

Antoine Buchard

List of Publications by Year in descending order

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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	An overview of CO ₂ capture technologies. <i>Energy and Environmental Science</i> , 2010, 3, 1645.	15.6	1,376
2	Catalysts for CO ₂ /epoxide copolymerisation. <i>Chemical Communications</i> , 2011, 47, 141-163.	2.2	731
3	A bimetallic iron(III) catalyst for CO ₂ /epoxide coupling. <i>Chemical Communications</i> , 2011, 47, 212-214.	2.2	390
4	Chemoselective Polymerizations from Mixtures of Epoxide, Lactone, Anhydride, and Carbon Dioxide. <i>Journal of the American Chemical Society</i> , 2016, 138, 4120-4131.	6.6	200
5	Mechanistic Investigation and Reaction Kinetics of the Low-Pressure Copolymerization of Cyclohexene Oxide and Carbon Dioxide Catalyzed by a Dizinc Complex. <i>Journal of the American Chemical Society</i> , 2011, 133, 17395-17405.	6.6	191
6	Experimental and Computational Investigation of the Mechanism of Carbon Dioxide/Cyclohexene Oxide Copolymerization Using a Dizinc Catalyst. <i>Macromolecules</i> , 2012, 45, 6781-6795.	2.2	123
7	Di-cobalt(ii) catalysts for the copolymerisation of CO ₂ and cyclohexene oxide: support for a dinuclear mechanism?. <i>Chemical Science</i> , 2012, 3, 1245.	3.7	117
8	Polymers from sugars: cyclic monomer synthesis, ring-opening polymerisation, material properties and applications. <i>Chemical Communications</i> , 2017, 53, 2198-2217.	2.2	114
9	Triblock copolymers from lactide and telechelic poly(cyclohexene carbonate). <i>Polymer Chemistry</i> , 2012, 3, 1196.	1.9	113
10	Zirconium complexes of bipyrrrolidine derived salan ligands for the isoselective polymerisation of <i>rac</i> -lactide. <i>Chemical Communications</i> , 2014, 50, 15967-15970.	2.2	105
11	Phosphasalen Yttrium Complexes: Highly Active and Stereoselective Initiators for Lactide Polymerization. <i>Inorganic Chemistry</i> , 2012, 51, 2157-2169.	1.9	104
12	Metal influence on the iso- and hetero-selectivity of complexes of bipyrrrolidine derived salan ligands for the polymerisation of <i>rac</i> -lactide. <i>Chemical Science</i> , 2015, 6, 5034-5039.	3.7	90
13	Polymers from Sugars and CO ₂ : Synthesis and Polymerization of a <i>d</i> -Mannose-Based Cyclic Carbonate. <i>Macromolecules</i> , 2016, 49, 7165-7169.	2.2	87
14	Preparation of Stereoregular Isotactic Poly(mandelic acid) through Organocatalytic Ring-Opening Polymerization of a Cyclic <i>O</i> -Carboxyanhydride. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 13858-13861.	7.2	85
15	Iminophosphorane Neodymium(III) Complexes As Efficient Initiators for Lactide Polymerization. <i>Organometallics</i> , 2010, 29, 2892-2900.	1.1	74
16	Synthesis of 6-membered cyclic carbonates from 1,3-diols and low CO ₂ pressure: a novel mild strategy to replace phosgene reagents. <i>RSC Advances</i> , 2015, 5, 39404-39408.	1.7	71
17	Synthesis of 5- to 8-membered cyclic carbonates from diols and CO ₂ : A one-step, atmospheric pressure and ambient temperature procedure. <i>Journal of CO₂ Utilization</i> , 2018, 27, 283-288.	3.3	71
18	Polymers from sugars and CO ₂ : ring-opening polymerisation and copolymerisation of cyclic carbonates derived from 2-deoxy- <i>d</i> -ribose. <i>Polymer Chemistry</i> , 2017, 8, 2093-2104.	1.9	65

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19	Coordination of tetradentate X ₂ N ₂ (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
20	First neodymium(III) alkyl-carbene complex based on bis(iminophosphoranyl) ligands. Dalton Transactions, 2009, , 10219.	1.6	52
21	Highly efficient Pâ€‘N nickel(II) complexes for the dimerisation of ethylene. Chemical Communications, 2007, , 1502-1504.	2.2	51
22	New renewably-sourced polyesters from limonene-derived monomers. Green Chemistry, 2019, 21, 149-156.	4.6	51
23	Facile, Catalytic Dehydrocoupling of Phosphines Using Î²â€‘diketiminato Iron(II) Complexes. Chemistry - A European Journal, 2015, 21, 15960-15963.	1.7	49
24	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
25	CO ₂ -Driven stereochemical inversion of sugars to create thymidine-based polycarbonates by ring-opening polymerisation. Polymer Chemistry, 2017, 8, 1714-1721.	1.9	43
26	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
27	Diâ€‘Zincâ€‘Aryl Complexes: CO ₂ Insertions and Applications in Polymerisation Catalysis. Chemistry - A European Journal, 2017, 23, 7367-7376.	1.7	41
28	Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Diâ€‘Mg ^{II} Catalyst. Angewandte Chemie - International Edition, 2022, 61, .	7.2	36
29	Polymers from sugars and unsaturated fatty acids: ADMET polymerisation of monomers derived from <sc>d</sc>-xylose, <sc>d</sc>-mannose and castor oil. Polymer Chemistry, 2020, 11, 2681-2691.	1.9	35
30	Recent Developments in Catalytic Activation of Renewable Resources for Polymer Synthesis. Topics in Organometallic Chemistry, 2012, , 175-224.	0.7	35
31	Polymers from sugars and CS ₂ : synthesis and ring-opening polymerisation of sulfur-containing monomers derived from 2-deoxy-<sc>d</sc>-ribose and <sc>d</sc>-xylose. Polymer Chemistry, 2018, 9, 1577-1582.	1.9	31
32	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
33	Control of Crystallinity and Stereocomplexation of Synthetic Carbohydrate Polymers from <sc>d</sc>- and <sc>l</sc>-Xylose. Angewandte Chemie - International Edition, 2021, 60, 4524-4528.	7.2	29
34	Aluminum Complexes of Monopyrrolidine Ligands for the Controlled Ring-Opening Polymerization of Lactide. Organometallics, 2018, 37, 1719-1724.	1.1	26
35	Monomeric and dimeric Al(<sc>iii</sc>) complexes for the production of polylactide. Dalton Transactions, 2016, 45, 13846-13852.	1.6	24
36	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

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37	Does the Configuration at the Metal Matter in Noyori's Iridium Type Asymmetric Transfer Hydrogenation Catalysts?. <i>ACS Catalysis</i> , 2021, 11, 13649-13659.	5.5	24
38	Continuous Production of Biorenewable, Polymer-Grade Lactone Monomers through Sn(II)-Catalyzed Baeyer-Villiger Oxidation with H ₂ O ₂ . <i>ChemSusChem</i> , 2017, 10, 3652-3659.	3.6	23
39	Salan group 13 complexes – structural study and lactide polymerisation. <i>New Journal of Chemistry</i> , 2017, 41, 2198-2203.	1.4	22
40	Combining alkali metals and zinc to harness heterometallic cooperativity in cyclic ester ring-opening polymerisation. <i>Chemical Science</i> , 2020, 11, 11785-11790.	3.7	22
41	Chromium (iii)-bis(iminophosphoranyl)methanido complexes: synthesis, X-ray crystal structures and catalytic ethylene oligomerization. <i>New Journal of Chemistry</i> , 2009, 33, 1748.	1.4	21
42	Polymers from sugars and CS ₂ : ring opening copolymerisation of a d-xylose anhydrosugar oxetane. <i>Polymer Chemistry</i> , 2021, 12, 4253-4261.	1.9	21
43	Interplay between Hydrido/Dihydrogen and Amine/Amido Ligands in Ruthenium-Catalyzed Transfer Hydrogenation of Ketones. <i>Inorganic Chemistry</i> , 2010, 49, 1310-1312.	1.9	19
44	Polymers from Sugars and Cyclic Anhydrides: Ring-Opening Copolymerization of a d-Xylose Anhydrosugar Oxetane. <i>Macromolecules</i> , 2021, 54, 5094-5105.	2.2	19
45	UV degradation of poly(lactic acid) materials through copolymerisation with a sugar-derived cyclic xanthate. <i>Chemical Communications</i> , 2022, 58, 5463-5466.	2.2	19
46	Polymer of Intrinsic Microporosity Induces Host-Guest Substrate Selectivity in Heterogeneous 4-Benzoyloxy-TEMPO-Catalysed Alcohol Oxidations. <i>Electrocatalysis</i> , 2016, 7, 70-78.	1.5	18
47	Xylose-Based Polyethers and Polyesters Via ADMET Polymerization toward Polyethylene-Like Materials. <i>ACS Applied Polymer Materials</i> , 2021, 3, 5870-5881.	2.0	18
48	Selectivity and Lifetime Effects in Zeolite-Catalysed Baeyer-Villiger Oxidation Investigated in Batch and Continuous Flow. <i>ChemCatChem</i> , 2016, 8, 3490-3498.	1.8	16
49	Ethylene dimerization catalyzed by mixed phosphine-iminophosphorane nickel(II) complexes: a DFT investigation. <i>Journal of Molecular Modeling</i> , 2013, 19, 2107-2118.	0.8	15
50	Iminophosphorane-based [P2N2] rhodium complexes: synthesis, reactivity, and application in catalysed transfer hydrogenation of polar bonds. <i>New Journal of Chemistry</i> , 2010, 34, 2943.	1.4	14
51	Polymer-supported metal catalysts for the heterogeneous polymerisation of lactones. <i>Polymer Chemistry</i> , 2019, 10, 5894-5904.	1.9	14
52	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. <i>Macromolecules</i> , 2022, 55, 498-510.	2.2	14
53	Copolymerization of Cyclic Phosphonate and Lactide: Synthetic Strategies toward Control of Amphiphilic Microstructure. <i>Macromolecules</i> , 2019, 52, 1220-1226.	2.2	12
54	Understanding the Effects of Cross-Linking Density on the Self-Healing Performance of Epoxidized Natural Rubber and Natural Rubber. <i>ACS Omega</i> , 2022, 7, 15098-15105.	1.6	12

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55	Heterometallic cooperativity in divalent metal ProPhenol catalysts: combining zinc with magnesium or calcium for cyclic ester ring-opening polymerisation. <i>Catalysis Science and Technology</i> , 2022, 12, 1070-1079.	2.1	11
56	Crosslinked xylose-based polyester as a bio-derived and degradable solid polymer electrolyte for Li ⁺ -ion conduction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 6796-6808.	5.2	11
57	Interfacial Electron-Shuttling Processes across KolliphorEL Monolayer Grafted Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 15458-15465.	4.0	10
58	Chemoselective Lactonization of Renewable Succinic Acid with Heterogeneous Nanoparticle Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 16341-16351.	3.2	10
59	Bipyrrrolidine salen alkoxide complexes of lanthanides: synthesis, characterisation, activity in the polymerisation of lactide and mechanistic investigation by DOSY NMR. <i>Dalton Transactions</i> , 2018, 47, 9164-9172.	1.6	8
60	Control of Crystallinity and Stereocomplexation of Synthetic Carbohydrate Polymers from α -D-Glucopyranose and α -D-Xylose. <i>Angewandte Chemie</i> , 2021, 133, 4574-4578.	1.6	8
61	Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Di μ -Mg ^{II} Catalyst. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
62	Hydrodynamic Rocking Disc Electrode Study of the TEMPO-mediated Catalytic Oxidation of Primary Alcohols. <i>Electroanalysis</i> , 2016, 28, 2093-2103.	1.5	7
63	Mechanism of CO ₂ capture in nanostructured sodium amide encapsulated in porous silica. <i>Surface and Coatings Technology</i> , 2018, 350, 227-233.	2.2	7
64	Polymers from plants: Biomass fixed carbon dioxide as a resource. , 2019, , 503-525.		7
65	Epoxy-functionalised 4-vinylguaiacol for the synthesis of bio-based, degradable star polymers via a RAFT/ROCOP strategy. <i>Polymer Chemistry</i> , 2020, 11, 5844-5850.	1.9	7
66	Electrochemically Driven C ^α -H Hydrogen Abstraction Processes with the Tetrachloro α -Phthalimido α -Cyanoxyl (Cl ₄ -PINO) Catalyst. <i>Electroanalysis</i> , 2018, 30, 1706-1713.	1.5	6
67	One-pot synthesis, characterisation and kinetic stability of novel side-bridged pentaazamacrocyclic copper(ii) complexes. <i>RSC Advances</i> , 2014, 4, 12964.	1.7	5
68	Atom efficiency in small molecule and macromolecule synthesis: general discussion. <i>Faraday Discussions</i> , 2015, 183, 97-123.	1.6	1
69	Introduction to the themed collection on sustainable polymers. <i>Polymer Chemistry</i> , 2022, 13, 1785-1786.	1.9	1