

Phillip B Messersmith

List of Publications by Year in descending order

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195
papers

38,150
citations

6254

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201
all docs

201
docs citations

201
times ranked

30197
citing authors

#	ARTICLE	IF	CITATIONS
1	Mussel-Inspired Surface Chemistry for Multifunctional Coatings. <i>Science</i> , 2007, 318, 426-430.	12.6	9,012
2	Single-molecule mechanics of mussel adhesion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12999-13003.	7.1	1,814
3	A reversible wet/dry adhesive inspired by mussels and geckos. <i>Nature</i> , 2007, 448, 338-341.	27.8	1,806
4	Mussel-Inspired Adhesives and Coatings. <i>Annual Review of Materials Research</i> , 2011, 41, 99-132.	9.3	1,422
5	Facile Conjugation of Biomolecules onto Surfaces via Mussel Adhesive Protein Inspired Coatings. <i>Advanced Materials</i> , 2009, 21, 431-434.	21.0	1,348
6	pH-induced metal-ligand cross-links inspired by mussel yield self-healing polymer networks with near-covalent elastic moduli. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 2651-2655.	7.1	1,314
7	Polydopamine Surface Chemistry: A Decade of Discovery. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7523-7540.	8.0	1,232
8	Synthesis and barrier properties of poly(ϵ -caprolactone)-layered silicate nanocomposites. <i>Journal of Polymer Science Part A</i> , 1995, 33, 1047-1057.	2.3	1,159
9	Colorless Multifunctional Coatings Inspired by Polyphenols Found in Tea, Chocolate, and Wine. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 10766-10770.	13.8	713
10	Mussel Adhesive Protein Mimetic Polymers for the Preparation of Nonfouling Surfaces. <i>Journal of the American Chemical Society</i> , 2003, 125, 4253-4258.	13.7	548
11	Synthesis and Gelation of DOPA-Modified Poly(ethylene glycol) Hydrogels. <i>Biomacromolecules</i> , 2002, 3, 1038-1047.	5.4	544
12	One-Step Multipurpose Surface Functionalization by Adhesive Catecholamine. <i>Advanced Functional Materials</i> , 2012, 22, 2949-2955.	14.9	436
13	Protein Resistance of Titanium Oxide Surfaces Modified by Biologically Inspired mPEG ²² DOPA. <i>Langmuir</i> , 2005, 21, 640-646.	3.5	423
14	Biomimetic Anchor for Surface-Initiated Polymerization from Metal Substrates. <i>Journal of the American Chemical Society</i> , 2005, 127, 15843-15847.	13.7	419
15	Substrate-Independent Layer-by-Layer Assembly by Using Mussel-Adhesive-Inspired Polymers. <i>Advanced Materials</i> , 2008, 20, 1619-1623.	21.0	418
16	New Peptidomimetic Polymers for Antifouling Surfaces. <i>Journal of the American Chemical Society</i> , 2005, 127, 7972-7973.	13.7	402
17	Catechol Polymers for pH-Responsive, Targeted Drug Delivery to Cancer Cells. <i>Journal of the American Chemical Society</i> , 2011, 133, 11850-11853.	13.7	400
18	pH responsive self-healing hydrogels formed by boronate-catechol complexation. <i>Chemical Communications</i> , 2011, 47, 7497.	4.1	392

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19	Control of hierarchical polymer mechanics with bioinspired metal-coordination dynamics. <i>Nature Materials</i> , 2015, 14, 1210-1216.	27.5	375
20	Thermo-sensitive, injectable, and tissue adhesive sol-gel transition hyaluronic acid/pluronic composite hydrogels prepared from bio-inspired catechol-thiol reaction. <i>Soft Matter</i> , 2010, 6, 977.	2.7	336
21	Antibacterial Performance of Polydopamine-Modified Polymer Surfaces Containing Passive and Active Components. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 4602-4610.	8.0	317
22	Norepinephrine: Material-Independent, Multifunctional Surface Modification Reagent. <i>Journal of the American Chemical Society</i> , 2009, 131, 13224-13225.	13.7	298
23	Biological performance of mussel-inspired adhesive in extrahepatic islet transplantation. <i>Biomaterials</i> , 2010, 31, 420-427.	11.4	298
24	Bioinspired Surface Immobilization of Hyaluronic Acid on Monodisperse Magnetite Nanocrystals for Targeted Cancer Imaging. <i>Advanced Materials</i> , 2008, 20, 4154-4157.	21.0	274
25	Mussel-Inspired Histidine-Based Transient Network Metal Coordination Hydrogels. <i>Macromolecules</i> , 2013, 46, 1167-1174.	4.8	254
26	Controlling Hydrogel Mechanics via Bio-Inspired Polymer-Nanoparticle Bond Dynamics. <i>ACS Nano</i> , 2016, 10, 1317-1324.	14.6	253
27	Molecular diversity in phenolic and polyphenolic precursors of tannin-inspired nanocoatings. <i>Chemical Communications</i> , 2014, 50, 7265-7268.	4.1	248
28	Facile, high efficiency immobilization of lipase enzyme on magnetic iron oxide nanoparticles via a biomimetic coating. <i>BMC Biotechnology</i> , 2011, 11, 63.	3.3	242
29	Thermally and Photochemically Triggered Self-Assembly of Peptide Hydrogels. <i>Journal of the American Chemical Society</i> , 2001, 123, 9463-9464.	13.7	236
30	Versatile Core-Shell Nanoparticle@Metal-Organic Framework Nanohybrids: Exploiting Mussel-Inspired Polydopamine for Tailored Structural Integration. <i>ACS Nano</i> , 2015, 9, 6951-6960.	14.6	223
31	Mussel-inspired silver-releasing antibacterial hydrogels. <i>Biomaterials</i> , 2012, 33, 3783-3791.	11.4	219
32	Bioinspired antifouling polymers. <i>Materials Today</i> , 2005, 8, 38-46.	14.2	217
33	pH-Based Regulation of Hydrogel Mechanical Properties Through Mussel-Inspired Chemistry and Processing. <i>Advanced Functional Materials</i> , 2013, 23, 1111-1119.	14.9	214
34	Fusion of Seashell Nacre and Marine Bioadhesive Analogs: High-Strength Nanocomposite by Layer-by-Layer Assembly of Clay and L-3,4-Dihydroxyphenylalanine Polymer. <i>Advanced Materials</i> , 2007, 19, 949-955.	21.0	204
35	Interfacial Assembly of Mussel-Inspired Au@Ag@ Polydopamine Core-Shell Nanoparticles for Recyclable Nanocatalysts. <i>Advanced Materials</i> , 2014, 26, 701-705.	21.0	196
36	Cell Fouling Resistance of Polymer Brushes Grafted from Ti Substrates by Surface-Initiated Polymerization: Effect of Ethylene Glycol Side Chain Length. <i>Biomacromolecules</i> , 2006, 7, 2443-2448.	5.4	195

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37	Mechanically Robust, Negative-Swelling, Mussel-Inspired Tissue Adhesives. <i>Advanced Healthcare Materials</i> , 2013, 2, 745-755.	7.6	194
38	Polydopamine-enabled surface functionalization of gold nanorods for cancer cell-targeted imaging and photothermal therapy. <i>Nanomedicine</i> , 2013, 8, 17-28.	3.3	192
39	Enzymatically Degradable Mussel-Inspired Adhesive Hydrogel. <i>Biomacromolecules</i> , 2011, 12, 4326-4334.	5.4	190
40	Rational Design of Transglutaminase Substrate Peptides for Rapid Enzymatic Formation of Hydrogels. <i>Journal of the American Chemical Society</i> , 2003, 125, 14298-14299.	13.7	185
41	Rapid Gel Formation and Adhesion in Photocurable and Biodegradable Block Copolymers with High DOPA Content. <i>Macromolecules</i> , 2006, 39, 1740-1748.	4.8	183
42	Metal-coordination: using one of nature's tricks to control soft material mechanics. <i>Journal of Materials Chemistry B</i> , 2014, 2, 2467-2472.	5.8	178
43	Facile DNA Immobilization on Surfaces through a Catecholamine Polymer. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 732-736.	13.8	176
44	Synthesis and Characterization of Self-Assembling Block Copolymers Containing Bioadhesive End Groups. <i>Biomacromolecules</i> , 2002, 3, 397-406.	5.4	174
45	Anti-inflammatory peptide-functionalized hydrogels for insulin-secreting cell encapsulation. <i>Biomaterials</i> , 2010, 31, 308-314.	11.4	170
46	Thermal gelation and tissue adhesion of biomimetic hydrogels. <i>Biomedical Materials (Bristol)</i> , 2007, 2, 203-210.	3.3	169
47	In situ crosslinking of a biomimetic peptide-PEG hydrogel via thermally triggered activation of factor XIII. <i>Biomaterials</i> , 2002, 23, 2703-2710.	11.4	164
48	Phenolic-enabled nanotechnology: versatile particle engineering for biomedicine. <i>Chemical Society Reviews</i> , 2021, 50, 4432-4483.	38.1	163
49	The Present and Future of Biologically Inspired Adhesive Interfaces and Materials. <i>Langmuir</i> , 2012, 28, 2200-2205.	3.5	162
50	Universal Surface-Initiated Polymerization of Antifouling Zwitterionic Brushes Using a Mussel-Mimetic Peptide Initiator. <i>Langmuir</i> , 2012, 28, 7258-7266.	3.5	159
51	Effects of dispersion and interfacial modification on the macroscale properties of TiO ₂ polymer-matrix nanocomposites. <i>Composites Science and Technology</i> , 2009, 69, 1880-1886.	7.8	156
52	Enzymatic Modification of Self-Assembled Peptide Structures with Tissue Transglutaminase. <i>Bioconjugate Chemistry</i> , 2003, 14, 748-755.	3.6	153
53	Algal antifouling and fouling-release properties of metal surfaces coated with a polymer inspired by marine mussels. <i>Biofouling</i> , 2006, 22, 391-399.	2.2	148
54	Direct Evidence for the Polymeric Nature of Polydopamine. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1077-1082.	13.8	148

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55	Self-Assembly and Adhesion of DOPA-Modified Methacrylic Triblock Hydrogels. <i>Biomacromolecules</i> , 2008, 9, 122-128.	5.4	146
56	Heparin-Coated Gold Nanoparticles for Liver-Specific CT Imaging. <i>Chemistry - A European Journal</i> , 2009, 15, 13341-13347.	3.3	146
57	Surface-Grafted Polysarcosine as a Peptoid Antifouling Polymer Brush. <i>Langmuir</i> , 2012, 28, 16099-16107.	3.5	146
58	Self-Assembling Polymer-Peptide Conjugates: Nanostructural Tailoring. <i>Advanced Materials</i> , 2004, 16, 907-910.	21.0	143
59	Protein, cell and bacterial fouling resistance of polypeptoid-modified surfaces: effect of side-chain chemistry. <i>Soft Matter</i> , 2008, 4, 131-139.	2.7	137
60	Synthesis of nanocomposites: Organoceramics. <i>Journal of Materials Research</i> , 1992, 7, 2599-2611.	2.6	134
61	Catechol Redox Induced Formation of Metal Core-Polymer Shell Nanoparticles. <i>Chemistry of Materials</i> , 2011, 23, 1130-1135.	6.7	132
62	Surface-initiated polymerization from TiO ₂ nanoparticle surfaces through a biomimetic initiator: A new route toward polymer-matrix nanocomposites. <i>Composites Science and Technology</i> , 2006, 66, 1198-1204.	7.8	121
63	Conductive Polymer Binder for High-Tap-Density Nanosilicon Material for Lithium-Ion Battery Negative Electrode Application. <i>Nano Letters</i> , 2015, 15, 7927-7932.	9.1	121
64	Phospholipid Strategies in Biomineralization and Biomaterials Research. <i>Annual Review of Materials Research</i> , 2001, 31, 237-263.	9.3	117
65	Triggered release of calcium from lipid vesicles: a bioinspired strategy for rapid gelation of polysaccharide and protein hydrogels. <i>Biomaterials</i> , 2001, 22, 453-462.	11.4	114
66	Hydrogels Cross-Linked by Native Chemical Ligation. <i>Biomacromolecules</i> , 2009, 10, 2194-2200.	5.4	114
67	Antifouling Glycocalyx-Mimetic Peptoids. <i>Journal of the American Chemical Society</i> , 2013, 135, 13015-13022.	13.7	113
68	Injectable candidate sealants for fetal membrane repair: bonding and toxicity in vitro. <i>American Journal of Obstetrics and Gynecology</i> , 2010, 202, 85.e1-85.e9.	1.3	109
69	Polydopamine-Enabled Approach toward Tailored Plasmonic Nanogapped Nanoparticles: From Nanogap Engineering to Multifunctionality. <i>ACS Nano</i> , 2016, 10, 11066-11075.	14.6	109
70	Synthesis of 3,4-dihydroxyphenylalanine (DOPA) containing monomers and their co-polymerization with PEG-diacrylate to form hydrogels. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2004, 15, 449-464.	3.5	106
71	Marine-inspired polymers in medical adhesion. <i>European Polymer Journal</i> , 2019, 116, 134-143.	5.4	98
72	Surface-immobilised antimicrobial peptoids. <i>Biofouling</i> , 2008, 24, 439-448.	2.2	97

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73	pH-dependent cross-linking of catechols through oxidation via Fe ³⁺ and potential implications for mussel adhesion. RSC Advances, 2014, 4, 25127-25134.	3.6	95
74	Chiral Self-Assembly of Nanotubules and Ribbons from Phospholipid Mixtures. Nano Letters, 2001, 1, 375-378.	9.1	93
75	Enhanced Adhesion and Cohesion of Bioinspired Dry/Wet Pressure-Sensitive Adhesives. ACS Applied Materials & Interfaces, 2019, 11, 28296-28306.	8.0	92
76	Nanofibrous scaffold-mediated REST knockdown to enhance neuronal differentiation of stem cells. Biomaterials, 2013, 34, 3581-3590.	11.4	90
77	Mussel-Inspired Conductive Polymer Binder for Si-Alloy Anode in Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 5440-5446.	8.0	90
78	Thermal assembly of a biomimetic mineral/collagen composite. Biomaterials, 2003, 24, 4881-4890.	11.4	84
79	Molecular design principles of Lysine-DOPA wet adhesion. Nature Communications, 2020, 11, 3895.	12.8	83
80	A novel low-friction surface for biomedical applications: Modification of poly(dimethylsiloxane) (PDMS) with polyethylene glycol(PEG)-DOPA-Lysine. Journal of Biomedical Materials Research - Part A, 2009, 90A, 742-749.	4.0	81
81	Bacterial Killing by Light-Triggered Release of Silver from Biomimetic Metal Nanorods. Small, 2014, 10, 169-178.	10.0	81
82	Multifunctional Magnetic Nanochains: Exploiting Self-Polymerization and Versatile Reactivity of Mussel-Inspired Polydopamine. Chemistry of Materials, 2015, 27, 3071-3076.	6.7	81
83	Bioinspired Design Provides High-Strength Benzoxazine Structural Adhesives. Angewandte Chemie - International Edition, 2019, 58, 12271-12279.	13.8	79
84	Molecular Design of Antifouling Polymer Brushes Using Sequence-Specific Peptoids. Advanced Materials Interfaces, 2015, 2, 1400225.	3.7	77
85	Deposition Kinetics of Bioinspired Phenolic Coatings on Titanium Surfaces. Langmuir, 2016, 32, 8050-8060.	3.5	76
86	Cooperativity of Catechols and Amines in High-Performance Dry/Wet Adhesives. Angewandte Chemie - International Edition, 2020, 59, 16616-16624.	13.8	76
87	Multitasking in Tissues and Materials. Science, 2008, 319, 1767-1768.	12.6	75
88	Enzymatic Mineralization of Hydrogels for Bone Tissue Engineering by Incorporation of Alkaline Phosphatase. Macromolecular Bioscience, 2012, 12, 1077-1089.	4.1	75
89	Adhesion of DOPA-Functionalized Model Membranes to Hard and Soft Surfaces. Journal of Adhesion, 2009, 85, 631-645.	3.0	72
90	Drug-induced regeneration in adult mice. Science Translational Medicine, 2015, 7, 290ra92.	12.4	72

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91	Injectable dynamic covalent hydrogels of boronic acid polymers cross-linked by bioactive plant-derived polyphenols. <i>Biomaterials Science</i> , 2018, 6, 2487-2495.	5.4	72
92	Formation of Polymerizable Phospholipid Nanotubules and Their Transformation into a Network Gel. <i>Langmuir</i> , 1999, 15, 4464-4471.	3.5	70
93	Mechanical Enhancement of Bioinspired Polydopamine Nanocoatings. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 43599-43607.	8.0	70
94	Seamless Metallic Coating and Surface Adhesion of Self-Assembled Bioinspired Nanostructures Based on Di-(3,4-dihydroxy-L-phenylalanine) Peptide Motif. <i>ACS Nano</i> , 2014, 8, 7220-7228.	14.6	68
95	An Experimentalâ€Theoretical Analysis of Protein Adsorption on Peptidomimetic Polymer Brushes. <i>Langmuir</i> , 2012, 28, 2288-2298.	3.5	66
96	Mimicking mussel adhesion to improve interfacial properties in composites. <i>Composites Science and Technology</i> , 2008, 68, 2042-2048.	7.8	64
97	Mussel-mimetic tissue adhesive for fetal membrane repair: An ex vivo evaluation. <i>Acta Biomaterialia</i> , 2012, 8, 4365-4370.	8.3	64
98	Doubly Biomimetic Catecholic Phosphorylcholine Copolymer: A Platform Strategy for Fabricating Antifouling Surfaces. <i>Macromolecular Bioscience</i> , 2012, 12, 979-985.	4.1	63
99	Polymer Directed Self-Assembly of pH-Responsive Antioxidant Nanoparticles. <i>Langmuir</i> , 2015, 31, 3612-3620.	3.5	61
100	Enhancement of poly(ethylene glycol) mucoadsorption by biomimetic end group functionalization. <i>Biointerphases</i> , 2006, 1, 134-141.	1.6	60
101	Water Detoxification by a Substrateâ€Bound Catecholamine Adsorbent. <i>ChemPlusChem</i> , 2012, 77, 987-990.	2.8	57
102	Collagen-collagen interactions mediated by plant-derived proanthocyanidins: A spectroscopic and atomic force microscopy study. <i>Acta Biomaterialia</i> , 2016, 41, 110-118.	8.3	55
103	Sustained Exosomeâ€Guided Macrophage Polarization Using Hydrolytically Degradable PEG Hydrogels for Cutaneous Wound Healing: Identification of Key Proteins and MiRNAs, and Sustained Release Formulation. <i>Small</i> , 2022, 18, e2200060.	10.0	54
104	Enzymatically cross-linked hydrogels and their adhesive strength to biosurfaces. <i>Orthodontics and Craniofacial Research</i> , 2005, 8, 145-149.	2.8	53
105	Musselâ€mimetic tissue adhesive for fetal membrane repair: a standardized <i>ex vivo</i> evaluation using elastomeric membranes. <i>Prenatal Diagnosis</i> , 2011, 31, 654-660.	2.3	52
106	High Ionic Strength Formation of DOPAâ€Melanin Coating for Loading and Release of Cationic Antimicrobial Compounds. <i>Advanced Materials Interfaces</i> , 2014, 1, 1400145.	3.7	52
107	Ten Years of Polydopamine: Current Status and Future Directions. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7521-7522.	8.0	52
108	Experimental and theoretical investigation of chain length and surface coverage on fouling of surface grafted polypeptoids. <i>Biointerphases</i> , 2009, 4, FA22-FA32.	1.6	49

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109	The contribution of plasmid design and release to in vivo gene expression following delivery from cationic polymer modified scaffolds. <i>Biomaterials</i> , 2010, 31, 1140-1147.	11.4	49
110	Supramolecular Polymer Hydrogels for Drug-Induced Tissue Regeneration. <i>ACS Nano</i> , 2019, 13, 5493-5501.	14.6	48
111	Mussel mimetic tissue adhesive for fetal membrane repair: initial in vivo investigation in rabbits. <i>European Journal of Obstetrics, Gynecology and Reproductive Biology</i> , 2013, 171, 240-245.	1.1	46
112	Direct Evidence for the Polymeric Nature of Polydopamine. <i>Angewandte Chemie</i> , 2019, 131, 1089-1094.	2.0	44
113	Conformal Bacterial Cellulose Coatings as Lubricious Surfaces. <i>ACS Nano</i> , 2020, 14, 3885-3895.	14.6	42
114	Formation of Fibrinogen-Based Hydrogels Using Phototriggerable Dipalmitoyl Liposomes. <i>Bioconjugate Chemistry</i> , 2002, 13, 640-646.	3.6	41
115	Surface Presentation of Bioactive Ligands in a Nonadhesive Background Using DOPA-Tethered Biotinylated Poly(ethylene glycol). <i>Langmuir</i> , 2007, 23, 10635-10643.	3.5	41
116	Self-Assembled Nanofibers for Strong Underwater Adhesion: The Trick of Barnacles. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25017-25025.	8.0	40
117	Self-Healing Hydrogels Formed by Complexation between Calcium Ions and Bisphosphonate-Functionalized Star-Shaped Polymers. <i>Macromolecules</i> , 2017, 50, 8698-8706.	4.8	39
118	Laser-induced graphitization of polydopamine leads to enhanced mechanical performance while preserving multifunctionality. <i>Nature Communications</i> , 2020, 11, 4848.	12.8	38
119	Lipopeptides Incorporated into Supported Phospholipid Monolayers Have High Specific Activity at Low Incorporation Levels. <i>Journal of the American Chemical Society</i> , 2004, 126, 15223-15230.	13.7	36
120	Electrospun catechol-modified poly(ethyleneglycol) nanofibrous mesh for anti-fouling properties. <i>Journal of Materials Chemistry B</i> , 2013, 1, 3940.	5.8	35
121	Untemplated Resveratrol-Mediated Polydopamine Nanocapsule Formation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 34792-34801.	8.0	35
122	Facile coupling of synthetic peptides and peptide-polymer conjugates to cartilage via transglutaminase enzyme. <i>Biomaterials</i> , 2007, 28, 5215-5224.	11.4	34
123	Compartmental control of mineral formation: adaptation of a biomineralization strategy for biomedical use. <i>Polyhedron</i> , 2000, 19, 357-363.	2.2	33
124	Quartz Crystal Microbalance Studies of Polymer Gels and Solutions in Liquid Environments. <i>Analytical Chemistry</i> , 2006, 78, 1158-1166.	6.5	33
125	Polydopamine-assisted immobilization of trypsin onto monolithic structures for protein digestion. <i>Journal of Separation Science</i> , 2012, 35, 1514-1520.	2.5	33
126	Size Control and Fluorescence Labeling of Polydopamine Melanin-Mimetic Nanoparticles for Intracellular Imaging. <i>Biomimetics</i> , 2017, 2, 17.	3.3	33

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127	Biomimetic Adhesive Polymers Based on Mussel Adhesive Proteins. , 2006, , 257-278.		32
128	A Bioinspired Polymeric Template for 1D Assembly of Metallic Nanoparticles, Semiconductor Quantum Dots, and Magnetic Nanoparticles. <i>Macromolecular Rapid Communications</i> , 2010, 31, 2109-2114.	3.9	32
129	Phenolic condensation and facilitation of fluorescent carbon dot formation: a mechanism study. <i>Nanoscale</i> , 2017, 9, 16596-16601.	5.6	32
130	Protection of 3,4-dihydroxyphenylalanine (DOPA) for Fmoc solid-phase peptide synthesis. <i>Tetrahedron Letters</i> , 2000, 41, 5795-5798.	1.4	31
131	Mussel-Inspired Modification of Nanofibers for REST siRNA Delivery: Understanding the Effects of Gene-Silencing and Substrate Topography on Human Mesenchymal Stem Cell Neuronal Commitment. <i>Macromolecular Bioscience</i> , 2015, 15, 1457-1468.	4.1	31
132	Facile synthesis and surface modification of bioinspired nanoparticles from quercetin for drug delivery. <i>Biomaterials Science</i> , 2018, 6, 2656-2666.	5.4	31
133	Supramolecular Cross-Links in Mussel-Inspired Tissue Adhesives. <i>ACS Macro Letters</i> , 2020, 9, 1439-1445.	4.8	31
134	Thermally Triggered Calcium Phosphate Formation from Calcium-Loaded Liposomes. <i>Chemistry of Materials</i> , 1998, 10, 117-124.	6.7	30
135	Hydrogels formed by oxo-ester mediated native chemical ligation. <i>Biomaterials Science</i> , 2013, 1, 603.	5.4	30
136	ECM-Incorporated Hydrogels Cross-Linked via Native Chemical Ligation To Engineer Stem Cell Microenvironments. <i>Biomacromolecules</i> , 2013, 14, 3102-3111.	5.4	30
137	An injectable hydrogel-formulated inhibitor of prolyl-4-hydroxylase promotes T regulatory cell recruitment and enhances alveolar bone regeneration during resolution of experimental periodontitis. <i>FASEB Journal</i> , 2020, 34, 13726-13740.	0.5	29
138	A novel technique for in situ aggregation of <i>Gluconobacter oxydans</i> using bio-adhesive magnetic nanoparticles. <i>Biotechnology and Bioengineering</i> , 2012, 109, 2970-2977.	3.3	28
139	Decoration of Electrospun Nanofibers with Monomeric Catechols to Facilitate Cell Adhesion. <i>Macromolecular Bioscience</i> , 2014, 14, 270-279.	4.1	28
140	Acetonide protection of dopamine for the synthesis of highly pure N-docosahexaenoyldopamine. <i>Tetrahedron Letters</i> , 2010, 51, 2403-2405.	1.4	25
141	Cooperativity of Catechols and Amines in High-Performance Dry/Wet Adhesives. <i>Angewandte Chemie</i> , 2020, 132, 16759-16767.	2.0	25
142	Surface Design for Immobilization of an Antimicrobial Peptide Mimic for Efficient Anti-Biofouling. <i>Chemistry - A European Journal</i> , 2020, 26, 5789-5793.	3.3	25
143	MUC1-Targeted Cancer Cell Photothermal Ablation Using Bioinspired Gold Nanorods. <i>PLoS ONE</i> , 2015, 10, e0128756.	2.5	25
144	Convenient synthesis of acetonide-protected 3,4-dihydroxyphenylalanine (DOPA) for Fmoc solid-phase peptide synthesis. <i>Tetrahedron Letters</i> , 2008, 49, 5519-5521.	1.4	24

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145	Immobilized Thrombopoietin (TPO) Lipopeptide Mimic Supports Similar Signaling and CD34+ Cell Differentiation as Soluble TPO.. Blood, 2005, 106, 3150-3150.	1.4	24
146	Enzymes on nanotubes thwart fouling. Nature Nanotechnology, 2007, 2, 138-139.	31.5	23
147	A comparative investigation of mussel-mimetic sealants for fetal membrane repair. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 57-64.	3.1	23
148	Processing of mussel adhesive protein analog thin films by matrix assisted pulsed laser evaporation. Applied Surface Science, 2005, 247, 217-224.	6.1	22
149	Molecular resurfacing of cartilage with proteoglycan 4. Acta Biomaterialia, 2010, 6, 3388-3394.	8.3	22
150	New Antifouling Platform Characterized by Single-Molecule Imaging. ACS Applied Materials & Interfaces, 2014, 6, 3553-3558.	8.0	21
151	Biomaterials in fetal surgery. Biomaterials Science, 2019, 7, 3092-3109.	5.4	21
152	Processing of mussel-adhesive protein analog copolymer thin films by matrix-assisted pulsed laser evaporation. Applied Surface Science, 2005, 248, 416-421.	6.1	20
153	Improved method for synthesis of cysteine modified hyaluronic acid for in situ hydrogel formation. Chemical Communications, 2015, 51, 9662-9665.	4.1	20
154	Bioinspired Design Provides High-Strength Benzoxazine Structural Adhesives. Angewandte Chemie, 2019, 131, 12399-12407.	2.0	20
155	Preparation of Calcium-Loaded Liposomes and Their Use in Calcium Phosphate Formation. Chemistry of Materials, 1998, 10, 109-116.	6.7	19
156	Effects of Supported Lipid Monolayer Fluidity on the Adhesion of Hematopoietic Progenitor Cell Lines to Fibronectin-Derived Peptide Ligands for $\alpha 5 \beta 1$ and $\alpha 4 \beta 1$ Integrins. Langmuir, 2009, 25, 2994-3002.	3.5	19
157	Effect of disulfide bonding and multimerization on proteoglycan 4's cartilage boundary lubricating ability and adsorption. Connective Tissue Research, 2016, 57, 113-123.	2.3	19
158	Unlocking mammalian regeneration through hypoxia inducible factor one alpha signaling. Biomaterials, 2021, 269, 120646.	11.4	19
159	In situ forming biomaterials. Oral and Maxillofacial Surgery Clinics of North America, 2002, 14, 29-38.	1.0	17
160	Method for Screening and MALDI-TOF MS Sequencing of Encoded Combinatorial Libraries. Analytical Chemistry, 2007, 79, 7275-7285.	6.5	17
161	Exploratory Testing of Diatom Silica to Map the Role of Material Attributes on Cell Fate. Scientific Reports, 2017, 7, 14138.	3.3	17
162	A Modular Strategy for Functional Pressure Sensitive Adhesives. ACS Applied Materials & Interfaces, 2021, 13, 3161-3165.	8.0	17

#	ARTICLE	IF	CITATIONS
163	Universal nanothin silk coatings <i>via</i> controlled spidroin self-assembly. <i>Biomaterials Science</i> , 2019, 7, 683-695.	5.4	15
164	Holding On by a Hard-Shell Thread. <i>Science</i> , 2010, 328, 180-181.	12.6	14
165	Polymer@MOFs capsules prepared through controlled interfacial mineralization for switching on/off enzymatic reactions. <i>Applied Materials Today</i> , 2018, 13, 320-328.	4.3	14
166	Surface Functionalization and Patterning by Multifunctional Resorcinarenes. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39268-39278.	8.0	14
167	Synthesis and Lcst Behavior of Thermally Responsive Poly(N-Isopropylacrylamide)/Layered Silicate Nanocomposites. <i>Materials Research Society Symposia Proceedings</i> , 1996, 457, 507.	0.1	13
168	Facile Macrocyclic Polyphenol Barrier Coatings for PDMS Microfluidic Devices. <i>Advanced Functional Materials</i> , 2020, 30, 2001274.	14.9	12
169	From sequence to color. <i>Science</i> , 2017, 356, 1011-1012.	12.6	11
170	Cartilage boundary lubricating ability of aldehyde modified proteoglycan 4Å (PRG4-CHO). <i>Osteoarthritis and Cartilage</i> , 2013, 21, 186-189.	1.3	10
171	Biomimetic Adhesives and Coatings Based on Mussel Adhesive Proteins. , 2016, , 345-378.		9
172	Interfacial Assembly Inspired by Marine Mussels and Antifouling Effects of Polypeptoids: A Neutron Reflection Study. <i>Langmuir</i> , 2020, 36, 12309-12318.	3.5	9
173	Stress enhancement and fatigue susceptibility of porous coated Ti-6Al-4V implants: An elastic analysis. <i>Journal of Biomedical Materials Research Part B</i> , 1990, 24, 591-604.	3.1	8
174	Preparation of a nanostructured organoceramic and its reversible interlayer expansion. <i>Journal of Materials Research</i> , 1999, 14, 315-318.	2.6	8
175	Matrix-assisted pulsed-laser evaporation of DOPA-modified poly(ethylene glycol) thin films. <i>Journal of Adhesion Science and Technology</i> , 2007, 21, 287-299.	2.6	8
176	Polydopamine-mediated Immobilization of Alginate Lyase to Prevent <i>P. aeruginosa</i> Adhesion. <i>Macromolecular Bioscience</i> , 2016, 16, 1301-1310.	4.1	8
177	Drug delivery and epimorphic salamander-type mouse regeneration: A full parts and labor plan. <i>Advanced Drug Delivery Reviews</i> , 2018, 129, 254-261.	13.7	8
178	High-throughput screening of multifunctional nanocoatings based on combinations of polyphenols and catecholamines. <i>Materials Today Bio</i> , 2021, 10, 100108.	5.5	8
179	A multi-tasking polypeptide from bloodworm jaws: Catalyst, template, and copolymer in film formation. <i>Matter</i> , 2022, 5, 1890-1908.	10.0	8
180	Surface Force Measurements of Mussel-Inspired Pressure-Sensitive Adhesives. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 6212-6220.	8.0	6

#	ARTICLE	IF	CITATIONS
181	Bioinspired Macromolecular Materials. <i>Biomacromolecules</i> , 2021, 22, 1-3.	5.4	5
182	Real time assessment of surface interactions with a titanium passivation layer by surface plasmon resonance. <i>Acta Biomaterialia</i> , 2012, 8, 1260-1266.	8.3	3
183	Wet Performance of Biomimetic Fibrillar Adhesives. , 2010, , 285-294.		3
184	Synthesis and Properties of Poly(Vinyl Alcohol)/Calcium Aluminate Nanocomposites. <i>Materials Research Society Symposia Proceedings</i> , 1991, 245, 191.	0.1	2
185	Biological Adhesion. , 2012, , 211-229.		2
186	Surface Modification for Protein Resistance Using a Biomimetic Approach. <i>Materials Research Society Symposia Proceedings</i> , 2003, 774, 221.	0.1	1
187	Biomimetic polydopamine coating on gold nanorods for biofunctionalization, imaging, and photothermal therapy. , 2013, , .		1
188	Design of Novel Mixer and Applicator for Two-Component Surgical Adhesives. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2015, 9, 0450011-450016.	0.7	1
189	Pulling together to improve stability. <i>Nature Chemistry</i> , 2019, 11, 295-296.	13.6	1
190	Adhesive block copolymers for tissue repair and drug delivery. , 0, , .		0
191	Laser Thin Film Processing of Biopolymers: Mussel Adhesive Protein Analog. <i>Materials Research Society Symposia Proceedings</i> , 2005, 897, 1.	0.1	0
192	Back Cover: <i>Macromol. Biosci.</i> 2/2014. <i>Macromolecular Bioscience</i> , 2014, 14, 298-298.	4.1	0
193	Biomaterials Science Emerging Investigators themed issue. <i>Biomaterials Science</i> , 2014, 2, 602.	5.4	0
194	Formation and Functionalization of Metallic Nanoparticles with Biomimetic Multifunctional Catechols. , 2009, , .		0
195	Biological Adhesion. , 2016, , .		0