

# Sandra Hofmann

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Alkaline Phosphatase Activity of Serum Affects Osteogenic Differentiation Cultures.. <i>ACS Omega</i> , <b>2022</b> , 7, 12724-12733	3.9	2
73	Osteoblast-osteoclast co-cultures: A systematic review and map of available literature. <i>PLoS ONE</i> , <b>2021</b> , 16, e0257724	3.7	2
72	Matrix Vesicles: Role in Bone Mineralization and Potential Use as Therapeutics. <i>Pharmaceuticals</i> , <b>2021</b> , 14,	5.2	11
71	An Organoid for Woven Bone. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2010524	15.6	10
70	Spatio-temporal characterization of fracture healing patterns and assessment of biomaterials by time-lapsed in vivo micro-computed tomography. <i>Scientific Reports</i> , <b>2021</b> , 11, 8660	4.9	3
69	Osteogenic differentiation driven by osteoclasts and macrophages. <i>Journal of Immunology and Regenerative Medicine</i> , <b>2021</b> , 12, 100044	2.8	
68	Cell Sources for Human In vitro Bone Models. <i>Current Osteoporosis Reports</i> , <b>2021</b> , 19, 88-100	5.4	7
67	Porous Geometry Guided Micro-mechanical Environment Within Scaffolds for Cell Mechanobiology Study in Bone Tissue Engineering. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 736489	5.8	2
66	Scaffold Pore Geometry Guides Gene Regulation and Bone-like Tissue Formation in Dynamic Cultures. <i>Tissue Engineering - Part A</i> , <b>2021</b> , 27, 1192-1204	3.9	5
65	Biodegradable Hydrogel Scaffolds Based on 2-Hydroxyethyl Methacrylate, Gelatin, Poly(E amino esters), and Hydroxyapatite.. <i>Polymers</i> , <b>2021</b> , 14,	4.5	2
64	Assessment of Growth Reduction of Five Clinical Pathogens by Injectable S53P4 Bioactive Glass Material Formulations. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 634	5.8	2
63	Computational Characterization of The Dish-In-A-Dish, A High Yield Culture Platform for Endothelial Shear Stress Studies on the Orbital Shaker. <i>Micromachines</i> , <b>2020</b> , 11,	3.3	3
62	The association between mineralised tissue formation and the mechanical local in vivo environment: Time-lapsed quantification of a mouse defect healing model. <i>Scientific Reports</i> , <b>2020</b> , 10, 1100	4.9	14
61	Orbital seeding of mesenchymal stromal cells increases osteogenic differentiation and bone-like tissue formation. <i>Journal of Orthopaedic Research</i> , <b>2020</b> , 38, 1228-1237	3.8	7
60	Changes in scaffold porosity during bone tissue engineering in perfusion bioreactors considerably affect cellular mechanical stimulation for mineralization. <i>Bone Reports</i> , <b>2020</b> , 12, 100265	2.6	4
59	Fluid flow-induced cell stimulation in bone tissue engineering changes due to interstitial tissue formation in vitro. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2020</b> , 36, e3342	2.6	5
58	Impact of Culture Medium on Cellular Interactions in Co-culture Systems. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 911	5.8	22

57	From bone regeneration to three-dimensional in vitro models: tissue engineering of organized bone extracellular matrix. <i>Current Opinion in Biomedical Engineering</i> , <b>2019</b> , 10, 107-115	4.4	21
56	A multiscale computational fluid dynamics approach to simulate the micro-fluidic environment within a tissue engineering scaffold with highly irregular pore geometry. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2019</b> , 18, 1965-1977	3.8	15
55	Tumor necrosis factor stimulates fibroblast growth factor 23 levels in chronic kidney disease and non-renal inflammation. <i>Kidney International</i> , <b>2019</b> , 96, 890-905	9.9	32
54	Resorption of the calcium phosphate layer on S53P4 bioactive glass by osteoclasts. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2019</b> , 30, 94	4.5	4
53	Evaluation of longitudinal time-lapsed in vivo micro-CT for monitoring fracture healing in mouse femur defect models. <i>Scientific Reports</i> , <b>2019</b> , 9, 17445	4.9	20
52	Multimodal pore formation in calcium phosphate cements. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2018</b> , 106, 500-509	5.4	16
51	Flow rates in perfusion bioreactors to maximise mineralisation in bone tissue engineering in vitro. <i>Journal of Biomechanics</i> , <b>2018</b> , 79, 232-237	2.9	34
50	Microvascular Networks From Endothelial Cells and Mesenchymal Stromal Cells From Adipose Tissue and Bone Marrow: A Comparison. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2018</b> , 6, 156	5.8	16
49	Localisation of mineralised tissue in a complex spinner flask environment correlates with predicted wall shear stress level localisation. <i>European Cells and Materials</i> , <b>2018</b> , 36, 57-68	4.3	19
48	Composition dependent mechanical behaviour of S53P4 bioactive glass putty for bone defect grafting. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2017</b> , 69, 301-306	4.1	4
47	Silk fibroin scaffolds with inverse opal structure for bone tissue engineering. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2017</b> , 105, 2074-2084	3.5	31
46	Flow velocity-driven differentiation of human mesenchymal stromal cells in silk fibroin scaffolds: A combined experimental and computational approach. <i>PLoS ONE</i> , <b>2017</b> , 12, e0180781	3.7	34
45	Silk fibroin as biomaterial for bone tissue engineering. <i>Acta Biomaterialia</i> , <b>2016</b> , 31, 1-16	10.8	452
44	The influence of curvature on three-dimensional mineralized matrix formation under static and perfused conditions: an in vitro bioreactor model. <i>Journal of the Royal Society Interface</i> , <b>2016</b> , 13,	4.1	14
43	A surprisingly poor correlation between in vitro and in vivo testing of biomaterials for bone regeneration: results of a multicentre analysis. <i>European Cells and Materials</i> , <b>2016</b> , 31, 312-22	4.3	66
42	3D Bioprinting of complex channels-Effects of material, orientation, geometry, and cell embedding. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2015</b> , 103, 2558-70	5.4	45
41	Clinical Applications of S53P4 Bioactive Glass in Bone Healing and Osteomyelitic Treatment: A Literature Review. <i>BioMed Research International</i> , <b>2015</b> , 2015, 684826	3	66
40	Vascularization mediated by mesenchymal stem cells from bone marrow and adipose tissue: a comparison. <i>Cell Regeneration</i> , <b>2015</b> , 4, 8	2.5	53

39	Effect of fetal bovine serum on mineralization in silk fibroin scaffolds. <i>Acta Biomaterialia</i> , <b>2015</b> , 13, 277-285	10.8	37
38	The evolution of simulation techniques for dynamic bone tissue engineering in bioreactors. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2015</b> , 9, 903-17	4.4	33
37	Micro-computed tomography based computational fluid dynamics for the determination of shear stresses in scaffolds within a perfusion bioreactor. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 1085-94	4.7	37
36	Injectable and porous PLGA microspheres that form highly porous scaffolds at body temperature. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 5090-5098	10.8	77
35	Tunable hydrogel composite with two-step processing in combination with innovative hardware upgrade for cell-based three-dimensional bioprinting. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 630-40	10.8	242
34	Therapeutic potential of adipose-derived stromal cells in age-related osteoporosis. <i>Biomaterials</i> , <b>2014</b> , 35, 7326-35	15.6	48
33	Influence of the mechanical environment on the engineering of mineralised tissues using human dental pulp stem cells and silk fibroin scaffolds. <i>PLoS ONE</i> , <b>2014</b> , 9, e111010	3.7	34
32	Effect of sterilization on structural and material properties of 3-D silk fibroin scaffolds. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 308-17	10.8	46
31	Effect of grain size and microporosity on the in vivo behaviour of tricalcium phosphate scaffolds. <i>European Cells and Materials</i> , <b>2014</b> , 28, 299-319	4.3	47
30	In vitro ceramic scaffold mineralization: comparison between histological and micro-computed tomographical analysis. <i>Annals of Biomedical Engineering</i> , <b>2013</b> , 41, 2666-75	4.7	13
29	New depowdering-friendly designs for three-dimensional printing of calcium phosphate bone substitutes. <i>Acta Biomaterialia</i> , <b>2013</b> , 9, 9149-58	10.8	74
28	Remodeling of tissue-engineered bone structures in vivo. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2013</b> , 85, 119-29	5.7	46
27	Pressureless mechanical induction of stem cell differentiation is dose and frequency dependent. <i>PLoS ONE</i> , <b>2013</b> , 8, e81362	3.7	20
26	Chondrocyte redifferentiation in 3D: the effect of adhesion site density and substrate elasticity. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2012</b> , 100, 38-47	5.4	77
25	The influence of matrix elasticity on chondrocyte behavior in 3D. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2012</b> , 6, e31-42	4.4	29
24	Imaging of cellular spread on a three-dimensional scaffold by means of a novel cell-labeling technique for high-resolution computed tomography. <i>Tissue Engineering - Part C: Methods</i> , <b>2012</b> , 18, 167-73	2.8	4
23	Controlled Positioning of Cells in Biomaterials-Approaches Towards 3D Tissue Printing. <i>Journal of Functional Biomaterials</i> , <b>2011</b> , 2, 119-54	4.8	163
22	Two-layer membranes of calcium phosphate/collagen/PLGA nanofibres: in vitro biomineralisation and osteogenic differentiation of human mesenchymal stem cells. <i>Nanoscale</i> , <b>2011</b> , 3, 401-9	7.7	59

21	Initial cell pre-cultivation can maximize ECM mineralization by human mesenchymal stem cells on silk fibroin scaffolds. <i>Acta Biomaterialia</i> , <b>2011</b> , 7, 2218-28	10.8	29
20	Structural and material approaches to bone tissue engineering in powder-based three-dimensional printing. <i>Acta Biomaterialia</i> , <b>2011</b> , 7, 907-20	10.8	350
19	CONTROL OF TISSUE-ENGINEERED BONE-LIKE STRUCTURES ON SILK FIBROIN SCAFFOLDS. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, S163	2.9	
18	Control of in vitro tissue-engineered bone-like structures using human mesenchymal stem cells and porous silk scaffolds. <i>Biomaterials</i> , <b>2007</b> , 28, 1152-62	15.6	270
17	Non-invasive time-lapsed monitoring and quantification of engineered bone-like tissue. <i>Annals of Biomedical Engineering</i> , <b>2007</b> , 35, 1657-67	4.7	43
16	BMP-silk composite matrices heal critically sized femoral defects. <i>Bone</i> , <b>2007</b> , 41, 247-55	4.7	132
15	Silk fibroin as an organic polymer for controlled drug delivery. <i>Journal of Controlled Release</i> , <b>2006</b> , 111, 219-27	11.7	293
14	Tissue Engineering of Bone <b>2006</b> , 323-373		5
13	Effect of scaffold design on bone morphology in vitro. <i>Tissue Engineering</i> , <b>2006</b> , 12, 3417-29		117
12	Cartilage-like tissue engineering using silk scaffolds and mesenchymal stem cells. <i>Tissue Engineering</i> , <b>2006</b> , 12, 2729-38		159
11	Silk based biomaterials to heal critical sized femur defects. <i>Bone</i> , <b>2006</b> , 39, 922-31	4.7	190
10	Osteogenesis by human mesenchymal stem cells cultured on silk biomaterials: comparison of adenovirus mediated gene transfer and protein delivery of BMP-2. <i>Biomaterials</i> , <b>2006</b> , 27, 4993-5002	15.6	157
9	Cartilage-like Tissue Engineering Using Silk Scaffolds and Mesenchymal Stem Cells. <i>Tissue Engineering</i> , <b>2006</b> , 060915113954001		1
8	Effect of Scaffold Design on Bone Morphology in Vitro. <i>Tissue Engineering</i> , <b>2006</b> , 061017080728004		
7	Silk implants for the healing of critical size bone defects. <i>Bone</i> , <b>2005</b> , 37, 688-98	4.7	371
6	The inflammatory responses to silk films in vitro and in vivo. <i>Biomaterials</i> , <b>2005</b> , 26, 147-55	15.6	636
5	Engineering cartilage-like tissue using human mesenchymal stem cells and silk protein scaffolds. <i>Biotechnology and Bioengineering</i> , <b>2004</b> , 88, 379-91	4.9	262
4	Engineering bone-like tissue in vitro using human bone marrow stem cells and silk scaffolds. <i>Journal of Biomedical Materials Research Part B</i> , <b>2004</b> , 71, 25-34		277

3	Bone morphogenetic protein-2 decorated silk fibroin films induce osteogenic differentiation of human bone marrow stromal cells. <i>Journal of Biomedical Materials Research Part B</i> , <b>2004</b> , 71, 528-37	258
2	The association between mineralised tissue formation and the mechanical local in vivo environment: Time-lapsed quantification of a mouse defect healing model	1
1	Capturing Essential Physiological Aspects of Interacting Cartilage and Bone Tissue with Osteoarthritis Pathophysiology: A Human Osteochondral Unit-on-a-Chip Model. <i>Advanced Materials Technologies</i> , 2101310	6.8 1