# Antoine Buchard

List of Publications by Year
in descending order



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

159585

85541

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | An overview of CO2 capture technologies. Energy and Environmental Science, 2010, 3, 1645. | 30.8 | 1,376 |
| 2 | Catalysts for CO<sub>2</sub>/epoxide copolymerisation. Chemical Communications, 2011, 47, 141-163. | 4.1 | 731 |
| 3 | A bimetallic iron(<scp>iii</scp>) catalyst for CO<sub>2</sub>/epoxide coupling. Chemical Communications, 2011, 47, 212-214. | 4.1 | 390 |
| 4 | Chemoselective Polymerizations from Mixtures of Epoxide, Lactone, Anhydride, and Carbon Dioxide. Journal of the American Chemical Society, 2016, 138, 4120-4131. | 13.7 | 200 |
| 5 | 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. | 13.7 | 191 |
| 6 | Experimental and Computational Investigation of the Mechanism of Carbon Dioxide/Cyclohexene Oxide Copolymerization Using a Dizinc Catalyst. Macromolecules, 2012, 45, 6781-6795. | 4.8 | 123 |
| 7 | Di-cobalt(ii) catalysts for the copolymerisation of CO2 and cyclohexene oxide: support for a dinuclear mechanism?. Chemical Science, 2012, 3, 1245. | 7.4 | 117 |
| 8 | Polymers from sugars: cyclic monomer synthesis, ring-opening polymerisation, material properties and applications. Chemical Communications, 2017, 53, 2198-2217. | 4.1 | 114 |
| 9 | Triblock copolymers from lactide and telechelic poly(cyclohexene carbonate). Polymer Chemistry, 2012, 3, 1196. | 3.9 | 113 |
| 10 | Zirconium complexes of bipyrrolidine derived salan ligands for the isoselective polymerisation of <i>rac</i>-lactide. Chemical Communications, 2014, 50, 15967-15970. | 4.1 | 105 |
| 11 | Phosphasalen Yttrium Complexes: Highly Active and Stereoselective Initiators for Lactide Polymerization. Inorganic Chemistry, 2012, 51, 2157-2169. | 4.0 | 104 |
| 12 | 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. | 7.4 | 90 |
| 13 | Polymers from Sugars and CO<sub>2</sub>: Synthesis and Polymerization of a <scp>d</scp>-Mannose-Based Cyclic Carbonate. Macromolecules, 2016, 49, 7165-7169. | 4.8 | 87 |
| 14 | 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. | 13.8 | 85 |
| 15 | Iminophosphorane Neodymium(III) Complexes As Efficient Initiators for Lactide Polymerization. Organometallics, 2010, 29, 2892-2900. | 2.3 | 74 |
| 16 | Synthesis of 6-membered cyclic carbonates from 1,3-diols and low CO<sub>2</sub> pressure: a novel mild strategy to replace phosgene reagents. RSC Advances, 2015, 5, 39404-39408. | 3.6 | 71 |
| 17 | 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. | 6.8 | 71 |
| 18 | Polymers from sugars and CO<sub>2</sub>: ring-opening polymerisation and copolymerisation of cyclic carbonates derived from 2-deoxy-<scp>d</scp>-ribose. Polymer Chemistry, 2017, 8, 2093-2104. | 3.9 | 65 |

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|---|---|---|---|
| 19 | 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. | 3.3 | 60 |
| 20 | First neodymium(iii) alkyl-carbene complex based on bis(iminophosphoranyl) ligands. Dalton Transactions, 2009, , 10219. | 3.3 | 52 |
| 21 | Highly efficient Pâ€“N nickel(ii) complexes for the dimerisation of ethylene. Chemical Communications, 2007, , 1502-1504. | 4.1 | 51 |
| 22 | New renewably-sourced polyesters from limonene-derived monomers. Green Chemistry, 2019, 21, 149-156. | 9.0 | 51 |
| 23 | Facile, Catalytic Dehydrocoupling of Phosphines Using Î²â€Diketiminate Iron(II) Complexes. Chemistry - A European Journal, 2015, 21, 15960-15963. | 3.3 | 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. | 13.7 | 49 |
| 25 | CO<sub>2</sub>-Driven stereochemical inversion of sugars to create thymidine-based polycarbonates by ring-opening polymerisation. Polymer Chemistry, 2017, 8, 1714-1721. | 3.9 | 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. | 11.2 | 43 |
| 27 | Diâ€Zincâ€“Aryl Complexes: CO<sub>2</sub> Insertions and Applications in Polymerisation Catalysis. Chemistry - A European Journal, 2017, 23, 7367-7376. | 3.3 | 41 |
| 28 | Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Diâ€Mg<sup>II</sup> Catalyst. Angewandte Chemie - International Edition, 2022, 61, . | 13.8 | 36 |
| 29 | 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. | 3.9 | 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<sub>2</sub>: 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. | 3.9 | 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. | 2.3 | 30 |
| 33 | 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. | 13.8 | 29 |
| 34 | Aluminum Complexes of Monopyrrolidine Ligands for the Controlled Ring-Opening Polymerization of Lactide. Organometallics, 2018, 37, 1719-1724. | 2.3 | 26 |
| 35 | Monomeric and dimeric Al(<scp>iii</scp>) complexes for the production of polylactide. Dalton Transactions, 2016, 45, 13846-13852. | 3.3 | 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. | 4.1 | 24 |

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|---|---|---|---|
| 37 | Does the Configuration at the Metal Matter in Noyoriâ€“Ikariya Type Asymmetric Transfer Hydrogenation Catalysts?. ACS Catalysis, 2021, 11, 13649-13659. | 11.2 | 24 |
| 38 | Continuous Production of Biorenewable, Polymerâ€Grade Lactone Monomers through Snâ€Î²â€Catalyzed Baeyerâ€“Villiger Oxidation with H<sub>2</sub>O<sub>2</sub>. ChemSusChem, 2017, 10, 3652-3659. | 6.8 | 23 |
| 39 | Salan group 13 complexes â€“ structural study and lactide polymerisation. New Journal of Chemistry, 2017, 41, 2198-2203. | 2.8 | 22 |
| 40 | Combining alkali metals and zinc to harness heterometallic cooperativity in cyclic ester ring-opening polymerisation. Chemical Science, 2020, 11, 11785-11790. | 7.4 | 22 |
| 41 | Chromium (iii)-bis(iminophosphoranyl)methanido complexes: synthesis, X-ray crystal structures and catalytic ethylene oligomerization. New Journal of Chemistry, 2009, 33, 1748. | 2.8 | 21 |
| 42 | Polymers from sugars and CS<sub>2</sub>: ring opening copolymerisation of a <scp>d</scp>-xylose anhydrosugar oxetane. Polymer Chemistry, 2021, 12, 4253-4261. | 3.9 | 21 |
| 43 | Interplay between Hydrido/Dihydrogen and Amine/Amido Ligands in Ruthenium-Catalyzed Transfer Hydrogenation of Ketones. Inorganic Chemistry, 2010, 49, 1310-1312. | 4.0 | 19 |
| 44 | Polymers from Sugars and Cyclic Anhydrides: Ring-Opening Copolymerization of a <scp>d</scp>-Xylose Anhydrosugar Oxetane. Macromolecules, 2021, 54, 5094-5105. | 4.8 | 19 |
| 45 | UV degradation of poly(lactic acid) materials through copolymerisation with a sugar-derived cyclic xanthate. Chemical Communications, 2022, 58, 5463-5466. | 4.1 | 19 |
| 46 | Polymer of Intrinsic Microporosity Induces Host-Guest Substrate Selectivity in Heterogeneous 4-Benzoyloxy-TEMPO-Catalysed Alcohol Oxidations. Electrocatalysis, 2016, 7, 70-78. | 3.0 | 18 |
| 47 | Xylose-Based Polyethers and Polyesters Via ADMET Polymerization toward Polyethylene-Like Materials. ACS Applied Polymer Materials, 2021, 3, 5870-5881. | 4.4 | 18 |
| 48 | Selectivity and Lifetime Effects in Zeoliteâ€Catalysed Baeyerâ€“Villiger Oxidation Investigated in Batch and Continuous Flow. ChemCatChem, 2016, 8, 3490-3498. | 3.7 | 16 |
| 49 | Ethylene dimerization catalyzed by mixed phosphineâ€“iminophosphorane nickel(II) complexes: a DFT investigation. Journal of Molecular Modeling, 2013, 19, 2107-2118. | 1.8 | 15 |
| 50 | Iminophosphorane-based [P2N2] rhodium complexes: synthesis, reactivity, and application in catalysed transfer hydrogenation of polar bonds. New Journal of Chemistry, 2010, 34, 2943. | 2.8 | 14 |
| 51 | Polymer-supported metal catalysts for the heterogeneous polymerisation of lactones. Polymer Chemistry, 2019, 10, 5894-5904. | 3.9 | 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. Macromolecules, 2022, 55, 498-510. | 4.8 | 14 |
| 53 | Copolymerization of Cyclic Phosphonate and Lactide: Synthetic Strategies toward Control of Amphiphilic Microstructure. Macromolecules, 2019, 52, 1220-1226. | 4.8 | 12 |
| 54 | 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. | 3.5 | 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. Catalysis Science and Technology, 2022, 12, 1070-1079. | 4.1 | 11 |
| 56 | Crosslinked xylose-based polyester as a bio-derived and degradable solid polymer electrolyte for Li<sup>+</sup>-ion conduction. Journal of Materials Chemistry A, 2022, 10, 6796-6808. | 10.3 | 11 |
| 57 | Interfacial Electron-Shuttling Processes across KolliphorEL Monolayer Grafted Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 15458-15465. | 8.0 | 10 |
| 58 | Chemoselective Lactonization of Renewable Succinic Acid with Heterogeneous Nanoparticle Catalysts. ACS Sustainable Chemistry and Engineering, 2018, 6, 16341-16351. | 6.7 | 10 |
| 59 | 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. | 3.3 | 8 |
| 60 | 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. | 2.0 | 8 |
| 61 | Chemical Recycling of Poly(Cyclohexene Carbonate) Using a Diâ€Mg<sup>II</sup> Catalyst. Angewandte Chemie, 2022, 134, . | 2.0 | 8 |
| 62 | Hydrodynamic Rocking Disc Electrode Study of the TEMPOâ€mediated Catalytic Oxidation of Primary Alcohols. Electroanalysis, 2016, 28, 2093-2103. | 2.9 | 7 |
| 63 | Mechanism of CO2 capture in nanostructured sodium amide encapsulated in porous silica. Surface and Coatings Technology, 2018, 350, 227-233. | 4.8 | 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. Polymer Chemistry, 2020, 11, 5844-5850. | 3.9 | 7 |
| 66 | Electrochemically Driven Câˆ'H Hydrogen Abstraction Processes with the Tetrachloroâ€Phthalimidoâ€Nâ€Oxyl (Cl<sub>4</sub>PINO) Catalyst. Electroanalysis, 2018, 30, 1706-1713. | 2.9 | 6 |
| 67 | One-pot synthesis, characterisation and kinetic stability of novel side-bridged pentaazamacrocyclic copper(ii) complexes. RSC Advances, 2014, 4, 12964. | 3.6 | 5 |
| 68 | Atom efficiency in small molecule and macromolecule synthesis: general discussion. Faraday Discussions, 2015, 183, 97-123. | 3.2 | 1 |
| 69 | Introduction to the themed collection on sustainable polymers. Polymer Chemistry, 2022, 13, 1785-1786. | 3.9 | 1 |