Rohan A Shirwaiker

List of Publications by Year
in descending order

50 papers	1,050 citations	586496 16 h-index	511568 30 g-index
51 all docs	51 docs citations	51 times ranked	1544 citing authors

#	Article	IF	Citations
1	Multiscale Anisotropic Tissue Biofabrication via Bulk Acoustic Patterning of Cells and Functional Additives in Hybrid Bioinks. Advanced Healthcare Materials, 2022, 11, e2102351.	3.9	11
2	Investigating dielectric spectroscopy and soft sensing for nondestructive quality assessment of engineered tissues. Biosensors and Bioelectronics, 2022, 216, 114286.	5.3	2
3	Process hybridization schemes for multiscale engineered tissue biofabrication. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2021, 13, e1673.	3.3	9
4	Biofabricated <scp>3D</scp> in vitro model of fibrosisâ€induced abnormal hepatoblast/biliary progenitors' expansion of the developing liver. Bioengineering and Translational Medicine, 2021, 6, e10207.	3.9	4
5	Non-destructive quality monitoring of 3D printed tissue scaffolds via dielectric impedance spectroscopy and supervised machine learning. Procedia Manufacturing, 2021, 53, 636-643.	1.9	8
6	Steroid eluting biocompatible stent for subglottic stenosis. European Archives of Oto-Rhino-Laryngology, 2021, 278, 1153-1158.	0.8	1
7	Cell-Laden Nanocellulose/Chitosan-Based Bioinks for 3D Bioprinting and Enhanced Osteogenic Cell Differentiation. ACS Applied Bio Materials, 2021, 4, 2342-2353.	2.3	66
8	The evaluation of a multiphasic <scp>3D</scp>â€bioplotted scaffold seeded with adipose derived stem cells to repair osteochondral defects in a porcine model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 2246-2258.	1.6	8
9	Characterizing the Effects of Synergistic Thermal and Photo-Cross-Linking during Biofabrication on the Structural and Functional Properties of Gelatin Methacryloyl (GelMA) Hydrogels. ACS Biomaterials Science and Engineering, 2021, 7, 5175-5188.	2.6	29
10	Fabrication of drug-loaded ultrafine polymer fibers via solution blowing and their drug release kinetics. Procedia Manufacturing, 2021, 53, 128-135.	1.9	3
11	Mechanical properties of tissue formed in vivo are affected by 3D-bioplotted scaffold microarchitecture and correlate with ECM collagen fiber alignment. Connective Tissue Research, 2020, 61, 190-204.	1.1	10
12	3D bioprinting of anisotropic engineered tissue constructs with ultrasonically induced cell patterning. Additive Manufacturing, 2020, 32, 101042.	1.7	13
13	Investigation of multiphasic 3Dâ€bioplotted scaffolds for siteâ€specific chondrogenic and osteogenic differentiation of human adiposeâ€derived stem cells for osteochondral tissue engineering applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2017-2030.	1.6	29
14	Effects of Autoclaving, EtOH, and UV Sterilization on the Chemical, Mechanical, Printability, and Biocompatibility Characteristics of Alginate. ACS Biomaterials Science and Engineering, 2020, 6, 5191-5201.	2.6	18
15	Experimental Characterization and Finite Element Modeling of the Effects of 3D Bioplotting Process Parameters on Structural and Tensile Properties of Polycaprolactone (PCL) Scaffolds. Applied Sciences (Switzerland), 2020, 10, 5289.	1.3	2
16	Ultrasound-assisted vat photopolymerization 3D printing of preferentially organized carbon fiber reinforced polymer composites. Journal of Manufacturing Processes, 2020, 56, 1340-1343.	2.8	32
17	High-Throughput Manufacture of 3D Fiber Scaffolds for Regenerative Medicine. Tissue Engineering - Part C: Methods, 2020, 26, 364-374.	1.1	12
18	The Ion Delivery Manner Influences the Antimicrobial Efficacy of Silver Oligodynamic Iontophoresis. Journal of Medical and Biological Engineering, 2019, 39, 622-631.	1.0	6

#	Article	IF	Citations
19	Characterizing the Process Physics of Ultrasound-Assisted Bioprinting. Scientific Reports, 2019, 9, 13889.	1.6	25
20	Ultrasound-assisted biofabrication and bioprinting of preferentially aligned three-dimensional cellular constructs. Biofabrication, 2019, 11, 035015.	3.7	46
21	Label free process monitoring of 3D bioprinted engineered constructs via dielectric impedance spectroscopy. Biofabrication, 2018, 10, 035012.	3.7	15
22	Antibacterial efficacy and cytotoxicity of low intensity direct current activated silverâ€“titanium implant system prototype. BioMetals, 2017, 30, 113-125.	1.8	15
23	Effects of 3D-bioplotted polycaprolactone scaffold geometry on human adipose-derived stem cell viability and proliferation. Rapid Prototyping Journal, 2017, 23, 534-542.	1.6	10
24	Engineering 3D-Bioplotted scaffolds to induce aligned extracellular matrix deposition for musculoskeletal soft tissue replacement. Connective Tissue Research, 2017, 58, 342-354.	1.1	21
25	Investigating Dielectric Impedance Spectroscopy As a Non-Destructive Quality Assessment Tool for 3D Cellular Constructs. , 2017, , .		3
26	Fabrication and Evaluation of Electrospun, 3D-Bioplotted, and Combination of Electrospun/3D-Bioplotted Scaffolds for Tissue Engineering Applications. BioMed Research International, 2017, 2017, 1-9.	0.9	48
27	Evaluation of silverâ€titanium implants activated by low intensity direct current for orthopedic infection control: An in vitro and in vivo study. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 1023-1031.	1.6	11
28	3D-Bioprinting of Polylactic Acid (PLA) Nanofiberâ€“Alginate Hydrogel Bioink Containing Human Adipose-Derived Stem Cells. ACS Biomaterials Science and Engineering, 2016, 2, 1732-1742.	2.6	232
29	Effects of Electrically Activated Silverâ€“Titanium Implant System Design Parameters on Time-Kill Curves Against Staphylococcus aureus. Journal of Medical and Biological Engineering, 2016, 36, 325-333.	1.0	5
30	In vitro characterization of design and compressive properties of 3D-biofabricated/decellularized hybrid grafts for tracheal tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 572-585.	1.5	27
31	Characterization of Materialâ€“Processâ€“Structure Interactions in the 3D Bioplotting of Polycaprolactone. 3D Printing and Additive Manufacturing, 2015, 2, 20-31.	1.4	18
32	Alginate Microspheroid Encapsulation and Delivery of MG-63 Cells Into Polycaprolactone Scaffolds: A New Biofabrication Approach for Tissue Engineering Constructs. Journal of Nanotechnology in Engineering and Medicine, 2015, 6, .	0.8	5
33	3D Bioprinting Techniques. , 2015, , 57-77.		19
34	Manufacturing Road Map for Tissue Engineering and Regenerative Medicine Technologies. Stem Cells Translational Medicine, 2015, 4, 130-135.	1.6	76
35	Effects of cathode design parameters on in vitro antimicrobial efficacy of electrically-activated silver-based iontophoretic system. Journal of Materials Science: Materials in Medicine, 2015, 26, 5382.	1.7	6
36	A Clinical Perspective on Musculoskeletal Infection Treatment Strategies and Challenges. Journal of the American Academy of Orthopaedic Surgeons, The, 2015, 23, S44-S54.	1.1	17

#	Article	IF	Citations
37	Modified Pharmacokinetic/Pharmacodynamic model for electrically activated silver-titanium implant system. Biomaterials and Biomechanics in Bioengineering, 2015, 2, 127-141.	0.4	1
38	Interdigitated silver-polymer-based antibacterial surface system activated by oligodynamic iontophoresis â€“ An empirical characterization study. Biomedical Microdevices, 2014, 16, 1-10.	1.4	7
39	Scaffolding hydrogels for rapid prototyping based tissue engineering. , 2014, , 176-200.		12
40	Biocompatibility analysis of an electrically-activated silver-based antibacterial surface system for medical device applications. Journal of Materials Science: Materials in Medicine, 2013, 24, 755-760.	1.7	13
41	Nanomaterials and synergistic lowâ€intensity direct current (LIDC) stimulation technology for orthopedic implantable medical devices. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2013, 5, 191-204.	3.3	21
42	Determining Optimal Current Intensity and Duration for Electrically Activated Silver-Based Prophylactic Hip Implant Prototype Design. , 2013, , .		0
43	Micro-scale fabrication and characterization of a silver-polymer-based electrically activated antibacterial surface. Biofabrication, 2011, 3, 015003.	3.7	9
44	Contributions of TRIZ and axiomatic design to leanness in design: an investigation. Procedia Engineering, 2011, 9, 730-735.	1.2	22
45	Developing an engineered antimicrobial/prophylactic system using electrically activated bactericidal metals. Journal of Materials Science: Materials in Medicine, 2010, 21, 2103-2114.	1.7	13
46	Prophylactic Bactericidal Orthopedic Implants â€“ Animal Testing Study. Journal of Biomedical Science and Engineering, 2010, 03, 917-926.	0.2	5
47	Triz and axiomatic design: a review of case-studies and a proposed synergistic use. Journal of Intelligent Manufacturing, 2008, 19, 33-47.	4.4	60
48	USING TRIZ AND AXIOMATIC DESIGN SYNERGISTICALLY: A CASE STUDY. International Journal of Innovation and Technology Management, 2007, 04, 155-170.	0.8	2
49	TRIZ and Axiomatic Design: A Review of Manufacturing Case-Studies&Their Compatibility. , 2006, , .		11
50	A Multi-Stage Problem Formulation for Concept Selection for Improved Product Design. , 2006, , .		12