Carsten Werner

List of Publications by Citations

458 papers	16,976 citations	65 h-index	106 g-index
498 ext. papers	18,875 ext. citations	7.3 avg, IF	6.71 L-index

#	Paper	IF	Citations
458	Mesenchymal stem cells can be differentiated into endothelial cells in vitro. *Stem Cells*, **2004**, 22, 377-84	5.8	979
457	Self-assembled monolayers with different terminating groups as model substrates for cell adhesion studies. *Biomaterials*, **2004**, 25, 2721-30	15.6	605
456	A star-PEG-heparin hydrogel platform to aid cell replacement therapies for neurodegenerative diseases. *Biomaterials*, **2009**, 30, 5049-60	15.6	254
455	Extended Electrokinetic Characterization of Flat Solid Surfaces. *Journal of Colloid and Interface Science*, **1998**, 208, 329-346	9.3	233
454	Current strategies towards hemocompatible coatings. *Journal of Materials Chemistry*, **2007**, 17, 3376		221
453	Maleic anhydride copolymers--a versatile platform for molecular biosurface engineering. *Biomacromolecules*, **2003**, 4, 1072-9	6.9	208
452	Blood coagulation on biomaterials requires the combination of distinct activation processes. *Biomaterials*, **2009**, 30, 4447-56	15.6	198
451	Electrokinetic Measurements Reveal Interfacial Charge at Polymer Films Caused by Simple Electrolyte Ions. *Journal of Physical Chemistry B*, **2001**, 105, 8544-8549	3.4	197
450	Thermo-responsive PNiPAAm-g-PEG films for controlled cell detachment. *Biomacromolecules*, **2003**, 4, 1733-9	6.9	189
449	Functional immobilization of signaling proteins enables control of stem cell fate. *Nature Methods*, **2008**, 5, 645-50	21.6	180
448	FGF-2 and VEGF functionalization of starPEG-heparin hydrogels to modulate biomolecular and physical cues of angiogenesis. *Biomaterials*, **2010**, 31, 7985-94	15.6	172
447	Hydroxide and hydronium ion adsorption □A survey. *Current Opinion in Colloid and Interface Science*, **2010**, 15, 196-202	7.6	170
446	Smart skin patterns protect springtails. *PLoS ONE*, **2011**, 6, e25105	3.7	166
445	Tightly anchored tissue-mimetic matrices as instructive stem cell microenvironments. *Nature Methods*, **2013**, 10, 788-94	21.6	162
444	Glycosaminoglycan-based hydrogels capture inflammatory chemokines and rescue defective wound healing in mice. *Science Translational Medicine*, **2017**, 9,	17.5	159
443	Wetting resistance at its topographical limit: the benefit of mushroom and serif T structures. *Langmuir*, **2013**, 29, 1100-12	4	157
442	Flow characteristics of water through a microchannel between two parallel plates with electrokinetic effects. *International Journal of Heat and Fluid Flow*, **1997**, 18, 489-496	2.4	152

441	Glycosaminoglycan-based hydrogels to modulate heterocellular communication in in vitro angiogenesis models. *Scientific Reports*, **2014**, 4, 4414	4.9	150
440	Adsorption-induced conformational changes of proteins onto ceramic particles: differential scanning calorimetry and FTIR analysis. *Journal of Colloid and Interface Science*, **2006**, 299, 56-69	9.3	149
439	Multi-parametric hydrogels support 3D in vitro bioengineered microenvironment models of tumour angiogenesis. *Biomaterials*, **2015**, 53, 609-20	15.6	145
438	The springtail cuticle as a blueprint for omniphobic surfaces. *Chemical Society Reviews*, **2016**, 45, 323-41	58.5	143
437	Tailored poly(2-oxazoline) polymer brushes to control protein adsorption and cell adhesion. *Macromolecular Bioscience*, **2012**, 12, 926-36	5.5	138
436	Sustained delivery of SDF-1 from heparin-based hydrogels to attract circulating pro-angiogenic cells. *Biomaterials*, **2012**, 33, 4792-800	15.6	137
435	Dissociation of Surface Functional Groups and Preferential Adsorption of Ions on Self-Assembled Monolayers Assessed by Streaming Potential and Streaming Current Measurements. *Langmuir*, **2001**, 17, 4304-4311	4	132
434	A practical guide to quantify cell adhesion using single-cell force spectroscopy. *Methods*, **2013**, 60, 169-78	4.6	127
433	Defined polymer-peptide conjugates to form cell-instructive starPEG-heparin matrices in situ. *Advanced Materials*, **2013**, 25, 2606-10	24	127
432	Glycosaminoglycan-Based Biohybrid Hydrogels: A Sweet and Smart Choice for Multifunctional Biomaterials. *Advanced Materials*, **2016**, 28, 8861-8891	24	125
431	Characterization of oxide layers on Ti6Al4V and titanium by streaming potential and streaming current measurements. *Colloids and Surfaces B: Biointerfaces*, **2002**, 26, 387-395	6	117
430	Biologically inspired omniphobic surfaces by reverse imprint lithography. *Advanced Materials*, **2014**, 26, 2029-33	24	112
429	Bio-responsive polymer hydrogels homeostatically regulate blood coagulation. *Nature Communications*, **2013**, 4, 2168	17.4	108
428	Dual independent delivery of pro-angiogenic growth factors from starPEG-heparin hydrogels. *Journal of Controlled Release*, **2011**, 156, 28-36	11.7	108
427	The role of the interplay between polymer architecture and bacterial surface properties on the microbial adhesion to polyoxazoline-based ultrathin films. *Biomaterials*, **2010**, 31, 9462-72	15.6	105
426	Low pressure plasma treatment of poly(3-hydroxybutyrate): toward tailored polymer surfaces for tissue engineering scaffolds. *Journal of Biomedical Materials Research Part B*, **2002**, 59, 632-8		103
425	Discovery of 505-million-year old chitin in the basal demosponge Vauxia gracilenta. *Scientific Reports*, **2013**, 3, 3497	4.9	102
424	Biofabricated soft network composites for cartilage tissue engineering. *Biofabrication*, **2017**, 9, 025014	10.5	100

423	In vitro hemocompatibility of self-assembled monolayers displaying various functional groups. *Biomaterials*, **2005**, 26, 6547-57	15.6	99
422	The growth and differentiation of mesenchymal stem and progenitor cells cultured on aligned collagen matrices. *Biomaterials*, **2009**, 30, 5950-8	15.6	98
421	Surface modification of poly(hydroxybutyrate) films to control cell-matrix adhesion. *Biomaterials*, **2007**, 28, 28-37	15.6	95
420	Electrokinetic Characterization of Oligo- and Poly(ethylene glycol)-Terminated Self-Assembled Monolayers on Gold and Glass Surfaces. *Langmuir*, **2003**, 19, 7380-7385	4	95
419	3D extracellular matrix interactions modulate tumour cell growth, invasion and angiogenesis in engineered tumour microenvironments. *Acta Biomaterialia*, **2016**, 36, 73-85	10.8	94
418	Electrostatic interactions modulate the conformation of collagen I. *Biophysical Journal*, **2007**, 92, 2108-19	2.9	93
417	Sperm Micromotors for Cargo Delivery through Flowing Blood. *ACS Nano*, **2020**, 14, 2982-2993	16.7	92
416	Aligned fibrillar collagen matrices obtained by shear flow deposition. *Biomaterials*, **2008**, 29, 3888-95	15.6	92
415	Insights on structural variations of protein adsorption layers on hydrophobic fluorohydrocarbon polymers gained by spectroscopic ellipsometry (part I). *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1999**, 156, 3-17	5.1	89
414	Electrokinetic surface characterization of biomedical polymers a survey. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1999**, 159, 519-529	5.1	89
413	Thermo-responsive poly(NiPAAm-co-DEGMA) substrates for gentle harvest of human corneal endothelial cell sheets. *Journal of Biomedical Materials Research - Part A*, **2007**, 80, 1003-10	5.4	86
412	Streaming potential and streaming current measurements at planar solid/liquid interfaces for simultaneous determination of zeta potential and surface conductivity. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2001**, 192, 205-213	5.1	85
411	Influence of Three-Dimensional Roughness on Pressure-Driven Flow Through Microchannels. *Journal of Fluids Engineering, Transactions of the ASME*, **2003**, 125, 871-879	2.1	83
410	Heparin desulfation modulates VEGF release and angiogenesis in diabetic wounds. *Journal of Controlled Release*, **2015**, 220, 79-88	11.7	80
409	Multifunctional silk-heparin biomaterials for vascular tissue engineering applications. *Biomaterials*, **2014**, 35, 83-91	15.6	79
408	Electrokinetic transport through rough microchannels. *Analytical Chemistry*, **2003**, 75, 5747-58	7.8	79
407	Heparin intercalation into reconstituted collagen I fibrils: Impact on growth kinetics and morphology. *Biomaterials*, **2008**, 29, 1-14	15.6	76
406	An Improved Method of Determining the zeta-Potential and Surface Conductance. *Journal of Colloid and Interface Science*, **2000**, 232, 186-197	9.3	76

405	Multilayer hydrogel coatings to combine hemocompatibility and antimicrobial activity. *Biomaterials*, **2015**, 56, 198-205	15.6	75
404	Microwave CO2 plasma-initiated vapour phase graft polymerization of acrylic acid onto polytetrafluoroethylene for immobilization of human thrombomodulin. *Biomaterials*, **1997**, 18, 1139-45	15.6	75
403	An attempt to explain bimodal behaviour of the sapphire c-plane electrolyte interface. *Advances in Colloid and Interface Science*, **2010**, 157, 61-74	14.3	72
402	Tunable nano-replication to explore the omniphobic characteristics of springtail skin. *NPG Asia Materials*, **2013**, 5, e37-e37	10.3	71
401	The ion sensitivity of surface conductive single crystalline diamond. *Journal of the American Chemical Society*, **2007**, 129, 1287-92	16.4	71
400	Gene-expression profiling of CD34+ hematopoietic cells expanded in a collagen I matrix. *Stem Cells*, **2006**, 24, 494-500	5.8	71
399	Matrix elasticity regulates the secretory profile of human bone marrow-derived multipotent mesenchymal stromal cells (MSCs). *Biochemical and Biophysical Research Communications*, **2009**, 389, 663-7	3.4	69
398	Surface characterisation of NH3 plasma treated polyamide 6 foils. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2001**, 195, 81-95	5.1	69
397	3D Culture Method for Alzheimer's Disease Modeling Reveals Interleukin-4 Rescues A□42-Induced Loss of Human Neural Stem Cell Plasticity. *Developmental Cell*, **2018**, 46, 85-101.e8	10.2	69
396	Covalently immobilized thrombomodulin inhibits coagulation and complement activation of artificial surfaces in vitro. *Biomaterials*, **2004**, 25, 5101-13	15.6	66
395	Tissue-engineered 3D tumor angiogenesis models: potential technologies for anti-cancer drug discovery. *Advanced Drug Delivery Reviews*, **2014**, 79-80, 30-9	18.5	65
394	Intrinsic charge and Donnan potentials of grafted polyelectrolyte layers determined by surface conductivity data. *Journal of Colloid and Interface Science*, **2004**, 274, 309-18	9.3	65
393	Modification of poly(octadecene-alt-maleic anhydride) films by reaction with functional amines. *Journal of Applied Polymer Science*, **2003**, 87, 1255-1266	2.9	63
392	Periosteum tissue engineering in an orthotopic in□vivo platform. *Biomaterials*, **2017**, 121, 193-204	15.6	62
391	Charging and structure of zwitterionic supported bilayer lipid membranes studied by streaming current measurements, fluorescence microscopy, and attenuated total reflection Fourier transform infrared spectroscopy. *Biointerphases*, **2009**, 4, 1-6	1.8	62
390	Effect of human parathyroid hormone hPTH (1-34) applied at different regimes on fracture healing and muscle in ovariectomized and healthy rats. *Bone*, **2010**, 47, 480-92	4.7	61
389	Polarization of human hematopoietic progenitors during contact with multipotent mesenchymal stromal cells: effects on proliferation and clonogenicity. *Stem Cells and Development*, **2006**, 15, 815-29	4.4	61
388	Impact of processing parameters on the haemocompatibility of Bombyx mori silk films. *Biomaterials* , **2012**, 33, 1017-23	15.6	60

387	Engineered matrix coatings to modulate the adhesion of CD133+ human hematopoietic progenitor cells. *Biomaterials*, **2007**, 28, 836-43	15.6	60
386	In vitro hemocompatibility of albumin-heparin multilayer coatings on polyethersulfone prepared by the layer-by-layer technique. *Journal of Biomedical Materials Research - Part A*, **2006**, 76, 681-9	5.4	60
385	In vitro reconstitution of fibrillar collagen type I assemblies at reactive polymer surfaces. *Biomacromolecules*, **2004**, 5, 1340-50	6.9	59
384	Surface characterization of hemodialysis membranes based on streaming potential measurements. *Journal of Biomaterials Science, Polymer Edition*, **1995**, 7, 61-76	3.5	58
383	Diversity and potential correlations to the function of Collembola cuticle structures. *Zoomorphology*, **2013**, 132, 183-195	1	57
382	Using Mean Field Theory to Guide Biofunctional Materials Design. *Advanced Functional Materials*, **2012**, 22, 1391-1398	15.6	57
381	Thermo-reversible swelling of thin hydrogel films immobilized by low-pressure plasma. *Langmuir*, **2004**, 20, 10107-14	4	57
380	A novel, biased-like SDF-1 derivative acts synergistically with starPEG-based heparin hydrogels and improves eEPC migration in vitro. *Journal of Controlled Release*, **2012**, 162, 68-75	11.7	56
379	Macroporous starPEG-heparin cryogels. *Biomacromolecules*, **2012**, 13, 2349-58	6.9	56
378	Durable surface modification of poly(tetrafluoroethylene) by low pressure H2O plasma treatment followed by acrylic acid graft polymerization. *Colloids and Surfaces B: Biointerfaces*, **2002**, 24, 63-71	6	56
377	Fibronectin anchorage to polymer substrates controls the initial phase of endothelial cell adhesion. *Journal of Biomedical Materials Research - Part A*, **2003**, 67, 647-57	5.4	56
376	Geometry-driven cell organization determines tissue growths in scaffold pores: consequences for fibronectin organization. *PLoS ONE*, **2013**, 8, e73545	3.7	56
375	Antifouling potential of Subtilisin A immobilized onto maleic anhydride copolymer thin films. *Biofouling*, **2009**, 25, 505-16	3.3	55
374	Design and evaluation of novel blood incubation systems for in vitro hemocompatibility assessment of planar solid surfaces **2003**, 66, 379-90		55
373	Impedance spectroscopy studies of interfacial acidBase reactions of self-assembled monolayers. *Journal of Electroanalytical Chemistry*, **2003**, 540, 145-151	4.1	55
372	The impact of structure dimensions on initial bacterial adhesion. *Biomaterials Science*, **2016**, 4, 1074-8	7.4	54
371	Minimal peptide motif for non-covalent peptide-heparin hydrogels. *Journal of the American Chemical Society*, **2013**, 135, 2919-22	16.4	54
370	Hematopoietic stem and progenitor cells in adhesive microcavities. *Integrative Biology (United Kingdom)*, **2009**, 1, 427-34	3.7	54

369	Extracellular matrix deposition of bone marrow stroma enhanced by macromolecular crowding. *Biomaterials*, **2015**, 73, 60-9	15.6	53
368	Electrokinetics of diffuse soft interfaces. IV. Analysis of streaming current measurements at thermoresponsive thin films. *Langmuir*, **2009**, 25, 10691-703	4	53
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366	Biocompatibility and surface structure of chemically modified immunoisolating alginate-PLL capsules. *Journal of Biomedical Materials Research - Part A*, **2003**, 67, 1219-27	5.4	52
365	Two-tier hydrogel degradation to boost endothelial cell morphogenesis. *Biomaterials*, **2011**, 32, 9649-57	15.6	51
364	Modulating Biofunctional starPEG Heparin Hydrogels by Varying Size and Ratio of the Constituents. *Polymers*, **2011**, 3, 602-620	4.5	51
363	Modular StarPEG-Heparin Gels with Bifunctional Peptide Linkers. *Macromolecular Rapid Communications*, **2010**, 31, 1529-33	4.8	51
362	Standardized microgel beads as elastic cell mechanical probes. *Journal of Materials Chemistry B*, **2018**, 6, 6245-6261	7.3	51
361	The multi-layered protective cuticle of Collembola: a chemical analysis. *Journal of the Royal Society Interface*, **2014**, 11,	4.1	50
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359	Fibronectin displacement at polymer surfaces. *Langmuir*, **2005**, 21, 4571-7	4	50
358	Tackling Cell Transplantation Anoikis: An Injectable, Shape Memory Cryogel Microcarrier Platform Material for Stem Cell and Neuronal Cell Growth. *Small*, **2015**, 11, 5047-53	11	49
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356	Electrohydrodynamics of soft polyelectrolyte multilayers: point of zero-streaming current. *Langmuir*, **2011**, 27, 10739-52	4	49
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353	The microscopy cell (MicCell), a versatile modular flowthrough system for cell biology, biomaterial research, and nanotechnology. *Microfluidics and Nanofluidics*, **2006**, 2, 21-36	2.8	48
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350	Enzymatically degradable heparin-polyethylene glycol gels with controlled mechanical properties. *Chemical Communications*, **2010**, 46, 1141-3	5.8	47
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347	Surface Characterization of Polymers for Medical Devices. *International Journal of Artificial Organs*, **1999**, 22, 160-176	1.9	46
346	TGF□functionalized starPEG-heparin hydrogels modulate human dermal fibroblast growth and differentiation. *Acta Biomaterialia*, **2015**, 25, 65-75	10.8	45
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342	Biocompatibility assessment of silk nanoparticles: hemocompatibility and internalization by human blood cells. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2017**, 13, 2633-2642	6	44
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327	Highly Conductive, Stretchable, and Cell-Adhesive Hydrogel by Nanoclay Doping. *Small*, **2019**, 15, e1901406	10.6	40
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325	Musculoskeletal response to whole-body vibration during fracture healing in intact and ovariectomized rats. *Calcified Tissue International*, **2010**, 87, 168-80	3.9	40
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322	3D Microenvironment Stiffness Regulates Tumor Spheroid Growth and Mechanics via p21 and ROCK. *Advanced Biology*, **2019**, 3, e1900128	3.5	38
321	Extracellular matrix functionalized microcavities to control hematopoietic stem and progenitor cell fate. *Macromolecular Bioscience*, **2011**, 11, 739-47	5.5	38
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