Alberto Rainer

List of Publications by Citations

95 papers	3,091 citations	31 h-index	53 g-index
106 ext. papers	3,705 ext. citations	5 avg, IF	5.18 L-index

#	Paper	IF	Citations
95	Current trends in the design of scaffolds for computer-aided tissue engineering. *Acta Biomaterialia*, **2014**, 10, 580-94	10.8	304
94	Microfluidic-enhanced 3D bioprinting of aligned myoblast-laden hydrogels leads to functionally organized myofibers in vitro and in vivo. *Biomaterials*, **2017**, 131, 98-110	15.6	184
93	A multi-cellular 3D bioprinting approach for vascularized heart tissue engineering based on HUVECs and iPSC-derived cardiomyocytes. *Scientific Reports*, **2018**, 8, 13532	4.9	164
92	Combining electrospinning and fused deposition modeling for the fabrication of a hybrid vascular graft. *Biofabrication*, **2010**, 2, 014102	10.5	114
91	Pluronic F127 Hydrogel Characterization and Biofabrication in Cellularized Constructs for Tissue Engineering Applications. *Procedia CIRP*, **2016**, 49, 125-132	1.8	114
90	Microfluidic Organ/Body-on-a-Chip Devices at the Convergence of Biology and Microengineering. *Sensors*, **2015**, 15, 31142-70	3.8	99
89	Investigating Nonalcoholic Fatty Liver Disease in a Liver-on-a-Chip Microfluidic Device. *PLoS ONE*, **2016**, 11, e0159729	3.7	98
88	Combined additive manufacturing approaches in tissue engineering. *Acta Biomaterialia*, **2015**, 24, 1-11	10.8	96
87	Poly-L-lactic acid/hydroxyapatite electrospun nanocomposites induce chondrogenic differentiation of human MSC. *Annals of Biomedical Engineering*, **2009**, 37, 1376-89	4.7	96
86	Classification of M1/M2-polarized human macrophages by label-free hyperspectral reflectance confocal microscopy and multivariate analysis. *Scientific Reports*, **2017**, 7, 8965	4.9	93
85	Electrospinning of PCL/PVP blends for tissue engineering scaffolds. *Journal of Materials Science: Materials in Medicine*, **2013**, 24, 1425-42	4.5	89
84	Polyurethane-based scaffolds for myocardial tissue engineering. *Interface Focus*, **2014**, 4, 20130045	3.9	80
83	Fabrication of bioactive glass-ceramic foams mimicking human bone portions for regenerative medicine. *Acta Biomaterialia*, **2008**, 4, 362-9	10.8	68
82	Naturally derived proteins and glycosaminoglycan scaffolds for tissue engineering applications. *Materials Science and Engineering C*, **2017**, 78, 1277-1299	8.3	59
81	Engineering muscle cell alignment through 3D bioprinting. *Journal of Biomedical Materials Research - Part A*, **2017**, 105, 2582-2588	5.4	58
80	Electrospun scaffolds for bone tissue engineering. *Musculoskeletal Surgery*, **2011**, 95, 69-80	2.4	57
79	Correlation between porous texture and cell seeding efficiency of gas foaming and microfluidic foaming scaffolds. *Materials Science and Engineering C*, **2016**, 62, 668-77	8.3	56

78	Characterization of age-related changes of tendon stem cells from adult human tendons. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2014**, 22, 2856-66	5.5	55
77	Bioactive electrospun scaffold for annulus fibrosus repair and regeneration. *European Spine Journal* , **2012**, 21 Suppl 1, S20-6	2.7	55
76	Graded porous polyurethane foam: a potential scaffold for oro-maxillary bone regeneration. *Materials Science and Engineering C*, **2015**, 51, 329-35	8.3	53
75	Biological response of human mesenchymal stromal cells to titanium grade 4 implants coated with PCL/ZrO hybrid materials synthesized by sol-gel route: in vitro evaluation. *Materials Science and Engineering C*, **2014**, 45, 395-401	8.3	50
74	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, 966-75	4.7	48
73	Drug releasing systems in cardiovascular tissue engineering. *Journal of Cellular and Molecular Medicine*, **2009**, 13, 422-39	5.6	48
72	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, 334-42	3.3	46
71	Engineering Muscle Networks in 3D Gelatin Methacryloyl Hydrogels: Influence of Mechanical Stiffness and Geometrical Confinement. *Frontiers in Bioengineering and Biotechnology*, **2017**, 5, 22	5.8	42
70	Combining Type I Interferons and 5-Aza-2SDeoxycitidine to Improve Anti-Tumor Response against Melanoma. *Journal of Investigative Dermatology*, **2017**, 137, 159-169	4.3	41
69	Biomechanical Characterization at the Cell Scale: Present and Prospects. *Frontiers in Physiology*, **2018**, 9, 1449	4.6	41
68	Scaffold-based delivery of a clinically relevant anti-angiogenic drug promotes the formation of in vivo stable cartilage. *Tissue Engineering - Part A*, **2013**, 19, 1960-71	3.9	36
67	Effect of filler surface functionalization on the performance of Nafion/Titanium oxide composite membranes. *Electrochimica Acta*, **2014**, 147, 418-425	6.7	35
66	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	1.9	32
65	Electrospun hydroxyapatite-functionalized PLLA scaffold: potential applications in sternal bone healing. *Annals of Biomedical Engineering*, **2011**, 39, 1882-90	4.7	31
64	Combination of biochemical and mechanical cues for tendon tissue engineering. *Journal of Cellular and Molecular Medicine*, **2017**, 21, 2711-2719	5.6	28
63	Surface functionalization of polyurethane scaffolds mimicking the myocardial microenvironment to support cardiac primitive cells. *PLoS ONE*, **2018**, 13, e0199896	3.7	26
62	Heparin-releasing scaffold for stem cells: a differentiating device for vascular aims. *Regenerative Medicine*, **2010**, 5, 645-57	2.5	26
61	The role of extracellular matrix in age-related conduction disorders: a forgotten player?. *Journal of Geriatric Cardiology*, **2015**, 12, 76-82	1.7	26

60	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, 157-62	3.1	25
59	A G-CSF functionalized scaffold for stem cells seeding: a differentiating device for cardiac purposes. *Journal of Cellular and Molecular Medicine*, **2011**, 15, 1096-108	5.6	25
58	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	3.3	23
57	Cells and extracellular matrix interplay in cardiac valve disease: because age matters. *Basic Research in Cardiology*, **2016**, 111, 16	11.8	23
56	The fate of large-diameter Dacron vascular grafts in surgical practice: are we really satisfied?. *International Journal of Cardiology*, **2013**, 168, 5028-9	3.2	22
55	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, 338-43	8.3	21
54	Biofabrication of Hepatic Constructs by 3D Bioprinting of a Cell-Laden Thermogel: An Effective Tool to Assess Drug-Induced Hepatotoxic Response. *Advanced Healthcare Materials*, **2020**, 9, e2001163	10.1	21
53	Tissue engineering and microRNAs: future perspectives in regenerative medicine. *Expert Opinion on Biological Therapy*, **2015**, 15, 1601-22	5.4	19
52	Electric Field Assisted Microfluidic Platform for Generation of Tailorable Porous Microbeads as Cell Carriers for Tissue Engineering. *Advanced Functional Materials*, **2018**, 28, 1800874	15.6	19
51	Electrospinning of hydroxyapatite chitosan nanofibers for tissue engineering applications. *Asia-Pacific Journal of Chemical Engineering*, **2014**, 9, 407-414	1.3	19
50	Preliminary In Vivo Evaluation of a Hybrid Armored Vascular Graft Combining Electrospinning and Additive Manufacturing Techniques. *Drug Target Insights*, **2016**, 10, 1-7	3.4	18
49	Composite Ormosil/Nafion Membranes as Electrolytes for Direct Methanol Fuel Cells. *Journal of the Electrochemical Society*, **2007**, 154, B1148	3.9	18
48	Multiscale Analysis of Extracellular Matrix Remodeling in the Failing Heart. *Circulation Research*, **2021**, 128, 24-38	15.7	17
47	A primer of statistical methods for correlating parameters and properties of electrospun poly(L-lactide) scaffolds for tissue engineering--PART 1: design of experiments. *Journal of Biomedical Materials Research - Part A*, **2015**, 103, 91-102	5.4	16
46	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	3.8	16
45	Electrospun Nanomaterials Implementing Antibacterial Inorganic Nanophases. *Applied Sciences (Switzerland)*, **2018**, 8, 1643	2.6	16
44	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, 103-14	5.4	14
43	Biomimetic engineering of the cardiac tissue through processing, functionalization, and biological characterization of polyester urethanes. *Biomedical Materials (Bristol)*, **2018**, 13, 055006	3.5	12

42	Tuning Structural Changes in Glucose Oxidase for Enzyme Fuel Cell Applications. *ACS Applied Materials & Interfaces*, **2015**, 7, 28311-8	9.5	11
41	Functionalization of poly(ε-caprolactone) surface with lactose-modified chitosan via alkaline hydrolysis: ToF-SIMS characterization. *Biointerphases*, **2016**, 11, 02A323	1.8	11
40	A G-CSF functionalized PLLA scaffold for wound repair: An in vitro preliminary study. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 843-6	0.9	9
39	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	5.7	9
38	Biofabricating murine and human myo-substitutes for rapid volumetric muscle loss restoration. *EMBO Molecular Medicine*, **2021**, 13, e12778	12	9
37	Electrospinning and microfluidics **2018**, 139-155		8
36	The long-term follow-up of large-diameter Dacron® vascular grafts in surgical practice: a review. *Journal of Cardiovascular Surgery*, **2019**, 60, 501-513	0.7	8
35	Graphene-laden hydrogels: A strategy for thermally triggered drug delivery. *Materials Science and Engineering C*, **2021**, 118, 111353	8.3	8
34	YAP-TEAD1 control of cytoskeleton dynamics and intracellular tension guides human pluripotent stem cell mesoderm specification. *Cell Death and Differentiation*, **2021**, 28, 1193-1207	12.7	8
33	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	1.9	8
32	An implantable neural interface with electromagnetic stimulation capabilities. *Medical Hypotheses*, **2013**, 81, 322-7	3.8	7
31	Computer Simulation of Scaffold Degradation. *Journal of Physics: Conference Series*, **2010**, 252, 012004	0.3	7
30	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	8.3	7
29	Palmitic Acid Affects Intestinal Epithelial Barrier Integrity and Permeability In Vitro. *Antioxidants*, **2020**, 9,	7.1	6
28	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	2.5	6
27	Postbariatric Brachioplasty with Posteromedial Scar: Physical Model, Technical Refinements, and Clinical Outcomes. *Plastic and Reconstructive Surgery*, **2018**, 141, 344-353	2.7	6
26	EGFR/ErbB Inhibition Promotes OPC Maturation up to Axon Engagement by Co-Regulating PIP2 and MBP. *Cells*, **2019**, 8,	7.9	6
25	Computationally Informed Design of a Multi-Axial Actuated Microfluidic Chip Device. *Scientific Reports*, **2017**, 7, 5489	4.9	6

24	Surface decoration of electrospun scaffolds by microcontact printing. *Asia-Pacific Journal of Chemical Engineering*, **2014**, 9, 401-406	1.3	6
23	Electrospun Nanocomposites and Stem Cells in Cardiac Tissue Engineering. *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, **2011**, 215-242	0.5	6
22	Quercetin and hydroxytyrosol as modulators of hepatic steatosis: A NAFLD-on-a-chip study. *Biotechnology and Bioengineering*, **2021**, 118, 142-152	4.9	6
21	In situ electrostimulation drives a regenerative shift in the zone of infarcted myocardium. *Cell Transplantation*, **2013**, 22, 493-503	4	5
20	Stem cells cardiac differentiation in 3D systems. *Frontiers in Bioscience - Scholar*, **2011**, 3, 901-18	2.4	5
19	Endothelin-1 drives invadopodia and interaction with mesothelial cells through ILK. *Cell Reports*, **2021**, 34, 108800	10.6	5
18	Resynthesis of sternal dehiscence with autologous bone graft and autologous platelet gel. *Journal of Wound Care*, **2012**, 21, 74, 76-7	2.2	3
17	Seriate cytology vs molecular analysis of peritoneal washing to improve gastric cancer cells detection. *Diagnostic Cytopathology*, **2019**, 47, 670-674	1.4	3
16	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	15.6	3
15	Computer-aided tissue engineering for bone regeneration **2012**,		2
14	Catalitic Properties of Ce-TZP Ceramic Foams. *Key Engineering Materials*, **2004**, 264-268, 2219-2222	0.4	2
13	Photocurable Biopolymers for Coaxial Bioprinting. *Methods in Molecular Biology*, **2021**, 2147, 45-54	1.4	2
12	Optimization Approaches for the Design of Additively Manufactured Scaffolds. *Computational Methods in Applied Sciences (Springer)*, **2014**, 113-128	0.4	2
11	Rational Design of Artificial Cellular Niches for Tissue Engineering. *Computational Methods in Applied Sciences (Springer)*, **2014**, 129-147	0.4	2
10	A biomimetic three-layered compartmented scaffold for vascular tissue engineering. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 839-42	0.9	1
9	Morphological and Molecular Assessment in Thyroid Cytology Using Cell-Capturing Scaffolds. *Hormone and Metabolic Research*, **2020**, 52,	3.1	1
8	A primer to Traction Force Microscopy.. *Journal of Biological Chemistry*, **2022**, 101867	5.4	1
7	A Soft Zwitterionic Hydrogel as Potential Coating on a Polyimide Surface to Reduce Foreign Body Reaction to Intraneural Electrodes. *Molecules*, **2022**, 27, 3126	4.8	1

6	Smoothened/AMP-Activated Protein Kinase Signaling in Oligodendroglial Cell Maturation.. *Frontiers in Cellular Neuroscience*, **2021**, 15, 801704	6.1	0
5	Silicone-Textile Composite Resistive Strain Sensors for Human Motion-Related Parameters. *Sensors*, **2022**, 22, 3954	3.8	0
4	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, 203-5	1.2	
3	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		
2	Additive manufacturing of biomaterials. *Advances in Chemical Engineering*, **2021**, 233-260	0.6	
1	Dystrophic Muscle Affects Motoneuron Axon Outgrowth and NMJ Assembly. *Advanced Materials Technologies*,2101216	6.8	