

# Scott M Grayson

## List of Publications by Year in descending order

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107  
papers

6,164  
citations

136950

32  
h-index

69250

77  
g-index

110  
all docs

110  
docs citations

110  
times ranked

5569  
citing authors

#	ARTICLE	IF	CITATIONS
1	Convergent Dendrons and Dendrimers: from Synthesis to Applications. <i>Chemical Reviews</i> , 2001, 101, 3819-3868.	47.7	1,547
2	An Efficient Route to Well-Defined Macrocyclic Polymers via "Click" Cyclization. <i>Journal of the American Chemical Society</i> , 2006, 128, 4238-4239.	13.7	666
3	Synthetic approaches for the preparation of cyclic polymers. <i>Chemical Society Reviews</i> , 2009, 38, 2202.	38.1	441
4	The synthesis, properties and potential applications of cyclic polymers. <i>Nature Chemistry</i> , 2020, 12, 433-444.	13.6	242
5	Synthesis and Degradation Behavior of Cyclic Poly( $\mu$ -caprolactone). <i>Macromolecules</i> , 2009, 42, 6406-6413.	4.8	216
6	The Synthesis of Cyclic Poly(ethylene imine) and Exact Linear Analogues: An Evaluation of Gene Delivery Comparing Polymer Architectures. <i>Journal of the American Chemical Society</i> , 2015, 137, 6541-6549.	13.7	195
7	Efficient Preparation of Cyclic Poly(methyl acrylate)- <i>block</i> -poly(styrene) by Combination of Atom Transfer Radical Polymerization and Click Cyclization. <i>Macromolecules</i> , 2008, 41, 5082-5084.	4.8	161
8	Approaches for the preparation of non-linear amphiphilic polymers and their applications to drug delivery. <i>Advanced Drug Delivery Reviews</i> , 2012, 64, 852-865.	13.7	159
9	Cyclic polyesters: synthetic approaches and potential applications. <i>Polymer Chemistry</i> , 2011, 2, 289-299.	3.9	135
10	Divergent Synthesis of Dendronized Poly( <i>p</i> -hydroxystyrene). <i>Macromolecules</i> , 2001, 34, 6542-6544.	4.8	106
11	Exploring the Effect of Amphiphilic Polymer Architecture: Synthesis, Characterization, and Self-Assembly of Both Cyclic and Linear Poly(ethylene glycol)- <i>block</i> -polycaprolactone. <i>ACS Macro Letters</i> , 2013, 2, 845-848.	4.8	105
12	Synthesis of Cyclic Dendronized Polymers via Divergent "Graft-from" and Convergent Click "Graft-to" Routes: Preparation of Modular Toroidal Macromolecules. <i>Journal of the American Chemical Society</i> , 2011, 133, 13421-13429.	13.7	93
13	Architectural Differentiation of Linear and Cyclic Polymeric Isomers by Ion Mobility Spectrometry-Mass Spectrometry. <i>Macromolecules</i> , 2011, 44, 6915-6918.	4.8	87
14	New insights on the crystallization and melting of cyclic PCL chains on the basis of a modified Thomson's Gibbs equation. <i>Polymer</i> , 2013, 54, 846-859.	3.8	82
15	A Comparative Study on the Crystallization Behavior of Analogous Linear and Cyclic Poly( $\mu$ -caprolactones). <i>Macromolecules</i> , 2011, 44, 1742-1746.	4.8	81
16	Synthesis and Surface Functionalization of Aliphatic Polyether Dendrons. <i>Journal of the American Chemical Society</i> , 2000, 122, 10335-10344.	13.7	77
17	MALDI-TOF Mass Spectral Characterization of Polymers Containing an Azide Group: Evidence of Metastable Ions. <i>Macromolecules</i> , 2010, 43, 6225-6228.	4.8	75
18	Hydrogel Biosensor Array Platform Indexed by Shape. <i>Chemistry of Materials</i> , 2004, 16, 5574-5580.	6.7	73

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19	Nucleation and Antinucleation Effects of Functionalized Carbon Nanotubes on Cyclic and Linear Poly( $\mu$ -caprolactones). <i>Macromolecules</i> , 2014, 47, 3553-3566.	4.8	70
20	Dendronized Supramolecular Nanocapsules: pH Independent, Water-Soluble, Deep-Cavity Cavitands Assemble via the Hydrophobic Effect. <i>Journal of the American Chemical Society</i> , 2008, 130, 14430-14431.	13.7	68
21	The role of macromolecular architecture in passively targeted polymeric carriers for drug and gene delivery. <i>Journal of Drug Targeting</i> , 2008, 16, 329-356.	4.4	68
22	Major Impact of Cyclic Chain Topology on the $T_g$ -Confinement Effect of Supported Thin Films of Polystyrene. <i>Macromolecules</i> , 2016, 49, 257-268.	4.8	67
23	Synthesis of Amphiphilic Star Block Copolymers and Their Evaluation as Transdermal Carriers. <i>Biomacromolecules</i> , 2011, 12, 898-906.	5.4	56
24	Organocatalyzed ROP of a Glucopyranoside Derived Five-Membered Cyclic Carbonate. <i>Macromolecules</i> , 2018, 51, 1787-1797.	4.8	52
25	Thiol-ene Click Functionalization and Subsequent Polymerization of 2-Oxazoline Monomers. <i>Macromolecules</i> , 2010, 43, 4081-4090.	4.8	48
26	Core-shell structured poly(glycidyl methacrylate)/BaTiO <sub>3</sub> nanocomposites prepared by surface-initiated atom transfer radical polymerization: A novel material for high energy density dielectric storage. <i>Journal of Polymer Science Part A</i> , 2015, 53, 719-728.	2.3	45
27	Comparing crystallization rates between linear and cyclic poly( $\epsilon$ -caprolactones) via fast-scan chip-calorimeter measurements. <i>Polymer</i> , 2015, 63, 34-40.	3.8	45
28	Synthesis of narrow-polydispersity degradable dendronized aliphatic polyesters. <i>Journal of Polymer Science Part A</i> , 2004, 42, 3563-3578.	2.3	40
29	Synthesis of cyclic amphiphilic homopolymers and their potential application as polymeric micelles. <i>Polymer Chemistry</i> , 2012, 3, 1846-1855.	3.9	39
30	Differentiation of Linear and Cyclic Polymer Architectures by MALDI Tandem Mass Spectrometry (MALDI-MS <sup>2</sup> ). <i>Journal of the American Society for Mass Spectrometry</i> , 2013, 24, 74-82.	2.8	38
31	The identification of synthetic homopolymer end groups and verification of their transformations using MALDI-TOF mass spectrometry. <i>Journal of Mass Spectrometry</i> , 2010, 45, 587-611.	1.6	36
32	Scaling Exponent and Effective Interactions in Linear and Cyclic Polymer Solutions: Theory, Simulations, and Experiments. <i>Macromolecules</i> , 2019, 52, 4579-4589.	4.8	35
33	Surface-initiated atom transfer radical polymerization of glycidyl methacrylate and styrene from boron nitride nanotubes. <i>Journal of Materials Chemistry C</i> , 2014, 2, 4073-4079.	5.5	33
34	Suppression of the Fragility-Confinement Effect via Low Molecular Weight Cyclic or Ring Polymer Topology. <i>Macromolecules</i> , 2017, 50, 1147-1154.	4.8	33
35	It is Better with Salt: Aqueous Ring-Opening Metathesis Polymerization at Neutral pH. <i>Journal of the American Chemical Society</i> , 2020, 142, 13878-13885.	13.7	33
36	Synthesis, purification, and characterization of perfect star polymers via Click-coupling. <i>Journal of Polymer Science Part A</i> , 2012, 50, 1086-1101.	2.3	32

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37	Determining the Origins of Impurities during Azide-Alkyne Click Cyclization of Polystyrene. <i>Macromolecules</i> , 2016, 49, 4369-4372.	4.8	31
38	Use of Ion Mobility Spectrometry-Mass Spectrometry to Elucidate Architectural Dispersity within Star Polymers. <i>ACS Macro Letters</i> , 2015, 4, 778-782.	4.8	30
39	Core-shell like structured barium zirconium titanate-barium calcium titanate-poly(methyl Tj ETQq1 1 0.784314 ggBT/Overlock 10	3.8	29
40	The influence of small amounts of linear polycaprolactone chains on the crystallization of cyclic analogue molecules. <i>RSC Advances</i> , 2016, 6, 48049-48063.	3.6	29
41	Non-monotonic molecular weight dependence of crystallization rates of linear and cyclic poly(epsilon-caprolactone)s in a wide temperature range. <i>Polymer International</i> , 2016, 65, 1074-1079.	3.1	28
42	Evaluation of redox-responsive disulfide cross-linked poly(hydroxyethyl methacrylate) hydrogels. <i>Polymer</i> , 2011, 52, 5262-5270.	3.8	27
43	Neutral linear amphiphilic homopolymers prepared by atom transfer radical polymerization. <i>Polymer Chemistry</i> , 2014, 5, 622-629.	3.9	24
44	Detection, Quantification, and Click-Scavenging of Impurities in Cyclic Poly(glycidyl phenyl ether) Obtained by Zwitterionic Ring-Expansion Polymerization with B(C <sub>6</sub> F <sub>5</sub> ) <sub>3</sub> . <i>Macromolecules</i> , 2017, 50, 1870-1881.	4.8	24
45	A New Approach to Heterofunctionalized Dendrimers: A Versatile Triallyl Chloride Core. <i>Organic Letters</i> , 2002, 4, 3171-3174.	4.6	23
46	Molecular Weight Control via Cross Metathesis in Photo-Redox Mediated Ring-Opening Metathesis Polymerization. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9074-9079.	13.8	23
47	Advantages of Monodisperse and Chemically Robust Spherical Polyester Dendrimers as a Universal MS Calibrant. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 303-309.	2.8	22
48	Efficient Synthesis of High Purity Homoarm and Miktoarm Poly(ethylene glycol) Stars Using Epoxide and Azide-Alkyne Coupling Chemistry. <i>Macromolecular Rapid Communications</i> , 2014, 35, 146-151.	3.9	21
49	Hollow amphiphilic crosslinked nanocapsules from sacrificial silica nanoparticle templates and their application as dispersants for oil spill remediation. <i>Polymer Chemistry</i> , 2017, 8, 5129-5138.	3.9	21
50	Synthesis and Properties of Diazopiperidones for Use in Nonchemically Amplified Deep UV Photoresists. <i>Chemistry of Materials</i> , 2004, 16, 1770-1774.	6.7	20
51	Evaluation of Amphiphilic Star/Linear Dendritic Polymer Reverse Micelles for Transdermal Drug Delivery: Directing Carrier Properties by Tailoring Core versus Peripheral Branching. <i>Biomacromolecules</i> , 2018, 19, 3163-3176.	5.4	20
52	Investigation of Lysine-Functionalized Dendrimers as Dichlorvos Detoxification Agents. <i>Biomacromolecules</i> , 2015, 16, 3434-3444.	5.4	18
53	Photonic curing of aromatic thiol-ene click dielectric capacitors via inkjet printing. <i>Journal of Materials Chemistry A</i> , 2014, 2, 17380-17386.	10.3	17
54	Determination of polyethylene glycol end group functionalities by combination of selective reactions and characterization by matrix assisted laser desorption/ionization time-of-flight mass spectrometry. <i>Analytica Chimica Acta</i> , 2014, 816, 28-40.	5.4	17

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55	Click-In Ferroelectric Nanoparticles for Dielectric Energy Storage. ACS Applied Materials & Interfaces, 2015, 7, 17819-17825.	8.0	17
56	Comparison of Cross-Linked Branched and Linear Poly(ethylene imine) Microgel Microstructures and Their Impact in Antimicrobial Behavior, Copper Chelation, and Carbon Dioxide Capture. ACS Applied Polymer Materials, 2020, 2, 826-836.	4.4	16
57	Polymers kept in the loop. Nature Chemistry, 2009, 1, 178-179.	13.6	15
58	Molecular Dynamics Simulations of Linear and Cyclic Amphiphilic Polymers in Aqueous and Organic Environments. Journal of Physical Chemistry B, 2014, 118, 6491-6497.	2.6	15
59	MALDI-ToF MS Study of Macrocyclic Polyethers Generated by Electrophilic Zwitterionic Ring Expansion Polymerization of Monosubstituted Epoxides with B(C <sub>6</sub> F <sub>5</sub> ) <sub>3</sub> . Macromolecules, 2019, 52, 6369-6381.	4.8	14
60	Amphiphilic hyperbranched polyglycerol-block-polycaprolactone copolymer-grafted nanoparticles with improved encapsulation properties. Reactive and Functional Polymers, 2016, 102, 39-46.	4.1	13
61	Determining Sequence Fidelity in Repeating Sequence Poly(lactic-co-glycolic acid)s. Macromolecules, 2017, 50, 550-560.	4.8	13
62	The characterization of dendronized poly(ethylene glycol)s and poly(ethylene glycol) multi-arm stars using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. Analytica Chimica Acta, 2014, 808, 175-189.	5.4	12
63	Use of MALDI-ToF MS to elucidate the structure of oligomeric impurities formed during $\epsilon$ -click <sup>TM</sup> cyclization of polystyrene. Reactive and Functional Polymers, 2014, 80, 83-94.	4.1	12
64	Suppression of Melt-Induced Dewetting in Cyclic Poly( $\mu$ -caprolactone) Thin Films. Macromolecules, 2017, 50, 9852-9856.	4.8	12
65	Synthesis and Self-Assembly of Amphiphilic Star/Linear $\epsilon$ -Dendritic Polymers: Effect of Core versus Peripheral Branching on Reverse Micelle Aggregation. Biomacromolecules, 2018, 19, 3177-3189.	5.4	12
66	Linear $\epsilon$ -Dendritic Alternating Copolymers. Angewandte Chemie - International Edition, 2019, 58, 10572-10576.	13.8	12
67	The Potential of Amine-Containing Dendrimer Mass Standards for Internal Calibration of Peptides. European Journal of Mass Spectrometry, 2015, 21, 747-752.	1.0	9
68	Water-soluble PEGylated silicon nanoparticles and their assembly into swellable nanoparticle aggregates. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	9
69	Design of Amphiphilic Polymers via Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2016, 120, 10603-10610.	2.6	9
70	Synthesis of Macrocyclic Poly(glycidyl phenyl ether) with an Inverted-Dipole Microstructure via Ring Closure of Two-Arm Linear Precursors Obtained by Initiation with t-BuP4/Water. Macromolecules, 2020, 53, 10005-10014.	4.8	9
71	Synthesis and Characterization of Norbornanediol Isomers and Their Fluorinated Analogues. Journal of Organic Chemistry, 2006, 71, 341-344.	3.2	8
72	Dendronized cavitands: A step towards a synthetic viral capsid?. Soft Matter, 2010, 6, 1377.	2.7	8

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73	Application of Time-Dependent MALDI-TOF Mass Spectral Analysis To Elucidate Chain Transfer Mechanism during Cationic Polymerization of Oxazoline Monomers Containing Thioethers. <i>Macromolecules</i> , 2010, 43, 10152-10156.	4.8	8
74	Iodine-Containing Mass-Defect-Tuned Dendrimers for Use as Internal Mass Spectrometry Calibrants. <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 490-500.	2.8	8
75	Characterization of Synthetic Polymers via Matrix Assisted Laser Desorption Ionization Time of Flight (MALDI-TOF) Mass Spectrometry. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	8
76	Limitations of ion mobility spectrometryâ€”mass spectrometry for the relative quantification of architectural isomeric polymers: A case study. <i>Rapid Communications in Mass Spectrometry</i> , 2020, 34, e8660.	1.5	8
77	Toxicity assessment of a novel oil dispersant based on silica nanoparticles using Fathead minnow. <i>Aquatic Toxicology</i> , 2020, 229, 105653.	4.0	8
78	THE RING-CLOSURE APPROACH FOR SYNTHESIZING CYCLIC POLYMERS. , 2013, , 157-197.		7
79	Facile oneâ€”pot method of initiator fixation for surfaceâ€”initiated atom transfer radical polymerization on carbon hard spheres. <i>Journal of Polymer Science Part A</i> , 2013, 51, 3314-3322.	2.3	7
80	Modular amphiphilic copolymer-grafted nanoparticles: â€œnanoparticle micelleâ€”behavior enhances utility as dispersants. <i>Polymer Chemistry</i> , 2015, 6, 7749-7757.	3.9	7
81	Synthesis and characterization of poly(lactide)â€”PAMAM â€œJanusâ€”typeâ€”linearâ€”dendritic hybrids. <i>Journal of Polymer Science Part A</i> , 2019, 57, 1448-1459.	2.3	7
82	Mass spectrometry investigation into the oxidative degradation of poly(ethylene glycol). <i>Polymer Degradation and Stability</i> , 2021, 183, 109388.	5.8	7
83	Synthesis and Reactivity of 3-Diazo-4-oxocoumarins for Photolithographic Applications. <i>Chemistry of Materials</i> , 2004, 16, 1763-1769.	6.7	6
84	Divergent Dendronization of Deepâ€”Cavity Cavitands to Tune Host Solubility. <i>Israel Journal of Chemistry</i> , 2009, 49, 31-40.	2.3	6
85	Synthesis of a pH-independent bifurcated amphiphile. <i>Tetrahedron Letters</i> , 2008, 49, 2091-2094.	1.4	5
86	Elucidating Branching Topology and Branch Lengths in Star-Branched Polymers by Tandem Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 1981-1991.	2.8	5
87	Molecular Weight Control via Cross Metathesis in Photoâ€”Redox Mediated Ringâ€”Opening Metathesis Polymerization. <i>Angewandte Chemie</i> , 2020, 132, 9159-9164.	2.0	5
88	Feature Multiplexingâ€”Improving the Efficiency of Microarray Devices. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 3338-3341.	13.8	4
89	Polymer grafted hard carbon microspheres at an oil/water interface. <i>Journal of Colloid and Interface Science</i> , 2016, 470, 31-38.	9.4	4
90	MALDI-TOF MS investigation of the unconventional termination of living polyoxazoline with ammonia. <i>Journal of Polymer Science Part A</i> , 2017, 55, 1303-1312.	2.3	4

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91	Linear Dendritic Alternating Copolymers. <i>Angewandte Chemie</i> , 2019, 131, 10682-10686.	2.0	4
92	Synthesis of poly(caprolactone)- <i>block</i> -poly[oligo(ethylene glycol)methyl methacrylate] amphiphilic grafted nanoparticles (AGNs) as improved oil dispersants. <i>Polymer Chemistry</i> , 2021, 12, 4758-4769.	3.9	4
93	Dielectric Properties of UV Cured Thick Film Polymer Networks through High Power Xenon Flash Lamp Curing. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1630, 1.	0.1	3
94	First principles modeling of nanoparticle-polymer surface functionalizations for improved capacitive energy storage. <i>Journal of Materials Science</i> , 2020, 55, 15813-15825.	3.7	3
95	A highly efficient metal-free protocol for the synthesis of linear polydicyclopentadiene. <i>Polymer Chemistry</i> , 2021, 12, 2860-2867.	3.9	3
96	SpheriCal <sup>®</sup> -ESI: A dendrimer-based nine-point calibration solution ranging from <i>m/z</i> 273 to 1716 for electrospray ionization mass spectrometry peptide analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2021, 35, e9035.	1.5	3
97	A Simple Visualization of Double Bond Properties: Chemical Reactivity and UV Fluorescence. <i>Journal of Chemical Education</i> , 2012, 89, 925-927.	2.3	2
98	Solution size variation of linear and dendritic bis-MPA analogs using DOSY- <sup>1</sup> H NMR. <i>Polymer Chemistry</i> , 2021, 12, 1507-1517.	3.9	2
99	Oil Encapsulation Advantages of Amphiphilic Polymer-Grafted Silica Nanoparticle Systems. <i>ACS Applied Polymer Materials</i> , 0, , .	4.4	2
100	The Cyclization and Functionalization of Styrenic Polymers. <i>ACS Symposium Series</i> , 2008, , 37-50.	0.5	1
101	Synthesis and Characterization of Linear, Homopolyester, Benzoyl-Protected Bis-MPA. <i>Macromolecules</i> , 2020, 53, 6608-6618.	4.8	1
102	Succinylated isoniazid potential prodrug: Design of Experiments (DoE) for synthesis optimization and computational study of the reaction mechanism by DFT calculations. <i>Journal of Molecular Structure</i> , 2022, 1254, 132323.	3.6	1
103	Separation, identification, and confirmation of cyclic and tadpole macromolecules <i>via</i> UPLC-MS/MS. <i>Analyst</i> , 2022, 147, 2089-2096.	3.5	1
104	Selective monobenylation of 2,2-bis(hydroxymethyl)propionic acid (bis-MPA) to yield an AB linear monomer and analogous linear oligomers. <i>Tetrahedron Letters</i> , 2020, 61, 152016.	1.4	0
105	Insights and comparison of structure-bulk property relationships in low generation hydroxylated polyester dendrimer and hyperbranched polymer prepared from bis-MPA monomer. <i>Polymer</i> , 2021, 231, 124097.	3.8	0
106	Syntheses and crystal structures of 2,2,5-trimethyl-1,3-dioxane-5-carboxylic acid and 2,2,5-trimethyl-1,3-dioxane-5-carboxylic anhydride. <i>Acta Crystallographica Section E: Crystallographic Communications</i> , 2020, 76, 86-90.	0.5	0
107	Physical Evidence of Oil Uptake and Toxicity Assessment of Amphiphilic Grafted Nanoparticles Used as Oil Dispersants. <i>Environmental Science &amp; Technology</i> , 2022, , .	10.0	0