Antoine Buchard

List of Publications by Year
in descending order

69 papers	5,264 citations	159358 30 h-index	85405 71 g-index
75 all docs	75 docs citations	75 times ranked	4920 citing authors

#	Article	IF	Citations
1	Heterometallic cooperativity in divalent metal ProPhenol catalysts: combining zinc with magnesium or calcium for cyclic ester ring-opening polymerisation. Catalysis Science and Technology, 2022, 12, 1070-1079.	2.1	11
2	Comparative Study of Oxygen Diffusion in Polyethylene Terephthalate and Polyethylene Furanoate Using Molecular Modeling: Computational Insights into the Mechanism for Gas Transport in Bulk Polymer Systems. Macromolecules, 2022, 55, 498-510.	2.2	14
3	UV degradation of poly(lactic acid) materials through copolymerisation with a sugar-derived cyclic xanthate. Chemical Communications, 2022, 58, 5463-5466.	2.2	19
4	Introduction to the themed collection on sustainable polymers. Polymer Chemistry, 2022, 13, 1785-1786.	1.9	1
5	Crosslinked xylose-based polyester as a bio-derived and degradable solid polymer electrolyte for Li⁺-ion conduction. Journal of Materials Chemistry A, 2022, 10, 6796-6808.	5.2	11
6	Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Diâ€Mg^{II} Catalyst. Angewandte Chemie - International Edition, 2022, 61, .	7.2	36
7	Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Diâ€Mg^{II} Catalyst. Angewandte Chemie, 2022, 134, .	1.6	8
8	Understanding the Effects of Cross-Linking Density on the Self-Healing Performance of Epoxidized Natural Rubber and Natural Rubber. ACS Omega, 2022, 7, 15098-15105.	1.6	12
9	Control of Crystallinity and Stereocomplexation of Synthetic Carbohydrate Polymers from <scp>d</scp>â€•and <scp>l</scp>â€Xylose. Angewandte Chemie - International Edition, 2021, 60, 4524-4528.	7.2	29
10	Control of Crystallinity and Stereocomplexation of Synthetic Carbohydrate Polymers from <scp>d</scp>â€•and <scp>l</scp>â€Xylose. Angewandte Chemie, 2021, 133, 4574-4578.	1.6	8
11	Polymers from sugars and CS₂: ring opening copolymerisation of a <scp>d</scp>-xylose anhydrosugar oxetane. Polymer Chemistry, 2021, 12, 4253-4261.	1.9	21
12	Polymers from Sugars and Cyclic Anhydrides: Ring-Opening Copolymerization of a <scp>d</scp>-Xylose Anhydrosugar Oxetane. Macromolecules, 2021, 54, 5094-5105.	2.2	19
13	Catalytic Synergy Using Al(III) and Group 1 Metals to Accelerate Epoxide and Anhydride Ring-Opening Copolymerizations. ACS Catalysis, 2021, 11, 12532-12542.	5.5	43
14	Does the Configuration at the Metal Matter in Noyoriâ€“Ikariya Type Asymmetric Transfer Hydrogenation Catalysts?. ACS Catalysis, 2021, 11, 13649-13659.	5.5	24
15	Xylose-Based Polyethers and Polyesters Via ADMET Polymerization toward Polyethylene-Like Materials. ACS Applied Polymer Materials, 2021, 3, 5870-5881.	2.0	18
16	Combining alkali metals and zinc to harness heterometallic cooperativity in cyclic ester ring-opening polymerisation. Chemical Science, 2020, 11, 11785-11790.	3.7	22
17	Indium phosphasalen catalysts showing high isoselectivity and activity in racemic lactide and lactone ring opening polymerizations. Catalysis Science and Technology, 2020, 10, 7226-7239.	2.1	24
18	Epoxy-functionalised 4-vinylguaiacol for the synthesis of bio-based, degradable star polymers via a RAFT/ROCOP strategy. Polymer Chemistry, 2020, 11, 5844-5850.	1.9	7

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19	Polymers from sugars and unsaturated fatty acids: ADMET polymerisation of monomers derived from <scp>d</scp>-xylose, <scp>d</scp>-mannose and castor oil. Polymer Chemistry, 2020, 11, 2681-2691.	1.9	35
20	Divergent Catalytic Strategies for the <i>Cis</i>/<i>Trans</i> Stereoselective Ring-Opening Polymerization of a Dual Cyclic Carbonate/Olefin Monomer. Journal of the American Chemical Society, 2019, 141, 13301-13305.	6.6	49
21	New renewably-sourced polyesters from limonene-derived monomers. Green Chemistry, 2019, 21, 149-156.	4.6	51
22	Copolymerization of Cyclic Phosphonate and Lactide: Synthetic Strategies toward Control of Amphiphilic Microstructure. Macromolecules, 2019, 52, 1220-1226.	2.2	12
23	Polymer-supported metal catalysts for the heterogeneous polymerisation of lactones. Polymer Chemistry, 2019, 10, 5894-5904.	1.9	14
24	Polymers from plants: Biomass fixed carbon dioxide as a resource. , 2019, , 503-525.		7
25	Polymers from sugars and CS₂: synthesis and ring-opening polymerisation of sulfur-containing monomers derived from 2-deoxy-<scp>d</scp>-ribose and <scp>d</scp>-xylose. Polymer Chemistry, 2018, 9, 1577-1582.	1.9	31
26	Electrochemically Driven Câ^’H Hydrogen Abstraction Processes with the Tetrachloroâ€Phthalimidoâ€Nâ€Oxyl (Cl₄PINO) Catalyst. Electroanalysis, 2018, 30, 1706-1713.	1.5	6
27	Chemoselective Lactonization of Renewable Succinic Acid with Heterogeneous Nanoparticle Catalysts. ACS Sustainable Chemistry and Engineering, 2018, 6, 16341-16351.	3.2	10
28	Aluminum Complexes of Monopyrrolidine Ligands for the Controlled Ring-Opening Polymerization of Lactide. Organometallics, 2018, 37, 1719-1724.	1.1	26
29	Bipyrrolidine salan alkoxide complexes of lanthanides: synthesis, characterisation, activity in the polymerisation of lactide and mechanistic investigation by DOSY NMR. Dalton Transactions, 2018, 47, 9164-9172.	1.6	8
30	Mechanism of CO2 capture in nanostructured sodium amide encapsulated in porous silica. Surface and Coatings Technology, 2018, 350, 227-233.	2.2	7
31	Synthesis of 5- to 8-membered cyclic carbonates from diols and CO2: A one-step, atmospheric pressure and ambient temperature procedure. Journal of CO2 Utilization, 2018, 27, 283-288.	3.3	71
32	Polymers from sugars: cyclic monomer synthesis, ring-opening polymerisation, material properties and applications. Chemical Communications, 2017, 53, 2198-2217.	2.2	114
33	Salan group 13 complexes â€“ structural study and lactide polymerisation. New Journal of Chemistry, 2017, 41, 2198-2203.	1.4	22
34	CO₂-Driven stereochemical inversion of sugars to create thymidine-based polycarbonates by ring-opening polymerisation. Polymer Chemistry, 2017, 8, 1714-1721.	1.9	43
35	Diâ€Zincâ€“Aryl Complexes: CO₂ Insertions and Applications in Polymerisation Catalysis. Chemistry - A European Journal, 2017, 23, 7367-7376.	1.7	41
36	Polymers from sugars and CO₂: ring-opening polymerisation and copolymerisation of cyclic carbonates derived from 2-deoxy-<scp>d</scp>-ribose. Polymer Chemistry, 2017, 8, 2093-2104.	1.9	65

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37	Continuous Production of Biorenewable, Polymerâ€Grade Lactone Monomers through Snâ€Î²â€Catalyzed Baeyerâ€"Villiger Oxidation with H₂O₂. ChemSusChem, 2017, 10, 3652-3659.	3.6	23
38	Hydrodynamic Rocking Disc Electrode Study of the TEMPOâ€mediated Catalytic Oxidation of Primary Alcohols. Electroanalysis, 2016, 28, 2093-2103.	1.5	7
39	Polymers from Sugars and CO₂: Synthesis and Polymerization of a <scp>d</scp>-Mannose-Based Cyclic Carbonate. Macromolecules, 2016, 49, 7165-7169.	2.2	87
40	Monomeric and dimeric Al(<scp>iii</scp>) complexes for the production of polylactide. Dalton Transactions, 2016, 45, 13846-13852.	1.6	24
41	Selectivity and Lifetime Effects in Zeoliteâ€Catalysed Baeyerâ€"Villiger Oxidation Investigated in Batch and Continuous Flow. ChemCatChem, 2016, 8, 3490-3498.	1.8	16
42	Chemoselective Polymerizations from Mixtures of Epoxide, Lactone, Anhydride, and Carbon Dioxide. Journal of the American Chemical Society, 2016, 138, 4120-4131.	6.6	200
43	Polymer of Intrinsic Microporosity Induces Host-Guest Substrate Selectivity in Heterogeneous 4-Benzoyloxy-TEMPO-Catalysed Alcohol Oxidations. Electrocatalysis, 2016, 7, 70-78.	1.5	18
44	Facile, Catalytic Dehydrocoupling of Phosphines Using Î²â€Diketiminate Iron(II) Complexes. Chemistry - A European Journal, 2015, 21, 15960-15963.	1.7	49
45	Synthesis of 6-membered cyclic carbonates from 1,3-diols and low CO₂ pressure: a novel mild strategy to replace phosgene reagents. RSC Advances, 2015, 5, 39404-39408.	1.7	71
46	Atom efficiency in small molecule and macromolecule synthesis: general discussion. Faraday Discussions, 2015, 183, 97-123.	1.6	1
47	Metal influence on the iso- and hetero-selectivity of complexes of bipyrrolidine derived salan ligands for the polymerisation of rac-lactide. Chemical Science, 2015, 6, 5034-5039.	3.7	90
48	Interfacial Electron-Shuttling Processes across KolliphorEL Monolayer Grafted Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 15458-15465.	4.0	10
49	Zirconium complexes of bipyrrolidine derived salan ligands for the isoselective polymerisation of <i>rac</i>-lactide. Chemical Communications, 2014, 50, 15967-15970.	2.2	105
50	One-pot synthesis, characterisation and kinetic stability of novel side-bridged pentaazamacrocyclic copper(ii) complexes. RSC Advances, 2014, 4, 12964.	1.7	5
51	Preparation of Stereoregular Isotactic Poly(mandelic acid) through Organocatalytic Ringâ€Opening Polymerization of a Cyclic <i>O</i>â€Carboxyanhydride. Angewandte Chemie - International Edition, 2014, 53, 13858-13861.	7.2	85
52	Ethylene dimerization catalyzed by mixed phosphineâ€"iminophosphorane nickel(II) complexes: a DFT investigation. Journal of Molecular Modeling, 2013, 19, 2107-2118.	0.8	15
53	Di-cobalt(ii) catalysts for the copolymerisation of CO2 and cyclohexene oxide: support for a dinuclear mechanism?. Chemical Science, 2012, 3, 1245.	3.7	117
54	Phosphasalen Yttrium Complexes: Highly Active and Stereoselective Initiators for Lactide Polymerization. Inorganic Chemistry, 2012, 51, 2157-2169.	1.9	104

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55	Experimental and Computational Investigation of the Mechanism of Carbon Dioxide/Cyclohexene Oxide Copolymerization Using a Dizinc Catalyst. Macromolecules, 2012, 45, 6781-6795.	2.2	123
56	Triblock copolymers from lactide and telechelic poly(cyclohexene carbonate). Polymer Chemistry, 2012, 3, 1196.	1.9	113
57	Recent Developments in Catalytic Activation of Renewable Resources for Polymer Synthesis. Topics in Organometallic Chemistry, 2012, , 175-224.	0.7	35
58	A bimetallic iron(<scp>iii</scp>) catalyst for CO₂/epoxide coupling. Chemical Communications, 2011, 47, 212-214.	2.2	390
59	Mechanistic Investigation and Reaction Kinetics of the Low-Pressure Copolymerization of Cyclohexene Oxide and Carbon Dioxide Catalyzed by a Dizinc Complex. Journal of the American Chemical Society, 2011, 133, 17395-17405.	6.6	191
60	Catalysts for CO₂/epoxide copolymerisation. Chemical Communications, 2011, 47, 141-163.	2.2	731
61	Iminophosphorane Neodymium(III) Complexes As Efficient Initiators for Lactide Polymerization. Organometallics, 2010, 29, 2892-2900.	1.1	74
62	An overview of CO2 capture technologies. Energy and Environmental Science, 2010, 3, 1645.	15.6	1,376
63	Interplay between Hydrido/Dihydrogen and Amine/Amido Ligands in Ruthenium-Catalyzed Transfer Hydrogenation of Ketones. Inorganic Chemistry, 2010, 49, 1310-1312.	1.9	19
64	Iminophosphorane-based [P2N2] rhodium complexes: synthesis, reactivity, and application in catalysed transfer hydrogenation of polar bonds. New Journal of Chemistry, 2010, 34, 2943.	1.4	14
65	First neodymium(iii) alkyl-carbene complex based on bis(iminophosphoranyl) ligands. Dalton Transactions, 2009, , 10219.	1.6	52
66	Coordination of tetradentate X2N2 (X = P, S, O) ligands to iron(ii) metal center and catalytic application in the transfer hydrogenation of ketones. Dalton Transactions, 2009, , 1659.	1.6	60
67	Chromium (iii)-bis(iminophosphoranyl)methanido complexes: synthesis, X-ray crystal structures and catalytic ethylene oligomerization. New Journal of Chemistry, 2009, 33, 1748.	1.4	21
68	A Mixed Phosphineâ€"Iminophosphorane Tetradentate Ligand: Synthesis, Coordination to Group 10 Metal Centers, and Use as Catalyst in Suzukiâ€"Miyaura Coupling. Organometallics, 2008, 27, 4380-4385.	1.1	30
69	Highly efficient Pâ€"N nickel(ii) complexes for the dimerisation of ethylene. Chemical Communications, 2007, , 1502-1504.	2.2	51