Gnter E M Tovar

List of Publications by Citations

95	2,035	23	42
papers	citations	h-index	g-index
101	2,337	4.7	4.97
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
95	Chemical tailoring of gelatin to adjust its chemical and physical properties for functional bioprinting. *Journal of Materials Chemistry B*, **2013**, 1, 5675-5685	7.3	146
94	Stiff gelatin hydrogels can be photo-chemically synthesized from low viscous gelatin solutions using molecularly functionalized gelatin with a high degree of methacrylation. *Journal of Materials Science: Materials in Medicine*, **2012**, 23, 2607-17	4.5	143
93	Molecularly imprinted polymer nanospheres as synthetic affinity receptors obtained by miniemulsion polymerisation. *Macromolecular Chemistry and Physics*, **2002**, 203, 1965-1973	2.6	129
92	Bioprinting of artificial blood vessels: current approaches towards a demanding goal. *European Journal of Cardio-thoracic Surgery*, **2014**, 46, 767-78	3	122
91	Fabrication of 2D protein microstructures and 3D polymer-protein hybrid microstructures by two-photon polymerization. *Biofabrication*, **2011**, 3, 025003	10.5	104
90	Microstructuring of Molecularly Thin Polymer Layers by Photolithography. *Advanced Materials*, **1998**, 10, 1073-1077	24	97
89	Bone matrix production in hydroxyapatite-modified hydrogels suitable for bone bioprinting. *Biofabrication*, **2017**, 9, 044103	10.5	90
88	Controlled surface functionalization of silica nanospheres by covalent conjugation reactions and preparation of high density streptavidin nanoparticles. *Journal of Nanoscience and Nanotechnology*, **2004**, 4, 504-11	1.3	76
87	Methacrylated gelatin and mature adipocytes are promising components for adipose tissue engineering. *Journal of Biomaterials Applications*, **2016**, 30, 699-710	2.9	75
86	Quantification of Substitution of Gelatin Methacryloyl: Best Practice and Current Pitfalls. *Biomacromolecules*, **2018**, 19, 42-52	6.9	59
85	Isothermal Titration Calorimetry of Molecularly Imprinted Polymer Nanospheres. *Macromolecular Rapid Communications*, **2002**, 23, 824-828	4.8	50
84	Selective separations and hydrodynamic studies: a new approach using molecularly imprinted nanosphere composite membranes. *Desalination*, **2002**, 149, 315-321	10.3	47
83	Plant virus-based materials for biomedical applications: Trends and prospects. *Advanced Drug Delivery Reviews*, **2019**, 145, 96-118	18.5	47
82	Mixed self-assembled monolayers (SAMs) consisting of methoxy-tri(ethylene glycol)-terminated and alkyl-terminated dimethylchlorosilanes control the non-specific adsorption of proteins at oxidic surfaces. *Journal of Colloid and Interface Science*, **2006**, 295, 427-35	9.3	40
81	Neural cell pattern formation on glass and oxidized silicon surfaces modified with poly(N-isopropylacrylamide). *Journal of Biomaterials Science, Polymer Edition*, **1996**, 8, 19-39	3.5	37
80	A systematic approach of chitosan nanoparticle preparation via emulsion crosslinking as potential adsorbent in wastewater treatment. *Carbohydrate Polymers*, **2018**, 180, 46-54	10.3	35
79	Polymer Nanoparticles with Activated Ester Surface by Using Functional Surfmers. *Macromolecular Chemistry and Physics*, **2003**, 204, 770-778	2.6	32

78	Binding of JAB1/CSN5 to MIF is mediated by the MPN domain but is independent of the JAMM motif. *FEBS Letters*, **2005**, 579, 1693-701	3.8	30
77	Hydroxyapatite-modified gelatin bioinks for bone bioprinting. *BioNanoMaterials*, **2016**, 17,		27
76	Tumor necrosis factor (TNF)-functionalized nanostructured particles for the stimulation of membrane TNF-specific cell responses. *Bioconjugate Chemistry*, **2005**, 16, 1459-67	6.3	27
75	Blood-Vessel Mimicking Structures by Stereolithographic Fabrication of Small Porous Tubes Using Cytocompatible Polyacrylate Elastomers, Biofunctionalization and Endothelialization. *Journal of Functional Biomaterials*, **2016**, 7,	4.8	27
74	Affinity parameters of amino acid derivative binding to molecularly imprinted nanospheres consisting of poly[(ethylene glycol dimethacrylate)-co-(methacrylic acid)]. *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*, **2004**, 808, 43-50	3.2	26
73	Optical sensors with molecularly imprinted nanospheres: a promising approach for robust and label-free detection of small molecules. *Analytical and Bioanalytical Chemistry*, **2012**, 402, 3245-52	4.4	24
72	Beyond the Modification Degree: Impact of Raw Material on Physicochemical Properties of Gelatin Type A and Type B Methacryloyls. *Macromolecular Bioscience*, **2018**, 18, e1800168	5.5	23
71	Influence of shear thinning and material flow on robotic dispensing of poly(ethylene glycol) diacrylate/poloxamer 407 hydrogels. *Journal of Applied Polymer Science*, **2017**, 134, 45083	2.9	21
70	clickECM: Development of a cell-derived extracellular matrix with azide functionalities. *Acta Biomaterialia*, **2017**, 52, 159-170	10.8	21
69	Controlled Release of Vascular Endothelial Growth Factor from Heparin-Functionalized Gelatin Type A and Albumin Hydrogels. *Gels*, **2017**, 3,	4.2	20
68	Influence of PDMS molecular weight on transparency and mechanical properties of soft polysiloxane-urea-elastomers for intraocular lens application. *European Polymer Journal*, **2018**, 101, 190-201	5.2	19
67	Triphenylene silanes for direct surface anchoring in binary mixed self-assembled monolayers. *Langmuir*, **2012**, 28, 8399-407	4	19
66	Biopolymer-based hydrogels for cartilage tissue engineering. *Bioinspired, Biomimetic and Nanobiomaterials*, **2016**, 5, 51-66	1.3	18
65	Physical Interactions Strengthen Chemical Gelatin Methacryloyl Gels. *Gels*, **2019**, 5,	4.2	17
64	Nano-MIP based sensor for penicillin G: Sensitive layer and analytical validation. *Sensors and Actuators B: Chemical*, **2018**, 267, 26-33	8.5	17
63	Toward Controlling the Formation, Degradation Behavior, and Properties of Hydrogels Synthesized by Aza-Michael Reactions. *Macromolecular Chemistry and Physics*, **2013**, 214, 1865-1873	2.6	17
62	Side chain thiol-functionalized poly(ethylene glycol) by post-polymerization modification of hydroxyl groups: synthesis, crosslinking and inkjet printing. *Polymer Chemistry*, **2014**, 5, 5350-5359	4.9	16
61	Heparin molecularly imprinted surfaces for the attenuation of complement activation in blood. *Biomaterials Science*, **2015**, 3, 1208-17	7.4	15

60	Extrusion-Based 3D Printing of Poly(ethylene glycol) Diacrylate Hydrogels Containing Positively and Negatively Charged Groups. *Gels*, **2018**, 4,	4.2	15
59	Impact of intermediate UV curing and yield stress of 3D printed poly(ethylene glycol) diacrylate hydrogels on interlayer connectivity and maximum build height. *Additive Manufacturing*, **2017**, 18, 136-144	6.1	14
58	Chitosan nanoparticles via high-pressure homogenization-assisted miniemulsion crosslinking for mixed-matrix membrane adsorbers. *Carbohydrate Polymers*, **2018**, 201, 172-181	10.3	14
57	Nanostructured Composite Adsorber Membranes for the Reduction of Trace Substances in Water: The Example of Bisphenol A. *Industrial & Engineering Chemistry Research*, **2013**, 52, 14011-14018	3.9	14
56	Molecularly Imprinted Polymer Nanospheres as Fully Synthetic Affinity Receptors. *Topics in Current Chemistry*, **2003**, 125-144		14
55	Microstructured layers of spherical biofunctional core-shell nanoparticles provide enlarged reactive surfaces for protein microarrays. *Analytical and Bioanalytical Chemistry*, **2005**, 383, 738-46	4.4	14
54	Removal of micropollutants from water by nanocomposite membrane adsorbers. *Separation and Purification Technology*, **2014**, 131, 60-68	8.3	13
53	Physically and chemically gelling hydrogel formulations based on poly(ethylene glycol) diacrylate and Poloxamer 407. *Polymer*, **2017**, 108, 21-28	3.9	12
52	Desmosine-inspired cross-linkers for hyaluronan hydrogels. *Scientific Reports*, **2013**, 3, 2043	4.9	12
51	Precision 3D-Printed Cell Scaffolds Mimicking Native Tissue Composition and Mechanics. *Advanced Healthcare Materials*, **2020**, 9, e2000918	10.1	12
50	Data on the synthesis and mechanical characterization of polysiloxane-based urea-elastomers prepared from amino-terminated polydimethylsiloxanes and polydimethyl-methyl-phenyl-siloxane-copolymers. *Data in Brief*, **2018**, 18, 1784-1794	1.2	11
49	Simulation of imprinted emulsion prepolymerization mixtures. *Polymer Journal*, **2015**, 47, 827-830	2.7	10
48	Charged Triazole Cross-Linkers for Hyaluronan-Based Hybrid Hydrogels. *Materials*, **2016**, 9,	3.5	10
47	Molekular geprgte Nanopartikel als selektive Phase in Kompositmembranen: Hydrodynamik und Stofftrennung in nanoskaligen Schtungen. *Chemie-Ingenieur-Technik*, **2003**, 75, 149-153	0.8	9
46	Differentiation of physical and chemical cross-linking in gelatin methacryloyl hydrogels. *Scientific Reports*, **2021**, 11, 3256	4.9	9
45	Photoinduced Cleavage and Hydrolysis of o-Nitrobenzyl Linker and Covalent Linker Immobilization in Gelatin Methacryloyl Hydrogels. *Macromolecular Bioscience*, **2018**, 18, e1800104	5.5	9
44	Covalent incorporation of tobacco mosaic virus increases the stiffness of poly(ethylene glycol) diacrylate hydrogels.. *RSC Advances*, **2018**, 8, 4686-4694	3.7	8
43	Interactions of methacryloylated gelatin and heparin modulate physico-chemical properties of hydrogels and release of vascular endothelial growth factor. *Biomedical Materials (Bristol)*, **2018**, 13, 055008	3.5	8

42	Synthesis of Pyridine Acrylates and Acrylamides and Their Corresponding Pyridinium Ions as Versatile Cross-Linkers for Tunable Hydrogels. *Synthesis*, **2014**, 46, 1243-1253	2.9	8
41	Molecularly Imprinted Polymer Waveguides for Direct Optical Detection of Low-Molecular-Weight Analytes. *Macromolecular Chemistry and Physics*, **2014**, 215, 2295-2304	2.6	8
40	Gelatin methacrylamide as coating material in cell culture. *Biointerphases*, **2016**, 11, 021007	1.8	8
39	Surface etching of methacrylic microparticles via basic hydrolysis and introduction of functional groups for click chemistry. *Journal of Colloid and Interface Science*, **2013**, 397, 185-91	9.3	7
38	Evaluation of Cell-Material Interactions on Newly Designed, Printable Polymers for Tissue Engineering Applications. *Advanced Engineering Materials*, **2011**, 13, B467-B475	3.5	7
37	Development of an MHC-class I peptide selection assay combining nanoparticle technology and matrix-assisted laser desorption/ionisation mass spectrometry. *Journal of Immunological Methods*, **2003**, 283, 205-13	2.5	7
36	Influence of Hard Segment Content and Diisocyanate Structure on the Transparency and Mechanical Properties of Poly(dimethylsiloxane)-Based Urea Elastomers for Biomedical Applications. *Polymers*, **2021**, 13,	4.5	7
35	Bioconjugative polymer nanospheres studied by isothermal titration calorimetry. *Thermochimica Acta*, **2004**, 415, 69-74	2.9	6
34	Active Ester Containing Surfmer for One-Stage Polymer Nanoparticle Surface Functionalization in Mini-Emulsion Polymerization. *Polymers*, **2018**, 10,	4.5	5
33	Hydrogels with multiple clickable anchor points: synthesis and characterization of poly(furfuryl glycidyl ether)-block-poly(ethylene glycol) macromonomers. *Polymer Chemistry*, **2019**, 10, 4485-4494	4.9	5
32	Azide-Functional Extracellular Matrix Coatings as a Bioactive Platform for Bioconjugation. *ACS Applied Materials & Interfaces*, **2020**, 12, 26868-26879	9.5	4
31	Preparation and characterisation of dry thin native protein trehalose films on titanium-coated cyclo-olefin polymer (COP) foil generated by spin-coating/drying process and applied for protein transfer by Laser-Induced-Forward Transfer (LIFT). *Chemical Engineering and Processing: Process Intensification*, **2011**, 50, 558-564	3.7	4
30	Ink Formulation for Inkjet Printing of Streptavidin and Streptavidin Functionalized Nanoparticles. *Journal of Dispersion Science and Technology*, **2011**, 32, 1759-1764	1.5	4
29	Surface functionalization of toner particles for three-dimensional laser-printing in biomaterial applications. *Materials Research Society Symposia Proceedings*, **2011**, 1340, 1		3
28	Modular Surfmers with Activated Ester Function A Colloidal Tool for the Preparation of Bioconjugative Nanoparticles **2006**, 30-34		3
27	A successive dry–wet process for fabricating conductive thin film of bis(ethylenedithio)tetrathiafulvalene salt. *Thin Solid Films*, **2001**, 393, 225-230	2.2	3
26	Synthesis of Soft Polysiloxane-urea Elastomers for Intraocular Lens Application. *Journal of Visualized Experiments*, **2019**,	1.6	2
25	Water treatment by molecularly imprinted polymer nanoparticles. *Materials Research Society Symposia Proceedings*, **2009**, 1169, 407		2

24	Modularer Aufbau von Biochips durch mikrostrukturierte Abscheidung von funktionellen Nanopartikeln. *Chemie-Ingenieur-Technik*, **2003**, 75, 437-441	0.8	2
23	Coumarin-4-ylmethyl- and p-Hydroxyphenacyl-Based Photoacid Generators with High Solubility in Aqueous Media: Synthesis, Stability and Photolysis. *ChemPhotoChem*, **2020**, 4, 207-217	3.3	2
22	Tribological Conditions Using CO2 as Volatile Lubricant in Dry Metal Forming. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2020**, 7, 965-973	3.8	2
21	Triazole-based cross-linkers in radical polymerization processes: tuning mechanical properties of poly(acrylamide) and poly(-dimethylacrylamide) hydrogels.. *RSC Advances*, **2018**, 8, 34743-34753	3.7	2
20	Fluorescent spherical monodisperse silica core-shell nanoparticles with a protein-binding biofunctional shell. *Methods in Molecular Biology*, **2013**, 991, 293-306	1.4	1
19	C-VIS: Interoperative Tumorerkennung mit Hilfe von Nanopartikeln. *Endoskopie Heute*, **2009**, 22, 36-39		1
18	In vitro study of mouse fibroblast tumor cells with TNF coated and Alexa488 marked silica nanoparticles with an endoscopic device for real time cancer visualization. *Materials Research Society Symposia Proceedings*, **2009**, 1190, 172		1
17	Modular Structure of Biochips Based on Microstructured Deposition of Functional Nanoparticles. *Engineering in Life Sciences*, **2004**, 4, 93-97	3.4	1
16	Friction and Wear Behavior of Deep Drawing Tools Using Volatile Lubricants Injected Through Laser-Drilled Micro-Holes. *Jom*,1	2.1	1
15	Structure roperty relations of amphiphilic poly(furfuryl glycidyl ether)-block-poly(ethylene glycol) macromonomers at the air water interface. *Polymer Chemistry*, **2020**, 11, 5659-5668	4.9	1
14	The choice of biopolymer is crucial to trigger angiogenesis with vascular endothelial growth factor releasing coatings. *Journal of Materials Science: Materials in Medicine*, **2020**, 31, 93	4.5	1
13	Turbulent energy transfer into zonal flows from the weak to the strong flow shear regime in the stellarator TJ-K. *Physics of Plasmas*, **2021**, 28, 052502	2.1	1
12	Acid catalyzed cross-linking of polyvinyl alcohol for humidifier membranes. *Journal of Applied Polymer Science*,51606	2.9	1
11	Biomimetic Nanoparticles Providing Molecularly Defined Binding Sites rotein-Featuring Structures versus Molecularly Imprinted Polymers31-67		1
10	Expanding the Range of Available Isoelectric Points of Highly Methacryloylated Gelatin. *Macromolecular Chemistry and Physics*, **2019**, 220, 1900097	2.6	0
9	Multi-axis 3D printing of gelatin methacryloyl hydrogels on a non-planar surface obtained from magnetic resonance imaging. *Additive Manufacturing*, **2022**, 50, 102566	6.1	0
8	Eclectic characterisation of chemically modified cell-derived matrices obtained by metabolic glycoengineering and re-assessment of commonly used methods.. *RSC Advances*, **2020**, 10, 35273-35286	3.7	0
7	Azido-functionalized gelatin via direct conversion of lysine amino groups by diazo transfer as a building block for biofunctional hydrogels. *Journal of Biomedical Materials Research - Part A*, **2021**, 109, 77-91	5.4	0

List of Publications

6	Experimental observation of resonance manifold shrinking under zonal flow shear. *Physical Review E*, **2020**, 102, 063201	2.4
5	Oberflächenfunktionalisierung von Tonerpartikeln für den Aufbau dreidimensionaler Objekte mittels Klick-Chemie. *Chemie-Ingenieur-Technik*, **2012**, 84, 322-327	0.8
4	Generation and Surface Functionalization of Electro Photographic Toner Particles for Biomaterial Applications. *Materials Research Society Symposia Proceedings*, **2013**, 1569, 165-171	
3	Grenzflächen und der Blick aufs Ganze. *Nachrichten Aus Der Chemie*, **2003**, 51, 929-929	0.1
2	Bio-Microarrays382-390	
1	Modular Surfmers with Activated Ester Function □A□Colloidal Tool for the Preparation of Bioconjugative Nanoparticles30-34	