filter for Exogenous Feedforward Signals. IEEE Transactions on Control Systems Technology, 2014, 22, 1581-1588.	3.2	19
38	Micro-CT based quantification of non-mineralized tissue on cultured hydroxyapatite scaffolds. Journal of Biomedical Materials Research - Part A, 2007, 82A, 1012-1021.	2.1	18
39	Mechanical and structural changes of the rat cervix in late-stage pregnancy. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 66-75.	1.5	18
40	An indentation-based approach to determine the elastic constants of soft anisotropic tissues. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103539.	1.5	18
41	A thermodynamic approach to surface modification of calcium phosphate implants by phosphate evaporation and condensation. Journal of the European Ceramic Society, 2020, 40, 6095-6106.	2.8	18
42	Automated segmentation of micro-CT images of bone formation in calcium phosphate scaffolds. Computerized Medical Imaging and Graphics, 2012, 36, 54-65.	3.5	17
43	Breast tumors induced by N-methyl-N-nitrosourea are damaging to bone strength, structure, and mineralization in the absence of metastasis in rats. Journal of Bone and Mineral Research, 2011, 26, 769-776.	3.1	16
44	Net shape fabrication of calcium phosphate scaffolds with multiple material domains. Biofabrication, 2016, 8, 015005.	3.7	16
45	Design and Manufacture of Combinatorial Calcium Phosphate Bone Scaffolds. Journal of Biomechanical Engineering, 2011, 133, 101001.	0.6	15
46	Differences in Morphology and Traction Generation of Cell Lines Representing Different Stages of Osteogenesis. Journal of Biomechanical Engineering, 2015, 137, 124503.	0.6	13
47	Skeletal Muscle Adaptations and Passive Muscle Stiffness in Cerebral Palsy: A Literature Review and Conceptual Model. Journal of Applied Biomechanics, 2019, 35, 68-79.	0.3	13
48	Quantitative Classification of 3D Collagen Fiber Organization From Volumetric Images. IEEE Transactions on Medical Imaging, 2020, 39, 4425-4435.	5.4	13
49	Heterogeneous microstructural changes of the cervix influence cervical funneling. Acta Biomaterialia, 2022, 140, 434-445.	4.1	13
50	System-Level Biomechanical Approach for the Evaluation of Term and Preterm Pregnancy Maintenance. Journal of Biomechanical Engineering, 2013, 135, 021009.	0.6	12
51	Multimaterial polyacrylamide: fabrication with electrohydrodynamic jet printing, applications, and modeling. Biofabrication, 2014, 6, 035018.	3.7	12
52	Primary and Secondary Consequences of Rotator Cuff Injury on Joint Stabilizing Tissues in the Shoulder. Journal of Biomechanical Engineering, 2017, 139, .	0.6	11
53	An optomechanogram for assessment of the structural and mechanical properties of tissues. Scientific Reports, 2021, 11, 324.	1.6	10
54	Measuring mechanical properties of fine-wire cross-sections used in medical devices. Journal of Biomedical Materials Research Part B, 2004, 70B, 106-113.	3.0	9

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55	A multi-indent approach to detect the surface of soft materials during nanoindentation. <i>Journal of Materials Research</i> , 2016, 31, 2672-2685.	1.2	9
56	Bone Adaptation-Driven Design of Periodic Scaffolds. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2021, 143, .	1.7	8
57	Bumpless transfer for a flexible adaptation of Iterative Learning Control. , 2011, , .		7
58	Cell seeding simulation on micropatterned islands shows cell density depends on area to perimeter ratio, not on island size or shape. <i>Acta Biomaterialia</i> , 2020, 107, 152-163.	4.1	7
59	Composite Substrates Reveal Inorganic Material Cues for Coral Larval Settlement. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 3960-3971.	3.2	7
60	Microstructural control of modular peptide release from microporous biphasic calcium phosphate. <i>Materials Science and Engineering C</i> , 2017, 72, 268-277.	3.8	6
61	Iterative Learning Control using a basis signal library. , 2009, , .		5
62	Mechanical properties of various suture materials and placement patterns tested with surrogate in vitro model constructs simulating laryngeal advancement tie-forward procedures in horses. <i>American Journal of Veterinary Research</i> , 2014, 75, 500-506.	0.3	5
63	Simulated confluence on micropatterned substrates correlates responses regulating cellular differentiation. <i>Biotechnology and Bioengineering</i> , 2022, 119, 1641-1659.	1.7	5
64	The curve integration method is comparable to manual segmentation for the analysis of bone/scaffold composites using microâ€CT. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2009, 88B, 271-279.	1.6	4
65	Mineral binding peptides with enhanced binding stability in serum. <i>Biomaterials Science</i> , 2017, 5, 663-668.	2.6	4
66	Structural and Mechanical Properties of Cocoons of <i>Antherina suraka</i> (Saturniidae). <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td</i> (2017, 17, 17.	0.6	3
67	Transcriptomic profiling of fetal membranes of mice deficient in biglycan and decorin as a model of preterm birthâ€€. <i>Biology of Reproduction</i> , 2021, 104, 611-623.	1.2	3
68	Imaging Therapeutic Proteins in Gelatin for Controlled Drug Release. <i>Macromolecular Symposia</i> , 2005, 227, 295-306.	0.4	2
69	Cross Coupled Iterative Learning Control of Dissimilar Dynamical Systems. , 2009, , .		2
70	Strengthening Mechanisms in Ti-6Al-4V/TiC Composites. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	1
71	Tissue Engineering: A Modular, Hydroxyapatite-Binding Version of Vascular Endothelial Growth Factor (Adv. Mater. 48/2010). <i>Advanced Materials</i> , 2010, 22, 5436-5436.	11.1	1
72	Morphological switch is associated with increase in cellâ€cell contacts, ALP , and confluence above a minimum island area to perimeter ratio. <i>Journal of Biomedical Materials Research - Part A</i> , 2022, 110, 164-180.	2.1	1

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73	Evaluation of two workshops for graduate students on communicating research in engineering and science. Proceedings - Frontiers in Education Conference, FIE, 2007, , .	0.0	0
74	Bone Geometry in Periodic Hydroxyapatite Scaffolds Has Little Influence on Effective Elastic Properties. , 2008, , .		0
75	Hydroxyapatite Scaffold Porosity, Bone Regeneration, and Vascularization Using an Adapted CAM Assay. , 2012, , .		0
76	Near-Net Shape Structures Fabricated by Micro-Robotic Deposition Using Precision Extrusion Control. , 2012, , .		0
77	182: Characterization of tensile properties of the pregnant rat cervix. American Journal of Obstetrics and Gynecology, 2012, 206, S93-S94.	0.7	0
78	Easy-to-Use 3D Printer for Fabrication of Biological Scaffolds. , 2017, , .		0
79	Vasculogenic Potential of Porcine Endothelial Colony Forming Cells. , 2008, , .		0
80	Tensile Properties and Collagen Organization of the Rat Cervix. , 2012, , .		0
81	Quantification of Rat Cervical Microstructure using Fourier Transform-Second-Harmonic Generation Imaging. , 2013, , .		0
82	Analysis of 3D Collagen Organization in Non-pregnant Rat Cervix Tissue. , 2019, , .		0