Alberto Rainer

List of Publications by Year
in descending order

104 papers	4,252 citations	126708 33 h-index	118652 62 g-index
106 all docs	106 docs citations	106 times ranked	7289 citing authors

#	Article	IF	Citations
1	Current trends in the design of scaffolds for computer-aided tissue engineering. Acta Biomaterialia, 2014, 10, 580-594.	4.1	369
2	A multi-cellular 3D bioprinting approach for vascularized heart tissue engineering based on HUVECs and iPSC-derived cardiomyocytes. Scientific Reports, 2018, 8, 13532.	1.6	268
3	Microfluidic-enhanced 3D bioprinting of aligned myoblast-laden hydrogels leads to functionally organized myofibers inÂvitro and inÂvivo. Biomaterials, 2017, 131, 98-110.	5.7	252
4	Pluronic F127 Hydrogel Characterization and Biofabrication in Cellularized Constructs for Tissue Engineering Applications. Procedia CIRP, 2016, 49, 125-132.	1.0	179
5	Classification of M1/M2-polarized human macrophages by label-free hyperspectral reflectance confocal microscopy and multivariate analysis. Scientific Reports, 2017, 7, 8965.	1.6	158
6	Combining electrospinning and fused deposition modeling for the fabrication of a hybrid vascular graft. Biofabrication, 2010, 2, 014102.	3.7	137
7	Investigating Nonalcoholic Fatty Liver Disease in a Liver-on-a-Chip Microfluidic Device. PLoS ONE, 2016, 11, e0159729.	1.1	131
8	Microfluidic Organ/Body-on-a-Chip Devices at the Convergence of Biology and Microengineering. Sensors, 2015, 15, 31142-31170.	2.1	124
9	Combined additive manufacturing approaches in tissue engineering. Acta Biomaterialia, 2015, 24, 1-11.	4.1	115
10	Poly-l-Lactic Acid/Hydroxyapatite Electrospun Nanocomposites Induce Chondrogenic Differentiation of Human MSC. Annals of Biomedical Engineering, 2009, 37, 1376-1389.	1.3	107
11	Electrospinning of PCL/PVP blends for tissue engineering scaffolds. Journal of Materials Science: Materials in Medicine, 2013, 24, 1425-1442.	1.7	107
12	Polyurethane-based scaffolds for myocardial tissue engineering. Interface Focus, 2014, 4, 20130045.	1.5	95
13	Engineering muscle cell alignment through 3D bioprinting. Journal of Biomedical Materials Research - Part A, 2017, 105, 2582-2588.	2.1	84
14	Naturally derived proteins and glycosaminoglycan scaffolds for tissue engineering applications. Materials Science and Engineering C, 2017, 78, 1277-1299.	3.8	82
15	Fabrication of bioactive glassâ€"ceramic foams mimicking human bone portions for regenerative medicine. Acta Biomaterialia, 2008, 4, 362-369.	4.1	80
16	Characterization of age-related changes of tendon stem cells from adult human tendons. Knee Surgery, Sports Traumatology, Arthroscopy, 2014, 22, 2856-2866.	2.3	79
17	Old Myths, New Concerns: the Long-Term Effects of Ascending Aorta Replacement with Dacron Grafts. Not All That Glitters Is Gold. Journal of Cardiovascular Translational Research, 2016, 9, 334-342.	1.1	76
18	Correlation between porous texture and cell seeding efficiency of gas foaming and microfluidic foaming scaffolds. Materials Science and Engineering C, 2016, 62, 668-677.	3.8	70

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19	Bioactive electrospun scaffold for annulus fibrosus repair and regeneration. European Spine Journal, 2012, 21, 20-26.	1.0	65
20	Graded porous polyurethane foam: A potential scaffold for oro-maxillary bone regeneration. Materials Science and Engineering C, 2015, 51, 329-335.	3.8	64
21	Electrospun scaffolds for bone tissue engineering. Musculoskeletal Surgery, 2011, 95, 69-80.	0.7	62
22	Combining Type I Interferons and 5-Aza-2â€²-Deoxycitidine to Improve Anti-Tumor Response against Melanoma. Journal of Investigative Dermatology, 2017, 137, 159-169.	0.3	60
23	Engineering Muscle Networks in 3D Gelatin Methacryloyl Hydrogels: Influence of Mechanical Stiffness and Geometrical Confinement. Frontiers in Bioengineering and Biotechnology, 2017, 5, 22.	2.0	60
24	Multiscale Analysis of Extracellular Matrix Remodeling in the Failing Heart. Circulation Research, 2021, 128, 24-38.	2.0	60
25	Biomechanical Characterization at the Cell Scale: Present and Prospects. Frontiers in Physiology, 2018, 9, 1449.	1.3	59
26	Drug releasing systems in cardiovascular tissue engineering. Journal of Cellular and Molecular Medicine, 2009, 13, 422-439.	1.6	58
27	Biological response of human mesenchymal stromal cells to titanium grade 4 implants coated with PCL/ZrO2 hybrid materials synthesized by solâ€"gel route: in vitro evaluation. Materials Science and Engineering C, 2014, 45, 395-401.	3.8	55
28	Load-Adaptive Scaffold Architecturing: A Bioinspired Approach to the Design of Porous Additively Manufactured Scaffolds with Optimized Mechanical Properties. Annals of Biomedical Engineering, 2012, 40, 966-975.	1.3	53
29	Scaffold-Based Delivery of a Clinically Relevant Anti-Angiogenic Drug Promotes the Formation of <i>In Vivo</i> Stable Cartilage. Tissue Engineering - Part A, 2013, 19, 1960-1971.	1.6	47
30	Biofabrication of Hepatic Constructs by 3D Bioprinting of a Cellâ€Laden Thermogel: An Effective Tool to Assess Drugâ€Induced Hepatotoxic Response. Advanced Healthcare Materials, 2020, 9, e2001163.	3.9	41
31	Comparative Study of Different Techniques for the Sterilization of Poly-L-lactide Electrospun Microfibers: Effectiveness vs. Material Degradation. International Journal of Artificial Organs, 2010, 33, 76-85.	0.7	40
32	Effect of filler surface functionalization on the performance of Nafion/Titanium oxide composite membranes. Electrochimica Acta, 2014, 147, 418-425.	2.6	39
33	Surface functionalization of polyurethane scaffolds mimicking the myocardial microenvironment to support cardiac primitive cells. PLoS ONE, 2018, 13, e0199896.	1.1	38
34	Electrospun Nanomaterials Implementing Antibacterial Inorganic Nanophases. Applied Sciences (Switzerland), 2018, 8, 1643.	1.3	37
35	Combination of biochemical and mechanical cues for tendon tissue engineering. Journal of Cellular and Molecular Medicine, 2017, 21, 2711-2719.	1.6	35
36	Electrospun Hydroxyapatite-Functionalized PLLA Scaffold: Potential Applications in Sternal Bone Healing. Annals of Biomedical Engineering, 2011, 39, 1882-1890.	1.3	33

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37	Implantation of a Poly-l-Lactide GCSF-Functionalized Scaffold in a Model of Chronic Myocardial Infarction. Journal of Cardiovascular Translational Research, 2017, 10, 47-65.	1.1	33
38	YAPâ€"TEAD1 control of cytoskeleton dynamics and intracellular tension guides human pluripotent stem cell mesoderm specification. Cell Death and Differentiation, 2021, 28, 1193-1207.	5.0	33
39	Heparin-releasing scaffold for stem cells: a differentiating device for vascular aims. Regenerative Medicine, 2010, 5, 645-657.	0.8	32
40	Electric Field Assisted Microfluidic Platform for Generation of Tailorable Porous Microbeads as Cell Carriers for Tissue Engineering. Advanced Functional Materials, 2018, 28, 1800874.	7.8	32
41	The role of extracellular matrix in age-related conduction disorders: a forgotten player?. Journal of Geriatric Cardiology, 2015, 12, 76-82.	0.2	32
42	Preliminary in Vivo Evaluation of a Hybrid Armored Vascular Graft Combining Electrospinning and Additive Manufacturing Techniques. Drug Target Insights, 2016, 10s1, DTI.S35202.	0.9	31
43	A G-CSF functionalized scaffold for stem cells seeding: a differentiating device for cardiac purposes. Journal of Cellular and Molecular Medicine, 2011, 15, 1096-1108.	1.6	29
44	The fate of large-diameter DacronÂ® vascular grafts in surgical practice: Are we really satisfied?. International Journal of Cardiology, 2013, 168, 5028-5029.	0.8	29
45	Cells and extracellular matrix interplay in cardiac valve disease: because age matters. Basic Research in Cardiology, 2016, 111, 16.	2.5	29
46	Biofabricating murine and human myoâ€substitutes for rapid volumetric muscle loss restoration. EMBO Molecular Medicine, 2021, 13, e12778.	3.3	29
47	Tissue engineering and microRNAs: future perspectives in regenerative medicine. Expert Opinion on Biological Therapy, 2015, 15, 1601-1622.	1.4	25
48	Preoperative Assessment of TERT Promoter Mutation on Thyroid Core Needle Biopsies Supports Diagnosis of Malignancy and Addresses Surgical Strategy. Hormone and Metabolic Research, 2016, 48, 157-162.	0.7	25
49	The effect of post-mastectomy radiation therapy on breast implants: Unveiling biomaterial alterations with potential implications on capsular contracture. Materials Science and Engineering C, 2015, 57, 338-343.	3.8	23
50	Palmitic Acid Affects Intestinal Epithelial Barrier Integrity and Permeability In Vitro. Antioxidants, 2020, 9, 417.	2.2	23
51	Ester coupling of ibuprofen in hydrogel matrix: A facile one-step strategy for controlled anti-inflammatory drug release. European Journal of Pharmaceutics and Biopharmaceutics, 2020, 146, 143-149.	2.0	22
52	Graphene-laden hydrogels: A strategy for thermally triggered drug delivery. Materials Science and Engineering C, 2021, 118, 111353.	3.8	22
53	Electrospinning of hydroxyapatiteâ€"chitosan nanofibers for tissue engineering applications. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 407-414.	0.8	20
54	A primer of statistical methods for correlating parameters and properties of electrospun poly(<scp>l</scp>-lactide) scaffolds for tissue engineering-PART 1: Design of experiments. Journal of Biomedical Materials Research - Part A, 2015, 103, 91-102.	2.1	20

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55	Composite Ormosil/Nafion Membranes as Electrolytes for Direct Methanol Fuel Cells. Journal of the Electrochemical Society, 2007, 154, B1148.	1.3	19
56	A primer to traction force microscopy. Journal of Biological Chemistry, 2022, 298, 101867.	1.6	18
57	Foaming of Filled Polyurethanes for Fabrication of Porous Anode Supports for Intermediate Temperature-Solid Oxide Fuel Cells. Journal of the American Ceramic Society, 2006, 89, 1795-1800.	1.9	17
58	A primer of statistical methods for correlating parameters and properties of electrospun poly(l-lactide) scaffolds for tissue engineering-PART 2: Regression. Journal of Biomedical Materials Research - Part A, 2015, 103, 103-114.	2.1	16
59	Biomimetic engineering of the cardiac tissue through processing, functionalization, and biological characterization of polyester urethanes. Biomedical Materials (Bristol), 2018, 13, 055006.	1.7	16
60	Endothelin-1 drives invadopodia and interaction with mesothelial cells through ILK. Cell Reports, 2021, 34, 108800.	2.9	15
61	Hyaluronic Acidâ€"Polyethyleneimine Nanogels for Controlled Drug Delivery in Cancer Treatment. ACS Applied Nano Materials, 2022, 5, 5544-5557.	2.4	15
62	Functionalization of poly(Îµ-caprolactone) surface with lactose-modified chitosan via alkaline hydrolysis: ToF-SIMS characterization. Biointerphases, 2016, 11, 02A323.	0.6	14
63	The long-term follow-up of large-diameter DacronÂ® vascular grafts in surgical practice: a review. Journal of Cardiovascular Surgery, 2019, 60, 501-513.	0.3	14
64	A G-CSF functionalized PLLA scaffold for wound repair: An in vitro preliminary study. , 2010, 2010, 843-6.		12
65	Electrospinning and microfluidics. , 2018, , 139-155.		12
66	Quercetin and hydroxytyrosol as modulators of hepatic steatosis: A NAFLDâ€onâ€aâ€chip study. Biotechnology and Bioengineering, 2021, 118, 142-152.	1.7	12
67	Nano-encapsulation of hydroxytyrosol into formulated nanogels improves therapeutic effects against hepatic steatosis: An in vitro study. Materials Science and Engineering C, 2021, 124, 112080.	3.8	12
68	Tuning Structural Changes in Glucose Oxidase for Enzyme Fuel Cell Applications. ACS Applied Materials & Interfaces, 2015, 7, 28311-28318.	4.0	11
69	Comparative study of different techniques for the sterilization of poly-L-lactide electrospun microfibers: effectiveness vs. material degradation. International Journal of Artificial Organs, 2010, 33, 76-85.	0.7	11
70	EGFR/ErbB Inhibition Promotes OPC Maturation up to Axon Engagement by Co-Regulating PIP2 and MBP. Cells, 2019, 8, 844.	1.8	10
71	Postbariatric Brachioplasty with Posteromedial Scar: Physical Model, Technical Refinements, and Clinical Outcomes. Plastic and Reconstructive Surgery, 2018, 141, 344-353.	0.7	9
72	Silicone-Textile Composite Resistive Strain Sensors for Human Motion-Related Parameters. Sensors, 2022, 22, 3954.	2.1	9

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73	Computer Simulation of Scaffold Degradation. Journal of Physics: Conference Series, 2010, 252, 012004.	0.3	8
74	Computationally Informed Design of a Multi-Axial Actuated Microfluidic Chip Device. Scientific Reports, 2017, 7, 5489.	1.6	8
75	Electrospun Nanocomposites and Stem Cells in Cardiac Tissue Engineering. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 215-242.	0.7	7
76	Resynthesis of sternal dehiscence with autologous bone graft and autologous platelet gel. Journal of Wound Care, 2012, 21, 74-77.	0.5	7
77	An implantable neural interface with electromagnetic stimulation capabilities. Medical Hypotheses, 2013, 81, 322-327.	0.8	7
78	Designing a 3D printed human derived artificial myo-structure for anal sphincter defects in anorectal malformations and adult secondary damage. Materials Today Communications, 2018, 15, 120-123.	0.9	7
79	Surface decoration of electrospun scaffolds by microcontact printing. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 401-406.	0.8	6
80	Seriate cytology vs molecular analysis of peritoneal washing to improve gastric cancer cells detection. Diagnostic Cytopathology, 2019, 47, 670-674.	0.5	6
81	Dystrophic Muscle Affects Motoneuron Axon Outgrowth and NMJ Assembly. Advanced Materials Technologies, 2022, 7, .	3.0	6
82	A Soft Zwitterionic Hydrogel as Potential Coating on a Polyimide Surface to Reduce Foreign Body Reaction to Intraneural Electrodes. Molecules, 2022, 27, 3126.	1.7	6
83	In Situ Electrostimulation Drives a Regenerative Shift in the Zone of Infarcted Myocardium. Cell Transplantation, 2013, 22, 493-503.	1.2	5
84	Stem cells cardiac differentiation in 3D systems. Frontiers in Bioscience - Scholar, 2011, S3, 901.	0.8	5
85	Energy Harvesting: Electric Field Assisted Microfluidic Platform for Generation of Tailorable Porous Microbeads as Cell Carriers for Tissue Engineering (Adv. Funct. Mater. 20/2018). Advanced Functional Materials, 2018, 28, 1870133.	7.8	4
86	Photocurable Biopolymers for Coaxial Bioprinting. Methods in Molecular Biology, 2021, 2147, 45-54.	0.4	3
87	Smoothened/AMP-Activated Protein Kinase Signaling in Oligodendroglial Cell Maturation. Frontiers in Cellular Neuroscience, 2021, 15, 801704.	1.8	3
88	Catalitic Properties of Ce-TZP Ceramic Foams. Key Engineering Materials, 2004, 264-268, 2219-2222.	0.4	2
89	A biomimetic three-layered compartmented scaffold for vascular tissue engineering. , 2010, 2010, 839-42.		2
90	Computer-aided tissue engineering for bone regeneration. , 2012, , .		2

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91	Morphological and Molecular Assessment in Thyroid Cytology Using Cell-Capturing Scaffolds. Hormone and Metabolic Research, 2020, 52, 803-808.	0.7	2
92	Optimization Approaches for the Design of Additively Manufactured Scaffolds. Computational Methods in Applied Sciences (Springer), 2014, , 113-128.	0.1	2
93	Rational Design of Artificial Cellular Niches for Tissue Engineering. Computational Methods in Applied Sciences (Springer), 2014, , 129-147.	0.1	2
94	Ceramic Foams for SOFC Applications.. ECS Transactions, 2006, 1, 303-311.	0.3	1
95	Editorial: Physico-Chemical Control of Cell Function. Frontiers in Physiology, 2019, 10, 355.	1.3	1
96	Co-Sintering of Dense Electrophoretically Deposited YSZ Films on Porous NiO-YSZ Substrates for SOFC Applications. Materials Research Society Symposia Proceedings, 2004, 835, K3.1.1.	0.1	0
97	Muscle Reconstruction and Regeneration Using Biodegradable Scaffolds. , 2010, , .		0
98	A 3D ECM-Mimicking Device to Assess Stem Cells Differentiation: A Novel Approach to Stemness Evaluation. , 2010, , .		0
99	The Differentiation of Humane Adult Mesenchimal Stem Cells of Bone Marrow (hMSC) into Urothelial Cells on Bio-Engineering Support (Scaffold): Preliminary Experience of Tissue Engineering. Urologia, 2011, 78, 203-205.	0.3	0
100	OC.06.3 DIETARY CONCENTRATIONS OF PALMITIC ACID AFFECT GUT EPITHELIAL INTEGRITY. Digestive and Liver Disease, 2018, 50, e82.	0.4	0
101	Tu1924 - Dietary Concentrations of Palmitic Acid Affect Gut Epithelial Integrity. Gastroenterology, 2018, 154, S-1055.	0.6	0
102	3D Liver Models: Biofabrication of Hepatic Constructs by 3D Bioprinting of a Cellâ€Laden Thermogel: An Effective Tool to Assess Drugâ€Induced Hepatotoxic Response (Adv. Healthcare Mater. 21/2020). Advanced Healthcare Materials, 2020, 9, 2070078.	3.9	0
103	Additive manufacturing of biomaterials. Advances in Chemical Engineering, 2021, , 233-260.	0.5	0
104	Non animal methodologies (NAMs): Research, testing, assessment and applications â€" ecopa Symposium 2019. ALTEX: Alternatives To Animal Experimentation, 2020, 37, 317-320.	0.9	0