Hermann Seitz

List of Publications by Year
in descending order

125 papers	4,544 citations	147566 31 h-index	106150 65 g-index
129 all docs	129 docs citations	129 times ranked	5936 citing authors

#	Article	IF	Citations
1	Morphological and mechanical characterisation of three-dimensional gyroid structures fabricated by electron beam melting for the use as a porous biomaterial. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104882.	1.5	21
2	Interactive effects of ZnO nanoparticles and temperature on molecular and cellular stress responses of the blue mussel Mytilus edulis. Science of the Total Environment, 2022, 818, 151785.	3.9	11
3	Machine learning for the intelligent analysis of 3D printing conditions using environmental sensor data to support quality assurance. Additive Manufacturing, 2022, 50, 102535.	1.7	8
4	Thermal, Mechanical and Biocompatibility Analyses of Photochemically Polymerized PEGDA250 for Photopolymerization-Based Manufacturing Processes. Pharmaceutics, 2022, 14, 628.	2.0	10
5	Optimization of composite extrusion modeling process parameters for 3D printing of low-alloy steel AISI 8740 using metal injection moulding feedstock. Materials and Design, 2022, 219, 110814.	3.3	16
6	3D printed gelatin/decellularized bone composite scaffolds for bone tissue engineering: Fabrication, characterization and cytocompatibility study. Materials Today Bio, 2022, 15, 100309.	2.6	16
7	Tunable Pseudo-Piezoelectric Effect in Doped Calcium Titanate for Bone Tissue Engineering. Materials, 2021, 14, 1495.	1.3	3
8	Electrically Conductive and 3Dâ€Printable Oxidized Alginateâ€Gelatin Polypyrrole:PSS Hydrogels for Tissue Engineering. Advanced Healthcare Materials, 2021, 10, e2001876.	3.9	70
9	Influence of structure-determining parameters on the mechanical properties and damage behavior of electron beam melted lattice structures under quasi-static and fatigue compression loading. Materials Letters, 2021, 289, 129380.	1.3	7
10	Propagationâ€Based Phase Contrast Computed Tomography as a Suitable Tool for the Characterization of Spatial 3D Cell Distribution in Biomaterials. Advanced Engineering Materials, 2021, 23, 2001188.	1.6	3
11	A machine learning method for defect detection and visualization in selective laser sintering based on convolutional neural networks. Additive Manufacturing, 2021, 41, 101965.	1.7	50
12	Digital and Decentralized Management of Patient Data in Healthcare Using Blockchain Implementations. Frontiers in Blockchain, 2021, 4, .	1.6	9
13	Heat accumulation during femtosecond laser treatment at high repetition rate â€“ A morphological, chemical and crystallographic characterization of self-organized structures on Ti6Al4V. Applied Surface Science, 2021, 570, 151115.	3.1	17
14	Establishment of a New Device for Electrical Stimulation of Non-Degenerative Cartilage Cells In Vitro. International Journal of Molecular Sciences, 2021, 22, 394.	1.8	9
15	In vitro release of chlorhexidine from UV-cured PEGDA drug delivery scaffolds. Current Directions in Biomedical Engineering, 2021, 7, 519-522.	0.2	0
16	Micro injection molding of individualised implants using 3D printed molds manufactured via digital light processing. Current Directions in Biomedical Engineering, 2021, 7, 399-402.	0.2	2
17	Customised micro-electrode array (MEA) test setup featuring a silicone-casted overlay with two chambers for separated cell seedings. Current Directions in Biomedical Engineering, 2021, 7, 311-314.	0.2	0
18	Biomaterialâ€Induction of a Transplantable Angiosome. Advanced Functional Materials, 2020, 30, 1905115.	7.8	6

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19	Complex mechanical behavior of human articular cartilage and hydrogels for cartilage repair. Acta Biomaterialia, 2020, 118, 113-128.	4.1	36
20	A New Method for Modeling the Cyclic Structure of the Surface Microrelief of Titanium Alloy Ti6Al4V After Processing with Femtosecond Pulses. Materials, 2020, 13, 4983.	1.3	4
21	Effect of Chemical Solvents on the Wetting Behavior Over Time of Femtosecond Laser Structured Ti6Al4V Surfaces. Nanomaterials, 2020, 10, 1241.	1.9	30
22	Polymer-Bioactive Glass Composite Filaments for 3D Scaffold Manufacturing by Fused Deposition Modeling: Fabrication and Characterization. Frontiers in Bioengineering and Biotechnology, 2020, 8, 552.	2.0	78
23	Ring-Shaped Surface Microstructures for Improved Lubrication Performance of Joint Prostheses. Lubricants, 2020, 8, 45.	1.2	4
24	Bone regeneration of minipig mandibular defect by adipose derived mesenchymal stem cells seeded tri-calcium phosphate- poly(D,L-lactide-co-glycolide) scaffolds. Scientific Reports, 2020, 10, 2062.	1.6	59
25	Effect of Laser Pulse Overlap and Scanning Line Overlap on Femtosecond Laser-Structured Ti6Al4V Surfaces. Materials, 2020, 13, 969.	1.3	44
26	Beamless Metal Additive Manufacturing. Materials, 2020, 13, 922.	1.3	51
27	3D Printing of Piezoelectric Barium Titanate-Hydroxyapatite Scaffolds with Interconnected Porosity for Bone Tissue Engineering. Materials, 2020, 13, 1773.	1.3	77
28	PEGDA drug delivery scaffolds prepared with UV curing process. Current Directions in Biomedical Engineering, 2020, 6, 193-195.	0.2	3
29	DLP 3D printing of Dexamethasoneincorporated PEGDA-based photopolymers: compressive properties and drug release. Current Directions in Biomedical Engineering, 2020, 6, 406-409.	0.2	5
30	Plasma printing - direct local patterning with functional polymer coatings for biosensing and microfluidics applications. Microelectronic Engineering, 2020, 233, 111431.	1.1	2
31	Initial study on removing cellular residues from hydrostatic high-pressure treated allogeneic tissue using ultrasound. Current Directions in Biomedical Engineering, 2020, 6, 176-179.	0.2	0
32	Microstructured ceramic and metallic implant surfaces and their impact on the viscosity of a synovia fluid substitute. Current Directions in Biomedical Engineering, 2020, 6, 620-623.	0.2	0
33	Printing of vessels for small functional tissues â€“ a preliminary study. Current Directions in Biomedical Engineering, 2020, 6, 469-472.	0.2	2
34	Femtosecond Laser Nano/Micro Textured Ti6Al4V Surfacesâ€”Effect on Wetting and MG-63 Cell Adhesion. Materials, 2019, 12, 2210.	1.3	33
35	Micro-Macro Relationship between Microstructure, Porosity, Mechanical Properties, and Build Mode Parameters of a Selective-Electron-Beam-Melted Ti-6Al-4V Alloy. Metals, 2019, 9, 786.	1.0	14
36	Preliminary Study on 3D printing of PEGDA Hydrogels for Frontal Sinus Implants using Digital Light Processing (DLP). Current Directions in Biomedical Engineering, 2019, 5, 249-252.	0.2	20

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37	Thermomechanical properties of PEGDA in combination with different photo-curable comonomers. Current Directions in Biomedical Engineering, 2019, 5, 319-321.	0.2	1
38	Time-Dependent Anisotropic Wetting Behavior of Deterministic Structures of Different Strut Widths on Ti6Al4V. Metals, 2019, 9, 938.	1.0	9
39	Modification of joint prosthesis surfaces by ultrashort pulse laser treatment for improved joint lubrication. Current Directions in Biomedical Engineering, 2019, 5, 57-60.	0.2	4
40	Numerical simulation of the electric field distribution in an electrical stimulation device for scaffolds settled with cartilaginous cells. , 2019, 2019, 6481-6484.		1
41	A Novel Hybrid Additive Manufacturing Process for Drug Delivery Systems with Locally Incorporated Drug Depots. Pharmaceutics, 2019, 11, 661.	2.0	17
42	Thermomechanical properties of PEGDA and its co-polymers. Current Directions in Biomedical Engineering, 2018, 4, 669-672.	0.2	4
43	Novel 3D printing concept for the fabrication of time-controlled drug delivery systems. Current Directions in Biomedical Engineering, 2018, 4, 141-144.	0.2	6
44	Inkjet printing for localized coating and functionalization of medical devices. Current Directions in Biomedical Engineering, 2018, 4, 233-236.	0.2	0
45	Electrolytic Plasma Polishing of Pipe Inner Surfaces. Metals, 2018, 8, 12.	1.0	31
46	Silicone-Based Molding Technique for Optical Flow Analysis in Transparent Models of Fluidic Components. Applied Sciences (Switzerland), 2018, 8, 512.	1.3	0
47	Effects of Build Orientation on Surface Morphology and Bone Cell Activity of Additively Manufactured Ti6Al4V Specimens. Materials, 2018, 11, 915.	1.3	35
48	Mechanical Properties of Stainless-Steel Structures Fabricated by Composite Extrusion Modelling. Metals, 2018, 8, 84.	1.0	17
49	Influence of the Velocity and the Number of Polishing Passages on the Roughness of Electrolytic Plasma Polished Pipe Inner Surfaces. Metals, 2018, 8, 330.	1.0	11
50	Endocultivation: continuous application of rhBMP-2 via mini-osmotic pumps to induce bone formation at extraskeletal sites. International Journal of Oral and Maxillofacial Surgery, 2017, 46, 655-661.	0.7	5
51	Bioprinting of three dimensional tumor models: a preliminary study using a low cost 3D printer. Current Directions in Biomedical Engineering, 2017, 3, 135-138.	0.2	9
52	Mechanical and biological effects of infiltration with biopolymers on 3D printed tricalciumphosphate scaffolds. Dental Materials Journal, 2017, 36, 553-559.	0.8	4
53	Functional Laterality of Task-Evoked Activation in Sensorimotor Cortex of Preterm Infants: An Optimized 3 T fMRI Study Employing a Customized Neonatal Head Coil. PLoS ONE, 2017, 12, e0169392.	1.1	10
54	Diabetes and Breast Cancer Subtypes. PLoS ONE, 2017, 12, e0170084.	1.1	47

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55	Comparison of Single Ti6Al4V Struts Made Using Selective Laser Melting and Electron Beam Melting Subject to Part Orientation. Metals, 2017, 7, 91.	1.0	64
56	Numerical flow simulation methods and additive manufacturing methods for the development of a flow optimised design of a novel point-of-care diagnostic device. Current Directions in Biomedical Engineering, 2017, 3, 619-622.	0.2	0
57	Extrusion Based Additive Manufacturing of Metal Parts. Journal of Mechanics Engineering and Automation, 2017, 7, .	0.0	10
58	Flow optimised design of a novel point-of-care diagnostic device for the detection of disease specific biomarkers. Current Directions in Biomedical Engineering, 2016, 2, 685-688.	0.2	1
59	Influence of different test gases in a non-destructive 100% quality control system for medical devices. Current Directions in Biomedical Engineering, 2016, 2, 587-591.	0.2	0
60	Adjusting inkjet printhead parameters to deposit drugs into micro-sized reservoirs. Current Directions in Biomedical Engineering, 2016, 2, 387-390.	0.2	4
61	An Investigation of Sintering Parameters on Titanium Powder for Electron Beam Melting Processing Optimization. Materials, 2016, 9, 974.	1.3	16
62	Experimental studies on 3D printing of barium titanate ceramics for medical applications. Current Directions in Biomedical Engineering, 2016, 2, 95-99.	0.2	21
63	Printed pressure housings for underwater applications. Ocean Engineering, 2016, 113, 57-63.	1.9	24
64	Composites of amorphous and nanocrystalline Zrâ€“Cuâ€“Alâ€“Nb bulk materials synthesized by spark plasma sintering. Journal of Alloys and Compounds, 2016, 667, 109-114.	2.8	16
65	Continuous cellularization of calcium phosphate hybrid scaffolds induced by plasma polymer activation. Materials Science and Engineering C, 2016, 59, 514-523.	3.8	20
66	Additive Fertigung mit Metallspritzguss-Granulaten / Additive manufacturing with metal injection molding granules. , 2016, , 262-269.		1
67	Materials and scaffolds in medical 3D printing and bioprinting in the context of bone regeneration. International Journal of Computerized Dentistry, 2016, 19, 301-321.	0.2	21
68	Inkjet printing of viable human dental follicle stem cells. Current Directions in Biomedical Engineering, 2015, 1, 112-115.	0.2	3
69	Numerical and experimental flow analysis in centifluidic systems for rapid allergy screening tests. Current Directions in Biomedical Engineering, 2015, 1, 437-441.	0.2	0
70	Numerical simulation of low-pulsation gerotor pumps for use in the pharmaceutical industry and in biomedicine. Current Directions in Biomedical Engineering, 2015, 1, 433-436.	0.2	3
71	Tomographic particle image velocimetry of a water-jet for low volume harvesting of fat tissue for regenerative medicine. Current Directions in Biomedical Engineering, 2015, 1, 345-348.	0.2	1
72	Analysis of the release kinetics of surface-bound proteins via laser-induced fluorescence. Current Directions in Biomedical Engineering, 2015, 1, 340-344.	0.2	0

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73	Impact of Particle Size of Ceramic Granule Blends on Mechanical Strength and Porosity of 3D Printed Scaffolds. Materials, 2015, 8, 4720-4732.	1.3	33
74	Microstructured zirconia surfaces modulate osteogenic marker genes in human primary osteoblasts. Journal of Materials Science: Materials in Medicine, 2015, 26, 5350.	1.7	28
75	Endocultivation: Histomorphological effects of repetitive rhBMP-2 application into prefabricated hydroxyapatite scaffolds at extraskeletal sites. Journal of Cranio-Maxillo-Facial Surgery, 2015, 43, 981-988.	0.7	14
76	A concept for scaffold-based tissue engineering in alveolar cleft osteoplasty. Journal of Cranio-Maxillo-Facial Surgery, 2015, 43, 830-836.	0.7	32
77	A Novel Cell Seeding Chamber for Tissue Engineering and Regenerative Medicine. Processes, 2014, 2, 361-370.	1.3	1
78	A new Micro-Stereolithography-System based on Diode Laser Curing (DLC). International Journal of Precision Engineering and Manufacturing, 2014, 15, 2161-2166.	1.1	11
79	Fabrication of biodegradable, porous scaffolds using a low-cost 3D printer. International Journal of Rapid Manufacturing, 2014, 4, 140.	0.5	4
80	The Effects of Various Flow Velocities on the Sensitivity of an Enzyme-Linked Immunosorbent Assay in a Fluidic Allergy Diagnostic Device. Point of Care, 2014, 13, 35-40.	0.5	3
81	Drug Delivery From Poly(ethylene glycol) Diacrylate Scaffolds Produced by DLC Based Microâ€Stereolithography. Macromolecular Symposia, 2014, 346, 43-47.	0.4	34
82	Cellular Ti6Al4V with carbon nanotube-like structures fabricated by selective electron beam melting. Rapid Prototyping Journal, 2014, 20, 541-550.	1.6	8
83	Influence of grain size and grain-size distribution on workability of granules with 3D printing. International Journal of Advanced Manufacturing Technology, 2014, 70, 135-144.	1.5	36
84	Investigation of powder removal of net-structured titanium parts made from electron beam melting. International Journal of Rapid Manufacturing, 2014, 4, 81.	0.5	17
85	Track M. Biomedizinische Technik, 2014, 59, s910-s1027.	0.9	19
86	Characterization and evaluation of a PMMAâ€based 3D printing process. Rapid Prototyping Journal, 2013, 19, 37-43.	1.6	72
87	Machining of Biocompatible Polymers with Shaped Femtosecond Laser Pulses. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
88	A review on 3D micro-additive manufacturing technologies. International Journal of Advanced Manufacturing Technology, 2013, 67, 1721-1754.	1.5	1,065
89	Infiltration of 3D printed tricalciumphosphate scaffolds with biodegradable polymers and biomolecules for local drug delivery. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	7
90	Simulation of Cell-Laden Flow in a Cell Mixer Using Computational Fluid Dynamics. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0

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91	Machining of Biocompatible Ceramics with Femtosecond Laser Pulses. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	11
92	Biomechanical behavior of bone scaffolds made of additive manufactured tricalciumphosphate and titanium alloy under different loading conditions. Journal of Applied Biomaterials and Functional Materials, 2013, 11, 159-166.	0.7	15
93	On the Development of a Test Setup for a Non-Destructive Quality Control of Centifluidic Medical Devices. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
94	Comparison of Elisa Sensitivity Relating to Manual and Low-Pressure Loading of the Fluidic Test Device. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
95	Improvement of Mechanical Properties of Bone Tissue Engineered Scaffolds through Sintering and Infiltration with Biopolymers. , 2013, , .		2
96	Material Processing with Femtosecond Laser Pulses for Medical Applications. Biomedizinische Technik, 2012, 57, .	0.9	2
97	Cell seeding chamber for bone graft substitutes. Biomedizinische Technik, 2012, 57, .	0.9	1
98	Loading method for discrete drug depots on implant surfaces. Biomedizinische Technik, 2012, 57, .	0.9	2
99	Laser induced surface structure on stainless steel influences cell viability. Biomedizinische Technik, 2012, 57, .	0.9	0
100	Endocultivation: the influence of delayed vs. simultaneous application of BMP-2 onto individually formed hydroxyapatite matrices for heterotopic bone induction. International Journal of Oral and Maxillofacial Surgery, 2012, 41, 1153-1160.	0.7	48
101	Additive Manufacturing of Drug Delivery Systems. Biomedizinische Technik, 2012, 57, .	0.9	16
102	Laser structuring of silica surface improves cell adhesion. Biomedizinische Technik, 2012, 57, .	0.9	1
103	Material processing with shaped femtosecond laser pulses. Biomedizinische Technik, 2012, 57, .	0.9	1
104	In vitro-Osteoclastic Activity Studies on Surfaces of 3D Printed Calcium Phosphate Scaffolds. Journal of Biomaterials Applications, 2011, 26, 359-380.	1.2	128
105	Migration Capacity and Viability of Human Primary Osteoblasts in Synthetic Three-dimensional Bone Scaffolds Made of Tricalciumphosphate. Materials, 2011, 4, 1249-1259.	1.3	9
106	Biocompatibility of individually designed scaffolds with human periosteum for use in tissue engineering. Journal of Materials Science: Materials in Medicine, 2010, 21, 1255-1262.	1.7	25
107	Ceramic scaffolds produced by computerâ€assisted 3D printing and sintering: Characterization and biocompatibility investigations. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 93B, 212-217.	1.6	96
108	Endocultivation: 3D printed customized porous scaffolds for heterotopic bone induction. Oral Oncology, 2009, 45, e181-e188.	0.8	63

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109	Different Calcium Phosphate Granules for 3â€Ð Printing of Bone Tissue Engineering Scaffolds. Advanced Engineering Materials, 2009, 11, B41.	1.6	69
110	Processing and mechanical properties of a new flexible acrylic stereolithographic resin family for engineering and medical device manufacturing. International Journal of Computer Applications in Technology, 2009, 36, 10.	0.3	2
111	Validation of a Femoral Critical Size Defect Model for Orthotopic Evaluation of Bone Healing: A Biomechanical, Veterinary and Trauma Surgical Perspective. Tissue Engineering - Part C: Methods, 2008, 14, 79-88.	1.1	60
112	Nonâ€toxic flexible photopolymers for medical stereolithography technology. Rapid Prototyping Journal, 2007, 13, 38-47.	1.6	44
113	Biomaterials as Scaffold for Bone Tissue Engineering. European Journal of Trauma and Emergency Surgery, 2006, 32, 114-124.	0.3	164
114	Bioceramic Granulates for use in 3D Printing: Process Engineering Aspects. Materialwissenschaft Und Werkstofftechnik, 2006, 37, 533-537.	0.5	41
115	Image-based analysis of the internal microstructure of bone replacement scaffolds fabricated by 3D printing. , 2006, 6318, 64.		2
116	Novel, biocompatible polyether(meth)acrylate-based formulations for stereolithography â€“ A new flexible material class for three-dimensional applications. E-Polymers, 2005, 5, .	1.3	3
117	Three-dimensional printing of porous ceramic scaffolds for bone tissue engineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2005, 74B, 782-788.	1.6	623
118	Biocompatibility of ceramic scaffolds for bone replacement made by 3D printing. Materialwissenschaft Und Werkstofftechnik, 2005, 36, 781-787.	0.5	52
119	Hydroxyapatite scaffolds for bone tissue engineering made by 3D printing. Journal of Materials Science: Materials in Medicine, 2005, 16, 1121-1124.	1.7	418
120	Opportunities and limitations of the computer aided surgical reconstruction after complex facial burn injuries. International Congress Series, 2005, 1281, 504-508.	0.2	1
121	Computer aided surgical reconstruction after complex facial burn injuries â€“ opportunities and limitations. Burns, 2005, 31, 85-91.	1.1	27
122	Modelling of a microfluidic device with piezoelectric actuators. Journal of Micromechanics and Microengineering, 2004, 14, 1140-1147.	1.5	35
123	Rapid Prototyping models for surgical planning with hard and soft tissue representation. International Congress Series, 2004, 1268, 567-572.	0.2	32
124	FAST GENERATION OF STEREOLITHOGRAPHIC MODELS. Biomedizinische Technik, 2002, 47, 83-85.	0.9	3
125	Osteoblast Behavior <i>In Vitro</i> in Porous Calcium Phosphate Composite Scaffolds, Surface Activated with a Cell Adhesive Plasma Polymer Layer. Materials Science Forum, 0, 706-709, 566-571.	0.3	9