Derek L Patton

List of Publications by Year
in descending order

65 papers	2,683 citations	186209 28 h-index	182361 51 g-index
67 all docs	67 docs citations	67 times ranked	3604 citing authors

#	Article	IF	Citations
1	Low-density framework form of crystalline silicon with a wide optical band gap. Physical Review B, 2000, 62, R7707-R7710.	1.1	278
2	â€œClickingâ€•Polymer Brushes with Thiol-yne Chemistry: Indoors and Out. Journal of the American Chemical Society, 2009, 131, 14673-14675.	6.6	218
3	A Facile Synthesis Route to Thiol-Functionalized Î±,Ï‰-Telechelic Polymers via Reversible Addition Fragmentation Chain Transfer Polymerization. Macromolecules, 2005, 38, 8597-8602.	2.2	134
4	Superhydrophobic Hybrid Inorganicâ€“Organic Thiol-ene Surfaces Fabricated via Spray-Deposition and Photopolymerization. ACS Applied Materials & Interfaces, 2013, 5, 1811-1817.	4.0	113
5	Dynamic-covalent nanostructures prepared by Dielsâ€“Alder reactions of styrene-maleic anhydride-derived copolymers obtained by one-step cascade block copolymerization. Polymer Chemistry, 2012, 3, 3112.	1.9	99
6	Conjugated Oligothiophene-Dendron-Capped CdSe Nanoparticles:Â Synthesis and Energy Transfer. Chemistry of Materials, 2004, 16, 5187-5193.	3.2	92
7	A Versatile Synthetic Route to Macromonomers via RAFT Polymerization. Macromolecules, 2006, 39, 8674-8683.	2.2	92
8	Thiolâ€“isocyanate â€œclickâ€•reactions: rapid development of functional polymeric surfaces. Polymer Chemistry, 2011, 2, 88-90.	1.9	91
9	Investigating Carbazole Jacketed Precursor Dendrimers:Â Sonochemical Synthesis, Characterization, and Electrochemical Crosslinking Properties. Journal of the American Chemical Society, 2007, 129, 12537-12548.	6.6	83
10	Mussel-Inspired Thiolâ€“Ene Polymer Networks: Influencing Network Properties and Adhesion with Catechol Functionality. Chemistry of Materials, 2012, 24, 3633-3642.	3.2	81
11	Synthesis of multifunctional polymer brush surfaces via sequential and orthogonal thiol-click reactions. Journal of Materials Chemistry, 2012, 22, 932-943.	6.7	80
12	Spray-Deposition and Photopolymerization of Organicâ€“Inorganic Thiolâ€“ene Resins for Fabrication of Superamphiphobic Surfaces. ACS Applied Materials & Interfaces, 2014, 6, 10763-10774.	4.0	76
13	Quantitative Electrochemical and Electrochromic Behavior of Terthiophene and Carbazole Containing Conjugated Polymer Network Film Precursors:Â EC-QCM and EC-SPR. Langmuir, 2007, 23, 908-917.	1.6	68
14	Conjugated Polymer Nanoparticles via Intramolecular Crosslinking of Dendrimeric Precursors. Advanced Materials, 2006, 18, 2461-2465.	11.1	65
15	Thiophene Dendron Jacketed Poly(amidoamine) Dendrimers:Â Nanoparticle Synthesis and Adsorption on Graphite. Journal of the American Chemical Society, 2005, 127, 1744-1751.	6.6	64
16	Viscoelastic properties of confined polymer films measured via thermal wrinkling. Soft Matter, 2009, 5, 4638.	1.2	61
17	A Dynamic Duo: Pairing Click Chemistry and Postpolymerization Modification To Design Complex Surfaces. Accounts of Chemical Research, 2014, 47, 2999-3008.	7.6	55
18	Flexible aliphatic-bridged bisphenol-based polybenzoxazines. Polymer Chemistry, 2012, 3, 2892.	1.9	46

#	Article	IF	Citations
19	Structure and Band-Gap Design of a New Series of Light-Emitting Poly(cyanofluorene-alt-o/m/p-phenylenevinylene)-Based Copolymers for Light-Emitting Diodes. Macromolecules, 2006, 39, 3848-3854.	2.2	40
20	Stimuliâ€Responsive Peptideâ€Based ABAâ€Triblock Copolymers: Unique Morphology Transitions With pH. Macromolecular Rapid Communications, 2012, 33, 819-826.	2.0	39
21	Functional Microcapsules via Thiolâ€“Ene Photopolymerization in Droplet-Based Microfluidics. ACS Applied Materials & Interfaces, 2017, 9, 3288-3293.	4.0	39
22	Disordered nanoparticle interfaces for directed self-assembly. Soft Matter, 2009, 5, 622-628.	1.2	35
23	Electrochemically Active Dendriticâ^'Linear Block Copolymers via RAFT Polymerization: Synthesis, Characterization, and Electrodeposition Properties. Macromolecules, 2008, 41, 6703-6713.	2.2	33
24	Highly Tunable Thiolâ€“Ene Networks via Dual Thiol Addition. Macromolecules, 2013, 46, 5614-5621.	2.2	33
25	Rational Design of Superhydrophilic/Superoleophobic Surfaces for Oilâ€“Water Separation via Thiolâ€“Acrylate Photopolymerization. ACS Omega, 2018, 3, 10278-10285.	1.6	32
26	Fuzzy Ternary Particle Systems by Surface-Initiated Atom Transfer Radical Polymerization from Layer-by-Layer Colloidal Coreâ^'Shell Macroinitiator Particles. Langmuir, 2006, 22, 8397-8402.	1.6	31
27	Polymer Loops vs. Brushes on Surfaces: Adsorption, Kinetics, and Viscoelastic Behavior of Î±,Ï‰â€Thiol Telechelics on Gold. Macromolecular Chemistry and Physics, 2011, 212, 485-497.	1.1	31
28	Hybrid dual-cure polymer networks via sequential thiolâ€“ene photopolymerization and thermal ring-opening polymerization of benzoxazines. Reactive and Functional Polymers, 2012, 72, 799-806.	2.0	31
29	Photocaged pendent thiol polymer brush surfaces for postpolymerization modifications via thiolâ€click chemistry. Journal of Polymer Science Part A, 2013, 51, 1079-1090.	2.5	29
30	Evanescent Waveguide and Photochemical Characterization of Azobenzene-Functionalized Dendrimer Ultrathin Films. Langmuir, 2002, 18, 1688-1694.	1.6	28
31	Sequential Thiol Click Reactions: Formation of Ternary Thiourethane/Thiolâ€“Ene Networks with Enhanced Thermal and Mechanical Properties. ACS Applied Materials & Interfaces, 2014, 6, 6088-6097.	4.0	28
32	Functional, composite polythioether nanoparticles via thiolâ€“alkyne photopolymerization in miniemulsion. Chemical Communications, 2015, 51, 10910-10913.	2.2	26
33	Thiolâ€“ene adhesives from clove oil derivatives. RSC Advances, 2014, 4, 61927-61935.	1.7	25
34	Nanocomposite Hydrogen-Bonded Multilayer Ultrathin Films by Simultaneous Sexithiophene and Au Nanoparticle Formation. Chemistry of Materials, 2004, 16, 5063-5070.	3.2	24
35	Synthesis of thiol-clickable and block copolypeptide brushes via nickel-mediated surface initiated polymerization of Î±-amino acid N-carboxyanhydrides (NCAs). Chemical Communications, 2011, 47, 6245.	2.2	23
36	Hybrid Goldâ€Nanoparticleâ€Cored Conjugated Thiophene Dendrimers: Synthesis, Characterization, and Energyâ€Transfer Studies. Chemistry - A European Journal, 2011, 17, 8929-8940.	1.7	23

#	Article	IF	Citations
37	Destruction of Opportunistic Pathogens via Polymer Nanoparticleâ€Mediated Release of Plantâ€Based Antimicrobial Payloads. Advanced Healthcare Materials, 2016, 5, 1094-1103.	3.9	22
38	Selective and Rapid Lightâ€Induced RAFT Single Unit Monomer Insertion in Aqueous Solution. Macromolecular Rapid Communications, 2020, 41, e1900478.	2.0	22
39	Programmable Porous Polymers via Direct Bubble Writing with Surfactant-Free Inks. ACS Applied Materials & Interfaces, 2020, 12, 42048-42055.	4.0	22
40	Preparation of Carbazole Polymer Thin Films Chemically Bound to Substrate Surface by Physical Vapor Deposition Combined with Self-Assembled Monolayer. Japanese Journal of Applied Physics, 2005, 44, 504-508.	0.8	21
41	Measurement of Reactivity Ratios in Surface-Initiated Radical Copolymerization. Macromolecules, 2007, 40, 6017-6020.	2.2	21
42	RAFT Polymerization of â€œSplittersâ€•and â€œCryptosâ€• Exploiting Azole-N-carboxamides As Blocked Isocyanates for Ambient Temperature Postpolymerization Modification. Macromolecules, 2016, 49, 554-563.	2.2	21
43	Pro-Antimicrobial Networks via Degradable Acetals (PANDAs) Using Thiolâ€“Ene Photopolymerization. ACS Macro Letters, 2017, 6, 171-175.	2.3	21
44	Cyclic tetravinylsiloxanetetraols as hybrid inorganicâ€“organic thiol-ene networks. Journal of Materials Chemistry, 2012, 22, 3817.	6.7	20
45	Antimicrobial Activity of, and Cellular Pathways Targeted by, p -Anisaldehyde and Epigallocatechin Gallate in the Opportunistic Human Pathogen Pseudomonas aeruginosa. Applied and Environmental Microbiology, 2020, 86, .	1.4	17
46	Buckling Instabilities in Polymer Brush Surfaces via Postpolymerization Modification. Macromolecules, 2017, 50, 8670-8677.	2.2	15
47	Hydrolytically degradable poly(Î²-thioether ester ketal) thermosets via radical-mediated thiolâ€“ene photopolymerization. Polymer Chemistry, 2019, 10, 5635-5644.	1.9	14
48	A bio-based pro-antimicrobial polymer network via degradable acetal linkages. Acta Biomaterialia, 2018, 67, 196-205.	4.1	13
49	A robust and high-throughput measurement platform for monomer reactivity ratios from surface-initiated polymerization. Polymer Chemistry, 2012, 3, 1174.	1.9	11
50	Sequential and one-pot post-polymerization modification reactions of thiolactone-containing polymer brushes. Polymer Chemistry, 2019, 10, 4935-4943.	1.9	11
51	Post-polymerization modification of styreneâ€“maleic anhydride copolymer brushes. Polymer Chemistry, 2017, 8, 6778-6785.	1.9	10
52	Rapid Synthesis of Polymer Brush Surfaces via Microwaveâ€Assisted Surfaceâ€Initiated Radical Polymerization. Macromolecular Rapid Communications, 2012, 33, 863-868.	2.0	9
53	Fabrication of single-chain nanoparticles through the dimerization of pendant anthracene groups via photochemical upconversion. Dalton Transactions, 2018, 47, 8663-8669.	1.6	9
54	Versatile Surface Functionalization of Water-Dispersible Iron Oxide Nanoparticles with Precisely Controlled Sizes. Langmuir, 2021, 37, 1279-1287.	1.6	9

#	Article	IF	Citations
55	Solvent-free copolymerization of rigid and flexible bis-1,3-benzoxazines: Facile tunability of polybenzoxazine network properties. Polymer, 2013, 54, 5553-5559.	1.8	8
56	Thiolâ€“Trifluorovinyl Ether (TFVE) Photopolymerization: An On-Demand Synthetic Route to Semifluorinated Polymer Networks. Macromolecules, 2016, 49, 7667-7675.	2.2	7
57	Using Aldehyde Synergism To Direct the Design of Degradable Pro-Antimicrobial Networks. ACS Applied Bio Materials, 2018, 1, 1983-1991.	2.3	7
58	Synthesis and thiolâ€“ene photopolymerization of (meth)allylâ€terminated polysulfides. Journal of Applied Polymer Science, 2017, 134, 45523.	1.3	5
59	Command-destruct thermosets via photoinduced thiol-catalyzed Î²-scission of acyclic benzylidene acetals. Polymer Chemistry, 2020, 11, 6873-6878.	1.9	5
60	Quantifying Strain via Buckling Instabilities in Surface-Modified Polymer Brushes. Macromolecules, 2020, 53, 4552-4559.	2.2	5
61	Atomic Oxygen-Resistant Epoxy-amines Containing Phenylphosphine Oxide as Low Earth Orbit Stable Polymers. ACS Applied Polymer Materials, 2021, 3, 178-190.	2.0	5
62	Nanostructured Interpenetrating Polymer Network (IPN) Precursor Ultrathin Films. Macromolecular Chemistry and Physics, 2011, 212, 1039-1049.	1.1	4
63	Hydrolyzable Poly(Î² â€Thioether Ester Ketal) Thermosets via Acyclic Ketal Monomers. Macromolecular Rapid Communications, 2022, , 2200028.	2.0	2
64	Exploring the Effect of Maximum Cure Temperature on the Thermal and Thermomechanical Properties of Polybenzoxazine Networks. Macromolecular Symposia, 2013, 329, 133-141.	0.4	1
65	Quantifying Strain via Buckling Instabilities in Surface Modified Polymer Brushes. Macromolecules, 2020, 53, .	2.2	0