Xiao-Bing Lu

List of Publications by Year
in descending order

114 papers	8,268 citations	66315 42 h-index	48277 88 g-index
118 all docs	118 docs citations	118 times ranked	3785 citing authors

#	Article	IF	Citations
1	Cobalt catalysts for the coupling of CO₂and epoxides to provide polycarbonates and cyclic carbonates. Chemical Society Reviews, 2012, 41, 1462-1484.	18.7	1,017
2	CO₂ Copolymers from Epoxides: Catalyst Activity, Product Selectivity, and Stereochemistry Control. Accounts of Chemical Research, 2012, 45, 1721-1735.	7.6	576
3	Design of Highly Active Binary Catalyst Systems for CO2/Epoxide Copolymerization:Â Polymer Selectivity, Enantioselectivity, and Stereochemistry Control. Journal of the American Chemical Society, 2006, 128, 1664-1674.	6.6	399
4	Asymmetric Catalysis with CO2:Â Direct Synthesis of Optically Active Propylene Carbonate from Racemic Epoxides. Journal of the American Chemical Society, 2004, 126, 3732-3733.	6.6	340
5	CO₂ Adducts of N-Heterocyclic Carbenes: Thermal Stability and Catalytic Activity toward the Coupling of CO₂ with Epoxides. Journal of Organic Chemistry, 2008, 73, 8039-8044.	1.7	327
6	Highly Active, Binary Catalyst Systems for the Alternating Copolymerization of CO2 and Epoxides under Mild Conditions. Angewandte Chemie - International Edition, 2004, 43, 3574-3577.	7.2	320
7	Mechanistic Aspects of the Copolymerization of CO₂ with Epoxides Using a Thermally Stable Single-Site Cobalt(III) Catalyst. Journal of the American Chemical Society, 2009, 131, 11509-11518.	6.6	311
8	Fast CO₂ Sequestration, Activation, and Catalytic Transformation Using N-Heterocyclic Olefins. Journal of the American Chemical Society, 2013, 135, 11996-12003.	6.6	277
9	CO₂ Adducts of Phosphorus Ylides: Highly Active Organocatalysts for Carbon Dioxide Transformation. ACS Catalysis, 2015, 5, 6773-6779.	5.5	226
10	Asymmetric Copolymerization of CO₂ with mesoâ€Epoxides Mediated by Dinuclear Cobalt(III) Complexes: Unprecedented Enantioselectivity and Activity. Angewandte Chemie - International Edition, 2013, 52, 11594-11598.	7.2	207
11	Completely Recyclable Monomers and Polycarbonate: Approach to Sustainable Polymers. Angewandte Chemie - International Edition, 2017, 56, 4862-4866.	7.2	175
12	Asymmetric Alternating Copolymerization and Terpolymerization of Epoxides with Carbon Dioxide at Mild Conditions. Macromolecules, 2006, 39, 5679-5685.	2.2	142
13	Enhanced Asymmetric Induction for the Copolymerization of CO₂ and Cyclohexene Oxide with Unsymmetric Enantiopure SalenCo(III) Complexes: Synthesis of Crystalline CO₂-Based Polycarbonate. Journal of the American Chemical Society, 2012, 134, 5682-5688.	6.6	140
14	Highly Selective Synthesis of CO₂ Copolymer from Styrene Oxide. Macromolecules, 2010, 43, 9202-9204.	2.2	138
15	Asymmetric Alternating Copolymerization of Meso-epoxides and Cyclic Anhydrides: Efficient Access to Enantiopure Polyesters. Journal of the American Chemical Society, 2016, 138, 11493-11496.	6.6	128
16	Asymmetric, regioâ€•and stereoâ€selective alternating copolymerization of CO₂ and propylene oxide catalyzed by chiral chromium Salan complexes. Journal of Polymer Science Part A, 2008, 46, 6102-6113.	2.5	114
17	Binuclear chromiumâ€“salan complex catalyzed alternating copolymerization of epoxides and cyclic anhydrides. Polymer Chemistry, 2013, 4, 1439-1444.	1.9	111
18	Learning Nature: Recyclable Monomers and Polymers. Chemistry - A European Journal, 2018, 24, 11255-11266.	1.7	110

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19	Mechanistic Understanding of Dinuclear Cobalt(III) Complex Mediated Highly Enantioselective Copolymerization of meso-Epoxides with CO₂. Macromolecules, 2014, 47, 7775-7788.	2.2	108
20	Alkoxide-functionalized imidazolium betaines for CO₂ activation and catalytic transformation. Green Chemistry, 2014, 16, 2266-2272.	4.6	104
21	Making Various Degradable Polymers from Epoxides Using a Versatile Dinuclear Chromium Catalyst. Macromolecules, 2018, 51, 771-778.	2.2	96
22	Alternating copolymerization of CO2 and styrene oxide with Co(iii)-based catalyst systems: differences between styrene oxide and propylene oxide. Energy and Environmental Science, 2011, 4, 5084.	15.6	94
23	Role of the co-catalyst in the asymmetric coupling of racemic epoxides with CO2 using multichiral Co(iii) complexes: product selectivity and enantioselectivity. Chemical Science, 2012, 3, 2094.	3.7	93
24	CO₂, COS and CS₂ adducts of N-heterocyclic olefins and their application as organocatalysts for carbon dioxide fixation. Green Chemistry, 2015, 17, 4009-4015.	4.6	90
25	Crystalline-gradient polycarbonates prepared from enantioselective terpolymerization of meso-epoxides with CO2. Nature Communications, 2014, 5, 5687.	5.8	85
26	Crystalline CO2 Copolymer from Epichlorohydrin via Co(III)-Complex-Mediated Stereospecific Polymerization. Macromolecules, 2013, 46, 2128-2133.	2.2	82
27	Stereospecific CO₂ Copolymers from 3,5-Dioxaepoxides: Crystallization and Functionallization. Macromolecules, 2014, 47, 1269-1276.	2.2	80
28	Highly Robust Yttrium Bis(phenolate) Ether Catalysts for Excellent Isoselective Ring-Opening Polymerization of Racemic Lactide. Macromolecules, 2017, 50, 515-522.	2.2	78
29	Crystalline Stereocomplexed Polycarbonates: Hydrogenâ€Bondâ€Driven Interlocked Orderly Assembly of the Opposite Enantiomers. Angewandte Chemie - International Edition, 2015, 54, 2241-2244.	7.2	74
30	Stereoregular polycarbonate synthesis: Alternating copolymerization of CO₂ with aliphatic terminal epoxides catalyzed by multichiral cobalt(III) complexes. Journal of Polymer Science Part A, 2011, 49, 4894-4901.	2.5	73
31	Stereoregular poly(cyclohexene carbonate)s: Unique crystallization behavior. Chinese Journal of Polymer Science (English Edition), 2012, 30, 487-492.	2.0	73
32	Comprehensive Understanding of Polyester Stereocomplexation. Journal of the American Chemical Society, 2019, 141, 14780-14787.	6.6	72
33	Enantioselective Resolution Copolymerization of Racemic Epoxides and Anhydrides: Efficient Approach for Stereoregular Polyesters and Chiral Epoxides. Journal of the American Chemical Society, 2019, 141, 8937-8942.	6.6	70
34	Precise Synthesis of Poly(thioester)s with Diverse Structures by Copolymerization of Cyclic Thioanhydrides and Episulfides Mediated by Organic Ammonium Salts. Angewandte Chemie - International Edition, 2019, 58, 618-623.	7.2	69
35	Crystalline CO2-based polycarbonates prepared from racemic catalyst through intramolecularly interlocked assembly. Nature Communications, 2015, 6, 8594.	5.8	68
36	Carboxylative cyclization of substituted propenyl ketones using CO2: transition-metal-free synthesis of Î±-pyrones. Green Chemistry, 2016, 18, 4181-4184.	4.6	68

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37	Development of Highly Enantioselective Catalysts for Asymmetric Copolymerization of meso-Epoxides and Cyclic Anhydrides: Subtle Modification Resulting in Superior Enantioselectivity. ACS Catalysis, 2019, 9, 1915-1922.	5.5	67
38	Crystalline Heteroâ€Stereocomplexed Polycarbonates Produced from Amorphous Opposite Enantiomers Having Different Chemical Structures. Angewandte Chemie - International Edition, 2015, 54, 7042-7046.	7.2	59
39	Synthesis of Chiral Sulfurâ€Containing Polymers: Asymmetric Copolymerization of mesoâ€Epoxides and Carbonyl Sulfide. Angewandte Chemie - International Edition, 2018, 57, 12670-12674.	7.2	55
40	Single-Site Bifunctional Catalysts for COX (X = O or S)/Epoxides Copolymerization: Combining High Activity, Selectivity, and Durability. Macromolecules, 2015, 48, 8445-8450.	2.2	50
41	Chemical Synthesis of CO₂-Based Polymers with Enhanced Thermal Stability and Unexpected Recyclability from Biosourced Monomers. ACS Catalysis, 2021, 11, 8349-8357.	5.5	50
42	Recent advances in electrochemical carboxylation reactions using carbon dioxide. Green Chemical Engineering, 2022, 3, 125-137.	3.3	48
43	Synthesis of Nonalternating Polyketones Using Cationic Diphosphazane Monoxide-Palladium Complexes. Journal of the American Chemical Society, 2021, 143, 10743-10750.	6.6	44
44	Access to Î±â€Arylglycines by Umpolung Carboxylation of Aromatic Imines with Carbon Dioxide. Chemistry - A European Journal, 2016, 22, 17156-17159.	1.7	43
45	Crystalline and Elastomeric Poly(monothiocarbonate)s Prepared from Copolymerization of COS and Achiral Epoxide. Macromolecules, 2017, 50, 63-68.	2.2	43
46	Living and Chemoselective (Co)polymerization of Polar Divinyl Monomers Mediated by Bulky Lewis Pairs. Macromolecules, 2019, 52, 4520-4525.	2.2	43
47	Highly regio- and stereoselective synthesis of cyclic carbonates from biomass-derived polyolsviaorganocatalytic cascade reaction. Green Chemistry, 2019, 21, 6335-6341.	4.6	42
48	Intramolecularly Cooperative Catalysis for Copolymerization of Cyclic Thioanhydrides and Epoxides: A Dual Activation Strategy to Well-Defined Polythioesters. ACS Catalysis, 2020, 10, 6635-6644.	5.5	41
49	Crystalline Polythiocarbonate from Stereoregular Copolymerization of Carbonyl Sulfide and Epichlorohydrin. Macromolecules, 2016, 49, 2971-2976.	2.2	39
50	Highly Isotactic and High-Molecular-Weight Poly(2-vinylpyridine) by Coordination Polymerization with Yttrium Bis(phenolate) Ether Catalysts. ACS Catalysis, 2016, 6, 4907-4913.	5.5	38
51	Functionalized Polyesters with Tunable Degradability Prepared by Controlled Ring-Opening (Co)polymerization of Lactones. Macromolecules, 2017, 50, 3131-3142.	2.2	38
52	Semiaromatic Poly(thioester) from the Copolymerization of Phthalic Thioanhydride and Epoxide: Synthesis, Structure, and Properties. Macromolecules, 2019, 52, 2439-2445.	2.2	38
53	1,3-Dipolar Cycloaddition of Nitrile Imine with Carbon Dioxide: Access to 1,3,4-Oxadiazole-2(3H)-ones. Journal of Organic Chemistry, 2017, 82, 7637-7642.	1.7	37
54	N-heterocyclic Carbene Scandium Complexes: Synthesis, Structure, and Catalytic Performance for Î±-Olefin Polymerization and Copolymerization with 1,5-Hexadiene. Organometallics, 2011, 30, 5687-5694.	1.1	36

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55	Trivalent cobalt complex mediated formation of stereoregular CO2 copolymers from phenyl glycidyl ether. Polymer Chemistry, 2013, 4, 4425.	1.9	35
56	CO₂ Adducts of Î±â€Carbon Alkylated Nâ€Heterocyclic Olefins: Highly Active Organocatalysts for CO₂ Chemical Transformation. Asian Journal of Organic Chemistry, 2017, 6, 1264-1269.	1.3	34
57	Completely Recyclable Monomers and Polycarbonate: Approach to Sustainable Polymers. Angewandte Chemie, 2017, 129, 4940-4944.	1.6	34
58	Stereoregular CO₂ Copolymers from Epoxides with an Electron-Withdrawing Group: Crystallization and Unexpected Stereocomplexation. Macromolecules, 2017, 50, 7062-7069.	2.2	34
59	Enantioselective terpolymerization of racemic and meso -epoxides with anhydrides for preparation of chiral polyesters. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15429-15436.	3.3	31
60	Randomly Distributed Sulfur Atoms in the Main Chains of CO₂â€Based Polycarbonates: Enhanced Optical Properties. Angewandte Chemie - International Edition, 2021, 60, 4315-4321.	7.2	31
61	From Stereochemically Tunable Homopolymers to Stereomultiblock Copolymers: Lewis Base Regulates Stereochemistry in the Coordination Polymerization of 2-Vinylpyridine. Macromolecules, 2018, 51, 2240-2246.	2.2	30
62	Mechanistic Aspects of Metal Valence Change in SalenCo(III)OAc-Catalyzed Hydrolytic Kinetic Resolution of Racemic Epoxides. Journal of Organic Chemistry, 2013, 78, 4801-4810.	1.7	28
63	Reversible Transformation between Amorphous and Crystalline States of Unsaturated Polyesters by Cisâ€“Trans Isomerization. Angewandte Chemie - International Edition, 2019, 58, 17636-17640.	7.2	26
64	Bimetallic Cobalt Complex-Mediated Enantioselective Terpolymerizations of Carbon Dioxide, Cyclohexene Oxide, and Î²-Butyrolactone. Organometallics, 2020, 39, 1628-1633.	1.1	26
65	Electrocarboxylation of N-Acylimines with Carbon Dioxide: Access to Substituted Î±-Amino Acids. Organic Letters, 2022, 24, 3565-3569.	2.4	25
66	Enantioselective, Stereoconvergent Resolution Copolymerization of Racemic cisâ€Internal Epoxides and Anhydrides. Angewandte Chemie - International Edition, 2021, 60, 5994-6002.	7.2	24
67	Chemical recycling to monomers: Industrial <scp>Bisphenolâ€Aâ€Polycarbonates</scp> to novel aliphatic polycarbonate materials. Journal of Polymer Science, 2022, 60, 3256-3268.	2.0	24
68	Isolable CO₂ Adducts of Polarized Alkenes: High Thermal Stability and Catalytic Activity for CO₂ Chemical Transformation. Advanced Synthesis and Catalysis, 2019, 361, 326-334.	2.1	23
69	Facile Synthesis of Wellâ€Defined Branched Sulfurâ€Containing Copolymers: Oneâ€Pot Copolymerization of Carbonyl Sulfide and Epoxide. Angewandte Chemie - International Edition, 2020, 59, 13633-13637.	7.2	23
70	Asymmetric Alternating Copolymerization of CO₂ with meso-Epoxides: Ring Size Effects of Epoxides on Reactivity, Enantioselectivity, Crystallization, and Degradation. Macromolecules, 2020, 53, 2912-2918.	2.2	23
71	Recyclable Polyhydroxyalkanoates via a Regioselective Ring-Opening Polymerization of Î±,Î²-Disubstituted Î²-Lactone Monomers. Macromolecules, 2021, 54, 4641-4648.	2.2	23
72	Controlled Disassembly of Elemental Sulfur: An Approach to the Precise Synthesis of Polydisulfides. Angewandte Chemie - International Edition, 2022, 61, .	7.2	23

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73	Synthesis of Chiral Sulfurâ€Containing Polymers: Asymmetric Copolymerization of mesoâ€Epoxides and Carbonyl Sulfide. Angewandte Chemie, 2018, 130, 12852-12856.	1.6	22
74	Carbonylative Polymerization of Epoxides Mediated by Triâ€metallic Complexes: A Dual Catalysis Strategy for Synthesis of Biodegradable Polyhydroxyalkanoates. Angewandte Chemie - International Edition, 2022, 61, .	7.2	20
75	Palladium-Catalyzed Cyclization Reaction of o-Iodoanilines, CO₂, and CO: Access to Isatoic Anhydrides. ACS Catalysis, 2017, 7, 8072-8076.	5.5	18
76	A Single-Site Iron(III)-Salan Catalyst for Converting COS to Sulfur-Containing Polymers. Polymers, 2017, 9, 515.	2.0	17
77	Trinuclear salphenâ€“chromium(<scp>III</scp>)chloride complexes as catalysts for the alternating copolymerization of epoxides and cyclic anhydrides. Journal of Polymer Science, 2021, 59, 1821-1828.	2.0	16
78	Bulky o-Phenylene-Bridged Bimetallic Î±-Diimine Ni(II) and Pd(II) Catalysts in Ethylene (Co)polymerization. Organometallics, 2021, 40, 3703-3711.	1.1	15
79	Development of Highâ€Capacity and Waterâ€Lean CO₂ Absorbents by a Concise Molecular Design Strategy through Viscosity Control. ChemSusChem, 2019, 12, 5164-5171.	3.6	14
80	Alternating Copolymerization of SO₂ with Epoxides Mediated by Simple Organic Ammonium Salts. Macromolecules, 2020, 53, 9901-9905.	2.2	14
81	Partners in Epoxide Copolymerization Catalysis: Approach to High Activity and Selectivity. Chinese Journal of Polymer Science (English Edition), 2022, 40, 1331-1348.	2.0	14
82	Organocatalytic Cyclization of COS and Propargylic Derivatives to Valueâ€Added Heterocyclic Compounds. ChemCatChem, 2019, 11, 5728-5732.	1.8	13
83	Alternating Copolymerization of trans-Internal Epoxides and Cyclic Anhydrides Mediated by Dinuclear Chromium Catalyst Systems. Macromolecules, 2019, 52, 5652-5657.	2.2	12
84	Partners in catalysis. Nature Chemistry, 2020, 12, 324-326.	6.6	11
85	Photoinduced Reversible Semicrystallineâ€toâ€Amorphous State Transitions of Stereoregular Azopolyesters. Angewandte Chemie - International Edition, 2021, 60, 17898-17903.	7.2	11
86	Carbon dioxide-promoted palladium-catalyzed dehydration of primary allylic alcohols: access to substituted 1,3-dienes. Organic Chemistry Frontiers, 2021, 8, 941-946.	2.3	11
87	Cationic P,Oâ€Coordinated Nickel(II) Catalysts for Carbonylative Polymerization of Ethylene: Unexpected Productivity via Subtle Electronic Variation. Angewandte Chemie - International Edition, 2022, 61, .	7.2	11
88	Organocatalytic cycloaddition of carbonyl sulfide with propargylic alcohols to 1,3-oxathiolan-2-ones. Catalysis Science and Technology, 2019, 9, 1457-1463.	2.1	10
89	Highly effective capture and subsequent catalytic transformation of low-concentration CO₂ by superbasic guanidines. Green Chemistry, 2020, 22, 7832-7838.	4.6	10
90	Access to 1,3-oxazine-2,4-diones/1,3-thiazine-2,4-diones via organocatalytic CO₂/COS incorporation into allenamides. Organic and Biomolecular Chemistry, 2020, 18, 905-911.	1.5	9

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91	Intramolecular Partners in Asymmetric Catalysis Copolymerization: Highly Enantioselective and Controllable at Enhanced Temperatures and Low Loadings. Angewandte Chemie - International Edition, 2022, 61, .	7.2	8
92	Enantioselective Resolution Copolymerization of Racemic cis-Epoxides and Cyclic Anhydrides Mediated by Multichiral Bimetallic Chromium Complexes. Macromolecules, 2022, 55, 3869-3876.	2.2	8
93	Preparation of Sequence-Controlled Polyester and Polycarbonate Materials via Epoxide Copolymerization Mediated by Trinuclear Co(III) Complexes. Macromolecules, 2022, 55, 3541-3549.	2.2	7
94	Intramolecular synergistic catalysis for asymmetric alternating copolymerization of <scp>CO₂</scp>â€‰and mesoâ€epoxides. Journal of Polymer Science, 2022, 60, 2078-2085.	2.0	7
95	Precise Synthesis of Poly(thioester)s with Diverse Structures by Copolymerization of Cyclic Thioanhydrides and Episulfides Mediated by Organic Ammonium Salts. Angewandte Chemie, 2019, 131, 628-633.	1.6	6
96	Reversible Transformation between Amorphous and Crystalline States of Unsaturated Polyesters by Cis â€“ Trans Isomerization. Angewandte Chemie, 2019, 131, 17800-17804.	1.6	6
97	Fast Ringâ€Opening Polymerization of 1,2â€Disubstituted Epoxides Initiated by a Co^{III}â€Salen Complex. Macromolecular Chemistry and Physics, 2019, 220, 1900377.	1.1	6
98	Ether-functionalization of monoethanolamine (MEA) for reversible CO₂ capture under solvent-free conditions with high-capacity and low-viscosity. Sustainable Energy and Fuels, 2020, 4, 1276-1284.	2.5	6
99	A Simple Strategy for the Preparation of Pâ€Chirogenic Trost Ligands with Different Absolute Configurations. European Journal of Organic Chemistry, 2020, 2020, 5003-5008.	1.2	6
100	Enantioselective Resolution Copolymerization of Racemic 2,<scp>3â€Disubstituted cisâ€Epoxides</scp> with <scp>CO₂</scp> Mediated by Binuclear Cobalt(<scp>III</scp>) Catalyst^{â€}. Chinese Journal of Chemistry, 2021, 39, 2386-2390.	2.6	6
101	Enantioselective, Stereoconvergent Resolution Copolymerization of Racemic cis â€Internal Epoxides and Anhydrides. Angewandte Chemie, 2021, 133, 6059-6067.	1.6	5
102	Facile Access to Functionalized Poly(thioether)s via Anionic Ring-Opening Decarboxylative Polymerization of COS-Sourced Î±-Alkylidene Cyclic Thiocarbonates. Macromolecules, 2021, 54, 10395-10404.	2.2	5
103	COS-triggered oxygen/sulfur exchange of isatins: chemoselective synthesis of functionalized isoindigos and spirothiopyrans via self-condensation and the thio-Dielsâ€“Alder reaction. Organic and Biomolecular Chemistry, 2022, 20, 678-685.	1.5	5
104	Organocatalytic Cascade Synthesis of Peroxyâ€Substituted Cyclic Carbonates from CO₂â€Sourced Î±â€Alkylidene Cyclic Carbonates and Hydroperoxides. Asian Journal of Organic Chemistry, 2022, 11, .	1.3	4
105	Facile synthesis, structure and properties of CO₂-sourced poly(thioether-co-carbonate)s containing acetyl pendants via thio-ene click polymerization. Polymer Chemistry, 2022, 13, 201-208.	1.9	4
106	Carboxylative Cyclization of 2-Butenoates with Carbon Dioxide: Access to Glutaconic Anhydrides. Journal of Organic Chemistry, 2020, 85, 11579-11588.	1.7	3
107	Cationic P,Oâ€Coordinated Nickel(II) Catalysts for Carbonylative Polymerization of Ethylene: Unexpected Productivity via Subtle Electronic Variation. Angewandte Chemie, 2022, 134, .	1.6	3
108	Unveiling chainâ€“chain interactions in CO 2 -based crystalline stereocomplexed polycarbonates by solid-state NMR spectroscopy and DFT calculations. Journal of Energy Chemistry, 2018, 27, 361-366.	7.1	2

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109	Photoinduced Reversible Semicrystallineâ€toâ€Amorphous State Transitions of Stereoregular Azopolyesters. Angewandte Chemie, 2021, 133, 18042-18047.	1.6	2
110	Carbonylative Polymerization of Epoxides Mediated by Triâ€metallic Complexes: A Dual Catalysis Strategy for Synthesis of Biodegradable Polyhydroxyalkanoates. Angewandte Chemie, 0, , .	1.6	1
111	Intramolecular Partners in Asymmetric Catalysis Copolymerization: Highly Enantioselective and Controllable at Enhanced Temperatures and Low Loadings. Angewandte Chemie, 0, , .	1.6	1
112	Alkoxy-Functionalized Amines as Single-Component Water-Lean CO₂ Absorbents with High Efficiency: The Benefit of Stabilized Carbamic Acid. Industrial & Engineering Chemistry Research, 2022, 61, 7080-7089.	1.8	1
113	Frontispiece: Learning Nature: Recyclable Monomers and Polymers. Chemistry - A European Journal, 2018, 24, .	1.7	0
114	Controlled Disassembly of Elemental Sulfur: An Approach to the Precise Synthesis of Polydisulfides. Angewandte Chemie, 0, , .	1.6	0