Edmondo Maria Benetti

List of Publications by Year
in descending order

106 papers	4,054 citations	76294 40 h-index	138417 58 g-index
114 all docs	114 docs citations	114 times ranked	3946 citing authors

#	Article	IF	Citations
1	Oxygen Tolerance in Surface-Initiated Reversible Deactivation Radical Polymerizations: Are Polymer Brushes Turning into Technology?. ACS Macro Letters, 2022, 11, 415-421.	2.3	28
2	Topology and Molecular Architecture of Polyelectrolytes Determine Their pH-Responsiveness When Assembled on Surfaces. ACS Macro Letters, 2021, 10, 90-97.	2.3	8
3	Hydrogels Generated from Cyclic Poly(2â€Oxazoline)s Display Unique Swelling and Mechanical Properties. Macromolecular Rapid Communications, 2021, 42, e2000658.	2.0	13
4	Biomaterials applications of cyclic polymers. Biomaterials, 2021, 267, 120468.	5.7	31
5	The role of poly(2-alkyl-2-oxazoline)s in hydrogels and biofabrication. Biomaterials Science, 2021, 9, 2874-2886.	2.6	15
6	Fabrication of Three-Dimensional Polymer-Brush Gradients within Elastomeric Supports by Cu⁰-Mediated Surface-Initiated ATRP. ACS Macro Letters, 2021, 10, 1099-1106.	2.3	10
7	Dispersity within Brushes Plays a Major Role in Determining Their Interfacial Properties: The Case of Oligoxazoline-Based Graft Polymers. Journal of the American Chemical Society, 2021, 143, 19067-19077.	6.6	21
8	Fabrication of Biopassive Surfaces Using Poly(2â€alkylâ€2â€oxazoline)s: Recent Progresses and Applications. Advanced Materials Interfaces, 2020, 7, 2000943.	1.9	15
9	Polymer Topology Determines the Formation of Protein Corona on Coreâ€“Shell Nanoparticles. ACS Nano, 2020, 14, 12708-12718.	7.3	45
10	Mechanism and application of surface-initiated ATRP in the presence of a Zn⁰ plate. Polymer Chemistry, 2020, 11, 7009-7014.	1.9	21
11	Topological Polymer Chemistry Enters Materials Science: Expanding the Applicability of Cyclic Polymers. ACS Macro Letters, 2020, 9, 1024-1033.	2.3	44
12	Functional Nanoassemblies of Cyclic Polymers Show Amplified Responsiveness and Enhanced Protein-Binding Ability. ACS Nano, 2020, 14, 10054-10067.	7.3	23
13	Versatile Surface Modification of Hydrogels by Surface-Initiated, Cu⁰-Mediated Controlled Radical Polymerization. ACS Applied Materials & Interfaces, 2020, 12, 6761-6767.	4.0	38
14	Oxygen Tolerant and Cytocompatible Iron(0)-Mediated ATRP Enables the Controlled Growth of Polymer Brushes from Mammalian Cell Cultures. Journal of the American Chemical Society, 2020, 142, 3158-3164.	6.6	59
15	Surface-Initiated Photoinduced ATRP: Mechanism, Oxygen Tolerance, and Temporal Control during the Synthesis of Polymer Brushes. Macromolecules, 2020, 53, 2801-2810.	2.2	53
16	Influence of the Aliphatic Side Chain on the Near Atmospheric Pressure Plasma Polymerization of 2-Alkyl-2-oxazolines for Biomedical Applications. ACS Applied Materials & Interfaces, 2019, 11, 31356-31366.	4.0	17
17	Brushes, Graft Copolymers, or Bottlebrushes? The Effect of Polymer Architecture on the Nanotribological Properties of Grafted-from Assemblies. Langmuir, 2019, 35, 11255-11264.	1.6	23
18	Growing Polymer Brushes from a Variety of Substrates under Ambient Conditions by Cu⁰-Mediated Surface-Initiated ATRP. ACS Applied Materials & Interfaces, 2019, 11, 27470-27477.	4.0	50

#	Article	IF	Citations
19	Double-Network Hydrogels Including Enzymatically Crosslinked Poly-(2-alkyl-2-oxazoline)s for 3D Bioprinting of Cartilage-Engineering Constructs. Biomacromolecules, 2019, 20, 4502-4511.	2.6	54
20	Bioinert and Lubricious Surfaces by Macromolecular Design. Langmuir, 2019, 35, 13521-13535.	1.6	19
21	Translating Surface-Initiated Atom Transfer Radical Polymerization into Technology: The Mechanism of Cu⁰-Mediated SI-ATRP under Environmental Conditions. ACS Macro Letters, 2019, 8, 865-870.	2.3	50
22	Using Polymers to Impart Lubricity and Biopassivity to Surfaces: Are These Properties Linked?. Helvetica Chimica Acta, 2019, 102, e1900071.	1.0	28
23	Comblike Polymers with Topologically Different Side Chains for Surface Modification: Assembly Process and Interfacial Physicochemical Properties. Macromolecules, 2019, 52, 1632-1641.	2.2	22
24	Poly(3-hexylthiophene) nanowhiskers filler in poly(Îµ-caprolactone) based nanoblends as potential bioactive material. European Polymer Journal, 2019, 114, 144-150.	2.6	3
25	Biocatalytic ATRP in solution and on surfaces. Methods in Enzymology, 2019, 627, 263-290.	0.4	1
26	Surface-grafted assemblies of cyclic polymers: Shifting between high friction and extreme lubricity. European Polymer Journal, 2019, 110, 301-306.	2.6	33
27	Surface-Initiated Cu(0)-Mediated CRP for the Rapid and Controlled Synthesis of Quasi-3D Structured Polymer Brushes. ACS Macro Letters, 2019, 8, 145-153.	2.3	43
28	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. Angewandte Chemie - International Edition, 2018, 57, 1621-1626.	7.2	84
29	Hairy and Slippery Polyoxazoline-Based Copolymers on Model and Cartilage Surfaces. Biomacromolecules, 2018, 19, 680-690.	2.6	36
30	Molecularly Engineered Biolubricants for Articular Cartilage. Advanced Healthcare Materials, 2018, 7, e1701463.	3.9	43
31	Cyclic Polymer Grafts That Lubricate and Protect Damaged Cartilage. Angewandte Chemie, 2018, 130, 1637-1642.	1.6	10
32	Nanobiointerfaces: a themed collection. Biomaterials Science, 2018, 6, 706-707.	2.6	0
33	Engineering Lubricious, Biopassive Polymer Brushes by Surface-Initiated, Controlled Radical Polymerization. Industrial & Engineering Chemistry Research, 2018, 57, 4600-4606.	1.8	5
34	Design and characterization of ultrastable, biopassive and lubricious cyclic poly(2-alkyl-2-oxazoline) brushes. Polymer Chemistry, 2018, 9, 2580-2589.	1.9	56
35	Poly(2-oxazoline)â€"Pterostilbene Block Copolymer Nanoparticles for Dual-Anticancer Drug Delivery. Biomacromolecules, 2018, 19, 103-111.	2.6	28
36	Enzymatically crosslinked poly(2-alkyl-2-oxazoline) networks for 3D cell culture. Journal of Materials Chemistry B, 2018, 6, 7568-7572.	2.9	17

#	Article	IF	Citations
37	Mixing Poly(ethylene glycol) and Poly(2-alkyl-2-oxazoline)s Enhances Hydration and Viscoelasticity of Polymer Brushes and Determines Their Nanotribological and Antifouling Properties. ACS Applied Materials & Interfaces, 2018, 10, 41839-41848.	4.0	36
38	Surface Density Variation within Cyclic Polymer Brushes Reveals Topology Effects on Their Nanotribological and Biopassive Properties. ACS Macro Letters, 2018, 7, 1455-1460.	2.3	39
39	Assembly of poly-3-(hexylthiophene) nanocrystals in marginal solvent: The role of PCBM. European Polymer Journal, 2018, 109, 222-228.	2.6	4
40	Robust and Biocompatible Functionalization of ZnS Nanoparticles by Catechol-Bearing Poly(2-methyl-2-oxazoline)s. Langmuir, 2018, 34, 11534-11543.	1.6	7
41	Quasiâ€3Dâ€Structured Interfaces by Polymer Brushes. Macromolecular Rapid Communications, 2018, 39, e1800189.	2.0	19
42	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie, 2018, 130, 11841-11846.	1.6	6
43	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie - International Edition, 2018, 57, 11667-11672.	7.2	110
44	C1q-Mediated Complement Activation and C3 Opsonization Trigger Recognition of Stealth Poly(2-methyl-2-oxazoline)-Coated Silica Nanoparticles by Human Phagocytes. ACS Nano, 2018, 12, 5834-5847.	7.3	86
45	The Role of Cu⁰ in Surface-Initiated Atom Transfer Radical Polymerization: Tuning Catalyst Dissolution for Tailoring Polymer Interfaces. Macromolecules, 2018, 51, 6825-6835.	2.2	44
46	Nanoassemblies of Tissue-Reactive, Polyoxazoline Graft-Copolymers Restore the Lubrication Properties of Degraded Cartilage. ACS Nano, 2017, 11, 2794-2804.	7.3	72
47	Physical Networks of Metal-Ion-Containing Polymer Brushes Show Fully Tunable Swelling, Nanomechanical and Nanotribological Properties. Macromolecules, 2017, 50, 2495-2503.	2.2	14
48	Effects of Lateral Deformation by Thermoresponsive Polymer Brushes on the Measured Friction Forces. Langmuir, 2017, 33, 4164-4171.	1.6	22
49	Loops and Cycles at Surfaces: The Unique Properties of Topological Polymer Brushes. Chemistry - A European Journal, 2017, 23, 12433-12442.	1.7	55
50	Hostâ€"guest driven ligand replacement on monodisperse inorganic nanoparticles. Nanoscale, 2017, 9, 8925-8929.	2.8	6
51	RÃ¼cktitelbild: Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes (Angew. Chem. 16/2017). Angewandte Chemie, 2017, 129, 4702-4702.	1.6	0
52	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie - International Edition, 2017, 56, 4507-4511.	7.2	86
53	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie, 2017, 129, 4578-4582.	1.6	14
54	Fabrication and Interfacial Properties of Polymer Brush Gradients by Surface-Initiated Cu(0)-Mediated Controlled Radical Polymerization. Macromolecules, 2017, 50, 2436-2446.	2.2	61

#	Article	IF	Citations
55	Controlled Crosslinking Is a Tool To Precisely Modulate the Nanomechanical and Nanotribological Properties of Polymer Brushes. Macromolecules, 2017, 50, 2932-2941.	2.2	45
56	Controlling Enzymatic Polymerization from Surfaces with Switchable Bioaffinity. Biomacromolecules, 2017, 18, 4261-4270.	2.6	31
57	Topology Effects on the Structural and Physicochemical Properties of Polymer Brushes. Macromolecules, 2017, 50, 7760-7769.	2.2	86
58	Frontispiece: Loops and Cycles at Surfaces: The Unique Properties of Topological Polymer Brushes. Chemistry - A European Journal, 2017, 23, .	1.7	0
59	Covalent Binding of Bone Morphogenetic Proteinâ€•2 and Transforming Growth Factorâ€•Î²3 to 3D Plotted Scaffolds for Osteochondral Tissue Regeneration. Biotechnology Journal, 2017, 12, 1700072.	1.8	46
60	Modulation of Surface-Initiated ATRP by Confinement: Mechanism and Applications. Macromolecules, 2017, 50, 5711-5718.	2.2	21
61	A triaxial supramolecular weave. Nature Chemistry, 2017, 9, 1068-1072.	6.6	76
62	Berichtigung: Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie, 2017, 129, 2272-2272.	1.6	1
63	Easy to Apply Polyoxazoline-Based Coating for Precise and Long-Term Control of Neural Patterns. Langmuir, 2017, 33, 8594-8605.	1.6	35
64	Polyoxazoline biointerfaces by surface grafting. European Polymer Journal, 2017, 88, 470-485.	2.6	65
65	Immobilization of Colloidal Monolayers at Fluidâ€“Fluid Interfaces. Gels, 2016, 2, 19.	2.1	5
66	ATR-IR Investigation of Solvent Interactions with Surface-Bound Polymers. Langmuir, 2016, 32, 7588-7595.	1.6	11
67	Sizeâ€•Controlled Formation of Nobleâ€•Metal Nanoparticles in Aqueous Solution with a Thiolâ€•Free Tripeptide. Angewandte Chemie, 2016, 128, 8684-8687.	1.6	8
68	Sizeâ€•Controlled Formation of Nobleâ€•Metal Nanoparticles in Aqueous Solution with a Thiolâ€•Free Tripeptide. Angewandte Chemie - International Edition, 2016, 55, 8542-8545.	7.2	21
69	Titelbild: Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes (Angew. Chem. 50/2016). Angewandte Chemie, 2016, 128, 15671-15671.	1.6	1
70	Mimicking natural cell environments: design, fabrication and application of bio-chemical gradients on polymeric biomaterial substrates. Journal of Materials Chemistry B, 2016, 4, 4244-4257.	2.9	37
71	Crosslinking Polymer Brushes with Ethylene Glycol-Containing Segments: Influence on Physicochemical and Antifouling Properties. Langmuir, 2016, 32, 10317-10327.	1.6	51
72	Cell Adhesion: Stemâ€•Cell Clinging by a Thread: AFM Measure of Polymerâ€•Brush Lateral Deformation (Adv. Mater. Interfaces 3/2016). Advanced Materials Interfaces, 2016, 3, .	1.9	2

#	Article	IF	Citations
73	Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie - International Edition, 2016, 55, 15583-15588.	7.2	149
74	Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie, 2016, 128, 15812-15817.	1.6	27
75	Titelbild: Size-Controlled Formation of Noble-Metal Nanoparticles in Aqueous Solution with a Thiol-Free Tripeptide (Angew. Chem. 30/2016). Angewandte Chemie, 2016, 128, 8599-8599.	1.6	0
76	Understanding the effect of hydrophobic protecting blocks on the stability and biopassivity of polymer brushes in aqueous environments: A TiramisÃ¹ for cell-culture applications. Polymer, 2016, 98, 470-480.	1.8	33
77	Stemâ€Cell Clinging by a Thread: AFM Measure of Polymerâ€Brush Lateral Deformation. Advanced Materials Interfaces, 2016, 3, 1500456.	1.9	40
78	Lateral Deformability of Polymer Brushes by AFM-Based Method. Chimia, 2015, 69, 709.	0.3	0
79	Creeping Proteins in Microporous Structures: Polymer Brushâ€Assisted Fabrication of 3D Gradients for Tissue Engineering. Advanced Healthcare Materials, 2015, 4, 1169-1174.	3.9	39
80	Ultrathin, freestanding, stimuli-responsive, porous membranes from polymer hydrogel-brushes. Nanoscale, 2015, 7, 13017-13025.	2.8	39
81	Ultrastable Suspensions of Polyoxazoline-Functionalized ZnO Single Nanocrystals. Chemistry of Materials, 2015, 27, 2957-2964.	3.2	25
82	Amplified Responsiveness of Multilayered Polymer Grafts: Synergy between Brushes and Hydrogels. Macromolecules, 2015, 48, 7106-7116.	2.2	36
83	Stratified Polymer Grafts: Synthesis and Characterization of Layered â€˜Brushâ€™ and â€˜Gelâ€™ Structures. Advanced Materials Interfaces, 2014, 1, 1300007.	1.9	44
84	Polymer brush coatings regulating cell behavior: Passive interfaces turn into active. Acta Biomaterialia, 2014, 10, 2367-2378.	4.1	74
85	Polystyrene/TiO2 composite electrospun fibers as fillers for poly(butylene succinate-co-adipate): Structure, morphology and properties. European Polymer Journal, 2014, 50, 78-86.	2.6	28
86	Polymeric Thin Films: Stratified Polymer Grafts: Synthesis and Characterization of Layered â€˜Brushâ€™ and â€˜Gelâ€™ Structures (Adv. Mater. Interfaces 1/2014). Advanced Materials Interfaces, 2014, 1, n/a-n/a.	1.9	1
87	Tuning Surface Mechanical Properties by Amplified Polyelectrolyte Self-Assembly: Where â€œGrafting-fromâ€•Meets â€œGrafting-toâ€• ACS Applied Materials & Interfaces, 2013, 5, 4913-4920.	4.0	12
88	Thin Polymer Brush Decouples Biomaterialâ€™s Micro-/Nanotopology and Stem Cell Adhesion. Langmuir, 2013, 29, 13843-13852.	1.6	31
89	Conjugated Polymers in Cages: Templating Poly(3â€hexylthiophene) Nanocrystals by Inert Gel Matrices. Advanced Materials, 2012, 24, 5636-5641.	11.1	10
90	Lubrication with Oil-Compatible Polymer Brushes. Tribology Letters, 2012, 45, 477-487.	1.2	64

#	Article	IF	Citations
91	Self-Assembly of Focal Point Oligo-catechol Ethylene Glycol Dendrons on Titanium Oxide Surfaces: Adsorption Kinetics, Surface Characterization, and Nonfouling Properties. Journal of the American Chemical Society, 2011, 133, 10940-10950.	6.6	185
92	Grafting mixed responsive brushes of poly(N-isopropylacrylamide) and poly(methacrylic acid) from gold by selective initiation. Polymer Chemistry, 2011, 2, 879.	1.9	49
93	Surface-Grafted, Covalently Cross-Linked Hydrogel Brushes with Tunable Interfacial and Bulk Properties. Macromolecules, 2011, 44, 5344-5351.	2.2	94
94	Nanostructured Polymer Brushes by UVâ€Assisted Imprint Lithography and Surfaceâ€Initiated Polymerization for Biological Functions. Advanced Functional Materials, 2011, 21, 2088-2095.	7.8	29
95	Surfaceâ€Grafted Gelâ€Brush/Metal Nanoparticle Hybrids. Advanced Functional Materials, 2010, 20, 939-944.	7.8	60
96	A Brushâ€Gel/Metalâ€Nanoparticle Hybrid Film as an Efficient Supported Catalyst in Glass Microreactors. Chemistry - A European Journal, 2010, 16, 12406-12411.	1.7	77
97	The role of the interplay between polymer architecture and bacterial surface properties on the microbial adhesion to polyoxazoline-based ultrathin films. Biomaterials, 2010, 31, 9462-9472.	5.7	114
98	Characterization and molecular engineering of surface-grafted polymer brushes across the length scales by atomic force microscopy. Journal of Materials Chemistry, 2010, 20, 4981.	6.7	63
99	Enzyme-functionalized polymer brush films on the inner wall of siliconâ€“glass microreactors with tunable biocatalytic activity. Lab on A Chip, 2010, 10, 3407.	3.1	60
100	pH Responsive Polymeric Brush Nanostructures: Preparation and Characterization by Scanning Probe Oxidation and Surface Initiated Polymerization. Macromolecular Rapid Communications, 2009, 30, 411-417.	2.0	30
101	Temperature-modulated quenching of quantum dots covalently coupled to chain ends of poly(<i>N</i>-isopropyl acrylamide) brushes on gold. Nanotechnology, 2009, 20, 185501.	1.3	34
102	Poly(methacrylic acid) Grafts Grown from Designer Surfaces: The Effect of Initiator Coverage on Polymerization Kinetics, Morphology, and Properties. Macromolecules, 2009, 42, 1640-1647.	2.2	46
103	Buried, Covalently Attached RGD Peptide Motifs in Poly(methacrylic acid) Brush Layers: The Effect of Brush Structure on Cell Adhesion. Langmuir, 2008, 24, 10996-11002.	1.6	79
104	Preparation and characterization of macromolecular â€œhedgeâ€•brushes grafted from Au nanowires. Journal of Materials Chemistry, 2007, 17, 3293.	6.7	34
105	Tunable Thermoresponsive Polymeric Platforms on Gold by â€œPhotoiniferterâ€•Based Surface Grafting. Advanced Materials, 2007, 19, 268-271.	11.1	103
106	Morphological and structural characterization of polypropylene based nanocomposites. Polymer, 2005, 46, 8275-8285.	1.8	64