Vahid Serpooshan

List of Publications by Year
in descending order

83 papers	8,175 citations	134610 34 h-index	97045 71 g-index
87 all docs	87 docs citations	87 times ranked	16272 citing authors

#	Article	IF	Citations
1	Bioengineering of Pediatric Cardiovascular Constructs: In Vitro Modeling of Congenital Heart Disease. , 2022, , 233-248.		1
2	Mass Spectrometry, Structural Analysis, and Anti-Inflammatory Properties of Photo-Cross-Linked Human Albumin Hydrogels. ACS Applied Bio Materials, 2022, 5, 2643-2663.	2.3	8
3	Tissue engineered drug delivery vehicles: Methods to monitor and regulate the release behavior. Journal of Controlled Release, 2022, 349, 143-155.	4.8	14
4	A 3D Bioprinted in vitro Model of Neuroblastoma Recapitulates Dynamic Tumorâ€Endothelial Cell Interactions Contributing to Solid Tumor Aggressive Behavior. Advanced Science, 2022, 9, .	5.6	15
5	Methacrylateâ€Modified Gold Nanoparticles Enable Noninvasive Monitoring of Photocrosslinked Hydrogel Scaffolds. Advanced NanoBiomed Research, 2022, 2, .	1.7	5
6	3D Bioprinting of Neural Tissues. Advanced Healthcare Materials, 2021, 10, e2001600.	3.9	48
7	Patientâ€Specific 3D Bioprinted Models of Developing Human Heart. Advanced Healthcare Materials, 2021, 10, e2001169.	3.9	18
8	Ventilated Upper Airway Endoscopic Endonasal Procedure Mask: Surgical Safety in the COVID-19 Era. Journal of Neurological Surgery, Part B: Skull Base, 2021, 82, .	0.4	0
9	Engineering Human Cardiac Muscle Patch Constructs for Prevention of Post-infarction LV Remodeling. Frontiers in Cardiovascular Medicine, 2021, 8, 621781.	1.1	19
10	CRISPR/Cas9-based targeting of fluorescent reporters to human iPSCs to isolate atrial and ventricular-specific cardiomyocytes. Scientific Reports, 2021, 11, 3026.	1.6	18
11	3D Bioprinted Bacteriostatic Hyperelastic Bone Scaffold for Damage-Specific Bone Regeneration. Polymers, 2021, 13, 1099.	2.0	22
12	Nano-Medicine in the Cardiovascular System. Frontiers in Pharmacology, 2021, 12, 640182.	1.6	11
13	Noninvasive Three-Dimensional <i>In Situ</i> and <i>In Vivo</i> Characterization of Bioprinted Hydrogel Scaffolds Using the X-ray Propagation-Based Imaging Technique. ACS Applied Materials & Interfaces, 2021, 13, 25611-25623.	4.0	20
14	Sex as an important factor in nanomedicine. Nature Communications, 2021, 12, 2984.	5.8	47
15	Editorial: 3D Cell Culture Systems for Cardiovascular Tissue Engineering: In vitro Modelling and in vivo Regenerative Therapies. Frontiers in Cardiovascular Medicine, 2021, 8, 675676.	1.1	0
16	Restoring Endogenous Repair Mechanisms to Heal Chronic Wounds with a Multifunctional Wound Dressing. Molecular Pharmaceutics, 2021, 18, 3171-3180.	2.3	17
17	Adhesive Tissue Engineered Scaffolds: Mechanisms and Applications. Frontiers in Bioengineering and Biotechnology, 2021, 9, 683079.	2.0	10
18	Cyclin D2 Overexpression Enhances the Efficacy of Human Induced Pluripotent Stem Cellâ€"Derived Cardiomyocytes for Myocardial Repair in a Swine Model of Myocardial Infarction. Circulation, 2021, 144, 210-228.	1.6	61

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19	Editorial: Bioengineering and Biotechnology Approaches in Cardiovascular Sciences. Frontiers in Bioengineering and Biotechnology, 2021, 9, 746435.	2.0	0
20	A 3D Bioprinted In Vitro Model of Pulmonary Artery Atresia to Evaluate Endothelial Cell Response to Microenvironment. Advanced Healthcare Materials, 2021, 10, e2100968.	3.9	13
21	Nanomaterials for bioprinting: functionalization of tissue-specific bioinks. Essays in Biochemistry, 2021, 65, 429-439.	2.1	9
22	Patientâ€Specific 3D Bioprinted Models of Developing Human Heart (Adv. Healthcare Mater. 15/2021). Advanced Healthcare Materials, 2021, 10, 2170071.	3.9	0
23	Abstract MP207: A Precision Medicine Approach For Non-invasive, Longitudinal, And Quantitative Monitoring Of Cardiac Tissue-engineered Scaffolds. Circulation Research, 2021, 129, .	2.0	3
24	Bioprintability: Physiomechanical and Biological Requirements of Materials for 3D Bioprinting Processes. Polymers, 2020, 12, 2262.	2.0	67
25	Embedded 3D Bioprinting of Gelatin Methacryloyl-Based Constructs with Highly Tunable Structural Fidelity. ACS Applied Materials & Interfaces, 2020, 12, 44563-44577.	4.0	89
26	Synthesis of ultrasound-compatible embryonic heart tube phantom using water-soluble 3D printed model for 3D ultrasound flow velocimetry. , 2020, , .		1
27	Ventilated Upper Airway Endoscopic Endonasal Procedure Mask: Surgical Safety in the COVID-19 Era. Operative Neurosurgery, 2020, 19, 271-280.	0.4	18
28	Atherosclerosis and thrombosis heart failure. , 2020, , 23-42.		0
29	Clinical cardiovascular medicine and lessons learned from cancer nanotechnology. , 2020, , 187-195.		0
30	Nano-bioink solutions for cardiac tissue bioprinting. , 2020, , 171-185.		3
31	Wnt Activation and Reduced Cell-Cell Contact Synergistically Induce Massive Expansion of Functional Human iPSC-Derived Cardiomyocytes. Cell Stem Cell, 2020, 27, 50-63.e5.	5.2	112
32	Editorial for the Special Issue on 3D Printing for Tissue Engineering and Regenerative Medicine. Micromachines, 2020, 11, 366.	1.4	10
33	Biomechanical factors in three-dimensional tissue bioprinting. Applied Physics Reviews, 2020, 7, 041319.	5.5	30
34	Abstract 405: A Personalized, 3D Printed in vitro Model of Vascular Anastomosis in Single Ventricle Heart Defects. Circulation Research, 2020, 127, .	2.0	2
35	Abstract 427: A Patient-Specific 3D Bioprinted Platform for in vitro Disease Modeling and Treatment Planning in Pulmonary Vein Stenosis. Circulation Research, 2020, 127, .	2.0	3
36	3D Bioprinting in Clinical Cardiovascular Medicine. , 2019, , 149-162.		6

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37	Engineering Functional Cardiac Tissues for Regenerative Medicine Applications. Current Cardiology Reports, 2019, 21, 105.	1.3	28
38	Biomaterial approaches for cardiovascular tissue engineering. Emergent Materials, 2019, 2, 193-207.	3.2	29
39	In Vivo Tracking of Tissue Engineered Constructs. Micromachines, 2019, 10, 474.	1.4	32
40	3D Bioprinting of Cardiovascular Tissue Constructs: Cardiac Bioinks. , 2019, , 63-77.		12
41	Nanoscale Technologies for Prevention and Treatment of Heart Failure: Challenges and Opportunities. Chemical Reviews, 2019, 119, 11352-11390.	23.0	46
42	Patientâ€Specific 3â€Dimensionalâ€"Bioprinted Model for In Vitro Analysis and Treatment Planning of Pulmonary Artery Atresia in Tetralogy of Fallot and Major Aortopulmonary Collateral Arteries. Journal of the American Heart Association, 2019, 8, e014490.	1.6	23
43	Stage-specific Effects of Bioactive Lipids on Human iPSC Cardiac Differentiation and Cardiomyocyte Proliferation. Scientific Reports, 2018, 8, 6618.	1.6	32
44	Effect of Cell Sex on Uptake of Nanoparticles: The Overlooked Factor at the Nanobio Interface. ACS Nano, 2018, 12, 2253-2266.	7.3	87
45	Big bottlenecks in cardiovascular tissue engineering. Communications Biology, 2018, 1, 199.	2.0	66
46	Cardiovascular tissue bioprinting: Physical and chemical processes. Applied Physics Reviews, 2018, 5, 041106.	5.5	36
47	4D Printing of Actuating Cardiac Tissue. , 2018, , 153-162.		18
48	Mammalian Heart Regeneration. Circulation Research, 2017, 120, 630-632.	2.0	29
49	Revisiting structure-property relationship of pH-responsive polymers for drug delivery applications. Journal of Controlled Release, 2017, 253, 46-63.	4.8	231
50	Contractile force generation by 3D hiPSC-derived cardiac tissues is enhanced by rapid establishment of cellular interconnection in matrix with muscle-mimicking stiffness. Biomaterials, 2017, 131, 111-120.	5.7	72
51	Bioacoustic-enabled patterning of human iPSC-derived cardiomyocytes into 3D cardiac tissue. Biomaterials, 2017, 131, 47-57.	5.7	99
52	Bioengineering cardiac constructs using 3D printing. Journal of 3D Printing in Medicine, 2017, 1, 123-139.	1.0	44
53	Nkx2.5+â€‰Cardiomyoblasts Contribute to Cardiomyogenesis in the Neonatal Heart. Scientific Reports, 2017, 7, 12590.	1.6	29
54	A Multidisciplinary and Multicultural Adventure. Circulation Research, 2017, 120, 1540-1541.	2.0	0

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55	Tissue Engineering of 3D Organotypic Microtissues by Acoustic Assembly. Methods in Molecular Biology, 2017, 1576, 301-312.	0.4	12
56	Multiscale technologies for treatment of ischemic cardiomyopathy. Nature Nanotechnology, 2017, 12, 845-855.	15.6	104
57	Nanoparticle Surface Functionality Dictates Cellular and Systemic Toxicity. Chemistry of Materials, 2017, 29, 6578-6595.	3.2	99
58	Cellular uptake of nanoparticles: journey inside the cell. Chemical Society Reviews, 2017, 46, 4218-4244.	18.7	1,709
59	Infection-resistant MRI-visible scaffolds for tissue engineering applications. BioImpacts, 2016, 6, 111-115.	0.7	55
60	Protein Corona Influences Cellâ€“Biomaterial Interactions in Nanostructured Tissue Engineering Scaffolds. Advanced Functional Materials, 2015, 25, 4379-4389.	7.8	57
61	Micropatterned nanostructures: a bioengineered approach to mass-produce functional myocardial grafts. Nanotechnology, 2015, 26, 060501.	1.3	2
62	Personalized disease-specific protein corona influences the therapeutic impact of graphene oxide. Nanoscale, 2015, 7, 8978-8994.	2.8	199
63	Epicardial FSTL1 reconstitution regenerates the adult mammalian heart. Nature, 2015, 525, 479-485.	13.7	402
64	[Pyr1]-Apelin-13 delivery via nano-liposomal encapsulation attenuates pressure overload-induced cardiac dysfunction. Biomaterials, 2015, 37, 289-298.	5.7	44
65	Nanoparticles-induced inflammatory cytokines in human plasma concentration manner: an ignored factor at the nanobio-interface. Journal of the Iranian Chemical Society, 2015, 12, 317-323.	1.2	12
66	Use of bio-mimetic three-dimensional technology in therapeutics for heart disease. Bioengineered, 2014, 5, 193-197.	1.4	20
67	Patching Up Broken Hearts: Cardiac Cell Therapy Gets a Bioengineered Boost. Cell Stem Cell, 2014, 15, 671-673.	5.2	19
68	Protein corona change the drug release profile of nanocarriers: The â€œoverlookedâ€• factor at the nanobio interface. Colloids and Surfaces B: Biointerfaces, 2014, 123, 143-149.	2.5	144
69	Ultra-rapid Manufacturing of Engineered Epicardial Substitute to Regenerate Cardiac Tissue Following Acute Ischemic Injury. Methods in Molecular Biology, 2014, 1210, 239-248.	0.4	9
70	The effect of bioengineered acellular collagen patch on cardiac remodeling and ventricular function post myocardial infarction. Biomaterials, 2013, 34, 9048-9055.	5.7	168
71	Plasma concentration gradient influences the protein corona decoration on nanoparticles. RSC Advances, 2013, 3, 1119-1126.	1.7	69
72	Exocytosis of nanoparticles from cells: Role in cellular retention and toxicity. Advances in Colloid and Interface Science, 2013, 201-202, 18-29.	7.0	212

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73	Hydraulic permeability of multilayered collagen gel scaffolds under plastic compression-induced unidirectional fluid flow. Acta Biomaterialia, 2013, 9, 4673-4680.	4.1	40
74	Effect of chitosan incorporation on the consolidation process of highly hydrated collagen hydrogel scaffolds. Soft Matter, 2013, 9, 10811.	1.2	11
75	Temperature: The â€œIgnoredâ€•Factor at the NanoBio Interface. ACS Nano, 2013, 7, 6555-6562.	7.3	299
76	Antibacterial properties of nanoparticles. Trends in Biotechnology, 2012, 30, 499-511.	4.9	2,113
77	Silver-Coated Engineered Magnetic Nanoparticles Are Promising for the Success in the Fight against Antibacterial Resistance Threat. ACS Nano, 2012, 6, 2656-2664.	7.3	287
78	Characterization and modelling of a dense lamella formed during self-compression of fibrillar collagen gels: implications for biomimetic scaffolds. Soft Matter, 2011, 7, 2918.	1.2	25
79	Large Protein Absorptions from Small Changes on the Surface of Nanoparticles. Journal of Physical Chemistry C, 2011, 115, 18275-18283.	1.5	49
80	Engineered nanoparticles for biomolecular imaging. Nanoscale, 2011, 3, 3007.	2.8	246
81	Fibroblast contractility and growth in plastic compressed collagen gel scaffolds with microstructures correlated with hydraulic permeability. Journal of Biomedical Materials Research - Part A, 2011, 96A, 609-620.	2.1	30
82	Reduced hydraulic permeability of three-dimensional collagen scaffolds attenuates gel contraction and promotes the growth and differentiation of mesenchymal stem cells. Acta Biomaterialia, 2010, 6, 3978-3987.	4.1	76
83	Effect of rubber particle cavitation on the mechanical properties and deformation behavior of high-impact polystyrene. Journal of Applied Polymer Science, 2007, 104, 1110-1117.	1.3	10