

Eoin O'Cearbhaill

List of Publications by Year in descending order

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Version: 2024-02-01

48
papers

2,113
citations

279701

23
h-index

243529

44
g-index

50
all docs

50
docs citations

50
times ranked

3716
citing authors

#	ARTICLE	IF	CITATIONS
1	A bio-inspired swellable microneedle adhesive for mechanical interlocking with tissue. <i>Nature Communications</i> , 2013, 4, 1702.	5.8	316
2	A Blood-Resistant Surgical Glue for Minimally Invasive Repair of Vessels and Heart Defects. <i>Science Translational Medicine</i> , 2014, 6, 218ra6.	5.8	253
3	The electrical stimulation of carbon nanotubes to provide a cardiomimetic cue to MSCs. <i>Biomaterials</i> , 2012, 33, 6132-6139.	5.7	189
4	Simple and customizable method for fabrication of high-aspect ratio microneedle molds using low-cost 3D printing. <i>Microsystems and Nanoengineering</i> , 2019, 5, 42.	3.4	156
5	A self-adherent, bullet-shaped microneedle patch for controlled transdermal delivery of insulin. <i>Journal of Controlled Release</i> , 2017, 265, 48-56.	4.8	123
6	Bio-resorbable polymer stents: a review of material progress and prospects. <i>Progress in Polymer Science</i> , 2018, 83, 79-96.	11.8	123
7	Bulk Metallic Glasses for Implantable Medical Devices and Surgical Tools. <i>Advanced Materials</i> , 2016, 28, 5755-5762.	11.1	113
8	Response of mesenchymal stem cells to the biomechanical environment of the endothelium on a flexible tubular silicone substrate. <i>Biomaterials</i> , 2008, 29, 1610-1619.	5.7	72
9	Metallic microneedles with interconnected porosity: A scalable platform for biosensing and drug delivery. <i>Acta Biomaterialia</i> , 2018, 80, 401-411.	4.1	71
10	On-demand and negative-thermo-swelling tissue adhesive based on highly branched ambivalent PEG-catechol copolymers. <i>Journal of Materials Chemistry B</i> , 2015, 3, 6420-6428.	2.9	65
11	Toward Biofunctional Microneedles for Stimulus Responsive Drug Delivery. <i>Bioconjugate Chemistry</i> , 2015, 26, 1289-1296.	1.8	50
12	Endothelial cell response to biomechanical forces under simulated vascular loading conditions. <i>Journal of Biomechanics</i> , 2007, 40, 3146-3154.	0.9	41
13	Additive Manufacture of Composite Soft Pneumatic Actuators. <i>Soft Robotics</i> , 2018, 5, 726-736.	4.6	41
14	Insights into the mechanics of solid conical microneedle array insertion into skin using the finite element method. <i>Acta Biomaterialia</i> , 2021, 135, 403-413.	4.1	41
15	Hydrolytically Degradable Hyperbranched PEG-Polyester Adhesive with Low Swelling and Robust Mechanical Properties. <i>Advanced Healthcare Materials</i> , 2015, 4, 2260-2268.	3.9	37
16	Emerging Medical Devices for Minimally Invasive Cell Therapy. <i>Mayo Clinic Proceedings</i> , 2014, 89, 259-273.	1.4	36
17	A light-reflecting balloon catheter for atraumatic tissue defect repair. <i>Science Translational Medicine</i> , 2015, 7, 306ra149.	5.8	34
18	Behavior of Human Mesenchymal Stem Cells in Fibrin-Based Vascular Tissue Engineering Constructs. <i>Annals of Biomedical Engineering</i> , 2010, 38, 649-657.	1.3	32

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19	Synthetic bioresorbable poly- \pm -hydroxyesters as peripheral nerve guidance conduits; a review of material properties, design strategies and their efficacy to date. <i>Biomaterials Science</i> , 2019, 7, 4912-4943.	2.6	31
20	A therapeutic convection-enhanced macroencapsulation device for enhancing \hat{I}^2 cell viability and insulin secretion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	29
21	A growth-accommodating implant for paediatric applications. <i>Nature Biomedical Engineering</i> , 2017, 1, 818-825.	11.6	28
22	Touch-actuated transdermal delivery patch for quantitative skin permeation control. <i>Sensors and Actuators B: Chemical</i> , 2018, 256, 18-26.	4.0	27
23	Development and Evaluation of 3D-Printed Dry Microneedle Electrodes for Surface Electromyography. <i>Advanced Materials Technologies</i> , 2020, 5, 2000518.	3.0	27
24	Computational Examination of the Effect of Material Inhomogeneity on the Necking of Stent Struts Under Tensile Loading. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2007, 74, 978-989.	1.1	26
25	Evaluation of Human Endothelial Cells Post Stent Deployment in a Cardiovascular Simulator In Vitro. <i>Annals of Biomedical Engineering</i> , 2009, 37, 1322-1330.	1.3	24
26	Vascular Endothelial Growth Factor-Releasing Microspheres Based on Poly(μ -Caprolactone-PEG- μ -Caprolactone)-b-Poly(L-Lactide) Multiblock Copolymers Incorporated in a Three-Dimensional Printed Poly(Dimethylsiloxane) Cell Macroencapsulation Device. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 863-870.	1.6	15
27	Additive Manufacturing of Multi-Scale Porous Soft Tissue Implants That Encourage Vascularization and Tissue Ingrowth. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100229.	3.9	14
28	A Portable Chemotaxis Platform for Short and Long Term Analysis. <i>PLoS ONE</i> , 2012, 7, e44995.	1.1	12
29	Kinematic error modeling and error compensation of desktop 3D printer. <i>Nami Jishu Yu Jingmi Gongcheng/Nanotechnology and Precision Engineering</i> , 2018, 1, 180-186.	1.7	12
30	Comparing three-dimensional models of placenta accreta spectrum with surgical findings. <i>International Journal of Gynecology and Obstetrics</i> , 2022, 157, 188-197.	1.0	12
31	A biomimetic urethral model to evaluate urinary catheter lubricity and epithelial micro-trauma. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 108, 103792.	1.5	11
32	Characterisation of a collagen membrane for its potential use in cardiovascular tissue engineering applications. <i>Journal of Materials Science: Materials in Medicine</i> , 2006, 17, 195-201.	1.7	9
33	<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.	2.6	7
34	An Intraoral Non-Occlusal MEMS Sensor for Bruxism Detection. <i>IEEE Sensors Journal</i> , 2022, 22, 153-161.	2.4	7
35	Assessing the Effects of VEGF Releasing Microspheres on the Angiogenic and Foreign Body Response to a 3D Printed Silicone-Based Macroencapsulation Device. <i>Pharmaceutics</i> , 2021, 13, 2077.	2.0	7
36	Shedding light on implant-associated infection. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	6

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37	Outcome of congenital tracheal stenosis in children over two decades in a national cardiothoracic surgical unit. <i>Cardiology in the Young</i> , 2020, 30, 34-38.	0.4	5
38	Fused filament fabrication of polycaprolactone bioscaffolds: Influence of fabrication parameters and thermal environment on geometric fidelity and mechanical properties. <i>Bioprinting</i> , 2022, 27, e00206.	2.9	4
39	3D bioprinting chips away at glioblastomal resistance. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	2
40	A Stent with Customizable Length for Treatment of Critical Limb Ischemia: Clinical Need, Device Development and Pre-clinical Testing. <i>Cardiovascular Engineering and Technology</i> , 2014, 5, 317-333.	0.7	1
41	A radial clutch needle for facile and safe tissue compartment access. <i>Medical Devices & Sensors</i> , 2019, 2, e10049.	2.7	1
42	Angling for a bug-inspired method of coating therapeutics onto microneedles. <i>Science Translational Medicine</i> , 2020, 12, .	5.8	1
43	Development of a co-culture system for tissue engineered vascular grafts. <i>Bio-Medical Materials and Engineering</i> , 2008, 18, 291-294.	0.4	0
44	Patching up a wounded heart. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	0
45	A new approach to local drug delivery bubbling under the surface. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	0
46	Bound to get to the heart of a sticky problem. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	0
47	Development of a co-culture system for tissue engineered vascular grafts. <i>Bio-Medical Materials and Engineering</i> , 2008, 18, 291-4.	0.4	0
48	Development of a 3D Printed Benchtop Model of the Pulmonary System to Assist in the Development of Device to Treat Large Pulmonary Thrombo-embolic Disease. <i>Procedia CIRP</i> , 2022, 110, 162-167.	1.0	0