Michael Malkoch

List of Publications by Year
in descending order

113 papers	5,706 citations	101384 36 h-index	79541 73 g-index
119 all docs	119 docs citations	119 times ranked	5962 citing authors

#	Article	IF	Citations
1	Multivalent, bifunctional dendrimers prepared by click chemistry. Chemical Communications, 2005, , 5775.	2.2	416
2	Structurally Diverse Dendritic Libraries:Â A Highly Efficient Functionalization Approach Using Click Chemistry. Macromolecules, 2005, 38, 3663-3678.	2.2	363
3	New methodologies in the construction of dendritic materials. Chemical Society Reviews, 2009, 38, 352-362.	18.7	359
4	Orthogonal Approaches to the Simultaneous and Cascade Functionalization of Macromolecules Using Click Chemistry. Journal of the American Chemical Society, 2005, 127, 14942-14949.	6.6	322
5	Beyond PDMS: off-stoichiometry thiolâ€“ene (OSTE) based soft lithography for rapid prototyping of microfluidic devices. Lab on A Chip, 2011, 11, 3136.	3.1	260
6	Simplifying the synthesis of dendrimers: accelerated approaches. Chemical Society Reviews, 2012, 41, 4593.	18.7	252
7	Rapid and Efficient Synthesis of Aliphatic Ester Dendrons and Dendrimers. Macromolecules, 2002, 35, 8307-8314.	2.2	162
8	Pushing the Limits for Thiolâ^'Ene and CuAAC Reactions: Synthesis of a 6th Generation Dendrimer in a Single Day. Macromolecules, 2010, 43, 6625-6631.	2.2	158
9	Stability and biocompatibility of a library of polyester dendrimers in comparison to polyamidoamine dendrimers. Biomaterials, 2012, 33, 1970-1981.	5.7	147
10	Dendritic architectures based on bis-MPA: functional polymeric scaffolds for application-driven research. Chemical Society Reviews, 2013, 42, 5858.	18.7	137
11	Click Assisted Oneâ€Pot Multiâ€Step Reactions in Polymer Science: Accelerated Synthetic Protocols. Macromolecular Rapid Communications, 2008, 29, 998-1015.	2.0	135
12	Bifunctional Dendrimers: From Robust Synthesis and Accelerated Oneâ€Pot Postfunctionalization Strategy to Potential Applications. Angewandte Chemie - International Edition, 2009, 48, 2126-2130.	7.2	132
13	A chemoselective approach for the accelerated synthesis of well-defined dendritic architectures. Chemical Communications, 2007, , 2249-2251.	2.2	128
14	Role of architecture and molecular weight in the formation of tailor-made ultrathin multilayers using dendritic macromolecules and click chemistry. Journal of Polymer Science Part A, 2007, 45, 2835-2846.	2.5	113
15	Effects of Modulus and Surface Chemistry of Thiol-Ene Photopolymers in Nanoimprinting. Nano Letters, 2007, 7, 233-237.	4.5	101
16	Facile access to internally functionalized dendrimers through efficient and orthogonal click reactions. Chemical Communications, 2010, 46, 1556.	2.2	94
17	Accelerated Growth of Dendrimers via Thiolâ^'Ene and Esterification Reactions. Macromolecules, 2010, 43, 6004-6013.	2.2	90
18	Poly(ethylene glycol)-Based Thiol-ene Hydrogel Coatingsâ^'Curing Chemistry, Aqueous Stability, and Potential Marine Antifouling Applications. ACS Applied Materials & Interfaces, 2010, 2, 903-912.	4.0	89

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19	Dendronized Aliphatic Polymers by a Combination of ATRP and Divergent Growth. Macromolecules, 2004, 37, 322-329.	2.2	69
20	On the mechanism behind freezing-induced chemical crosslinking in ice-templated cellulose nanofibril aerogels. Journal of Materials Chemistry A, 2018, 6, 19371-19380.	5.2	63
21	Bifunctional Dendronized Cellulose Surfaces as Biosensors. Biomacromolecules, 2011, 12, 2114-2125.	2.6	59
22	Characterization of Poly(norbornene) Dendronized Polymers Prepared by Ring-Opening Metathesis Polymerization of Dendron Bearing Monomers. Macromolecules, 2006, 39, 7241-7249.	2.2	58
23	Characterization of wellâ€defined poly(ethylene glycol) hydrogels prepared by thiolâ€ene chemistry. Journal of Polymer Science Part A, 2011, 49, 4044-4054.	2.5	58
24	Nanogel Encapsulated Hydrogels As Advanced Wound Dressings for the Controlled Delivery of Antibiotics. Advanced Functional Materials, 2021, 31, 2006453.	7.8	58
25	Synthesis and thiolâ€“ene photopolymerization of allylâ€ether functionalized dendrimers. Journal of Polymer Science Part A, 2008, 46, 1339-1348.	2.5	57
26	Membrane interactions of microgels as carriers of antimicrobial peptides. Journal of Colloid and Interface Science, 2018, 513, 141-150.	5.0	57
27	pH-triggered self-assembly of biocompatible histamine-functionalized triblock copolymers. Soft Matter, 2013, 9, 82-89.	1.2	55
28	A general strategy for highly efficient nanoparticle dispersing agents based on hybrid dendritic linear block copolymers. Journal of Polymer Science Part A, 2009, 47, 1237-1258.	2.5	53
29	Exhaustive glycosylation, pegylation, and glutathionylation of a [G4]â€ene₄₈ dendrimer via photoinduced thiolâ€ene coupling. Journal of Polymer Science Part A, 2011, 49, 4468-4475.	2.5	51
30	UV initiated thiolâ€“ene chemistry: a facile and modular synthetic methodology for the construction of functional 3D networks with tunable properties. Journal of Materials Chemistry A, 2013, 1, 13732.	5.2	51
31	Hyperbranched copolymer micelles as delivery vehicles of doxorubicin in breast cancer cells. Journal of Polymer Science Part A, 2012, 50, 280-288.	2.5	50
32	Linear dendritic polymeric amphiphiles with intrinsic biocompatibility: synthesis and characterization to fabrication of micelles and honeycomb membranes. Polymer Chemistry, 2011, 2, 394-402.	1.9	49
33	Multifunctional Poly(ethylene glycol): Synthesis, Characterization, and Potential Applications of Dendriticâ€“Linearâ€“Dendritic Block Copolymer Hybrids. Macromolecules, 2013, 46, 3726-3736.	2.2	43
34	Fluorideâ€Promoted Esterification with Imidazolideâ€Activated Compounds: A Modular and Sustainable Approach to Dendrimers. Angewandte Chemie - International Edition, 2015, 54, 2416-2419.	7.2	42
35	Highly Adhesive Phenolic Compounds as Interfacial Primers for Bone Fracture Fixations. ACS Applied Materials & Interfaces, 2010, 2, 654-657.	4.0	41
36	Chemistry of multifunctional polymers based on bis-MPA and their cutting-edge applications. Progress in Polymer Science, 2015, 48, 85-110.	11.8	39

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37	Reactive imidazole intermediates: simplified synthetic approach to functional aliphatic cyclic carbonates. Polymer Chemistry, 2014, 5, 6651-6655.	1.9	38
38	Evaluation of Amino-Functional Polyester Dendrimers Based on Bis-MPA as Nonviral Vectors for siRNA Delivery. Molecules, 2018, 23, 2028.	1.7	38
39	Europium confined cyclen dendrimers with photophysically active triazoles. Journal of Materials Chemistry, 2008, 18, 2545.	6.7	37
40	Novel macrothiols for the synthesis of a structurally comprehensive dendritic library using thiolâ€“ene click chemistry. Journal of Polymer Science Part A, 2011, 49, 2990-2995.	2.5	37
41	Synthesis and in Vitro Evaluation of Monodisperse Amino-Functional Polyester Dendrimers with Rapid Degradability and Antibacterial Properties. Biomacromolecules, 2017, 18, 4323-4330.	2.6	37
42	Highâ€Performance Thiolâ€“Ene Composites Unveil a New Era of Adhesives Suited for Bone Repair. Advanced Functional Materials, 2018, 28, 1800372.	7.8	36
43	Immobilized oxazoline-containing Ligands in asymmetric catalysisâ€”a review. Bioorganic and Medicinal Chemistry Letters, 2002, 12, 1857-1861.	1.0	35
44	Localized â€œClickâ€•Chemistry Through Dipâ€Pen Nanolithography. Advanced Materials, 2007, 19, 4471-4473.	11.1	34
45	Synthesis and characterization of hyperbranched polymers with increased chemical versatility for imprint lithographic resists. Journal of Polymer Science Part A, 2008, 46, 6238-6254.	2.5	34
46	Thiolâ€ene and thiolâ€yneâ€based synthesis of glycodendrimers as nanomolar inhibitors of wheat germ agglutinin. Journal of Polymer Science Part A, 2014, 52, 2422-2433.	2.5	34
47	Conformation of Intramolecularly Cross-Linked Polymer Nanoparticles on Solid Substrates. Nano Letters, 2005, 5, 1704-1709.	4.5	31
48	Dual-purpose PEG scaffolds for the preparation of soft and biofunctional hydrogels: the convergence between CuAAC and thiolâ€“ene reactions. Chemical Communications, 2013, 49, 6938.	2.2	31
49	Linearâ€dendritic polymeric amphiphiles as carriers of doxorubicinâ€”In vitro evaluation of biocompatibility and drug delivery. Journal of Polymer Science Part A, 2012, 50, 217-226.	2.5	29
50	A one component methodology for the fabrication of honeycomb films from biocompatible amphiphilic block copolymer hybrids: a linearâ€“dendriticâ€“linear twist. Polymer Chemistry, 2013, 4, 2680.	1.9	29
51	Therapeutic Nanocarriers via Cholesterol Directed Self-Assembly of Well-Defined Linear-Dendritic Polymeric Amphiphiles. Chemistry of Materials, 2017, 29, 3891-3898.	3.2	26
52	Dendritic Oxazoline Ligands in Enantioselective Palladium-Catalyzed Allylic Alkylations. Journal of Organic Chemistry, 2002, 67, 8197-8202.	1.7	25
53	Templating Gold Surfaces with Function: A Self-Assembled Dendritic Monolayer Methodology Based on Monodisperse Polyester Scaffolds. Langmuir, 2013, 29, 456-465.	1.6	25
54	Accelerated Chemoselective Reactions to Sequence-Controlled Heterolayered Dendrimers. Journal of the American Chemical Society, 2020, 142, 1501-1509.	6.6	25

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55	Synthesis and characterization of 2,2-bis(methylol)propionic acid dendrimers with different cores and terminal groups. Journal of Polymer Science Part A, 2004, 42, 1758-1767.	2.5	24
56	Degradable high T_g sugar-derived polycarbonates from isosorbide and dihydroxyacetone. Polymer Chemistry, 2018, 9, 2238-2246.	1.9	24
57	Offâ€Stoichiometric Thiolâ€Ene Chemistry to Dendritic Nanogel Therapeutics. Advanced Functional Materials, 2019, 29, 1806693.	7.8	24
58	Advantages of Monodisperse and Chemically Robust â€œSpheriCalâ€•Polyester Dendrimers as a â€œUniversalâ€• MS Calibrant. Journal of the American Society for Mass Spectrometry, 2014, 25, 303-309.	1.2	22
59	Hybrid One-Dimensional Nanostructures: One-Pot Preparation of Nanoparticle Chains via Directed Self-Assembly of in Situ Synthesized Discrete Au Nanoparticles. Langmuir, 2012, 28, 5947-5955.	1.6	21
60	Sequential interpenetrating poly(ethylene glycol) hydrogels prepared by UVâ€initiated thiolâ€“ene coupling chemistry. Journal of Polymer Science Part A, 2013, 51, 363-371.	2.5	21
61	Degradable dendritic nanogels as carriers for antimicrobial peptides. Journal of Colloid and Interface Science, 2019, 554, 592-602.	5.0	21
62	Histamine-functionalized copolymer micelles as a drug delivery system in 2D and 3D models of breast cancer. Journal of Materials Chemistry B, 2015, 3, 2472-2486.	2.9	20
63	Dendritic Structures Based on Bis(hydroxymethyl)propionic Acid as Platforms for Surface Reactions. Langmuir, 2005, 21, 4512-4519.	1.6	19
64	Dendron-decorated cyanine dyes for optical limiting applications in the range of telecommunication wavelengths. New Journal of Chemistry, 2009, 33, 964.	1.4	18
65	Multipurpose heterofunctional dendritic scaffolds as crosslinkers towards functional soft hydrogels and implant adhesives in bone fracture applications. Journal of Materials Chemistry B, 2013, 1, 6015.	2.9	18
66	Linear Dendritic Block Copolymers as Promising Biomaterials for the Manufacturing of Soft Tissue Adhesive Patches Using Visible Light Initiated Thiolâ€“Ene Coupling Chemistry. Advanced Functional Materials, 2015, 25, 6596-6605.	7.8	18
67	Antibioticâ€Free Cationic Dendritic Hydrogels as Surgicalâ€Siteâ€Infectionâ€Inhibiting Coatings. Advanced Healthcare Materials, 2019, 8, e1801619.	3.9	18
68	Side-by-side comparison of dendritic-linear hybrids and their hyperbranched analogs as micellar carriers of chemotherapeutics. Journal of Polymer Science Part A, 2013, 51, 3992-3996.	2.5	17
69	The first peripherally masked thiol dendrimers: a facile and highly efficient functionalization strategy of polyester dendrimers via one-pot xanthate deprotection/thiolâ€“acrylate Michael addition reactions. Chemical Communications, 2014, 50, 6574-6577.	2.2	17
70	Fluoride-Promoted Esterification (FPE) Chemistry: A Robust Route to Bis-MPA Dendrons and Their Postfunctionalization. Molecules, 2016, 21, 366.	1.7	17
71	High temperature synthesis of vinyl terminated polymers based on dendronized acrylates: a detailed product analysis study. Polymer Chemistry, 2011, 2, 1163-1173.	1.9	16
72	Beyond State of the Art Honeycomb Membranes: High Performance Ordered Arrays from Multiprogrammable Linearâ€Dendritic Block Copolymers. Advanced Functional Materials, 2015, 25, 4837-4843.	7.8	16

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73	â€˜One-potâ€™ sequential deprotection/functionalisation of linear-dendritic hybrid polymers using a xanthate mediated thiol/Michael addition. Polymer Chemistry, 2015, 6, 573-582.	1.9	16
74	In Situ Encapsulation of Nile Red or Doxorubicin during RAFTâ€Mediated Emulsion Polymerization via Polymerizationâ€Induced Selfâ€Assembly for Biomedical Applications. Macromolecular Chemistry and Physics, 2020, 221, 1900443.	1.1	16
75	Facile synthesis of dopa-functional polycarbonates via thiol-Ene-coupling chemistry towards self-healing gels. Journal of Polymer Science Part A, 2016, 54, 2370-2378.	2.5	15
76	Penetration and Accumulation of Dendrons with Different Peripheral Composition in Pseudomonas aeruginosa Biofilms. Nano Letters, 2019, 19, 4327-4333.	4.5	15
77	Hydroxyl functional polyester dendrimers as stabilizing agent for preparation of colloidal silver particlesâ€”a study in respect to antimicrobial properties and toxicity against human cells. Colloid and Polymer Science, 2012, 290, 1413-1421.	1.0	14
78	Recent advances on crosslinked dendritic networks. Journal of Applied Polymer Science, 2014, 131, .	1.3	14
79	Activated dopamine derivatives as primers for adhesive-patch fixation of bone fractures. RSC Advances, 2016, 6, 26398-26405.	1.7	14
80	Synthesis of Heterofunctional Polyester Dendrimers with Internal and External Functionalities as Versatile Multipurpose Platforms. Biomacromolecules, 2020, 21, 4273-4279.	2.6	14
81	Dendritic Hydrogels Induce Immune Modulation in Human Keratinocytes and Effectively Eradicate Bacterial Pathogens. Journal of the American Chemical Society, 2021, 143, 17180-17190.	6.6	14
82	Heterogeneous Rupturing Dendrimers. Journal of the American Chemical Society, 2017, 139, 17660-17666.	6.6	12
83	Self-Assembled Polyester Dendrimer/Cellulose Nanofibril Hydrogels with Extraordinary Antibacterial Activity. Pharmaceutics, 2020, 12, 1139.	2.0	12
84	Radical copolymerization of acrylonitrile with 2,2,2â€trifluoroethyl acrylate for dielectric materials: Structure and characterization. Journal of Polymer Science Part A, 2013, 51, 3856-3866.	2.5	11
85	Functional porous membranes from amorphous linear dendritic polyester hybrids. Polymer Chemistry, 2015, 6, 2390-2395.	1.9	11
86	Fluoride-promoted carbonylation polymerization: a facile step-growth technique to polycarbonates. Chemical Science, 2017, 8, 4853-4857.	3.7	11
87	The Dawn of Thiolâ€Yne Triazine Triones Thermosets as a New Material Platform Suited for Hard Tissue Repair. Advanced Materials, 2018, 30, 1804966.	11.1	10
88	Soft hydrogels from tetra-functional PEGs using UV-induced thiolâ€“ene coupling chemistry: a structure-to-property study. RSC Advances, 2014, 4, 30118.	1.7	9
89	Dendritic hydrogels: From exploring various crosslinking chemistries to introducing functions and naturally abundant resources. Journal of Polymer Science Part A, 2015, 53, 2431-2439.	2.5	9
90	High water-content thermoresponsive hydrogels via electrostatic macrocrosslinking of cellulose nanofibrils. Journal of Polymer Science Part A, 2016, 54, 3415-3424.	2.5	9

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91	Degradable High Molecular Weight Monodisperse Dendritic Poly(ethylene glycols). Biomacromolecules, 2020, 21, 4294-4301.	2.6	9
92	Novel Therapeutic Platform of Micelles and Nanogels from Dopaâ€Functionalized Triblock Copolymers. Small, 2021, 17, e2007305.	5.2	9
93	Modular, synthetic, thiolâ€ene mediated hydrogel networks as potential scaffolds for <scp>3D</scp> cell cultures and tissue regeneration. Journal of Polymer Science, 2020, 58, 3153-3164.	2.0	8
94	Highly Customizable Bone Fracture Fixation through the Marriage of Composites and Screws. Advanced Functional Materials, 2021, 31, 2105187.	7.8	8
95	The influence of diffusion time on the properties of sequential interpenetrating PEG hydrogels. Journal of Polymer Science Part A, 2013, 51, 1378-1386.	2.5	7
96	Nanofibrous nonwovens based on dendriticâ€linearâ€dendritic poly(ethylene glycol) hybrids. Journal of Applied Polymer Science, 2018, 135, 45949.	1.3	6
97	Model studies of the sequential and simultaneous statistical modification of dendritic functional groups and their implications within complex polymer architecture synthesis. Polymer Chemistry, 2017, 8, 1644-1653.	1.9	5
98	Facile thiolation of hydroxyl functional polymers. Polymer Chemistry, 2017, 8, 4996-5001.	1.9	5
99	Design of multivalent fluorescent dendritic probes for siteâ€specific labeling of biomolecules. Journal of Polymer Science Part A, 2018, 56, 1609-1616.	2.5	5
100	DendroPrime as an adhesion barrier on fracture fixation plates: an experimental study in rabbits. Journal of Hand Surgery: European Volume, 2020, 45, 742-747.	0.5	5
101	Helux: A Heterofunctional Hyperbranched Poly(amido amine) Carboxylate. ACS Applied Polymer Materials, 2019, 1, 1845-1853.	2.0	4
102	Dendritic Polyampholyte-Assisted Formation of Functional Cellulose Nanofibril Materials. Biomacromolecules, 2020, 21, 2856-2863.	2.6	4
103	Differentiating Co-Delivery of Bisphosphonate and Simvastatin by Self-Healing Hyaluronan Hydrogel Formed by Orthogonal â€œClicksâ€: An In-Vitro Assessment. Polymers, 2021, 13, 2106.	2.0	4
104	Active quinine-based films able to release antimicrobial compounds via melt quaternization at low temperature. Journal of Materials Chemistry B, 2018, 6, 98-104.	2.9	3
105	Bone Repair: High-Performance Thiol-Ene Composites Unveil a New Era of Adhesives Suited for Bone Repair (Adv. Funct. Mater. 26/2018). Advanced Functional Materials, 2018, 28, 1870180.	7.8	3
106	SpheriCal^{Â®}â€ESI: A dendrimerâ€based nineâ€point calibration solution ranging from m/z 273 to 1716 for electrospray ionization mass spectrometry peptide analysis. Rapid Communications in Mass Spectrometry, 2021, 35, e9035.	0.7	3
107	Fluorideâ€Promoted Esterification with Imidazolideâ€Activated Compounds: A Modular and Sustainable Approach to Dendrimers. Angewandte Chemie, 2015, 127, 2446-2449.	1.6	2
108	Inside Cover: Bifunctional Dendrimers: From Robust Synthesis and Accelerated One-Pot Postfunctionalization Strategy to Potential Applications (Angew. Chem. Int. Ed. 12/2009). Angewandte Chemie - International Edition, 2009, 48, 2056-2056.	7.2	1

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109	Combination of Coordination and Releasable Covalent Binding for the Delivery of Antisense Therapeutics by Bisphosphonate-Hyaluronan-Oligonucleotide Conjugates. ACS Applied Polymer Materials, 2021, 3, 2197-2210.	2.0	1
110	UV-Cured Antibacterial Hydrogels Based on PEG and Monodisperse Heterofunctional Bis-MPA Dendrimers. Molecules, 2021, 26, 2364.	1.7	1
111	Highly Customizable Bone Fracture Fixation through the Marriage of Composites and Screws (Adv.) Tj ETQq1 1 0.784314 rgBT /Overl	7.8	1
112	Tissue Adhesives: Linear Dendritic Block Copolymers as Promising Biomaterials for the Manufacturing of Soft Tissue Adhesive Patches Using Visible Light Initiated Thiol-Ene Coupling Chemistry (Adv. Funct.) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.8	0
113	Electrospinning of hybrid nanofibres elaborated with PEG core dendrimers and SPIONs synthesized in-situ: As multifunctional material for biomedical applications. , 2017, , .		0