# Thomas R Scheibel

List of Publications by Citations



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|---|---|---|---|
| 234 papers | 11,838 citations | 56 h-index | 102 g-index |
| 248 ext. papers | 13,301 ext. citations | 7.6 avg, IF | 6.9 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 234 | Conducting nanowires built by controlled self-assembly of amyloid fibers and selective metal deposition. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 4527-32 | 11.5 | 656 |
| 233 | Strategies and Molecular Design Criteria for 3D Printable Hydrogels. *Chemical Reviews*, **2016**, 116, 1496-539 | 51.1 | 461 |
| 232 | Polymeric materials based on silk proteins. *Polymer*, **2008**, 49, 4309-4327 | 3.9 | 383 |
| 231 | Spider silk: from soluble protein to extraordinary fiber. *Angewandte Chemie - International Edition*, **2009**, 48, 3584-96 | 16.4 | 381 |
| 230 | Controlling silk fibroin particle features for drug delivery. *Biomaterials*, **2010**, 31, 4583-91 | 15.6 | 356 |
| 229 | A conserved spider silk domain acts as a molecular switch that controls fibre assembly. *Nature*, **2010**, 465, 239-42 | 50.4 | 309 |
| 228 | Assembly mechanism of recombinant spider silk proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 6590-5 | 11.5 | 288 |
| 227 | Primary structure elements of spider dragline silks and their contribution to protein solubility. *Biochemistry*, **2004**, 43, 13604-12 | 3.2 | 285 |
| 226 | Composite materials based on silk proteins. *Progress in Polymer Science*, **2010**, 35, 1093-1115 | 29.6 | 243 |
| 225 | Two chaperone sites in Hsp90 differing in substrate specificity and ATP dependence. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 1495-9 | 11.5 | 232 |
| 224 | Decoding the secrets of spider silk. *Materials Today*, **2011**, 14, 80-86 | 21.8 | 224 |
| 223 | The elaborate structure of spider silk: structure and function of a natural high performance fiber. *Prion*, **2008**, 2, 154-61 | 2.3 | 223 |
| 222 | Spider silks: recombinant synthesis, assembly, spinning, and engineering of synthetic proteins. *Microbial Cell Factories*, **2004**, 3, 14 | 6.4 | 220 |
| 221 | Biotechnological production of spider-silk proteins enables new applications. *Macromolecular Bioscience*, **2007**, 7, 401-9 | 5.5 | 194 |
| 220 | Biofabrication of cell-loaded 3D spider silk constructs. *Angewandte Chemie - International Edition*, **2015**, 54, 2816-20 | 16.4 | 169 |
| 219 | Silk-based materials for biomedical applications. *Biotechnology and Applied Biochemistry*, **2010**, 55, 155-67 | 2.8 | 169 |
| 218 | Protein fibers as performance proteins: new technologies and applications. *Current Opinion in Biotechnology*, **2005**, 16, 427-33 | 11.4 | 160 |

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| 217 | Cell adhesion and proliferation on RGD-modified recombinant spider silk proteins. *Biomaterials*, **2012**, 33, 6650-9 | 15.6 | 157 |
| 216 | Novel assembly properties of recombinant spider dragline silk proteins. *Current Biology*, **2004**, 14, 2070-4 | 6.3 | 151 |
| 215 | The Hsp90 complex--a super-chaperone machine as a novel drug target. *Biochemical Pharmacology*, **1998**, 56, 675-82 | 6 | 150 |
| 214 | Biomimetic fibers made of recombinant spidroins with the same toughness as natural spider silk. *Advanced Materials*, **2015**, 27, 2189-94 | 24 | 148 |
| 213 | Recombinant spider silk proteins for applications in biomaterials. *Macromolecular Bioscience*, **2010**, 10, 998-1007 | 5.5 | 146 |
| 212 | Spider silk and amyloid fibrils: a structural comparison. *Macromolecular Bioscience*, **2007**, 7, 183-8 | 5.5 | 141 |
| 211 | Biomedical Applications of Recombinant Silk-Based Materials. *Advanced Materials*, **2018**, 30, e1704636 | 24 | 140 |
| 210 | Peptide adsorption on a hydrophobic surface results from an interplay of solvation, surface, and intrapeptide forces. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 2842-7 | 11.5 | 135 |
| 209 | An engineered spider silk protein forms microspheres. *Angewandte Chemie - International Edition*, **2008**, 47, 4592-4 | 16.4 | 125 |
| 208 | Recombinant spider silk particles as drug delivery vehicles. *Biomaterials*, **2011**, 32, 2233-40 | 15.6 | 121 |
| 207 | Rheological characterization of hydrogels formed by recombinantly produced spider silk. *Applied Physics A: Materials Science and Processing*, **2006**, 82, 261-264 | 2.6 | 120 |
| 206 | Processing and modification of films made from recombinant spider silk proteins. *Applied Physics A: Materials Science and Processing*, **2006**, 82, 219-222 | 2.6 | 115 |
| 205 | Hierarchical structures made of proteins. The complex architecture of spider webs and their constituent silk proteins. *Chemical Society Reviews*, **2010**, 39, 156-64 | 58.5 | 114 |
| 204 | Engineered Microcapsules Fabricated from Reconstituted Spider Silk. *Advanced Materials*, **2007**, 19, 1810-1815 | 24 | 114 |
| 203 | pH-dependent dimerization and salt-dependent stabilization of the N-terminal domain of spider dragline silk--implications for fiber formation. *Angewandte Chemie - International Edition*, **2011**, 50, 310-3 | 16.4 | 107 |
| 202 | Controlled hydrogel formation of a recombinant spider silk protein. *Biomacromolecules*, **2011**, 12, 2488-95 | 5.9 | 101 |
| 201 | The charged region of Hsp90 modulates the function of the N-terminal domain. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 1297-302 | 11.5 | 97 |
| 200 | The role of conformational flexibility in prion propagation and maintenance for Sup35p. *Nature Structural Biology*, **2001**, 8, 958-62 | | 94 |

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| 199 | Processing conditions for the formation of spider silk microspheres. *ChemSusChem*, **2008**, 1, 413-6 | 8.3 | 93 |
| 198 | ATP-binding properties of human Hsp90. *Journal of Biological Chemistry*, **1997**, 272, 18608-13 | 5.4 | 91 |
| 197 | Silk-inspired polymers and proteins. *Biochemical Society Transactions*, **2009**, 37, 677-81 | 5.1 | 83 |
| 196 | The amphiphilic properties of spider silks are important for spinning. *Angewandte Chemie - International Edition*, **2007**, 46, 3559-62 | 16.4 | 83 |
| 195 | Assessment of the ATP binding properties of Hsp90. *Journal of Biological Chemistry*, **1996**, 271, 10035-41 | 5.4 | 82 |
| 194 | The elongation of yeast prion fibers involves separable steps of association and conversion. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 2287-92 | 11.5 | 81 |
| 193 | Bidirectional amyloid fiber growth for a yeast prion determinant. *Current Biology*, **2001**, 11, 366-9 | 6.3 | 80 |
| 192 | Recombinant production of spider silk proteins. *Advances in Applied Microbiology*, **2013**, 82, 115-53 | 4.9 | 79 |
| 191 | Spider Silk Coatings as a Bioshield to Reduce Periprosthetic Fibrous Capsule Formation. *Advanced Functional Materials*, **2014**, 24, 2658-2666 | 15.6 | 77 |
| 190 | Electroconductive Biohybrid Hydrogel for Enhanced Maturation and Beating Properties of Engineered Cardiac Tissues. *Advanced Functional Materials*, **2018**, 28, 1803951 | 15.6 | 75 |
| 189 | Coatings and films made of silk proteins. *ACS Applied Materials & Interfaces*, **2014**, 6, 15611-25 | 9.5 | 72 |
| 188 | Microfluidics-Produced Collagen Fibers Show Extraordinary Mechanical Properties. *Nano Letters*, **2016**, 16, 5917-22 | 11.5 | 72 |
| 187 | Processing of recombinant spider silk proteins into tailor-made materials for biomaterials applications. *Current Opinion in Biotechnology*, **2014**, 29, 62-9 | 11.4 | 71 |
| 186 | Structural Analysis of Spider Silk Films. *Supramolecular Chemistry*, **2006**, 18, 465-471 | 1.8 | 70 |
| 185 | The role of salt and shear on the storage and assembly of spider silk proteins. *Journal of Structural Biology*, **2010**, 170, 413-9 | 3.4 | 68 |
| 184 | Recombinant Spider SilksBiopolymers with Potential for Future Applications. *Polymers*, **2011**, 3, 640-661 | 4.5 | 66 |
| 183 | Review the role of terminal domains during storage and assembly of spider silk proteins. *Biopolymers*, **2012**, 97, 355-61 | 2.2 | 61 |
| 182 | Polymer Gradient Materials: Can Nature Teach Us New Tricks?. *Macromolecular Materials and Engineering*, **2012**, 297, 938-957 | 3.9 | 61 |

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| 181 | Interactions of Fibroblasts with Different Morphologies Made of an Engineered Spider Silk Protein. *Advanced Engineering Materials*, **2012**, 14, B67-B75 | 3.5 | 61 |
| 180 | Interactions of cells with silk surfaces. *Journal of Materials Chemistry*, **2012**, 22, 14330 | | 59 |
| 179 | Nanomaterial building blocks based on spider silk-oligonucleotide conjugates. *ACS Nano*, **2014**, 8, 1342-9 | 16.7 | 57 |
| 178 | Copolymer/Clay Nanocomposites for Biomedical Applications. *Advanced Functional Materials*, **2020**, 30, 1908101 | 15.6 | 56 |
| 177 | Impact of initial solvent on thermal stability and mechanical properties of recombinant spider silk films. *Journal of Materials Chemistry*, **2011**, 21, 13594 | | 55 |
| 176 | Folding and association of beta-Galactosidase. *Journal of Molecular Biology*, **1998**, 282, 1083-91 | 6.5 | 55 |
| 175 | Structural characterization and functionalization of engineered spider silk films. *Soft Matter*, **2010**, 6, 4168 | 3.6 | 54 |
| 174 | The yeast Sup35NM domain propagates as a prion in mammalian cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 462-7 | 11.5 | 54 |
| 173 | Spider Silk for Tissue Engineering Applications. *Molecules*, **2020**, 25, | 4.8 | 53 |
| 172 | Hydrophobic and Hofmeister effects on the adhesion of spider silk proteins onto solid substrates: an AFM-based single-molecule study. *Langmuir*, **2008**, 24, 1350-5 | 4 | 51 |
| 171 | Influence of repeat numbers on self-assembly rates of repetitive recombinant spider silk proteins. *Journal of Structural Biology*, **2014**, 186, 431-7 | 3.4 | 49 |
| 170 | Structural and functional features of a collagen-binding matrix protein from the mussel byssus. *Nature Communications*, **2014**, 5, 3392 | 17.4 | 48 |
| 169 | Nature as a blueprint for polymer material concepts: Protein fiber-reinforced composites as holdfasts of mussels. *Progress in Polymer Science*, **2014**, 39, 1564-1583 | 29.6 | 47 |
| 168 | Mussel collagen molecules with silk-like domains as load-bearing elements in distal byssal threads. *Journal of Structural Biology*, **2011**, 175, 339-47 | 3.4 | 43 |
| 167 | Permeability of silk microcapsules made by the interfacial adsorption of protein. *Physical Chemistry Chemical Physics*, **2007**, 9, 6442-6 | 3.6 | 43 |
| 166 | Biofabrication of 3D constructs: fabrication technologies and spider silk proteins as bioinks. *Pure and Applied Chemistry*, **2015**, 87, 737-749 | 2.1 | 42 |
| 165 | Enzymatic Degradation of Films, Particles, and Nonwoven Meshes Made of a Recombinant Spider Silk Protein. *ACS Biomaterials Science and Engineering*, **2015**, 1, 247-259 | 5.5 | 42 |
| 164 | Preparation and mechanical properties of layers made of recombinant spider silk proteins and silk from silk worm. *Applied Physics A: Materials Science and Processing*, **2006**, 82, 253-260 | 2.6 | 41 |

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| 163 | Recombinant spider silk-based bioinks. *Biofabrication*, **2017**, 9, 044104 | 10.5 | 40 |
| 162 | To spin or not to spin: spider silk fibers and more. *Applied Microbiology and Biotechnology*, **2015**, 99, 9361-80 | 5.7 | 38 |
| 161 | Cell-to-cell propagation of infectious cytosolic protein aggregates. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 5951-6 | 11.5 | 38 |
| 160 | Engineering of recombinant spider silk proteins allows defined uptake and release of substances. *Journal of Pharmaceutical Sciences*, **2015**, 104, 988-94 | 3.9 | 37 |
| 159 | Varying surface hydrophobicities of coatings made of recombinant spider silk proteins. *Journal of Materials Chemistry*, **2012**, 22, 22050 | | 37 |
| 158 | Mimicking biopolymers on a molecular scale: nano(bio)technology based on engineered proteins. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 1727-47 | 3 | 37 |
| 157 | Surface Features of Recombinant Spider Silk Protein eADF4(□16)-Made Materials are Well-Suited for Cardiac Tissue Engineering. *Advanced Functional Materials*, **2017**, 27, 1701427 | 15.6 | 36 |
| 156 | Structural analysis of proteinaceous components in Byssal threads of the mussel Mytilus galloprovincialis. *Macromolecular Bioscience*, **2009**, 9, 162-8 | 5.5 | 36 |
| 155 | Structural changes of thin films from recombinant spider silk proteins upon post-treatment. *Applied Physics A: Materials Science and Processing*, **2007**, 89, 655-661 | 2.6 | 36 |
| 154 | Two-in-One Composite Fibers With Side-by-Side Arrangement of Silk Fibroin and Poly(l-lactide) by Electrospinning. *Macromolecular Materials and Engineering*, **2016**, 301, 48-55 | 3.9 | 36 |
| 153 | Engineering of silk proteins for materials applications. *Current Opinion in Biotechnology*, **2019**, 60, 213-220 | 11.4 | 35 |
| 152 | Enhanced cellular uptake of engineered spider silk particles. *Biomaterials Science*, **2015**, 3, 543-51 | 7.4 | 35 |
| 151 | Production and processing of spider silk proteins. *Journal of Polymer Science Part A*, **2009**, 47, 3957-3963 | 2.5 | 35 |
| 150 | Structural Insights into Water-Based Spider Silk Protein-Nanoclay Composites with Excellent Gas and Water Vapor Barrier Properties. *ACS Applied Materials & Interfaces*, **2016**, 8, 25535-43 | 9.5 | 35 |
| 149 | Foams Made of Engineered Recombinant Spider Silk Proteins as 3D Scaffolds for Cell Growth. *ACS Biomaterials Science and Engineering*, **2016**, 2, 517-525 | 5.5 | 34 |
| 148 | Dragline, Egg Stalk and Byssus: A Comparison of Outstanding Protein Fibers and Their Potential for Developing New Materials. *Advanced Functional Materials*, **2013**, 23, 4467-4482 | 15.6 | 33 |
| 147 | Spider silk: understanding the structure-function relationship of a natural fiber. *Progress in Molecular Biology and Translational Science*, **2011**, 103, 131-85 | 4 | 33 |
| 146 | Characterization of recombinantly produced spider flagelliform silk domains. *Journal of Structural Biology*, **2010**, 170, 420-5 | 3.4 | 33 |

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| 145 | Single molecule force measurements delineate salt, pH and surface effects on biopolymer adhesion. *Physical Biology*, **2009**, 6, 025004 | 3 | 33 |
| 144 | Engineered hybrid spider silk particles as delivery system for peptide vaccines. *Biomaterials*, **2018**, 172, 105-115 | 15.6 | 31 |
| 143 | Engineered spider silk protein-based composites for drug delivery. *Macromolecular Bioscience*, **2013** , 13, 1431-7 | 5.5 | 31 |
| 142 | Spider Silk Capsules as Protective Reaction Containers for Enzymes. *Advanced Functional Materials*, **2014**, 24, 763-768 | 15.6 | 31 |
| 141 | Structure and post-translational modifications of the web silk protein spidroin-1 from Nephila spiders. *Journal of Proteomics*, **2014**, 105, 174-85 | 3.9 | 30 |
| 140 | Glycopolymer functionalization of engineered spider silk protein-based materials for improved cell adhesion. *Macromolecular Bioscience*, **2014**, 14, 936-42 | 5.5 | 30 |
| 139 | Formulation of poorly water-soluble substances using self-assembling spider silk protein. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2008**, 331, 126-132 | 5.1 | 29 |
| 138 | Surface Modification of Polymeric Biomaterials Using Recombinant Spider Silk Proteins. *ACS Biomaterials Science and Engineering*, **2017**, 3, 767-775 | 5.5 | 28 |
| 137 | Alternative assembly pathways of the amyloidogenic yeast prion determinant Sup35-NM. *EMBO Reports*, **2007**, 8, 1196-201 | 6.5 | 28 |
| 136 | Foundation of the Outstanding Toughness in Biomimetic and Natural Spider Silk. *Biomacromolecules*, **2017**, 18, 3954-3962 | 6.9 | 27 |
| 135 | Controlled hierarchical assembly of spider silk-DNA chimeras into ribbons and raft-like morphologies. *Nano Letters*, **2014**, 14, 3999-4004 | 11.5 | 27 |
| 134 | Controllable cell adhesion, growth and orientation on layered silk protein films. *Biomaterials Science*, **2013**, 1, 1244-1249 | 7.4 | 27 |
| 133 | Utilizing conformational changes for patterning thin films of recombinant spider silk proteins. *Biomacromolecules*, **2012**, 13, 3189-99 | 6.9 | 27 |
| 132 | Probing the role of PrP repeats in conformational conversion and amyloid assembly of chimeric yeast prions. *Journal of Biological Chemistry*, **2007**, 282, 34204-12 | 5.4 | 27 |
| 131 | Mechanical Testing of Engineered Spider Silk Filaments Provides Insights into Molecular Features on a Mesoscale. *ACS Applied Materials & Interfaces*, **2017**, 9, 892-900 | 9.5 | 26 |
| 130 | Learning from nature: synthesis and characterization of longitudinal polymer gradient materials inspired by mussel byssus threads. *Macromolecular Rapid Communications*, **2012**, 33, 206-11 | 4.8 | 26 |
| 129 | Recombinant Production, Characterization, and Fiber Spinning of an Engineered Short Major Ampullate Spidroin (MaSp1s). *Biomacromolecules*, **2017**, 18, 1365-1372 | 6.9 | 25 |
| 128 | Control of Drug Loading and Release Properties of Spider Silk Sub-Microparticles. *BioNanoScience*, **2012**, 2, 67-74 | 3.4 | 25 |

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| 126 | Protein aggregation as a cause for disease. *Handbook of Experimental Pharmacology*, **2006**, 199-219 | 3.2 | 25 |
| 125 | Micromechanical characterization of spider silk particles. *Biomaterials Science*, **2013**, 1, 1160-1165 | 7.4 | 22 |
| 124 | Air filter devices including nonwoven meshes of electrospun recombinant spider silk proteins. *Journal of Visualized Experiments*, **2013**, e50492 | 1.6 | 22 |
| 123 | Conquering isoleucine auxotrophy of Escherichia coli BLR(DE3) to recombinantly produce spider silk proteins in minimal media. *Biotechnology Letters*, **2007**, 29, 1741-4 | 3 | 22 |
| 122 | Biomineralization of Engineered Spider Silk Protein-Based Composite Materials for Bone Tissue Engineering. *Materials*, **2016**, 9, | 3.5 | 22 |
| 121 | Conformational Stability and Interplay of Helical N- and C-Terminal Domains with Implications on Major Ampullate Spidroin Assembly. *Biomacromolecules*, **2017**, 18, 835-845 | 6.9 | 21 |
| 120 | Microfluidic nozzle device for ultrafine fiber solution blow spinning with precise diameter control. *Lab on A Chip*, **2018**, 18, 2225-2234 | 7.2 | 21 |
| 119 | Dependence of mechanical properties of lacewing egg stalks on relative humidity. *Biomacromolecules*, **2012**, 13, 3730-5 | 6.9 | 21 |
| 118 | Acidic Residues Control the Dimerization of the N-terminal Domain of Black Widow SpidersTMajor Ampullate Spidroin 1. *Scientific Reports*, **2016**, 6, 34442 | 4.9 | 20 |
| 117 | Silk nanofibril self-assembly versus electrospinning. *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, **2018**, 10, e1509 | 9.2 | 19 |
| 116 | Artificial egg stalks made of a recombinantly produced lacewing silk protein. *Angewandte Chemie - International Edition*, **2012**, 51, 6521-4 | 16.4 | 19 |
| 115 | Functional Amyloids Used by Organisms: A Lesson in Controlling Assembly. *Macromolecular Chemistry and Physics*, **2010**, 211, 127-135 | 2.6 | 19 |
| 114 | Colloidal Properties of Recombinant Spider Silk Protein Particles. *Journal of Physical Chemistry C*, **2016**, 120, 18015-18027 | 3.8 | 19 |
| 113 | Cellular uptake of drug loaded spider silk particles. *Biomaterials Science*, **2016**, 4, 1515-1523 | 7.4 | 19 |
| 112 | Nerve guidance conduit design based on self-rolling tubes. *Materials Today Bio*, **2020**, 5, 100042 | 9.9 | 18 |
| 111 | Protein gradient films of fibroin and gelatine. *Macromolecular Bioscience*, **2013**, 13, 1396-403 | 5.5 | 18 |
| 110 | Centrifugal Electrospinning Enables the Production of Meshes of Ultrathin Polymer Fibers. *ACS Applied Polymer Materials*, **2020**, 2, 4360-4367 | 4.3 | 18 |

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| 109 | Chitosan-based nanocomposites for medical applications. *Journal of Polymer Science*, **2021**, 59, 1610-1642 | 2.4 | 18 |
| 108 | In Vivo Coating of Bacterial Magnetic Nanoparticles by Magnetosome Expression of Spider Silk-Inspired Peptides. *Biomacromolecules*, **2018**, 19, 962-972 | 6.9 | 17 |
| 107 | Multifunctional Biomaterials: Combining Material Modification Strategies for Engineering of Cell-Contacting Surfaces. *ACS Applied Materials & Interfaces*, **2020**, 12, 21342-21367 | 9.5 | 17 |
| 106 | Coacervation of the Recombinant Mytilus galloprovincialis Foot Protein-3b. *Biomacromolecules*, **2018**, 19, 3612-3619 | 6.9 | 16 |
| 105 | Surface properties of spider silk particles in solution. *Biomaterials Science*, **2013**, 1, 1166-1171 | 7.4 | 16 |
| 104 | Aqueous electrospinning of recombinant spider silk proteins. *Materials Science and Engineering C*, **2020**, 106, 110145 | 8.3 | 16 |
| 103 | Intrinsic Vascularization of Recombinant eADF4(C16) Spider Silk Matrices in the Arteriovenous Loop Model. *Tissue Engineering - Part A*, **2019**, 25, 1504-1513 | 3.9 | 15 |
| 102 | Cations influence the cross-linking of hydrogels made of recombinant, polyanionic spider silk proteins. *Materials Letters*, **2016**, 183, 101-104 | 3.3 | 15 |
| 101 | Ultrathin Spider Silk Films: Insights into Spider Silk Assembly on Surfaces. *ACS Applied Polymer Materials*, **2019**, 1, 3366-3374 | 4.3 | 15 |
| 100 | Prion protein/protein interactions: fusion with yeast Sup35p-NM modulates cytosolic PrP aggregation in mammalian cells. *FASEB Journal*, **2008**, 22, 762-73 | 0.9 | 15 |
| 99 | Engineered spider silk-based 2D and 3D materials prevent microbial infestation. *Materials Today*, **2020**, 41, 21-33 | 21.8 | 15 |
| 98 | Ion and seed dependent fibril assembly of a spidroin core domain. *Journal of Structural Biology*, **2015**, 191, 130-8 | 3.4 | 14 |
| 97 | Self-Assembly of Spider Silk-Fusion Proteins Comprising Enzymatic and Fluorescence Activity. *Bioconjugate Chemistry*, **2018**, 29, 898-904 | 6.3 | 14 |
| 96 | Spinnenseidenproteine: Grundlage f□ neue Materialien. *Chemie in Unserer Zeit*, **2007**, 41, 306-314 | 0.2 | 14 |
| 95 | Effect of oculopharyngeal muscular dystrophy-associated extension of seven alanines on the fibrillation properties of the N-terminal domain of PABPN1. *FEBS Journal*, **2007**, 274, 346-55 | 5.7 | 14 |
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| 93 | Contribution of N- and C-terminal domains to the function of Hsp90 in Saccharomyces cerevisiae. *Molecular Microbiology*, **1999**, 34, 701-13 | 4.1 | 14 |
| 92 | Silk-Based Materials for Hard Tissue Engineering. *Materials*, **2021**, 14, | 3.5 | 14 |

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| 91 | Probing the adhesion properties of alginate hydrogels: a new approach towards the preparation of soft colloidal probes for direct force measurements. *Soft Matter*, **2017**, 13, 578-589 | 3.6 | 13 |
| 90 | Recombinant Spider Silk and Collagen-Based Nerve Guidance Conduits Support Neuronal Cell Differentiation and Functionality in Vitro.. *ACS Applied Bio Materials*, **2019**, 2, 4872-4880 | 4.1 | 13 |
| 89 | Enhanced Antibacterial Activity of Se Nanoparticles Upon Coating with Recombinant Spider Silk Protein eADF4([illegible]16). *International Journal of Nanomedicine*, **2020**, 15, 4275-4288 | 7.3 | 13 |
| 88 | Dimerization of the Conserved N-Terminal Domain of a Spider Silk Protein Controls the Self-Assembly of the Repetitive Core Domain. *Biomacromolecules*, **2017**, 18, 2521-2528 | 6.9 | 13 |
| 87 | Interfacial rheological properties of recombinant spider-silk proteins. *Biointerphases*, **2009**, 4, 43-6 | 1.8 | 13 |
| 86 | Molecular design of performance proteins with repetitive sequences: recombinant flagelliform spider silk as basis for biomaterials. *Methods in Molecular Biology*, **2008**, 474, 3-14 | 1.4 | 13 |
| 85 | Recombinant Production of Mussel Byssus Inspired Proteins. *Biotechnology Journal*, **2018**, 13, e1800146 | 5.6 | 13 |
| 84 | Functionalized DNA-spider silk nanohydrogels for controlled protein binding and release. *Materials Today Bio*, **2020**, 6, 100045 | 9.9 | 12 |
| 83 | Recombinant Spider Silk Hydrogels for Sustained Release of Biologicals. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1750-1759 | 5.5 | 12 |
| 82 | Engineered Collagen: A Redox Switchable Framework for Tunable Assembly and Fabrication of Biocompatible Surfaces. *ACS Biomaterials Science and Engineering*, **2018**, 4, 2106-2114 | 5.5 | 12 |
| 81 | Universal nanothin silk coatings via controlled spidroin self-assembly. *Biomaterials Science*, **2019**, 7, 683-695 | 7.4 | 11 |
| 80 | Structural diversity of a collagen-binding matrix protein from the byssus of blue mussels upon refolding. *Journal of Structural Biology*, **2014**, 186, 75-85 | 3.4 | 11 |
| 79 | Characterization of natural and biomimetic spider silk fibers. *Bioinspired, Biomimetic and Nanobiomaterials*, **2012**, 1, 83-94 | 1.3 | 11 |
| 78 | Silk-Based Fine Dust Filters for Air Filtration. *Advanced Sustainable Systems*, **2017**, 1, 1700079 | 5.9 | 11 |
| 77 | Recombinant spider silk protein eADF4(C16)-RGD coatings are suitable for cardiac tissue engineering. *Scientific Reports*, **2020**, 10, 8789 | 4.9 | 10 |
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| 75 | Towards the Recombinant Production of Mussel Byssal Collagens **2010**, 86, 10-24 | | 10 |
| 74 | Statistical approaches for investigating silk properties. *Applied Physics A: Materials Science and Processing*, **2006**, 82, 243-251 | 2.6 | 10 |

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| 73 | Amyloid formation of a yeast prion determinant. *Journal of Molecular Neuroscience*, **2004**, 23, 13-22 | 3.3 | 10 |
| 72 | Biosynthesis of an elastin-mimetic polypeptide with two different chemical functional groups within the repetitive elastin fragment. *Macromolecular Bioscience*, **2005**, 5, 494-501 | 5.5 | 10 |
| 71 | Data for microbe resistant engineered recombinant spider silk protein based 2D and 3D materials. *Data in Brief*, **2020**, 32, 106305 | 1.2 | 10 |
| 70 | Recombinant Spider Silk-Silica Hybrid Scaffolds with Drug-Releasing Properties for Tissue Engineering Applications. *Macromolecular Rapid Communications*, **2020**, 41, e1900426 | 4.8 | 10 |
| 69 | Designed Spider Silk-Based Drug Carrier for Redox- or pH-Triggered Drug Release. *Biomacromolecules*, **2020**, 21, 4904-4912 | 6.9 | 10 |
| 68 | Roll-to-Roll Production of Spider Silk Nanofiber Nonwoven Meshes Using Centrifugal Electrospinning for Filtration Applications. *Molecules*, **2020**, 25, | 4.8 | 10 |
| 67 | Interplay of Different Major Ampullate Spidroins during Assembly and Implications for Fiber Mechanics. *Advanced Materials*, **2021**, 33, e2006499 | 24 | 10 |
| 66 | Sea star-inspired recombinant adhesive proteins self-assemble and adsorb on surfaces in aqueous environments to form cytocompatible coatings. *Acta Biomaterialia*, **2020**, 112, 62-74 | 10.8 | 9 |
| 65 | Influence of divalent copper, manganese and zinc ions on fibril nucleation and elongation of the amyloid-like yeast prion determinant Sup35p-NM. *Journal of Inorganic Biochemistry*, **2009**, 103, 1711-20 | 4.2 | 9 |
| 64 | The MyoRobot: A novel automated biomechatronics system to assess voltage/Ca biosensors and active/passive biomechanics in muscle and biomaterials. *Biosensors and Bioelectronics*, **2018**, 102, 589-599 | 11.8 | 9 |
| 63 | Data for ion and seed dependent fibril assembly of a spidroin core domain. *Data in Brief*, **2015**, 4, 571-6 | 1.2 | 8 |
| 62 | Biotechnological production of the mussel byssus derived collagen preColD. *RSC Advances*, **2017**, 7, 38273-38278 | 3.7 | 8 |
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