Andrew Boydston

List of Publications by Year
in descending order

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53 papers	3,002 citations	236925 25 h-index	175258 52 g-index
54 all docs	54 docs citations	54 times ranked	3217 citing authors

#	Article	IF	Citations
1	The role of polymer mechanochemistry in responsive materials and additive manufacturing. Nature Reviews Materials, 2021, 6, 84-98.	48.7	151
2	A highly efficient metal-free protocol for the synthesis of linear polydicyclopentadiene. Polymer Chemistry, 2021, 12, 2860-2867.	3.9	3
3	Mechanoactivation of Color and Autonomous Shape Change in 3D-Printed Ionic Polymer Networks. ACS Applied Materials & Interfaces, 2021, 13, 19263-19270.	8.0	15
4	An Ionâ€Pairing Approach to Stereoselective Metalâ€Free Ringâ€Opening Metathesis Polymerization. Angewandte Chemie, 2021, 133, 14071-14077.	2.0	5
5	Mechanochemical Release of N â€Heterocyclic Carbenes from Flexâ€Activated Mechanophores. Angewandte Chemie, 2021, 133, 13671-13675.	2.0	8
6	An Ionâ€Pairing Approach to Stereoselective Metalâ€Free Ringâ€Opening Metathesis Polymerization. Angewandte Chemie - International Edition, 2021, 60, 13952-13958.	13.8	14
7	Mechanochemical Release of Nâ€Heterocyclic Carbenes from Flexâ€Activated Mechanophores. Angewandte Chemie - International Edition, 2021, 60, 13559-13563.	13.8	36
8	Reduced strain mechanochemical activation onset in microstructured materials. Polymer Chemistry, 2020, 11, 1122-1126.	3.9	8
9	Ring-opening metathesis polymerization of a strained stilbene-based macrocyclic monomer. Materials Chemistry Frontiers, 2020, 4, 252-256.	5.9	1
10	100th Anniversary of Macromolecular Science Viewpoint: Integrating Chemistry and Engineering to Enable Additive Manufacturing with High-Performance Polymers. ACS Macro Letters, 2020, 9, 1119-1129.	4.8	19
11	Not all PLA filaments are created equal: an experimental investigation. Rapid Prototyping Journal, 2020, 26, 1263-1276.	3.2	11
12	Advances in Polymerizations Modulated by External Stimuli. ACS Catalysis, 2020, 10, 14457-14515.	11.2	67
13	Metal-Free Ring-Opening Metathesis Polymerization: From Concept to Creation. Accounts of Chemical Research, 2020, 53, 2325-2335.	15.6	39
14	Synthesis and Characterization of Anionic Poly(cyclopentadienylene vinylene) and Its Use in Conductive Hydrogels. Angewandte Chemie - International Edition, 2020, 59, 13430-13436.	13.8	3
15	Synthesis and Characterization of Anionic Poly(cyclopentadienylene vinylene) and Its Use in Conductive Hydrogels. Angewandte Chemie, 2020, 132, 13532-13538.	2.0	0
16	Molecular Weight Control via Cross Metathesis in Photoâ€Redox Mediated Ringâ€Opening Metathesis Polymerization. Angewandte Chemie - International Edition, 2020, 59, 9074-9079.	13.8	23
17	Molecular Weight Control via Cross Metathesis in Photoâ€Redox Mediated Ringâ€Opening Metathesis Polymerization. Angewandte Chemie, 2020, 132, 9159-9164.	2.0	5
18	Hybrid Photo-induced Copolymerization of Ring-Strained and Vinyl Monomers Utilizing Metal-Free Ring-Opening Metathesis Polymerization Conditions. Journal of the American Chemical Society, 2019, 141, 16605-16609.	13.7	28

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19	Room temperature extrusion 3D printing of polyether ether ketone using a stimuli-responsive binder. Additive Manufacturing, 2019, 28, 430-438.	3.0	22
20	Stimuli-responsive materials in additive manufacturing. Progress in Polymer Science, 2019, 93, 36-67.	24.7	148
21	The Intrinsic Mechanochemical Reactivity of Vinylâ€Addition Polynorbornene. Angewandte Chemie - International Edition, 2019, 58, 5639-5642.	13.8	12
22	The Intrinsic Mechanochemical Reactivity of Vinylâ€Addition Polynorbornene. Angewandte Chemie, 2019, 131, 5695-5698.	2.0	3
23	Multimaterial actinic spatial control 3D and 4D printing. Nature Communications, 2019, 10, 791.	12.8	208
24	Chemical advances in additive manufacturing. Polymer Chemistry, 2019, 10, 5948-5949.	3.9	1
25	Integration of metal-free ring-opening metathesis polymerization and organocatalyzed ring-opening polymerization through a bifunctional initiator. Polymer Chemistry, 2019, 10, 2975-2979.	3.9	20
26	Dual Polymerizations: Untapped Potential for Biomaterials. Advanced Healthcare Materials, 2019, 8, e1800861.	7.6	48
27	Facile Synthesis of Fluorine-Substituted Polylactides and Their Amphiphilic Block Copolymers. Macromolecules, 2018, 51, 1280-1289.	4.8	18
28	Additive manufacturing with stimuli-responsive materials. Journal of Materials Chemistry A, 2018, 6, 20621-20645.	10.3	80
29	Additive manufacturing with a flex activated mechanophore for nondestructive assessment of mechanochemical reactivity in complex object geometries. Polymer, 2018, 152, 4-8.	3.8	36
30	Investigation of Tacticity and Living Characteristics of Photoredoxâ€Mediated Metalâ€Free Ringâ€Opening Metathesis Polymerization. Macromolecular Rapid Communications, 2017, 38, 1600766.	3.9	24
31	Amphiphilic Copolymers Capable of Concomitant Release of HNO and Small Molecule Organics. ACS Macro Letters, 2017, 6, 46-49.	4.8	7
32	Modular Elastomer Photoresins for Digital Light Processing Additive Manufacturing. ACS Applied Materials & Interfaces, 2017, 9, 39708-39716.	8.0	99
33	Bidirectional metalâ€free ROMP from difunctional organic initiators. Journal of Polymer Science Part A, 2017, 55, 2977-2982.	2.3	20
34	Expanded Functionality of Polymers Prepared Using Metal-Free Ring-Opening Metathesis Polymerization. ACS Macro Letters, 2016, 5, 579-582.	4.8	63
35	Production of Materials with Spatially-Controlled Cross-Link Density via Vat Photopolymerization. ACS Applied Materials & Interfaces, 2016, 8, 29037-29043.	8.0	114
36	Investigations in Fundamental and Applied Polymer Mechanochemistry. Macromolecular Chemistry and Physics, 2016, 217, 354-364.	2.2	31

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37	Investigation of the dynamic nature of 1,2-oxazines derived from peralkylcyclopentadiene and nitrosocarbonyl species. Organic and Biomolecular Chemistry, 2016, 14, 5617-5621.	2.8	4
38	Comparison of Pyrylium and Thiopyrylium Photooxidants in Metal-Free Ring-Opening Metathesis Polymerization. Synlett, 2016, 27, 759-762.	1.8	26
39	Developments in Externally Regulated Ring-Opening Metathesis Polymerization. Synlett, 2016, 27, 203-214.	1.8	28
40	Recent Developments in Organocatalyzed Electroorganic Chemistry. Chemistry Letters, 2015, 44, 10-16.	1.3	63
41	Metal-Free Preparation of Linear and Cross-Linked Polydicyclopentadiene. Journal of the American Chemical Society, 2015, 137, 7572-7575.	13.7	72
42	Additive manufacturing of mechanochromic polycaprolactone on entry-level systems. Rapid Prototyping Journal, 2015, 21, 520-527.	3.2	20
43	Metal-Free Ring-Opening Metathesis Polymerization. Journal of the American Chemical Society, 2015, 137, 1400-1403.	13.7	214
44	3D-Printed Mechanochromic Materials. ACS Applied Materials & Interfaces, 2015, 7, 577-583.	8.0	236
45	Kinetic Analysis of Mechanochemical Chain Scission of Linear Poly(phthalaldehyde). Macromolecular Rapid Communications, 2014, 35, 1611-1614.	3.9	29
46	1,2-oxazine linker as a thermal trigger for self-immolative polymers. Polymer, 2014, 55, 5980-5985.	3.8	32
47	Comparison of Mechanochemical Chain Scission Rates for Linear versus Three-Arm Star Polymers in Strong Acoustic Fields. ACS Macro Letters, 2014, 3, 648-651.	4.8	102
48	Mechanically triggered heterolytic unzipping of a low-ceiling-temperature polymer. Nature Chemistry, 2014, 6, 623-628.	13.6	198
49	Successive Mechanochemical Activation and Small Molecule Release in an Elastomeric Material. Journal of the American Chemical Society, 2014, 136, 1276-1279.	13.7	136
50	Electrochemical Characterization of Azolium Salts. Chemistry Letters, 2014, 43, 907-909.	1.3	15
51	Modeling the Mechanochemical Degradation of Star Polymers. Macromolecular Theory and Simulations, 2014, 23, 555-563.	1.4	11
52	â€œFlex-Activatedâ€•Mechanophores: Using Polymer Mechanochemistry To Direct Bond Bending Activation. Journal of the American Chemical Society, 2013, 135, 8189-8192.	13.7	235
53	Controlled Depolymerization: Stimuli-Responsive Self-Immolative Polymers. Macromolecules, 2012, 45, 7317-7328.	4.8	191