

GÃ¼nter E M Tovar

List of Publications by Year in descending order

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95
papers

2,702
citations

201385

27
h-index

197535

49
g-index

101
all docs

101
docs citations

101
times ranked

3531
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Stiff gelatin hydrogels can be photo-chemically synthesized from low viscous gelatin solutions using molecularly functionalized gelatin with a high degree of methacrylation. <i>Journal of Materials Science: Materials in Medicine</i> , 2012, 23, 2607-2617. | 1.7 | 195 |
| 2 | Chemical tailoring of gelatin to adjust its chemical and physical properties for functional bioprinting. <i>Journal of Materials Chemistry B</i> , 2013, 1, 5675. | 2.9 | 195 |
| 3 | Bioprinting of artificial blood vessels: current approaches towards a demanding goal. <i>European Journal of Cardio-thoracic Surgery</i> , 2014, 46, 767-778. | 0.6 | 158 |
| 4 | Title is missing!. <i>Macromolecular Chemistry and Physics</i> , 2002, 203, 1965-1973. | 1.1 | 153 |
| 5 | Bone matrix production in hydroxyapatite-modified hydrogels suitable for bone bioprinting. <i>Biofabrication</i> , 2017, 9, 044103. | 3.7 | 124 |
| 6 | Fabrication of 2D protein microstructures and 3D polymerâ€protein hybrid microstructures by two-photon polymerization. <i>Biofabrication</i> , 2011, 3, 025003. | 3.7 | 120 |
| 7 | Microstructuring of Molecularly Thin Polymer Layers by Photolithography. <i>Advanced Materials</i> , 1998, 10, 1073-1077. | 11.1 | 107 |
| 8 | Methacrylated gelatin and mature adipocytes are promising components for adipose tissue engineering. <i>Journal of Biomaterials Applications</i> , 2016, 30, 699-710. | 1.2 | 98 |
| 9 | Quantification of Substitution of Gelatin Methacryloyl: Best Practice and Current Pitfalls. <i>Biomacromolecules</i> , 2018, 19, 42-52. | 2.6 | 93 |
| 10 | Controlled Surface Functionalization of Silica Nanospheres by Covalent Conjugation Reactions and Preparation of High Density Streptavidin Nanoparticles. <i>Journal of Nanoscience and Nanotechnology</i> , 2004, 4, 504-511. | 0.9 | 85 |
| 11 | Plant virus-based materials for biomedical applications: Trends and prospects. <i>Advanced Drug Delivery Reviews</i> , 2019, 145, 96-118. | 6.6 | 66 |
| 12 | Isothermal Titration Calorimetry of Molecularly Imprinted Polymer Nanospheres. <i>Macromolecular Rapid Communications</i> , 2002, 23, 824-828. | 2.0 | 60 |
| 13 | Selective separations and hydrodynamic studies: a new approach using molecularly imprinted nanosphere composite membranes. <i>Desalination</i> , 2002, 149, 315-321. | 4.0 | 54 |
| 14 | A systematic approach of chitosan nanoparticle preparation via emulsion crosslinking as potential adsorbent in wastewater treatment. <i>Carbohydrate Polymers</i> , 2018, 180, 46-54. | 5.1 | 53 |
| 15 | Neural cell pattern formation on glass and oxidized silicon surfaces modified with poly(N-isopropylacrylamide). <i>Journal of Biomaterials Science, Polymer Edition</i> , 1997, 8, 19-39. | 1.9 | 47 |
| 16 | Differentiation of physical and chemical cross-linking in gelatin methacryloyl hydrogels. <i>Scientific Reports</i> , 2021, 11, 3256. | 1.6 | 44 |
| 17 | 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. <i>Journal of Colloid and Interface Science</i> , 2006, 295, 427-435. | 5.0 | 42 |
| 18 | Beyond the Modification Degree: Impact of Raw Material on Physicochemical Properties of Gelatin Type A and Type B Methacryloyls. <i>Macromolecular Bioscience</i> , 2018, 18, e1800168. | 2.1 | 39 |

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|----|---|-----|-----------|
| 19 | Binding of JAB1/CSN5 to MIF is mediated by the MPN domain but is independent of the JAMM motif. <i>FEBS Letters</i> , 2005, 579, 1693-1701. | 1.3 | 37 |
| 20 | Hydroxyapatite-modified gelatin bioinks for bone bioprinting. <i>BioNanoMaterials</i> , 2016, 17, . | 1.4 | 35 |
| 21 | Polymer Nanoparticles with Activated Ester Surface by Using Functional Surfmers. <i>Macromolecular Chemistry and Physics</i> , 2003, 204, 770-778. | 1.1 | 34 |
| 22 | Blood-Vessel Mimicking Structures by Stereolithographic Fabrication of Small Porous Tubes Using Cytocompatible Polyacrylate Elastomers, Biofunctionalization and Endothelialization. <i>Journal of Functional Biomaterials</i> , 2016, 7, 11. | 1.8 | 31 |
| 23 | Controlled Release of Vascular Endothelial Growth Factor from Heparin-Functionalized Gelatin Type A and Albumin Hydrogels. <i>Gels</i> , 2017, 3, 35. | 2.1 | 31 |
| 24 | Affinity parameters of amino acid derivative binding to molecularly imprinted nanospheres consisting of poly[(ethylene glycol dimethacrylate)-co-(methacrylic acid)]. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2004, 808, 43-50. | 1.2 | 30 |
| 25 | Physical Interactions Strengthen Chemical Gelatin Methacryloyl Gels. <i>Gels</i> , 2019, 5, 4. | 2.1 | 30 |
| 26 | Tumor Necrosis Factor (TNF)-Functionalized Nanostructured Particles for the Stimulation of Membrane TNF-Specific Cell Responses. <i>Bioconjugate Chemistry</i> , 2005, 16, 1459-1467. | 1.8 | 29 |
| 27 | clickECM: Development of a cell-derived extracellular matrix with azide functionalities. <i>Acta Biomaterialia</i> , 2017, 52, 159-170. | 4.1 | 29 |
| 28 | Precision 3D-Printed Cell Scaffolds Mimicking Native Tissue Composition and Mechanics. <i>Advanced Healthcare Materials</i> , 2020, 9, e2000918. | 3.9 | 29 |
| 29 | Nano-MIP based sensor for penicillin G: Sensitive layer and analytical validation. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 26-33. | 4.0 | 27 |
| 30 | Optical sensors with molecularly imprinted nanospheres: a promising approach for robust and label-free detection of small molecules. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 3245-3252. | 1.9 | 26 |
| 31 | Influence of PDMS molecular weight on transparency and mechanical properties of soft polysiloxane-urea-elastomers for intraocular lens application. <i>European Polymer Journal</i> , 2018, 101, 190-201. | 2.6 | 26 |
| 32 | Influence of shear thinning and material flow on robotic dispensing of poly(ethylene glycol) diacrylate/poloxamer 407 hydrogels. <i>Journal of Applied Polymer Science</i> , 2017, 134, 45083. | 1.3 | 23 |
| 33 | Biopolymer-based hydrogels for cartilage tissue engineering. <i>Bioinspired, Biomimetic and Nanobiomaterials</i> , 2016, 5, 51-66. | 0.7 | 22 |
| 34 | Evaluation of novel biomaterials for cartilage regeneration based on gelatin methacryloyl interpenetrated with extractive chondroitin sulfate or unsulfated biotechnological chondroitin. <i>Journal of Biomedical Materials Research - Part A</i> , 2022, 110, 1210-1223. | 2.1 | 22 |
| 35 | Removal of micropollutants from water by nanocomposite membrane adsorbers. <i>Separation and Purification Technology</i> , 2014, 131, 60-68. | 3.9 | 21 |
| 36 | Triphenylene Silanes for Direct Surface Anchoring in Binary Mixed Self-Assembled Monolayers. <i>Langmuir</i> , 2012, 28, 8399-8407. | 1.6 | 20 |

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|----|--|-----|-----------|
| 37 | Side chain thiol-functionalized poly(ethylene glycol) by post-polymerization modification of hydroxyl groups: synthesis, crosslinking and inkjet printing. <i>Polymer Chemistry</i> , 2014, 5, 5350-5359. | 1.9 | 20 |
| 38 | Extrusion-Based 3D Printing of Poly(ethylene glycol) Diacrylate Hydrogels Containing Positively and Negatively Charged Groups. <i>Gels</i> , 2018, 4, 69. | 2.1 | 20 |
| 39 | Heparin molecularly imprinted surfaces for the attenuation of complement activation in blood. <i>Biomaterials Science</i> , 2015, 3, 1208-1217. | 2.6 | 19 |
| 40 | Chitosan nanoparticles via high-pressure homogenization-assisted miniemulsion crosslinking for mixed-matrix membrane adsorbers. <i>Carbohydrate Polymers</i> , 2018, 201, 172-181. | 5.1 | 19 |
| 41 | Molecularly Imprinted Polymer Nanospheres as Fully Synthetic Affinity Receptors. <i>Topics in Current Chemistry</i> , 2003, , 125-144. | 4.0 | 18 |
| 42 | Toward Controlling the Formation, Degradation Behavior, and Properties of Hydrogels Synthesized by Aza-Michael Reactions. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 1865-1873. | 1.1 | 18 |
| 43 | Nanostructured Composite Adsorber Membranes for the Reduction of Trace Substances in Water: The Example of Bisphenol A. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 14011-14018. | 1.8 | 16 |
| 44 | Physically and chemically gelling hydrogel formulations based on poly(ethylene glycol) diacrylate and Poloxamer 407. <i>Polymer</i> , 2017, 108, 21-28. | 1.8 | 16 |
| 45 | Impact of intermediate UV curing and yield stress of 3D printed poly(ethylene glycol) diacrylate hydrogels on interlayer connectivity and maximum build height. <i>Additive Manufacturing</i> , 2017, 18, 136-144. | 1.7 | 16 |
| 46 | Photoinduced Cleavage and Hydrolysis of Nitrobenzyl Linker and Covalent Linker Immobilization in Gelatin Methacryloyl Hydrogels. <i>Macromolecular Bioscience</i> , 2018, 18, e1800104. | 2.1 | 16 |
| 47 | Influence of Hard Segment Content and Diisocyanate Structure on the Transparency and Mechanical Properties of Poly(dimethylsiloxane)-Based Urea Elastomers for Biomedical Applications. <i>Polymers</i> , 2021, 13, 212. | 2.0 | 16 |
| 48 | Microstructured layers of spherical biofunctional core-shell nanoparticles provide enlarged reactive surfaces for protein microarrays. <i>Analytical and Bioanalytical Chemistry</i> , 2005, 383, 738-746. | 1.9 | 14 |
| 49 | Charged Triazole Cross-Linkers for Hyaluronan-Based Hybrid Hydrogels. <i>Materials</i> , 2016, 9, 810. | 1.3 | 14 |
| 50 | Data on the synthesis and mechanical characterization of polysiloxane-based urea-elastomers prepared from amino-terminated polydimethylsiloxanes and polydimethyl-methyl-phenyl-siloxane-copolymers. <i>Data in Brief</i> , 2018, 18, 1784-1794. | 0.5 | 14 |
| 51 | Desmosine-Inspired Cross-Linkers for Hyaluronan Hydrogels. <i>Scientific Reports</i> , 2013, 3, 2043. | 1.6 | 13 |
| 52 | Interactions of methacryloylated gelatin and heparin modulate physico-chemical properties of hydrogels and release of vascular endothelial growth factor. <i>Biomedical Materials (Bristol)</i> , 2018, 13, 055008. | 1.7 | 13 |
| 53 | Molecularly Imprinted Polymer Waveguides for Direct Optical Detection of Low-Molecular-Weight Analytes. <i>Macromolecular Chemistry and Physics</i> , 2014, 215, 2295-2304. | 1.1 | 11 |
| 54 | Simulation of imprinted emulsion prepolymerization mixtures. <i>Polymer Journal</i> , 2015, 47, 827-830. | 1.3 | 11 |

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|----|---|-----|-----------|
| 55 | Multi-axis 3D printing of gelatin methacryloyl hydrogels on a non-planar surface obtained from magnetic resonance imaging. <i>Additive Manufacturing</i> , 2022, 50, 102566. | 1.7 | 10 |
| 56 | Gelatin methacrylamide as coating material in cell culture. <i>Biointerphases</i> , 2016, 11, 021007. | 0.6 | 9 |
| 57 | Covalent incorporation of tobacco mosaic virus increases the stiffness of poly(ethylene glycol) diacrylate hydrogels. <i>RSC Advances</i> , 2018, 8, 4686-4694. | 1.7 | 9 |
| 58 | Azide-Functional Extracellular Matrix Coatings as a Bioactive Platform for Bioconjugation. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26868-26879. | 4.0 | 9 |
| 59 | Development of an MHC-class I peptide selection assay combining nanoparticle technology and matrix-assisted laser desorption/ionisation mass spectrometry. <i>Journal of Immunological Methods</i> , 2003, 283, 205-213. | 0.6 | 8 |
| 60 | Synthesis of Pyridine Acrylates and Acrylamides and Their Corresponding Pyridinium Ions as Versatile Cross-Linkers for Tunable Hydrogels. <i>Synthesis</i> , 2014, 46, 1243-1253. | 1.2 | 8 |
| 61 | Bioconjugative polymer nanospheres studied by isothermal titration calorimetry. <i>Thermochimica Acta</i> , 2004, 415, 69-74. | 1.2 | 7 |
| 62 | Evaluation of Cell-Material Interactions on Newly Designed, Printable Polymers for Tissue Engineering Applications. <i>Advanced Engineering Materials</i> , 2011, 13, B467. | 1.6 | 7 |
| 63 | Ink Formulation for Inkjet Printing of Streptavidin and Streptavidin Functionalized Nanoparticles. <i>Journal of Dispersion Science and Technology</i> , 2011, 32, 1759-1764. | 1.3 | 7 |
| 64 | Surface etching of methacrylic microparticles via basic hydrolysis and introduction of functional groups for click chemistry. <i>Journal of Colloid and Interface Science</i> , 2013, 397, 185-191. | 5.0 | 7 |
| 65 | Acid catalyzed cross-linking of polyvinyl alcohol for humidifier membranes. <i>Journal of Applied Polymer Science</i> , 0, , 51606. | 1.3 | 7 |
| 66 | Determination of the Conversion and Efficiency for CO ₂ in an Atmospheric Pressure Microwave Plasma Torch. <i>Chemie-Ingenieur-Technik</i> , 2022, 94, 299-308. | 0.4 | 7 |
| 67 | Active Ester Containing Surfmer for One-Stage Polymer Nanoparticle Surface Functionalization in Mini-Emulsion Polymerization. <i>Polymers</i> , 2018, 10, 408. | 2.0 | 6 |
| 68 | The choice of biopolymer is crucial to trigger angiogenesis with vascular endothelial growth factor releasing coatings. <i>Journal of Materials Science: Materials in Medicine</i> , 2020, 31, 93. | 1.7 | 6 |
| 69 | 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). <i>Chemical Engineering and Processing: Process Intensification</i> , 2011, 50, 558-564. | 1.8 | 5 |
| 70 | Hydrogels with multiple clickable anchor points: synthesis and characterization of poly(furfuryl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 14 4485-4494. | 1.9 | 5 |
| 71 | Photo-crosslinking and surface-attachment of polyvinyl alcohol nanocoatings by C,H insertion to customize their swelling behavior and stability in polar media. <i>Polymer Chemistry</i> , 2022, 13, 4273-4283. | 1.9 | 5 |
| 72 | A successive dry-wet process for fabricating conductive thin film of bis(ethylenedithio)tetrathiafulvalene salt. <i>Thin Solid Films</i> , 2001, 393, 225-230. | 0.8 | 4 |

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|----|---|-----|-----------|
| 73 | Tribological Conditions Using CO ₂ as Volatile Lubricant in Dry Metal Forming. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 965-973. | 2.7 | 4 |
| 74 | Friction and Wear Behavior of Deep Drawing Tools Using Volatile Lubricants Injected Through Laser-Drilled Micro-Holes. Jom, 2022, 74, 826-836. | 0.9 | 4 |
| 75 | Modular Surfmers with Activated Ester Function â€” A Colloidal Tool for the Preparation of Bioconjugative Nanoparticles. , 2006, , 30-34. | | 3 |
| 76 | Water treatment by molecularly imprinted polymer nanoparticles. Materials Research Society Symposia Proceedings, 2009, 1169, 407. | 0.1 | 3 |
| 77 | Surface functionalization of toner particles for three-dimensional laser-printing in biomaterial applications. Materials Research Society Symposia Proceedings, 2011, 1340, 1. | 0.1 | 3 |
| 78 | Triazole-based cross-linkers in radical polymerization processes: tuning mechanical properties of poly(acrylamide) and poly(N,N-dimethylacrylamide) hydrogels. RSC Advances, 2018, 8, 34743-34753. | 1.7 | 3 |
| 79 | Expanding the Range of Available Isoelectric Points of Highly Methacryloylated Gelatin. Macromolecular Chemistry and Physics, 2019, 220, 1900097. | 1.1 | 3 |
| 80 | Synthesis of Soft Polysiloxane-urea Elastomers for Intraocular Lens Application. Journal of Visualized Experiments, 2019, , . | 0.2 | 3 |
| 81 | Coumarinâ€”methylâ€”andâ€”Hydroxyphenacylâ€”Based Photoacid Generators with High Solubility in Aqueous Media: Synthesis, Stability and Photolysis. ChemPhotoChem, 2020, 4, 207-217. | 1.5 | 3 |
| 82 | 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. | 1.7 | 3 |
| 83 | Modular Structure of Biochips Based on Microstructured Deposition of Functional Nanoparticles. Engineering in Life Sciences, 2004, 4, 93-97. | 2.0 | 2 |
| 84 | Structureâ€”property relations of amphiphilic poly(furfuryl glycidyl ether)- <i>block</i> -poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf | 1.9 | 2 |
| 85 | 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, . | 0.7 | 2 |
| 86 | 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. | 0.1 | 1 |
| 87 | Fluorescent Spherical Monodisperse Silica Coreâ€”Shell Nanoparticles with a Protein-Binding Biofunctional Shell. Methods in Molecular Biology, 2013, 991, 293-306. | 0.4 | 1 |
| 88 | Experimental observation of resonance manifold shrinking under zonal flow shear. Physical Review E, 2020, 102, 063201. | 0.8 | 1 |
| 89 | Azidoâ€”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. | 2.1 | 1 |
| 90 | GrenzflÃ¤chen und der Blick aufs Ganze. Nachrichten Aus Der Chemie, 2003, 51, 929-929. | 0.0 | 0 |

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|----|--|-----|-----------|
| 91 | Cover Advanced Biomaterials 7/2011. Advanced Engineering Materials, 2011, 13, n/a-n/a. | 1.6 | 0 |
| 92 | Surface Functionalization of Toner Particles for the Assembly of Threeâ€³Dimensional Objects via Click Chemistry. Chemie-Ingenieur-Technik, 2012, 84, 322-327. | 0.4 | 0 |
| 93 | Generation and Surface Functionalization of Electro Photographic Toner Particles for Biomaterial Applications. Materials Research Society Symposia Proceedings, 2013, 1569, 165-171. | 0.1 | 0 |
| 94 | Modelling and Study of a Microwave Plasma Source for High-rate Etching. , 0, , . | | 0 |
| 95 | Modular Surfmers with Activated Ester Function â€œ AÂˆColloidal Tool for the Preparation of Bioconjugative Nanoparticles. , 0, , 30-34. | | 0 |