Katharina Maniura

List of Publications by Year
in descending order

120 papers	4,923 citations	87723 38 h-index	114278 63 g-index
122 all docs	122 docs citations	122 times ranked	8901 citing authors

#	Article	IF	Citations
1	Critical aspects of using bacterial cell viability assays with the fluorophores SYTO9 and propidium iodide. BMC Microbiology, 2015, 15, 36.	1.3	502
2	Differential regulation of osteogenic differentiation of stem cells on surface roughness gradients. Biomaterials, 2014, 35, 9023-9032.	5.7	226
3	3D Printed Enzymatically Biodegradable Soft Helical Microswimmers. Advanced Functional Materials, 2018, 28, 1804107.	7.8	222
4	Molecular and biophysical mechanisms regulating hypertrophic differentiation in chondrocytes and mesenchymal stem cells. , 2012, 24, 118-135.		171
5	Transient overexpression of mitochondrial transcription factor A (TFAM) is sufficient to stimulate mitochondrial DNA transcription, but not sufficient to increase mtDNA copy number in cultured cells. Nucleic Acids Research, 2004, 32, 6015-6027.	6.5	129
6	Osteogenic differentiation of human mesenchymal stem cells in the absence of osteogenic supplements: A surface-roughness gradient study. Acta Biomaterialia, 2015, 28, 64-75.	4.1	124
7	The role of nanostructures and hydrophilicity in osseointegration: Inâ€vitro proteinâ€adsorption and bloodâ€interaction studies. Journal of Biomedical Materials Research - Part A, 2015, 103, 2661-2672.	2.1	112
8	Is biofilm removal properly assessed? Comparison of different quantification methods in a 96-well plate system. Applied Microbiology and Biotechnology, 2016, 100, 4135-4145.	1.7	109
9	Antibacterial Au nanostructured surfaces. Nanoscale, 2016, 8, 2620-2625.	2.8	101
10	Nanostructured surface topographies have an effect on bactericidal activity. Journal of Nanobiotechnology, 2018, 16, 20.	4.2	91
11	Nearâ€Infrared Lightâ€Sensitive Polyvinyl Alcohol Hydrogel Photoresist for Spatiotemporal Control of Cellâ€Instructive 3D Microenvironments. Advanced Materials, 2018, 30, 1705564.	11.1	87
12	Biodegradable Bicomponent Fibers from Renewable Sources: Meltâ€Spinning of Poly(lactic acid) and Poly[(3â€hydroxybutyrate)â€coâ€(3â€hydroxyvalerate)]. Macromolecular Materials and Engineering, 2012, 297, 75-84.	1.7	84
13	TEMPO-Oxidized Nanofibrillated Cellulose as a High Density Carrier for Bioactive Molecules. Biomacromolecules, 2015, 16, 3640-3650.	2.6	84
14	Role of the Surface Nanoscale Roughness of Stainless Steel on Bacterial Adhesion and Microcolony Formation. ACS Omega, 2018, 3, 6456-6464.	1.6	83
15	Structure and morphology of electrospun polycaprolactone/gelatine nanofibres. European Polymer Journal, 2013, 49, 2052-2061.	2.6	80
16	Are duplications of mitochondrial DNA characteristic of Kearnsâ€”Sayre syndrome?. Human Molecular Genetics, 1994, 3, 947-951.	1.4	79
17	Simultaneous detection of pH value and glucose concentrations for wound monitoring applications. Biosensors and Bioelectronics, 2017, 87, 312-319.	5.3	75
18	Steering surface topographies of electrospun fibers: understanding the mechanisms. Scientific Reports, 2017, 7, 158.	1.6	71

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19	Macromechanics and polycaprolactone fiber organization drive macrophage polarization and regulate inflammatory activation of tendon in vitro and in vivo. Biomaterials, 2020, 249, 120034.	5.7	71
20	Antimicrobial Peptide-Driven Colloidal Transformations in Liquid-Crystalline Nanocarriers. Journal of Physical Chemistry Letters, 2016, 7, 3482-3486.	2.1	69
21	From Structure to Function: pH-Switchable Antimicrobial Nano-Self-Assemblies. ACS Applied Materials & Interfaces, 2019, 11, 2821-2829.	4.0	66
22	Enhanced differentiation of human osteoblasts on Ti surfaces pre-treated with human whole blood. Acta Biomaterialia, 2015, 19, 180-190.	4.1	62
23	Enzymes Enhance Biofilm Removal Efficiency of Cleaners. Antimicrobial Agents and Chemotherapy, 2016, 60, 3647-3652.	1.4	60
24	Mechanism of mammalian mitochondrial DNA replication: import of mitochondrial transcription factor A into isolated mitochondria stimulates 7S DNA synthesis. Nucleic Acids Research, 2001, 29, 3657-3663.	6.5	59
25	Impaired mitochondrial Ca2+ homeostasis in respiratory chain-deficient cells but efficient compensation of energetic disadvantage by enhanced anaerobic glycolysis due to low ATP steady state levels. Experimental Cell Research, 2007, 313, 3076-3089.	1.2	54
26	A Bioinspired Ultraporous Nanofiberâ€Hydrogel Mimic of the Cartilage Extracellular Matrix. Advanced Healthcare Materials, 2016, 5, 3129-3138.	3.9	54
27	A Proteinâ€Nanocellulose Paper for Sensing Copper Ions at the Nanoâ€to Micromolar Level. Advanced Functional Materials, 2017, 27, 1604291.	7.8	54
28	Biochemical and Molecular Studies of Mitochondrial Function in Diabetes Insipidus, Diabetes Mellitus, Optic Atrophy, and Deafness. Diabetes Care, 1994, 17, 728-733.	4.3	49
29	Antibacterial, Cytocompatible, Sustainably Sourced: Cellulose Membranes with Bifunctional Peptides for Advanced Wound Dressings. Advanced Healthcare Materials, 2020, 9, e1901850.	3.9	49
30	Addition of nanoscaledbioinspiredsurface features: A revolution for bone related implants and scaffolds?. Journal of Biomedical Materials Research - Part A, 2014, 102, 275-294.	2.1	48
31	Substrate viscosity plays an important role in bacterial adhesion under fluid flow. Journal of Colloid and Interface Science, 2019, 552, 247-257.	5.0	48
32	Convex and concave micro-structured silicone controls the shape, but not the polarization state of human macrophages. Biomaterials Science, 2016, 4, 1562-1573.	2.6	46
33	A compliant and biomimetic three-layered vascular graft for small blood vessels. Biofabrication, 2017, 9, 025010.	3.7	46
34	Bacterial Adhesion on Soft Materials: Passive Physicochemical Interactions or Active Bacterial Mechanosensing?. Advanced Healthcare Materials, 2019, 8, e1801323.	3.9	45
35	In Vitro Biofilm Models for Device-Related Infections. Trends in Biotechnology, 2016, 34, 945-948.	4.9	43
36	Multifunctional Biomaterials: Combining Material Modification Strategies for Engineering of Cell-Contacting Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 21342-21367.	4.0	43

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37	Cultivation in Glucose-Deprived Medium Stimulates Mitochondrial Biogenesis and Oxidative Metabolism in HepG2 Hepatoma Cells. Biological Chemistry, 2002, 383, 283-290.	1.2	42
38	Ribosomal Protein L13a as a Reference Gene for Human Bone Marrow-Derived Mesenchymal Stromal Cells During Expansion, Adipo-, Chondro-, and Osteogenesis. Tissue Engineering - Part C: Methods, 2012, 18, 761-771.	1.1	42
39	Toward Immunocompetent 3D Skin Models. Advanced Healthcare Materials, 2018, 7, e1701405.	3.9	42
40	Nylon-6/chitosan core/shell antimicrobial nanofibers for the prevention of mesh-associated surgical site infection. Journal of Nanobiotechnology, 2020, 18, 51.	4.2	41
41	Interference with the contractile machinery of the fibroblastic chondrocyte cytoskeleton induces re-expression of the cartilage phenotype through involvement of PI3K, PKC and MAPKs. Experimental Cell Research, 2014, 320, 175-187.	1.2	39
42	Enhanced Antimicrobial Activity and Structural Transitions of a Nanofibrillated Celluloseâ€“Nisin Biocomposite Suspension. ACS Applied Materials & Interfaces, 2018, 10, 20170-20181.	4.0	39
43	Silk fibroin/sericin 3D sponges: The effect of sericin on structural and biological properties of fibroin. International Journal of Biological Macromolecules, 2020, 153, 317-326.	3.6	39
44	The pyranine-benzalkonium ion pair: A promising fluorescent system for the ratiometric detection of wound pH. Sensors and Actuators B: Chemical, 2017, 249, 156-160.	4.0	38
45	Multifunctional Nanoâ€Biointerfaces: Cytocompatible Antimicrobial Nanocarriers from Stabilizerâ€Free Cubosomes. Advanced Functional Materials, 2019, 29, 1904007.	7.8	38
46	Tunable release of hydrophilic compounds from hydrophobic nanostructured fibers prepared by emulsion electrospinning. Polymer, 2015, 66, 268-276.	1.8	37
47	Regulation of Human Mesenchymal Stem Cell Osteogenesis by Specific Surface Density of Fibronectin: a Gradient Study. ACS Applied Materials & Interfaces, 2015, 7, 2367-2375.	4.0	37
48	Anti-oxidant and immune-modulatory properties of sulfated alginate derivatives on human chondrocytes and macrophages. Biomaterials Science, 2017, 5, 1756-1765.	2.6	36
49	Cell-Membrane-Inspired Silicone Interfaces that Mitigate Proinflammatory Macrophage Activation and Bacterial Adhesion. Langmuir, 2019, 35, 1882-1894.	1.6	35
50	Electrospraying of microfluidic encapsulated cells for the fabrication of cell-laden electrospun hybrid tissue constructs. Acta Biomaterialia, 2017, 64, 137-147.	4.1	33
51	Water-Based Scalable Methods for Self-Cleaning Antibacterial ZnO-Nanostructured Surfaces. Industrial & Engineering Chemistry Research, 2020, 59, 14323-14333.	1.8	32
52	Fabrication of elastomer pillar arrays with modulated stiffness for cellular force measurements. Journal of Vacuum Science & Technology B, 2008, 26, 2549-2553.	1.3	31
53	Human chondroprogenitors in alginate-collagen hybrid scaffolds produce stable cartilagein vivo. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 3014-3026.	1.3	31
54	A nanolayer coating on polydimethylsiloxane surfaces enables a mechanistic study of bacterial adhesion influenced by material surface physicochemistry. Materials Horizons, 2020, 7, 93-103.	6.4	31

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55	A new mechanism for mtDNA pathogenesis: impairment of post-transcriptional maturation leads to severe depletion of mitochondrial tRNASer(UCN) caused by T7512C and G7497A point mutations. Nucleic Acids Research, 2005, 33, 5647-5658.	6.5	30
56	Rapid Assay to Assess Bacterial Adhesion on Textiles. Materials, 2016, 9, 249.	1.3	29
57	Vacuum plasma sprayed coatings using ionic silver doped hydroxyapatite powder to prevent bacterial infection of bone implants. Biointerphases, 2016, 11, 011012.	0.6	29
58	Correlating cell architecture with osteogenesis: first steps towards live single cell monitoring. , 2009, 18, 59-62.		29
59	Molecular dysfunction associated with the human mitochondrial 3302A>G mutation in the MTTL1 (mt-tRNALeu(UUR)) gene. Nucleic Acids Research, 2006, 34, 6404-6415.	6.5	28
60	Colloidal Transformations in MS2 Virus Particles: Driven by pH, Influenced by Natural Organic Matter. ACS Nano, 2020, 14, 1879-1887.	7.3	27
61	Microencapsulation improves chondrogenesis in vitro and cartilaginous matrix stability in vivo compared to bulk encapsulation. Biomaterials Science, 2020, 8, 1711-1725.	2.6	27
62	A novel point mutation in the mitochondrial tRNATrp gene produces a neurogastrointestinal syndrome. European Journal of Human Genetics, 2004, 12, 509-512.	1.4	26
63	Macrophage Polarization by Titanium Dioxide (TiO₂) Particles: Size Matters. ACS Biomaterials Science and Engineering, 2016, 2, 908-919.	2.6	26
64	Engineered Microtissues Formed by Schiff Base Crosslinking Restore the Chondrogenic Potential of Aged Mesenchymal Stem Cells. Advanced Healthcare Materials, 2015, 4, 1348-1358.	3.9	25
65	The Effect of Selected Electrospinning Parameters on Molecular Structure of Polycaprolactone Nanofibers. International Journal of Polymeric Materials and Polymeric Biomaterials, 2015, 64, 365-377.	1.8	25
66	A FRET-based biosensor for the detection of neutrophil elastase. Analyst, The, 2016, 141, 1645-1648.	1.7	24
67	A microfluidic platform for in situ investigation of biofilm formation and its treatment under controlled conditions. Journal of Nanobiotechnology, 2020, 18, 166.	4.2	24
68	Bioresponsive Hybrid Nanofibers Enable Controlled Drug Delivery through Glass Transition Switching at Physiological Temperature. ACS Applied Bio Materials, 2021, 4, 4271-4279.	2.3	24
69	Watching osteogenesis: Life monitoring of osteogenic differentiation using an osteocalcin reporter. Journal of Cellular Biochemistry, 2012, 113, 313-321.	1.2	23
70	Development and thorough characterization of the processing steps of an ink for 3D printing for bone tissue engineering. Materials Science and Engineering C, 2020, 108, 110510.	3.8	23
71	Surface modification of ultrafineâ€grained titanium: Influence on mechanical properties, cytocompatibility, and osseointegration potential. Clinical Oral Implants Research, 2019, 30, 99-110.	1.9	21
72	Human mitochondria: distinct organelles or dynamic network?. Trends in Genetics, 1995, 11, 211-212.	2.9	20

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73	Assessing the osteogenic potential of zirconia and titanium surfaces with an advanced in vitro model. Dental Materials, 2019, 35, 74-86.	1.6	20
74	Nanoâ€3Dâ€Printed Photochromic Microâ€Objects. Small, 2021, 17, e2101337.	5.2	20
75	Photo-activated titanium surface confers time dependent bactericidal activity towards Gram positive and negative bacteria. Colloids and Surfaces B: Biointerfaces, 2021, 206, 111940.	2.5	20
76	A simple and rapid method for optical visualization and quantification of bacteria on textiles. Scientific Reports, 2016, 6, 39635.	1.6	19
77	Micro-patterned plasma polymer films for bio-sensing. Materials and Design, 2017, 114, 123-128.	3.3	19
78	Encrustations on ureteral stents from patients without urinary tract infection reveal distinct urotypes and a low bacterial load. Microbiome, 2019, 7, 60.	4.9	19
79	Silk based scaffolds with immunomodulatory capacity: anti-inflammatory effects of nicotinic acid. Biomaterials Science, 2020, 8, 148-162.	2.6	18
80	Stem cell plasticity, osteogenic differentiation and the third dimension. Journal of Materials Science: Materials in Medicine, 2010, 21, 999-1004.	1.7	15
81	Hierarchical Selfâ€Assembly of Poly(Urethane)/Poly(Vinylidene Fluorideâ€coâ€Hexafluoropropylene) Blends into Highly Hydrophobic Electrospun Fibers with Reduced Protein Adsorption Profiles. Macromolecular Materials and Engineering, 2017, 302, 1700081.	1.7	15
82	Catechin loaded PLGA submicron-sized fibers reduce levels of reactive oxygen species induced by MWCNT in vitro. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 122, 78-86.	2.0	14
83	Extraction of Biofilms From Ureteral Stents for Quantification and Cultivation-Dependent and -Independent Analyses. Frontiers in Microbiology, 2018, 9, 1470.	1.5	14
84	Encapsulation of FRET-based glucose and maltose biosensors to develop functionalized silica nanoparticles. Analyst, The, 2016, 141, 3982-3984.	1.7	13
85	In Vitro Cytocompatibility Assessment of Ti-Modified, Silicon-oxycarbide-Based, Polymer-Derived, Ceramic-Implantable Electrodes under Pacing Conditions. ACS Applied Materials & Interfaces, 2020, 12, 17244-17253.	4.0	13
86	Plasmaâ€deposited AgOxâ€doped TiOx coatings enable rapid antibacterial activity based on ROS generation. Plasma Processes and Polymers, 2022, 19, .	1.6	12
87	In Vitro Endothelialization of Surface-Integrated Nanofiber Networks for Stretchable Blood Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 5740-5751.	4.0	11
88	Virus pHâ€Dependent Interactions with Cationically Modified Cellulose and Their Application in Water Filtration. Small, 2021, 17, e2100307.	5.2	11
89	In vitro skin culture media influence the viability and inflammatory response of primary macrophages. Scientific Reports, 2021, 11, 7070.	1.6	10
90	Affinity-Driven Immobilization of Proteins to Hematite Nanoparticles. ACS Applied Materials & Interfaces, 2016, 8, 20432-20439.	4.0	9

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91	Controlling pH by electronic ion pumps to fight fibrosis. Applied Materials Today, 2021, 22, 100936.	2.3	9
92	Palladiumâ€Based Metallic Glass with High Thrombogenic Resistance for Bloodâ€Contacting Medical Devices. Advanced Functional Materials, 2022, 32, 2108256.	7.8	9
93	Uncoupling bacterial attachment on and detachment from polydimethylsiloxane surfaces through empirical and simulation studies. Journal of Colloid and Interface Science, 2022, 622, 419-430.	5.0	9
94	Harvesting pre-polarized macrophages using thermo-responsive substrates. Scientific Reports, 2017, 7, 42495.	1.6	8
95	Optical glucose sensing using ethanolamineâ€“polyborate complexes. Journal of Materials Chemistry B, 2018, 6, 816-823.	2.9	8
96	Multiscale 2D/3D microshaping and property tuning of polymer-derived SiCN ceramics. Journal of the European Ceramic Society, 2022, 42, 1963-1970.	2.8	8
97	Plasma polymer film designs through the eyes of ToF-SIMS. Biointerphases, 2018, 13, 03B417.	0.6	7
98	Self-assembly of glycerol monooleate with the antimicrobial peptide LL-37: a molecular dynamics study. RSC Advances, 2020, 10, 8291-8302.	1.7	7
99	Fabrication of biopolymer-based staple electrospun fibres for nanocomposite applications by particle-assisted low temperature ultrasonication. Materials Science and Engineering C, 2014, 45, 277-286.	3.8	6
100	Controlling the surface structure of electrospun fibers: Effect on endothelial cells and blood coagulation. Biointerphases, 2018, 13, 051001.	0.6	6
101	Near-Surface Structure of Plasma Polymer Films Affects Surface Behavior in Water and its Interaction with Proteins. Plasma Chemistry and Plasma Processing, 2018, 38, 851-870.	1.1	6
102	Gallium Complex-Functionalized P4HB Fibers: A Trojan Horse to Fight Bacterial Infection. ACS Applied Bio Materials, 2021, 4, 682-691.	2.3	6
103	Influence of ceftriaxone on human bone cell viability and in vitro mineralization potential is concentration- and time-dependent. Bone and Joint Research, 2021, 10, 218-225.	1.3	6
104	A High Throughput System for Long Term Application of Intermittent Cyclic Hydrostatic Pressure on Cells in Culture. Journal of Biomechanical Engineering, 2011, 133, 024502.	0.6	5
105	Orthogonal Morphological Feature Size and Density Gradients for Exploring Synergistic Effects in Biology. Langmuir, 2015, 31, 8446-8452.	1.6	5
106	Morphology and surface chemistry of bicomponent scaffolds in terms of mesenchymal stromal cell viability. Journal of Bioactive and Compatible Polymers, 2016, 31, 423-436.	0.8	5
107	A micropatterning approach to study the influence of actin cytoskeletal organization on polystyrene nanoparticle uptake by BeWo cells. RSC Advances, 2016, 6, 72827-72835.	1.7	3
108	Toward a quantified, validated, and verifiable understanding of the Biointerface. Biointerphases, 2016, 11, 040201.	0.6	3

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109	Complete inclusion of bioactive molecules and particles in polydimethylsiloxane: a straightforward process under mild conditions. Scientific Reports, 2019, 9, 17575.	1.6	3
110	A low-fouling, self-assembled, graft co-polymer and covalent surface coating for controlled immobilization of biologically active moieties. Applied Surface Science, 2022, 584, 152525.	3.1	2
111	Electrospinning: A Bioinspired Ultraporous Nanofiber-Hydrogel Mimic of the Cartilage Extracellular Matrix (Adv. Healthcare Mater. 24/2016). Advanced Healthcare Materials, 2016, 5, 3216-3216.	3.9	1
112	Absorbable mineral nanocomposite for biomedical applications: Influence of homogenous fiber dispersity on mechanical properties. Journal of Biomedical Materials Research - Part A, 2018, 106, 850-857.	2.1	1
113	Bioassay development. , 0, , 67-84.		0
114	Fluorescence intensity decay shape analysis microscopy (FIDSAM) for quantitative and sensitive live-cell imaging. Proceedings of SPIE, 2010, , .	0.8	0
115	New developments at the biointerface. Biointerphases, 2015, 10, 040201.	0.6	0
116	Some changes, but still communicating exciting key insights from the biointerface. Biointerphases, 2017, 12, 050201.	0.6	0
117	Editorial: In Focus Issue on Bacterial-Surface Interactions. Biointerphases, 2017, 12, 05G201.	0.6	0
118	In Focus: Women in biointerface science. Biointerphases, 2018, 13, 06D101.	0.6	0
119	Photochromic 3D Microâ€Objects: Nanoâ€3Dâ€Printed Photochromic Microâ€Objects (Small 26/2021). Small, 2021, 17, 2170132.	5.2	0
120	Outside Front Cover: Plasma Process. Polym. 7/2022. Plasma Processes and Polymers, 2022, 19, .	1.6	0