

# Markus Rottmar

## List of Publications by Citations

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53  
papers

997  
citations

18  
h-index

30  
g-index

56  
ext. papers

1,265  
ext. citations

8  
avg, IF

4.27  
L-index

#	Paper	IF	Citations
53	Differential regulation of osteogenic differentiation of stem cells on surface roughness gradients. <i>Biomaterials</i> , <b>2014</b> , 35, 9023-32	15.6	194
52	Osteogenic differentiation of human mesenchymal stem cells in the absence of osteogenic supplements: A surface-roughness gradient study. <i>Acta Biomaterialia</i> , <b>2015</b> , 28, 64-75	10.8	97
51	Near-Infrared Light-Sensitive Polyvinyl Alcohol Hydrogel Photoresist for Spatiotemporal Control of Cell-Instructive 3D Microenvironments. <i>Advanced Materials</i> , <b>2018</b> , 30, 1705564	24	60
50	Steering surface topographies of electrospun fibers: understanding the mechanisms. <i>Scientific Reports</i> , <b>2017</b> , 7, 158	4.9	58
49	Enhanced differentiation of human osteoblasts on Ti surfaces pre-treated with human whole blood. <i>Acta Biomaterialia</i> , <b>2015</b> , 19, 180-90	10.8	50
48	A Bioinspired Ultraporous Nanofiber-Hydrogel Mimic of the Cartilage Extracellular Matrix. <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 3129-3138	10.1	40
47	Interference with the contractile machinery of the fibroblastic chondrocyte cytoskeleton induces re-expression of the cartilage phenotype through involvement of PI3K, PKC and MAPKs. <i>Experimental Cell Research</i> , <b>2014</b> , 320, 175-87	4.2	31
46	Mussel-Inspired Injectable Hydrogel Adhesive Formed under Mild Conditions Features Near-Native Tissue Properties. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 47707-47719	9.5	30
45	Regulation of human mesenchymal stem cell osteogenesis by specific surface density of fibronectin: a gradient study. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 2367-75	9.5	29
44	A compliant and biomimetic three-layered vascular graft for small blood vessels. <i>Biofabrication</i> , <b>2017</b> , 9, 025010	10.5	28
43	Electrospraying of microfluidic encapsulated cells for the fabrication of cell-laden electrospun hybrid tissue constructs. <i>Acta Biomaterialia</i> , <b>2017</b> , 64, 137-147	10.8	25
42	Toward Immunocompetent 3D Skin Models. <i>Advanced Healthcare Materials</i> , <b>2018</b> , 7, e1701405	10.1	25
41	Easy to Apply Polyoxazoline-Based Coating for Precise and Long-Term Control of Neural Patterns. <i>Langmuir</i> , <b>2017</b> , 33, 8594-8605	4	25
40	The pyranine-benzalkonium ion pair: A promising fluorescent system for the ratiometric detection of wound pH. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 249, 156-160	8.5	23
39	Anti-oxidant and immune-modulatory properties of sulfated alginate derivatives on human chondrocytes and macrophages. <i>Biomaterials Science</i> , <b>2017</b> , 5, 1756-1765	7.4	21
38	Multifunctional Nano-Biointerfaces: Cytocompatible Antimicrobial Nanocarriers from Stabilizer-Free Cubosomes. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1904007	15.6	20
37	investigations of a novel wound dressing concept based on biodegradable polyurethane. <i>Science and Technology of Advanced Materials</i> , <b>2015</b> , 16, 034606	7.1	18

36	Cell-Membrane-Inspired Silicone Interfaces that Mitigate Proinflammatory Macrophage Activation and Bacterial Adhesion. <i>Langmuir</i> , <b>2019</b> , 35, 1882-1894	4	18
35	Lumican is upregulated in osteoarthritis and contributes to TLR4-induced pro-inflammatory activation of cartilage degradation and macrophage polarization. <i>Osteoarthritis and Cartilage</i> , <b>2020</b> , 28, 92-101	6.2	17
34	Multifunctional Biomaterials: Combining Material Modification Strategies for Engineering of Cell-Contacting Surfaces. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 21342-21367	9.5	17
33	Assessing the osteogenic potential of zirconia and titanium surfaces with an advanced in vitro model. <i>Dental Materials</i> , <b>2019</b> , 35, 74-86	5.7	14
32	Surface modification of ultrafine-grained titanium: Influence on mechanical properties, cytocompatibility, and osseointegration potential. <i>Clinical Oral Implants Research</i> , <b>2019</b> , 30, 99-110	4.8	14
31	Stem cell plasticity, osteogenic differentiation and the third dimension. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2010</b> , 21, 999-1004	4.5	13
30	Viability, differentiation capacity, and detectability of super-paramagnetic iron oxide-labeled muscle precursor cells for magnetic-resonance imaging. <i>Tissue Engineering - Part C: Methods</i> , <b>2015</b> , 21, 182-91	2.9	12
29	Silk fibroin/sericin 3D sponges: The effect of sericin on structural and biological properties of fibroin. <i>International Journal of Biological Macromolecules</i> , <b>2020</b> , 153, 317-326	7.9	11
28	Silk based scaffolds with immunomodulatory capacity: anti-inflammatory effects of nicotinic acid. <i>Biomaterials Science</i> , <b>2019</b> , 8, 148-162	7.4	11
27	In Vitro Cytocompatibility Assessment of Ti-Modified, Silicon-oxycarbide-Based, Polymer-Derived, Ceramic-Implantable Electrodes under Pacing Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 17244-17253	9.5	10
26	Electrospun colourimetric sensors for detecting volatile amines. <i>Sensors and Actuators B: Chemical</i> , <b>2020</b> , 322, 128570	8.5	10
25	Nano-3D-Printed Photochromic Micro-Objects. <i>Small</i> , <b>2021</b> , 17, e2101337	11	10
24	In Vitro Endothelialization of Surface-Integrated Nanofiber Networks for Stretchable Blood Interfaces. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 5740-5751	9.5	8
23	Intravoxel incoherent motion analysis of abdominal organs: computation of reference parameters in a large cohort of C57Bl/6 mice and correlation to microvessel density. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , <b>2016</b> , 29, 751-63	2.8	7
22	MR imaging relaxometry allows noninvasive characterization of in vivo differentiation of muscle precursor cells. <i>Radiology</i> , <b>2015</b> , 274, 800-9	20.5	5
21	Photo-activated titanium surface confers time dependent bactericidal activity towards Gram positive and negative bacteria. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2021</b> , 206, 111940	6	5
20	A high throughput system for long term application of intermittent cyclic hydrostatic pressure on cells in culture. <i>Journal of Biomechanical Engineering</i> , <b>2011</b> , 133, 024502	2.1	4
19	Responsive Nanofibers with Embedded Hierarchical Lipid Self-Assemblies. <i>Langmuir</i> , <b>2020</b> , 36, 11787-11797	4	4

18	One-Step Synthesis of Versatile Antimicrobial Nano-Architected Implant Coatings for Hard and Soft Tissue Healing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 33300-33310	9.5	4
17	Magnetization Transfer MR Imaging to Monitor Muscle Tissue Formation during Myogenic in Vivo Differentiation of Muscle Precursor Cells. <i>Radiology</i> , <b>2016</b> , 281, 436-443	20.5	4
16	Nanofiber membranes as biomimetic and mechanically stable surface coatings. <i>Materials Science and Engineering C</i> , <b>2020</b> , 108, 110417	8.3	3
15	In vitro skin culture media influence the viability and inflammatory response of primary macrophages. <i>Scientific Reports</i> , <b>2021</b> , 11, 7070	4.9	3
14	A micropatterning approach to study the influence of actin cytoskeletal organization on polystyrene nanoparticle uptake by BeWo cells. <i>RSC Advances</i> , <b>2016</b> , 6, 72827-72835	3.7	2
13	Controlling pH by electronic ion pumps to fight fibrosis. <i>Applied Materials Today</i> , <b>2021</b> , 22, 100936	6.6	2
12	Influence of ceftriaxone on human bone cell viability and in vitro mineralization potential is concentration- and time-dependent. <i>Bone and Joint Research</i> , <b>2021</b> , 10, 218-225	4.2	2
11	Rationally designed ultra-short pulsed laser patterning of zirconia-based ceramics tailored for the bone-implant interface. <i>Applied Surface Science</i> , <b>2021</b> , 545, 149020	6.7	2
10	Controlling the surface structure of electrospun fibers: Effect on endothelial cells and blood coagulation. <i>Biointerphases</i> , <b>2018</b> , 13, 051001	1.8	2
9	The response of soft tissue cells to Ti implants is modulated by blood-implant interactions. <i>Materials Today Bio</i> , <b>2022</b> , 100303	9.9	2
8	Palladium-Based Metallic Glass with High Thrombogenic Resistance for Blood-Contacting Medical Devices. <i>Advanced Functional Materials</i> , 2108256	15.6	1
7	Electrospinning: A Bioinspired Ultraporous Nanofiber-Hydrogel Mimic of the Cartilage Extracellular Matrix (Adv. Healthcare Mater. 24/2016). <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 3216-3216	10.1	1
6	Gallium Complex-Functionalized P4HB Fibers: A Trojan Horse to Fight Bacterial Infection. <i>ACS Applied Bio Materials</i> , <b>2021</b> , 4, 682-691	4.1	1
5	Design of a Versatile Sample Holder for Facile Culture of Cells on Electrospun Membranes or Thin Polymer Films Under Flow Conditions. <i>Methods in Molecular Biology</i> , <b>2020</b> , 2125, 1-13	1.4	1
4	Multiscale 2D/3D microshaping and property tuning of polymer-derived SiCN ceramics. <i>Journal of the European Ceramic Society</i> , <b>2022</b> , 42, 1963-1970	6	0
3	Tissue Inhibitor of Metalloproteinase (TIMP) Peptidomimetic as an Adjunctive Therapy for Infectious Keratitis. <i>Biomacromolecules</i> , <b>2021</b> , 22, 629-639	6.9	0
2	A low-fouling, self-assembled, graft co-polymer and covalent surface coating for controlled immobilization of biologically active moieties. <i>Applied Surface Science</i> , <b>2022</b> , 584, 152525	6.7	
1	Photochromic 3D Micro-Objects: Nano-3D-Printed Photochromic Micro-Objects (Small 26/2021). <i>Small</i> , <b>2021</b> , 17, 2170132	11	

