

William Whyte

List of Publications by Year in descending order

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42
papers

3,883
citations

430874

18
h-index

302126

39
g-index

44
all docs

44
docs citations

44
times ranked

5023
citing authors

#	ARTICLE	IF	CITATIONS
1	Precurved, Fiber-Reinforced Actuators Enable Pneumatically Efficient Replication of Complex Biological Motions. <i>Soft Robotics</i> , 2022, 9, 293-308.	8.0	2
2	A Multi-Domain Simulation Study of a Pulsatile-Flow Pump Device for Heart Failure With Preserved Ejection Fraction. <i>Frontiers in Physiology</i> , 2022, 13, 815787.	2.8	6
3	Direct Cardiac Compression Devices to Augment Heart Biomechanics and Function. <i>Annual Review of Biomedical Engineering</i> , 2022, 24, 137-156.	12.3	9
4	Electrical bioadhesive interface for bioelectronics. <i>Nature Materials</i> , 2021, 20, 229-236.	27.5	361
5	A protein sandwich enables real-time in vivo biomarker measurement. <i>Science Translational Medicine</i> , 2021, 13, .	12.4	1
6	<i>In silico</i> design of additively manufacturable composite synthetic vascular conduits and grafts with tuneable compliance. <i>Biomaterials Science</i> , 2021, 9, 4343-4355.	5.4	7
7	Object-Oriented Lumped-Parameter Modeling of the Cardiovascular System for Physiological and Pathophysiological Conditions. <i>Advanced Theory and Simulations</i> , 2021, 4, 2000216.	2.8	11
8	Lumped-Parameter and Finite Element Modeling of Heart Failure with Preserved Ejection Fraction. <i>Journal of Visualized Experiments</i> , 2021, . .	0.3	6
9	A Modular Geometrical Framework for Modelling the Force-Contraction Profile of Vacuum-Powered Soft Actuators. <i>Frontiers in Robotics and AI</i> , 2021, 8, 606938.	3.2	8
10	Minimally invasive electroceutical catheter for endoluminal defect sealing. <i>Science Advances</i> , 2021, 7, .	10.3	20
11	Bionic Organs and Tissues. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021, 3, 295-296.	3.2	1
12	Design Considerations for Macroencapsulation Devices for Stem Cell Derived Islets for the Treatment of Type 1 Diabetes. <i>Advanced Science</i> , 2021, 8, e2100820.	11.2	24
13	A Vacuum-Powered Artificial Muscle Designed for Infant Rehabilitation. <i>Micromachines</i> , 2021, 12, 971.	2.9	11
14	Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue. <i>Nature Biomedical Engineering</i> , 2021, 5, 1131-1142.	22.5	146
15	Characterization of Exercise-Induced Myocardium Growth Using Finite Element Modeling and Bayesian Optimization. <i>Frontiers in Physiology</i> , 2021, 12, 694940.	2.8	3
16	Device-Based Solutions to Improve Cardiac Physiology and Hemodynamics in Heart Failure With Preserved Ejection Fraction. <i>JACC Basic To Translational Science</i> , 2021, 6, 772-795.	4.1	24
17	Decellularization Following Fixation of Explanted Aortic Valves as a Strategy for Preserving Native Mechanical Properties and Function. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 803183.	4.1	3
18	Catheters gain arrays of sensors and actuators. <i>Nature Biomedical Engineering</i> , 2020, 4, 939-940.	22.5	0

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19	Minimally Invasive Delivery of Tissue Engineered Heart Valves to the Pulmonary Annulus. JACC Basic To Translational Science, 2020, 5, 829-830.	4.1	0
20	An organosynthetic dynamic heart model with enhanced biomimicry guided by cardiac diffusion tensor imaging. Science Robotics, 2020, 5, .	17.6	30
21	Implantable Therapeutic Reservoir Systems for Diverse Clinical Applications in Large Animal Models. Advanced Healthcare Materials, 2020, 9, e2000305.	7.6	13
22	Shedding light on heart failure. Science Translational Medicine, 2020, 12, .	12.4	1
23	Encapsulating a leukemia vaccine. Science Translational Medicine, 2020, 12, .	12.4	0
24	Multiscale Experimental and Computational Modeling Approaches to Characterize Therapy Delivery to the Heart from an Implantable Epicardial Biomaterial Reservoir. Advanced Healthcare Materials, 2019, 8, 1900228.	7.6	5
25	Multiscale Computational Modeling: Multiscale Experimental and Computational Modeling Approaches to Characterize Therapy Delivery to the Heart from an Implantable Epicardial Biomaterial Reservoir (Adv. Healthcare Mater. 16/2019). Advanced Healthcare Materials, 2019, 8, 1970068.	7.6	0
26	Dry double-sided tape for adhesion of wet tissues and devices. Nature, 2019, 575, 169-174.	27.8	798
27	An actuatable soft reservoir modulates host foreign body response. Science Robotics, 2019, 4, .	17.6	49
28	A comparison of two quasi-static computational models for assessment of intracardiac myocardial injection as a therapeutic strategy for heart failure. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3213.	2.1	7
29	Optimizing Epicardial Restraint and Reinforcement Following Myocardial Infarction: Moving Towards Localized, Biomimetic, and Multitherapeutic Options. Biomimetics, 2019, 4, 7.	3.3	12
30	Towards Alternative Approaches for Coupling of a Soft Robotic Sleeve to the Heart. Annals of Biomedical Engineering, 2018, 46, 1534-1547.	2.5	31
31	Sustained release of targeted cardiac therapy with a replenishable implanted epicardial reservoir. Nature Biomedical Engineering, 2018, 2, 416-428.	22.5	70
32	Soft robotic sleeve supports heart function. Science Translational Medicine, 2017, 9, .	12.4	280
33	An Intracardiac Soft Robotic Device for Augmentation of Blood Ejection from the Failing Right Ventricle. Annals of Biomedical Engineering, 2017, 45, 2222-2233.	2.5	28
34	An Implantable Extracardiac Soft Robotic Device for the Failing Heart: Mechanical Coupling and Synchronization. Soft Robotics, 2017, 4, 241-250.	8.0	57
35	The use of soft robotics in cardiovascular therapy. Expert Review of Cardiovascular Therapy, 2017, 15, 767-774.	1.5	17
36	Tough adhesives for diverse wet surfaces. Science, 2017, 357, 378-381.	12.6	1,068

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37	Biomaterial-Enhanced Cell and Drug Delivery: Lessons Learned in the Cardiac Field and Future Perspectives. <i>Advanced Materials</i> , 2016, 28, 5648-5661.	21.0	63
38	Biologic-free mechanically induced muscle regeneration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1534-1539.	7.1	142
39	A light-reflecting balloon catheter for atraumatic tissue defect repair. <i>Science Translational Medicine</i> , 2015, 7, 306ra149.	12.4	34
40	Drug and cell delivery for cardiac regeneration. <i>Advanced Drug Delivery Reviews</i> , 2015, 84, 85-106.	13.7	170
41	A Bioinspired Soft Actuated Material. <i>Advanced Materials</i> , 2014, 26, 1200-1206.	21.0	210
42	Comparison of biomaterial delivery vehicles for improving acute retention of stem cells in the infarcted heart. <i>Biomaterials</i> , 2014, 35, 6850-6858.	11.4	140