Carmelo De Maria

List of Publications by Year
in descending order

99	2,189	346980	299063
papers	citations	22 h-index	42 g-index

105	105	105	3285
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surface reconstruction and tissue recognition for robotic-based in situ bioprinting. Bioprinting, 2022, 26, e00195.	2.9	10
2	Open-Source Medical Devices: Concept, Trends, and Challenges Toward Equitable Healthcare Technology. , 2022, , 1-19.		0
3	Study of the Adhesion of the Human Gut Microbiota on Electrospun Structures. Bioengineering, 2022, 9, 96.	1.6	8
4	3D Printing Silk-Based Bioresorbable Piezoelectric Self-Adhesive Holey Structures for In Vivo Monitoring on Soft Tissues. ACS Applied Materials & Interfaces, 2022, 14, 19253-19264.	4.0	15
5	Biomedical engineering in low- and middle-income settings: analysis of current state, challenges and best practices. Health and Technology, 2022, , 1-11.	2.1	3
6	Bioprinting technologies: an overview. , 2022, , 19-49.		4
7	4D printing in biomedical applications: emerging trends and technologies. Journal of Materials Chemistry B, 2021, 9, 7608-7632.	2.9	65
8	Benefits of Non-Planar Printing Strategies Towards Eco-Efficient 3D Printing. Sustainability, 2021, 13, 1599.	1.6	13
9	Molecular Imprinting Strategies for Tissue Engineering Applications: A Review. Polymers, 2021, 13, 548.	2.0	14
10	Printable smart 3D architectures of regenerated silk on poly(3-hydroxybutyrate-co-3-hydroxyvalerate). Materials and Design, 2021, 201, 109492.	3.3	24
11	4D Printing: A Snapshot on an Evolving Field. Biosciences, Biotechnology Research Asia, 2021, 18, 1-4.	0.2	1
12	Oxygen releasing materials: Towards addressing the hypoxia-related issues in tissue engineering. Materials Science and Engineering C, 2021, 122, 111896.	3.8	46
13	Recent advances in bioprinting technologies for engineering different cartilage-based tissues. Materials Science and Engineering C, 2021, 123, 112005.	3.8	29
14	An interfacial self-assembling bioink for the manufacturing of capillary-like structures with tuneable and anisotropic permeability. Biofabrication, 2021, 13, 035027.	3.7	16
15	Recent advances in bioprinting technologies for engineering cardiac tissue. Materials Science and Engineering C, 2021, 124, 112057.	3.8	35
16	Carbon Nanotubes/Regenerated Silk Composite as a Three-Dimensional Printable Bio-Adhesive Ink with Self-Powering Properties. ACS Applied Materials & Interfaces, 2021, 13, 21007-21017.	4.0	17
17	Physicochemical Characterization of Pectinâ€Gelatin Biomaterial Formulations for 3D Bioprinting. Macromolecular Bioscience, 2021, 21, e2100168.	2.1	13
18	Pectin as Rheology Modifier of a Gelatin-Based Biomaterial Ink. Materials, 2021, 14, 3109.	1.3	21

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19	Robotic platform and path planning algorithm for in situ bioprinting. Bioprinting, 2021, 22, e00139.	2.9	22
20	Biomimetic Tendrils by Four Dimensional Printing Bimorph Springs with Torsion and Contraction Properties Based on Bioâ€Compatible Graphene/Silk Fibroin and Poly(3â€Hydroxybutyrateâ€coâ€3â€Hydroxyvalerate). Advanced Functional Materials, 2021, 31, 2105665.	7.8	18
21	One-Pot Process: Microwave-Assisted Keratin Extraction and Direct Electrospinning to Obtain Keratin-Based Bioplastic. International Journal of Molecular Sciences, 2021, 22, 9597.	1.8	12
22	Bioprinting for bone tissue engineering. Minerva Orthopedics, 2021, 72, .	0.1	7
23	High-resolution microscopy assisted mechanical modeling of ultrafine electrospun network. Polymer, 2021, 230, 124050.	1.8	1
24	Open-source CAD-CAM simulator of the extrusion-based bioprinting process. Bioprinting, 2021, 24, e00172.	2.9	29
25	Open-source medical devices: Healthcare solutions for low-, middle-, and high-resource settings. , 2020, , 7-14.		11
26	Pectin-GPTMS-Based Biomaterial: toward a Sustainable Bioprinting of 3D scaffolds for Tissue Engineering Application. Biomacromolecules, 2020, 21, 319-327.	2.6	51
27	Modeling the Three-Dimensional Bioprinting Process of Î²-Sheet Self-Assembling Peptide Hydrogel Scaffolds. Frontiers in Medical Technology, 2020, 2, 571626.	1.3	27
28	A Framework for Assessing Healthcare Facilities in Low-Resource Settings: Field Studies in Benin and Uganda. Journal of Medical and Biological Engineering, 2020, 40, 526-534.	1.0	23
29	A novel 3D in vitro model of the human gut microbiota. Scientific Reports, 2020, 10, 21499.	1.6	30
30	Microfabricated and multilayered PLGA structure for the development of co-cultured in vitro liver models. Bioprinting, 2020, 18, e00084.	2.9	2
31	Endothelial cells support osteogenesis in an in vitro vascularized bone model developed by 3D bioprinting. Biofabrication, 2020, 12, 025013.	3.7	78
32	Nurturing next-generation biomedical engineers in Africa: The impact of Innovatorsâ€™ Summer Schools. Global Health Innovation, 2020, 3, 1-10.	0.5	0
33	Shape-memory actuators manufactured by dual extrusion multimaterial 3d printing of conductive and non-conductive filaments. Smart Materials and Structures, 2019, 28, 105025.	1.8	15
34	Electrospun Structures Made of a Hydrolyzed Keratin-Based Biomaterial for Development of in vitro Tissue Models. Frontiers in Bioengineering and Biotechnology, 2019, 7, 174.	2.0	23
35	Co-design open-source medical devices: how to minimize the human error using UBORA e-infrastructure. , 2019, 2019, 3730-3733.		2
36	Phantoms in medicine: The case of ophthalmology. Biomedical Science and Engineering, 2019, 3, .	0.0	1

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37	Chemico-physical characterization and evaluation of coating properties of two commercial organosilicons. Journal of Thermal Analysis and Calorimetry, 2019, 138, 3277-3285.	2.0	2
38	Palpreastâ€"A New Wearable Device for Breast Self-Examination. Applied Sciences (Switzerland), 2019, 9, 381.	1.3	15
39	Ultrasonic mixing chamber as an effective tool for the biofabrication of fully graded scaffolds for interface tissue engineering. International Journal of Artificial Organs, 2019, 42, 586-594.	0.7	12
40	Comprehensive Review on Current and Future Regulatory Requirements on Wearable Sensors in Preclinical and Clinical Testing. Frontiers in Bioengineering and Biotechnology, 2019, 7, 313.	2.0	34
41	Fabrication and Characterization of Gelatin/Carbon Blackâ€"Based Scaffolds for Neural Tissue Engineering Applications. Materials Performance and Characterization, 2019, 8, 301-315.	0.2	3
42	Gelatinâ€"genipinâ€based biomaterials for skeletal muscle tissue engineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2763-2777.	1.6	48
43	Safe innovation: On medical device legislation in Europe and Africa. Health Policy and Technology, 2018, 7, 156-165.	1.3	41
44	Cardiac tissue regeneration: A preliminary study on carbonâ€based nanotubes gelatin scaffold. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2750-2762.	1.6	22
45	Biofabrication: A Guide to Technology and Terminology. Trends in Biotechnology, 2018, 36, 384-402.	4.9	465
46	Integration of Biomechanical and Biological Characterization in the Development of Porous Poly(caprolactone)-Based Membranes for Abdominal Wall Hernia Treatment. International Journal of Polymer Science, 2018, 2018, 1-15.	1.2	3
47	An ink-jet printed electrical stimulation platform for muscle tissue regeneration. Bioprinting, 2018, 11, e00035.	2.9	12
48	Characterization of Additive Manufactured Scaffolds. , 2018, , 55-78.		1
49	Soft-molecular imprinted electrospun scaffolds to mimic specific biological tissues. Biofabrication, 2018, 10, 045005.	3.7	19
50	The Kahawa Declaration: a manifesto for the democratization of medical technology. Global Health Innovation, 2018, 1, .	0.5	20
51	Towards Open Source Medical Devices. , 2018, , .		5
52	DataBrain: a web-accessible database for three-dimensional reconstructions and quantitative morphometrics of neurons. IFMBE Proceedings, 2018, , 767-770.	0.2	1
53	In vitrodevelopment of engineered muscle using a scaffold based on the pressure-activated microsyringe (PAM) technique. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 138-152.	1.3	5
54	Genipin diffusion and reaction into a gelatin matrix for tissue engineering applications. , 2017, 105, 473-480.		15

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55	Pressure-activated microsyringe (PAM) fabrication of bioactive glass-poly(lactic-co-glycolic acid) composite scaffolds for bone tissue regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1986-1997.	1.3	18
56	A new path to platelet production through matrix sensing. Haematologica, 2017, 102, 1150-1160.	1.7	51
57	EFFECTS OF A MODIFIED VITRECTOMY PROBE IN SMALL-GAUGE VITRECTOMY. Retina, 2017, 37, 1765-1774.	1.0	3
58	3D screening device for the evaluation of cell response to different electrospun microtopographies. Acta Biomaterialia, 2017, 55, 310-322.	4.1	16
59	Open-source automated external defibrillator. HardwareX, 2017, 2, 61-70.	1.1	19
60	The control of stem cell morphology and differentiation using three-dimensional printed scaffold architecture. MRS Communications, 2017, 7, 383-390.	0.8	13
61	Multimaterial, heterogeneous, and multicellular three-dimensional bioprinting. MRS Bulletin, 2017, 42, 578-584.	1.7	21
62	A new 3D concentration gradient maker and its application in building hydrogels with a 3D stiffness gradient. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 256-264.	1.3	21
63	Characterization of Additive Manufactured Scaffolds. , 2017, , 1-25.		1
64	Machine design for multimaterial processing. , 2016, , 111-140.		3
65	Biomechanical, Topological and Chemical Features That Influence the Implant Success of an Urogynecological Mesh: A Review. BioMed Research International, 2016, 2016, 1-6.	0.9	7
66	Status and solutions to medical device regulations for improving the healthcare landscape in Africa. , 2016, 2016, 4329-4332.		3
67	Touch sensor for social robots and interactive objects affective interaction. Sensors and Actuators A: Physical, 2016, 251, 92-99.	2.0	9
68	The influence of mesh topology in the abdominal wall repair process. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 1220-1228.	1.6	10
69	Design, fabrication and perivascular implantation of bioactive scaffolds engineered with human adventitial progenitor cells for stimulation of arteriogenesis in peripheral ischemia. Biofabrication, 2016, 8, 015020.	3.7	27
70	Triphasic scaffolds for the regeneration of the boneâ€“ligament interface. Biofabrication, 2016, 8, 015009.	3.7	67
71	Reconstruction of medial patello-femoral ligament: Comparison of two surgical techniques. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 272-278.	1.5	4
72	Material and structural tensile properties of the human medial patello-femoral ligament. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 54, 141-148.	1.5	32

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73	Open Biomedical Engineering education in Africa. , 2015, 2015, 3687-90.		1
74	Quasi-linear viscoelastic properties of the human medial patello-femoral ligament. Journal of Biomechanics, 2015, 48, 4297-4302.	0.9	13
75	Design and Validation of an Open-Hardware Print-Head for Bioprinting Application. Procedia Engineering, 2015, 110, 98-105.	1.2	7
76	Biomimicking of the Breast Tumor Microenvironment. Current Molecular Biology Reports, 2015, 1, 71-76.	0.8	2
77	Indirect Rapid Prototyping for Tissue Engineering. , 2015, , 153-164.		3
78	Magnetic-Driven Pointing System: A Feasibility Study. IEEE Sensors Journal, 2015, 15, 703-714.	2.4	1
79	ADMET: ADipocyte METabolism mathematical model. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1386-1391.	0.9	5
80	Realisation and characterization of conductive hollow fibers for neuronal tissue engineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 1107-1119.	1.6	17
81	In Vivo Assessment of Printed Microvasculature in a Bilayer Skin Graft to Treat Full-Thickness Wounds. Tissue Engineering - Part A, 2015, 21, 224-233.	1.6	128
82	Combining Inkjet Printing and Sol-Gel Chemistry for Making pH-Sensitive Surfaces. Current Topics in Medicinal Chemistry, 2015, 15, 271-278.	1.0	16
83	New eye phantom for ophthalmic surgery. Journal of Biomedical Optics, 2014, 19, 068001.	1.4	7
84	An Autologously Generated Platelet-Rich Plasma Suturable Membrane May Enhance Peripheral Nerve Regeneration after Neurorraphy in an Acute Injury Model of Sciatic Nerve Neurotmesis. Journal of Reconstructive Microsurgery, 2014, 30, 617-626.	1.0	48
85	Development of a novel micro-ablation system to realise micrometric and well-defined hydrogel structures for tissue engineering applications. Rapid Prototyping Journal, 2014, 20, 490-498.	1.6	7
86	In Silico Models for Dynamic Connected Cell Cultures Mimicking Hepatocyte-Endothelial Cell-Adipocyte Interaction Circle. PLoS ONE, 2014, 9, e111946.	1.1	4
87	Bone scaffolds with homogeneous and discrete gradient mechanical properties. Materials Science and Engineering C, 2013, 33, 28-36.	3.8	41
88	A new approach to fabricate agarose microstructures. Polymers for Advanced Technologies, 2013, 24, 895-902.	1.6	15
89	The PAM²system: a multilevel approach for fabrication of complex threeâ€dimensional microstructures. Rapid Prototyping Journal, 2012, 18, 299-307.	1.6	19
90	Printable Cellular Scaffold Using Self-Crosslinking Agents. Journal of Imaging Science and Technology, 2012, 56, 1-5.	0.3	7

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91	HEMETÎ²: improvement of hepatocyte metabolism mathematical model. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 837-851.	0.9	7
92	Squeeze Pressure Bioreactor: A Hydrodynamic Bioreactor for Noncontact Stimulation of Cartilage Constructs. Tissue Engineering - Part C: Methods, 2011, 17, 757-764.	1.1	10
93	Substrate stiffness influences high resolution printing of living cells with an ink-jet system. Journal of Bioscience and Bioengineering, 2011, 112, 79-85.	1.1	69
94	A new library of HEMET model: Insulin effects on hepatic metabolism. Computer Methods and Programs in Biomedicine, 2009, 94, 181-189.	2.6	7
95	ENMET: Endothelial Cell Metabolism Mathematical Model. , 2009, , .		2
96	HEMET: Mathematical model of biochemical pathways for simulation and prediction of HEpatocyte METabolism. Computer Methods and Programs in Biomedicine, 2008, 92, 121-134.	2.6	11
97	Microfabrication of Capillary System Using a Perfusion Cell Chamber. , 2007, , .		0
98	A novel vascular bioreactor for remodelling and testing mechanical properties of blood vessels. , 2007, , .		0
99	Pectin-Based Scaffolds for Tissue Engineering Applications. , 0, , .		4