Sandra Hofmann

List of Publications by Citations

74 papers	5,685 citations	34 h-index	75 g-index
88 ext. papers	6,507 ext. citations	6 avg, IF	5.56 L-index

#	Paper	IF	Citations
74	The inflammatory responses to silk films in vitro and in vivo. *Biomaterials*, **2005**, 26, 147-55	15.6	636
73	Silk fibroin as biomaterial for bone tissue engineering. *Acta Biomaterialia*, **2016**, 31, 1-16	10.8	452
72	Silk implants for the healing of critical size bone defects. *Bone*, **2005**, 37, 688-98	4.7	371
71	Structural and material approaches to bone tissue engineering in powder-based three-dimensional printing. *Acta Biomaterialia*, **2011**, 7, 907-20	10.8	350
70	Silk fibroin as an organic polymer for controlled drug delivery. *Journal of Controlled Release*, **2006**, 111, 219-27	11.7	293
69	Engineering bone-like tissue in vitro using human bone marrow stem cells and silk scaffolds. *Journal of Biomedical Materials Research Part B*, **2004**, 71, 25-34		277
68	Control of in vitro tissue-engineered bone-like structures using human mesenchymal stem cells and porous silk scaffolds. *Biomaterials*, **2007**, 28, 1152-62	15.6	270
67	Engineering cartilage-like tissue using human mesenchymal stem cells and silk protein scaffolds. *Biotechnology and Bioengineering*, **2004**, 88, 379-91	4.9	262
66	Bone morphogenetic protein-2 decorated silk fibroin films induce osteogenic differentiation of human bone marrow stromal cells. *Journal of Biomedical Materials Research Part B*, **2004**, 71, 528-37		258
65	Tunable hydrogel composite with two-step processing in combination with innovative hardware upgrade for cell-based three-dimensional bioprinting. *Acta Biomaterialia*, **2014**, 10, 630-40	10.8	242
64	Silk based biomaterials to heal critical sized femur defects. *Bone*, **2006**, 39, 922-31	4.7	190
63	Controlled Positioning of Cells in Biomaterials-Approaches Towards 3D Tissue Printing. *Journal of Functional Biomaterials*, **2011**, 2, 119-54	4.8	163
62	Cartilage-like tissue engineering using silk scaffolds and mesenchymal stem cells. *Tissue Engineering*, **2006**, 12, 2729-38		159
61	Osteogenesis by human mesenchymal stem cells cultured on silk biomaterials: comparison of adenovirus mediated gene transfer and protein delivery of BMP-2. *Biomaterials*, **2006**, 27, 4993-5002	15.6	157
60	BMP-silk composite matrices heal critically sized femoral defects. *Bone*, **2007**, 41, 247-55	4.7	132
59	Effect of scaffold design on bone morphology in vitro. *Tissue Engineering*, **2006**, 12, 3417-29		117
58	Injectable and porous PLGA microspheres that form highly porous scaffolds at body temperature. *Acta Biomaterialia*, **2014**, 10, 5090-5098	10.8	77

(2015-2012)

57	Chondrocyte redifferentiation in 3D: the effect of adhesion site density and substrate elasticity. *Journal of Biomedical Materials Research - Part A*, **2012**, 100, 38-47	5.4	77
56	New depowdering-friendly designs for three-dimensional printing of calcium phosphate bone substitutes. *Acta Biomaterialia*, **2013**, 9, 9149-58	10.8	74
55	Clinical Applications of S53P4 Bioactive Glass in Bone Healing and Osteomyelitic Treatment: A Literature Review. *BioMed Research International*, **2015**, 2015, 684826	3	66
54	A surprisingly poor correlation between in vitro and in vivo testing of biomaterials for bone regeneration: results of a multicentre analysis. *European Cells and Materials*, **2016**, 31, 312-22	4.3	66
53	Two-layer membranes of calcium phosphate/collagen/PLGA nanofibres: in vitro biomineralisation and osteogenic differentiation of human mesenchymal stem cells. *Nanoscale*, **2011**, 3, 401-9	7.7	59
52	Vascularization mediated by mesenchymal stem cells from bone marrow and adipose tissue: a comparison. *Cell Regeneration*, **2015**, 4, 8	2.5	53
51	Therapeutic potential of adipose-derived stromal cells in age-related osteoporosis. *Biomaterials*, **2014**, 35, 7326-35	15.6	48
50	Effect of grain size and microporosity on the in vivo behaviour of βtricalcium phosphate scaffolds. *European Cells and Materials*, **2014**, 28, 299-319	4.3	47
49	Remodeling of tissue-engineered bone structures in vivo. *European Journal of Pharmaceutics and Biopharmaceutics*, **2013**, 85, 119-29	5.7	46
48	Effect of sterilization on structural and material properties of 3-D silk fibroin scaffolds. *Acta Biomaterialia*, **2014**, 10, 308-17	10.8	46
47	3D Bioprinting of complex channels-Effects of material, orientation, geometry, and cell embedding. *Journal of Biomedical Materials Research - Part A*, **2015**, 103, 2558-70	5.4	45
46	Non-invasive time-lapsed monitoring and quantification of engineered bone-like tissue. *Annals of Biomedical Engineering*, **2007**, 35, 1657-67	4.7	43
45	Micro-computed tomography based computational fluid dynamics for the determination of shear stresses in scaffolds within a perfusion bioreactor. *Annals of Biomedical Engineering*, **2014**, 42, 1085-94	4.7	37
44	Effect of fetal bovine serum on mineralization in silk fibroin scaffolds. *Acta Biomaterialia*, **2015**, 13, 277-85	10.8	37
43	Flow rates in perfusion bioreactors to maximise mineralisation in bone tissue engineering in vitro. *Journal of Biomechanics*, **2018**, 79, 232-237	2.9	34
42	Influence of the mechanical environment on the engineering of mineralised tissues using human dental pulp stem cells and silk fibroin scaffolds. *PLoS ONE*, **2014**, 9, e111010	3.7	34
41	Flow velocity-driven differentiation of human mesenchymal stromal cells in silk fibroin scaffolds: A combined experimental and computational approach. *PLoS ONE*, **2017**, 12, e0180781	3.7	34
40	The evolution of simulation techniques for dynamic bone tissue engineering in bioreactors. *Journal of Tissue Engineering and Regenerative Medicine*, **2015**, 9, 903-17	4.4	33

39	Tumor necrosis factor stimulates fibroblast growth factor 23 levels in chronic kidney disease and non-renal inflammation. *Kidney International*, **2019**, 96, 890-905	9.9	32
38	Silk fibroin scaffolds with inverse opal structure for bone tissue engineering. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2017**, 105, 2074-2084	3.5	31
37	The influence of matrix elasticity on chondrocyte behavior in 3D. *Journal of Tissue Engineering and Regenerative Medicine*, **2012**, 6, e31-42	4.4	29
36	Initial cell pre-cultivation can maximize ECM mineralization by human mesenchymal stem cells on silk fibroin scaffolds. *Acta Biomaterialia*, **2011**, 7, 2218-28	10.8	29
35	Impact of Culture Medium on Cellular Interactions in Co-culture Systems. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 911	5.8	22
34	From bone regeneration to three-dimensional in vitro models: tissue engineering of organized bone extracellular matrix. *Current Opinion in Biomedical Engineering*, **2019**, 10, 107-115	4.4	21
33	Pressureless mechanical induction of stem cell differentiation is dose and frequency dependent. *PLoS ONE*, **2013**, 8, e81362	3.7	20
32	Evaluation of longitudinal time-lapsed in vivo micro-CT for monitoring fracture healing in mouse femur defect models. *Scientific Reports*, **2019**, 9, 17445	4.9	20
31	Localisation of mineralised tissue in a complex spinner flask environment correlates with predicted wall shear stress level localisation. *European Cells and Materials*, **2018**, 36, 57-68	4.3	19
30	Multimodal pore formation in calcium phosphate cements. *Journal of Biomedical Materials Research - Part A*, **2018**, 106, 500-509	5.4	16
29	Microvascular Networks From Endothelial Cells and Mesenchymal Stromal Cells From Adipose Tissue and Bone Marrow: A Comparison. *Frontiers in Bioengineering and Biotechnology*, **2018**, 6, 156	5.8	16
28	A multiscale computational fluid dynamics approach to simulate the micro-fluidic environment within a tissue engineering scaffold with highly irregular pore geometry. *Biomechanics and Modeling in Mechanobiology*, **2019**, 18, 1965-1977	3.8	15
27	The association between mineralised tissue formation and the mechanical local in vivo environment: Time-lapsed quantification of a mouse defect healing model. *Scientific Reports*, **2020**, 10, 1100	4.9	14
26	The influence of curvature on three-dimensional mineralized matrix formation under static and perfused conditions: an in vitro bioreactor model. *Journal of the Royal Society Interface*, **2016**, 13,	4.1	14
25	In vitro ceramic scaffold mineralization: comparison between histological and micro-computed tomographical analysis. *Annals of Biomedical Engineering*, **2013**, 41, 2666-75	4.7	13
24	Matrix Vesicles: Role in Bone Mineralization and Potential Use as Therapeutics. *Pharmaceuticals*, **2021**, 14,	5.2	11
23	An Organoid for Woven Bone. *Advanced Functional Materials*, **2021**, 31, 2010524	15.6	10
22	Orbital seeding of mesenchymal stromal cells increases osteogenic differentiation and bone-like tissue formation. *Journal of Orthopaedic Research*, **2020**, 38, 1228-1237	3.8	7

21	Cell Sources for Human In vitro Bone Models. *Current Osteoporosis Reports*, **2021**, 19, 88-100	5.4	7
20	Fluid flow-induced cell stimulation in bone tissue engineering changes due to interstitial tissue formation in vitro. *International Journal for Numerical Methods in Biomedical Engineering*, **2020**, 36, e3342	2.6	5
19	Tissue Engineering of Bone **2006**, 323-373		5
18	Scaffold Pore Geometry Guides Gene Regulation and Bone-like Tissue Formation in Dynamic Cultures. *Tissue Engineering - Part A*, **2021**, 27, 1192-1204	3.9	5
17	Composition dependent mechanical behaviour of S53P4 bioactive glass putty for bone defect grafting. *Journal of the Mechanical Behavior of Biomedical Materials*, **2017**, 69, 301-306	4.1	4
16	Changes in scaffold porosity during bone tissue engineering in perfusion bioreactors considerably affect cellular mechanical stimulation for mineralization. *Bone Reports*, **2020**, 12, 100265	2.6	4
15	Resorption of the calcium phosphate layer on S53P4 bioactive glass by osteoclasts. *Journal of Materials Science: Materials in Medicine*, **2019**, 30, 94	4.5	4
14	Imaging of cellular spread on a three-dimensional scaffold by means of a novel cell-labeling technique for high-resolution computed tomography. *Tissue Engineering - Part C: Methods*, **2012**, 18, 167-73	2.9	4
13	Computational Characterization of The Dish-In-A-Dish, A High Yield Culture Platform for Endothelial Shear Stress Studies on the Orbital Shaker. *Micromachines*, **2020**, 11,	3.3	3
12	Spatio-temporal characterization of fracture healing patterns and assessment of biomaterials by time-lapsed in vivo micro-computed tomography. *Scientific Reports*, **2021**, 11, 8660	4.9	3
11	Assessment of Growth Reduction of Five Clinical Pathogens by Injectable S53P4 Bioactive Glass Material Formulations. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 634	5.8	2
10	Osteoblast-osteoclast co-cultures: A systematic review and map of available literature. *PLoS ONE*, **2021**, 16, e0257724	3.7	2
9	Porous Geometry Guided Micro-mechanical Environment Within Scaffolds for Cell Mechanobiology Study in Bone Tissue Engineering. *Frontiers in Bioengineering and Biotechnology*, **2021**, 9, 736489	5.8	2
8	Alkaline Phosphatase Activity of Serum Affects Osteogenic Differentiation Cultures.. *ACS Omega*, **2022**, 7, 12724-12733	3.9	2
7	Biodegradable Hydrogel Scaffolds Based on 2-Hydroxyethyl Methacrylate, Gelatin, Poly(□amino esters), and Hydroxyapatite.. *Polymers*, **2021**, 14,	4.5	2
6	Cartilage-like Tissue Engineering Using Silk Scaffolds and Mesenchymal Stem Cells. *Tissue Engineering*, **2006**, 060915113954001		1
5	The association between mineralised tissue formation and the mechanical local in vivo environment: Time-lapsed quantification of a mouse defect healing model		1
4	Capturing Essential Physiological Aspects of Interacting Cartilage and Bone Tissue with Osteoarthritis Pathophysiology: A Human Osteochondral Unit-on-a-Chip Model. *Advanced Materials Technologies*,2101310	6.8	1

3	CONTROL OF TISSUE-ENGINEERED BONE-LIKE STRUCTURES ON SILK FIBROIN SCAFFOLDS. *Journal of Biomechanics*, **2008**, 41, S163	2.9
2	Effect of Scaffold Design on Bone Morphologyin Vitro. *Tissue Engineering*, **2006**, 061017080728004	
1	Osteogenic differentiation driven by osteoclasts and macrophages. *Journal of Immunology and Regenerative Medicine*, **2021**, 12, 100044	2.8