# Arthur J Ragauskas

List of Publications by Year
in descending order



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|---|---|---|---|
| 658 papers | 49,338 citations | 1994 101 h-index | 2747 192 g-index |
| 684 all docs | 684 docs citations | 684 times ranked | 30841 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The Path Forward for Biofuels and Biomaterials. Science, 2006, 311, 484-489. | 12.6 | 4,935 |
| 2 | Lignin Valorization: Improving Lignin Processing in the Biorefinery. Science, 2014, 344, 1246843. | 12.6 | 2,994 |
| 3 | Deep Eutectic Solvents: A Review of Fundamentals and Applications. Chemical Reviews, 2021, 121, 1232-1285. | 47.7 | 1,334 |
| 4 | Review of current and future softwood kraft lignin process chemistry. Industrial Crops and Products, 2004, 20, 131-141. | 5.2 | 961 |
| 5 | Genetic manipulation of lignin reduces recalcitrance and improves ethanol production from switchgrass. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3803-3808. | 7.1 | 585 |
| 6 | From lignin to valuable productsâ€“strategies, challenges, and prospects. Bioresource Technology, 2019, 271, 449-461. | 9.6 | 565 |
| 7 | Poplar as a feedstock for biofuels: A review of compositional characteristics. Biofuels, Bioproducts and Biorefining, 2010, 4, 209-226. | 3.7 | 558 |
| 8 | Ionic Liquid as a Green Solvent for Lignin. Journal of Wood Chemistry and Technology, 2007, 27, 23-33. | 1.7 | 484 |
| 9 | Assessing the molecular structure basis for biomass recalcitrance during dilute acid and hydrothermal pretreatments. Biotechnology for Biofuels, 2013, 6, 15. | 6.2 | 468 |
| 10 | Application of quantitative 31P NMR in biomass lignin and biofuel precursors characterization. Energy and Environmental Science, 2011, 4, 3154. | 30.8 | 447 |
| 11 | Pseudo-lignin and pretreatment chemistry. Energy and Environmental Science, 2011, 4, 1306-1310. | 30.8 | 423 |
| 12 | Characterization of milled wood lignin and ethanol organosolv lignin from miscanthus. Polymer Degradation and Stability, 2009, 94, 1632-1638. | 5.8 | 414 |
| 13 | The critical role of lignin in lignocellulosic biomass conversion and recent pretreatment strategies: A comprehensive review. Bioresource Technology, 2020, 301, 122784. | 9.6 | 396 |
| 14 | Pretreatment and Lignocellulosic Chemistry. Bioenergy Research, 2012, 5, 1043-1066. | 3.9 | 366 |
| 15 | <i>Miscanthus</i>: a fastâ€growing crop for biofuels and chemicals production. Biofuels, Bioproducts and Biorefining, 2012, 6, 580-598. | 3.7 | 360 |
| 16 | Natural deep eutectic solvents for lignocellulosic biomass pretreatment: Recent developments, challenges and novel opportunities. Biotechnology Advances, 2018, 36, 2032-2050. | 11.7 | 346 |
| 17 | Characterization and analysis of the molecular weight of lignin for biorefining studies. Biofuels, Bioproducts and Biorefining, 2014, 8, 836-856. | 3.7 | 343 |
| 18 | Recent advances in understanding the role of cellulose accessibility in enzymatic hydrolysis of lignocellulosic substrates. Current Opinion in Biotechnology, 2014, 27, 150-158. | 6.6 | 342 |

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| 19 | Pseudo-lignin formation and its impact on enzymatic hydrolysis. Bioresource Technology, 2012, 117, 7-12. | 9.6 | 327 |
| 20 | Recent advancements of plant-based natural fiberâ€“reinforced composites and their applications. Composites Part B: Engineering, 2020, 200, 108254. | 12.0 | 323 |
| 21 | Synthetic Applications of Laccase in Green Chemistry. Advanced Synthesis and Catalysis, 2009, 351, 1187-1209. | 4.3 | 296 |
| 22 | Enhanced enzymatic hydrolysis of spruce by alkaline pretreatment at low temperature. Biotechnology and Bioengineering, 2008, 99, 1320-1328. | 3.3 | 281 |
| 23 | Lignin Pyrolysis Components and Upgradingâ€"Technology Review. Bioenergy Research, 2013, 6, 1183-1204. | 3.9 | 280 |
| 24 | Current Understanding of the Correlation of Lignin Structure with Biomass Recalcitrance. Frontiers in Chemistry, 2016, 4, 45. | 3.6 | 279 |
| 25 | Improving the mechanical and thermal properties of gelatin hydrogels cross-linked by cellulose nanowhiskers. Carbohydrate Polymers, 2013, 91, 638-645. | 10.2 | 277 |
| 26 | Determination of hydroxyl groups in biorefinery resources via quantitative 31P NMR spectroscopy. Nature Protocols, 2019, 14, 2627-2647. | 12.0 | 272 |
| 27 | Recent advances in understanding the pseudo-lignin formation in a lignocellulosic biorefinery. Green Chemistry, 2018, 20, 2192-2205. | 9.0 | 269 |
| 28 | The frontiers of energy. Nature Energy, 2016, 1, . | 39.5 | 253 |
| 29 | Observation of Potential Contaminants in Processed Biomass Using Fourier Transform Infrared Spectroscopy. Applied Sciences (Switzerland), 2020, 10, 4345. | 2.5 | 249 |
| 30 | High performance green barriers based on nanocellulose. Sustainable Chemical Processes, 2014, 2, . | 2.3 | 246 |
| 31 | Ionic liquids: Promising green solvents for lignocellulosic biomass utilization. Current Opinion in Green and Sustainable Chemistry, 2017, 5, 5-11. | 5.9 | 238 |
| 32 | Structural Characterization and Comparison of Switchgrass Ball-milled Lignin Before and After Dilute Acid Pretreatment. Applied Biochemistry and Biotechnology, 2010, 162, 62-74. | 2.9 | 227 |
| 33 | Analyzing cellulose degree of polymerization and its relevancy to cellulosic ethanol. Biofuels, Bioproducts and Biorefining, 2011, 5, 215-225. | 3.7 | 224 |
| 34 | The new forestry biofuels sector. Biofuels, Bioproducts and Biorefining, 2008, 2, 58-73. | 3.7 | 219 |
| 35 | Investigation of lignin deposition on cellulose during hydrothermal pretreatment, its effect on cellulose hydrolysis, and underlying mechanisms. Biotechnology and Bioengineering, 2014, 111, 485-492. | 3.3 | 214 |
| 36 | From wood to fuels: Integrating biofuels and pulp production. Industrial Biotechnology, 2006, 2, 55-65. | 0.8 | 213 |

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| 37 | Lignin-enzyme interaction: A roadblock for efficient enzymatic hydrolysis of lignocellulosics. Renewable and Sustainable Energy Reviews, 2022, 154, 111822. | 16.4 | 211 |
| 38 | Facile synthesis of spherical cellulose nanoparticles. Carbohydrate Polymers, 2007, 69, 607-611. | 10.2 | 208 |
| 39 | Effects of process severity on the chemical structure of Miscanthus ethanol organosolv lignin. Polymer Degradation and Stability, 2010, 95, 997-1003. | 5.8 | 207 |
| 40 | Effect of acid-chlorite delignification on cellulose degree of polymerization. Bioresource Technology, 2010, 101, 7410-7415. | 9.6 | 207 |
| 41 | NMR Characterization of Pyrolysis Oils from Kraft Lignin. Energy & Fuels, 2011, 25, 2322-2332. | 5.1 | 205 |
| 42 | A critical review on the analysis of lignin carbohydrate bonds. Green Chemistry, 2019, 21, 1573-1595. | 9.0 | 204 |
| 43 | From lignin association to nano-/micro-particle preparation: extracting higher value of lignin. Green Chemistry, 2016, 18, 5693-5700. | 9.0 | 203 |
| 44 | High Shear Homogenization of Lignin to Nanolignin and Thermal Stability of Nanoligninâ€Polyvinyl Alcohol Blends. ChemSusChem, 2014, 7, 3513-3520. | 6.8 | 199 |
| 45 | Common processes drive the thermochemical pretreatment of lignocellulosic biomass. Green Chemistry, 2014, 16, 63-68. | 9.0 | 198 |
| 46 | Switchgrass as an energy crop for biofuel production: A review of its ligno-cellulosic chemical properties. Energy and Environmental Science, 2010, 3, 1182. | 30.8 | 194 |
| 47 | The fate of lignin during hydrothermal pretreatment. Biotechnology for Biofuels, 2013, 6, 110. | 6.2 | 191 |
| 48 | Lignin as a UV Light Blockerâ€"A Review. Polymers, 2020, 12, 1134. | 4.5 | 190 |
| 49 | Kraft Lignin-Based Rigid Polyurethane Foam. Journal of Wood Chemistry and Technology, 2012, 32, 210-224. | 1.7 | 177 |
| 50 | Comparison of laboratory delignification methods, their selectivity, and impacts on physiochemical characteristics of cellulosic biomass. Bioresource Technology, 2013, 130, 372-381. | 9.6 | 177 |
| 51 | Carbohydrate derivedâ€pseudoâ€lignin can retard cellulose biological conversion. Biotechnology and Bioengineering, 2013, 110, 737-753. | 3.3 | 174 |
| 52 | A review of sugarcane bagasse for secondâ€generation bioethanol and biopower production. Biofuels, Bioproducts and Biorefining, 2016, 10, 634-647. | 3.7 | 173 |
| 53 | Synergistic enzymatic and microbial lignin conversion. Green Chemistry, 2016, 18, 1306-1312. | 9.0 | 172 |
| 54 | Lipids from heterotrophic microbes: advances in metabolism research. Trends in Biotechnology, 2011, 29, 53-61. | 9.3 | 170 |

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| 55 | Lignin Structural Modifications Resulting from Ethanol Organosolv Treatment of Loblolly Pine. Energy & Fuels, 2010, 24, 683-689. | 5.1 | 169 |
| 56 | Plastic waste upcycling toward a circular economy. Chemical Engineering Journal, 2022, 428, 131928. | 12.7 | 169 |
| 57 | Copper(II)-Catalyzed Aerobic Oxidation of Primary Alcohols to Aldehydes in Ionic Liquid [bmpy]PF6. Organic Letters, 2005, 7, 3689-3692. | 4.6 | 166 |
| 58 | 4- <i>O</i> -methylation of glucuronic acid in <i>Arabidopsis</i> glucuronoxylan is catalyzed by a domain of unknown function family 579 protein. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14253-14258. | 7.1 | 164 |
| 59 | Pretreatment of <i>Miscanthus x giganteus</i> Using the Ethanol Organosolv Process for Ethanol Production. Industrial & Engineering Chemistry Research, 2009, 48, 8328-8334. | 3.7 | 162 |
| 60 | Effects of Two-Stage Dilute Acid Pretreatment on the Structure and Composition of Lignin and Cellulose in Loblolly Pine. Bioenergy Research, 2008, 1, 205-214. | 3.9 | 161 |
| 61 | Lignin extraction and upgrading using deep eutectic solvents. Industrial Crops and Products, 2020, 147, 112241. | 5.2 | 159 |
| 62 | Cu(II)-Catalyzed Selective Aerobic Oxidation of Alcohols under Mild Conditions. Journal of Organic Chemistry, 2006, 71, 7087-7090. | 3.2 | 158 |
| 63 | Cellulase kinetics as a function of cellulose pretreatment. Metabolic Engineering, 2008, 10, 370-381. | 7.0 | 157 |
| 64 | Effects of organosolv pretreatment and enzymatic hydrolysis on cellulose structure and crystallinity in Loblolly pine. Carbohydrate Research, 2010, 345, 965-970. | 2.3 | 153 |
| 65 | Bioconversion of lignin model compounds with oleaginous Rhodococci. Applied Microbiology and Biotechnology, 2012, 93, 891-900. | 3.6 | 153 |
| 66 | Mechanical deconstruction of lignocellulose cell walls and their enzymatic saccharification. Cellulose, 2013, 20, 807-818. | 4.9 | 148 |
| 67 | Insights into the effect of dilute acid, hot water or alkaline pretreatment on the cellulose accessible surface area and the overall porosity of Populus. Green Chemistry, 2015, 17, 4239-4246. | 9.0 | 146 |
| 68 | Effects of organosolv and ammonia pretreatments on lignin properties and its inhibition for enzymatic hydrolysis. Green Chemistry, 2017, 19, 2006-2016. | 9.0 | 145 |
| 69 | Breakdown of Cell Wall Nanostructure in Dilute Acid Pretreated Biomass. Biomacromolecules, 2010, 11, 2329-2335. | 5.4 | 143 |
| 70 | Os<scp>CESA</scp>9 conservedâ€site mutation leads to largely enhanced plant lodging resistance and biomass enzymatic saccharification by reducing cellulose <scp>DP</scp> and crystallinity in rice. Plant Biotechnology Journal, 2017, 15, 1093-1104. | 8.3 | 143 |
| 71 | Sustainable energy and fuels from biomass: a review focusing on hydrothermal biomass processing. Sustainable Energy and Fuels, 2020, 4, 4390-4414. | 4.9 | 140 |
| 72 | The Effect of Alkaline Pretreatment Methods on Cellulose Structure and Accessibility. ChemSusChem, 2015, 8, 275-279. | 6.8 | 139 |

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| 73 | Chemical transformations of Populus trichocarpa during dilute acid pretreatment. RSC Advances, 2012, 2, 10925. | 3.6 | 138 |
| 74 | Sugar release and growth of biofuel crops are improved by downregulation of pectin biosynthesis. Nature Biotechnology, 2018, 36, 249-257. | 17.5 | 136 |
| 75 | Cellulosic biorefineriesâ€"unleashing lignin opportunities. Current Opinion in Environmental Sustainability, 2010, 2, 383-393. | 6.3 | 134 |
| 76 | Rice straw as a feedstock for biofuels: Availability, recalcitrance, and chemical properties. Biofuels, Bioproducts and Biorefining, 2018, 12, 83-107. | 3.7 | 133 |
| 77 | Changes in lignocellulosic supramolecular and ultrastructure during dilute acid pretreatment of Populus and switchgrass. Biomass and Bioenergy, 2010, 34, 1885-1895. | 5.7 | 132 |
| 78 | Lignin to lipid bioconversion by oleaginous Rhodococci. Green Chemistry, 2013, 15, 2070. | 9.0 | 129 |
| 79 | Structural Characterization of Switchgrass Lignin after Ethanol Organosolv Pretreatment. Energy & Fuels, 2012, 26, 740-745. | 5.1 | 127 |
| 80 | Perspective on Technical Lignin Fractionation. ACS Sustainable Chemistry and Engineering, 2020, 8, 8086-8101. | 6.7 | 126 |
| 81 | Cellulose nanowhisker foams by freeze casting. Carbohydrate Polymers, 2012, 88, 789-792. | 10.2 | 125 |
| 82 | The emergence of Clostridium thermocellum as a high utility candidate for consolidated bioprocessing applications. Frontiers in Chemistry, 2014, 2, 66. | 3.6 | 124 |
| 83 | A novel nanocomposite film prepared from crosslinked cellulosic whiskers. Carbohydrate Polymers, 2009, 75, 85-89. | 10.2 | 123 |
| 84 | Fractionation of Organosolv Lignin Using Acetone:Water and Properties of the Obtained Fractions. ACS Sustainable Chemistry and Engineering, 2017, 5, 580-587. | 6.7 | 121 |
| 85 | Inhibitory effects of lignin on enzymatic hydrolysis: The role of lignin chemistry and molecular weight. Renewable Energy, 2018, 123, 664-674. | 8.9 | 121 |
| 86 | Systems biology-guided biodesign of consolidated lignin conversion. Green Chemistry, 2016, 18, 5536-5547. | 9.0 | 119 |
| 87 | Enhanced characteristics of genetically modified switchgrass (Panicum virgatum L.) for high biofuel production. Biotechnology for Biofuels, 2013, 6, 71. | 6.2 | 118 |
| 88 | Bioconversion of oxygen-pretreated Kraft lignin to microbial lipid with oleaginous Rhodococcus opacus DSM 1069. Green Chemistry, 2015, 17, 2784-2789. | 9.0 | 117 |
| 89 | Chemical Transformations of Buddleja davidii Lignin during Ethanol Organosolv Pretreatment. Energy & Fuels, 2010, 24, 2723-2732. | 5.1 | 116 |
| 90 | Influence of Si/Al Ratio of ZSM-5 Zeolite on the Properties of Lignin Pyrolysis Products. ACS Sustainable Chemistry and Engineering, 2013, 1, 316-324. | 6.7 | 116 |

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| 91 | Synergistic maximization of the carbohydrate output and lignin processability by combinatorial pretreatment. Green Chemistry, 2017, 19, 4939-4955. | 9.0 | 116 |
| 92 | Identifying and creating pathways to improve biological lignin valorization. Renewable and Sustainable Energy Reviews, 2019, 105, 349-362. | 16.4 | 116 |
| 93 | Chemical Structure of Residual Lignin from Kraft Pulp. Journal of Wood Chemistry and Technology, 1996, 16, 347-365. | 1.7 | 114 |
| 94 | Ethanol organosolv lignin-based rigid polyurethane foam reinforced with cellulose nanowhiskers. RSC Advances, 2012, 2, 3347. | 3.6 | 112 |
| 95 | Determination of porosity of lignocellulosic biomass before and after pretreatment by using Simonsâ€™ stain and NMR techniques. Bioresource Technology, 2013, 144, 467-476. | 9.6 | 112 |
| 96 | Effect of torrefaction on biomass structure and hydrocarbon production from fast pyrolysis. Green Chemistry, 2015, 17, 2406-2417. | 9.0 | 112 |
| 97 | Three lignocellulose features that distinctively affect biomass enzymatic digestibility under NaOH and H2SO4 pretreatments in Miscanthus. Bioresource Technology, 2013, 130, 30-37. | 9.6 | 111 |
| 98 | A Genomics Approach to Deciphering Lignin Biosynthesis in Switchgrass. Plant Cell, 2013, 25, 4342-4361. | 6.6 | 109 |
| 99 | Diol pretreatment to fractionate a reactive lignin in lignocellulosic biomass biorefineries. Green Chemistry, 2019, 21, 2788-2800. | 9.0 | 109 |
| 100 | Alignment of Cellulose Nanofibers: Harnessing Nanoscale Properties to Macroscale Benefits. ACS Nano, 2021, 15, 3646-3673. | 14.6 | 108 |
| 101 | Structural characterization of alkaline hydrogen peroxide pretreated grasses exhibiting diverse lignin phenotypes. Biotechnology for Biofuels, 2012, 5, 38. | 6.2 | 106 |
| 102 | An Inâ€Depth Understanding of Biomass Recalcitrance Using Natural Poplar Variants as the Feedstock. ChemSusChem, 2017, 10, 139-150. | 6.8 | 106 |
| 103 | Selective Aerobic Oxidation of Activated Alcohols into Acids or Aldehydes in Ionic Liquids. Journal of Organic Chemistry, 2007, 72, 7030-7033. | 3.2 | 105 |
| 104 | NMR a critical tool to study the production of carbon fiber from lignin. Carbon, 2013, 52, 65-73. | 10.3 | 103 |
| 105 | Effects of the advanced organosolv pretreatment strategies on structural properties of woody biomass. Industrial Crops and Products, 2020, 146, 112144. | 5.2 | 103 |
| 106 | Increase in 4-Coumaryl Alcohol Units during Lignification in Alfalfa (Medicago sativa) Alters the Extractability and Molecular Weight of Lignin. Journal of Biological Chemistry, 2010, 285, 38961-38968. | 3.4 | 102 |
| 107 | Vanadium-catalyzed selective aerobic alcohol oxidation in ionic liquid [bmim]PF6. Tetrahedron Letters, 2007, 48, 273-276. | 1.4 | 101 |
| 108 | Pyrolysis of Kraft Lignin with Additives. Energy & Fuels, 2011, 25, 4662-4668. | 5.1 | 101 |

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| 109 | Biotechnological opportunities with the Î²-ketoadipate pathway. Trends in Biotechnology, 2012, 30, 627-637. | 9.3 | 101 |
| 110 | Significance of Lignin S/G Ratio in Biomass Recalcitrance of <i>Populus trichocarpa</i> Variants for Bioethanol Production. ACS Sustainable Chemistry and Engineering, 2018, 6, 2162-2168. | 6.7 | 100 |
| 111 | Critical review of FDM 3D printing of PLA biocomposites filled with biomass resources, characterization, biodegradability, upcycling and opportunities for biorefineries. Applied Materials Today, 2021, 24, 101078. | 4.3 | 100 |
| 112 | Molecular Recognition of a Salmonella Trisaccharide Epitope by Monoclonal Antibody Se155-4. Biochemistry, 1994, 33, 5172-5182. | 2.5 | 99 |
| 113 | Pyrolysis oils from CO2 precipitated Kraft lignin. Green Chemistry, 2011, 13, 3196. | 9.0 | 99 |
| 114 | Torrefaction of Loblolly pine. Green Chemistry, 2012, 14, 72-76. | 9.0 | 99 |
| 115 | Chemical Transformations of Poplar Lignin during Cosolvent Enhanced Lignocellulosic Fractionation Process. ACS Sustainable Chemistry and Engineering, 2018, 6, 8711-8718. | 6.7 | 99 |
| 116 | Characterization of cellulose nanofibrillation by micro grinding. Journal of Nanoparticle Research, 2014, 16, 1. | 1.9 | 98 |
| 117 | Biomass Characterization of Buddleja davidii: A Potential Feedstock for Biofuel Production. Journal of Agricultural and Food Chemistry, 2009, 57, 1275-1281. | 5.2 | 97 |
| 118 | Chemical profiles of switchgrass. Bioresource Technology, 2010, 101, 3253-3257. | 9.6 | 97 |
| 119 | Defining lignin nanoparticle properties through tailored lignin reactivity by sequential organosolv fragmentation approach (SOFA). Green Chemistry, 2019, 21, 245-260. | 9.0 | 97 |
| 120 | Down-regulation of the caffeic acid O-methyltransferase gene in switchgrass reveals a novel monolignol analog. Biotechnology for Biofuels, 2012, 5, 71. | 6.2 | 96 |
| 121 | CP/MAS 13C NMR analysis of cellulase treated bleached softwood kraft pulp. Carbohydrate Research, 2006, 341, 591-597. | 2.3 | 94 |
| 122 | Review of NMR Characterization of Pyrolysis Oils. Energy & Fuels, 2016, 30, 6863-6880. | 5.1 | 94 |
| 123 | Evaluating laccase-facilitated coupling of phenolic acids to high-yield kraft pulps. Enzyme and Microbial Technology, 2002, 30, 855-861. | 3.2 | 93 |
| 124 | Heteronuclear Single-Quantum Correlationâ€"Nuclear Magnetic Resonance (HSQCâ€"NMR) Fingerprint Analysis of Pyrolysis Oils. Energy & Fuels, 2011, 25, 5791-5801. | 5.1 | 93 |
| 125 | Characterization of CO<sub>2</sub>precipitated Kraft lignin to promote its utilization. Green Chemistry, 2010, 12, 31-34. | 9.0 | 92 |
| 126 | Evaluation of grape stalks as a bioresource. Industrial Crops and Products, 2011, 33, 200-204. | 5.2 | 92 |

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| 127 | A finalized determinant for complete lignocellulose enzymatic saccharification potential to maximize bioethanol production in bioenergy Miscanthus. Biotechnology for Biofuels, 2019, 12, 99. | 6.2 | 92 |
| 128 | HSQC (heteronuclear single quantum coherence) 13Câ€“1H correlation spectra of whole biomass in perdeuterated pyridinium chlorideâ€“DMSO system: An effective tool for evaluating pretreatment. Fuel, 2011, 90, 2836-2842. | 6.4 | 91 |
| 129 | Synthesis, Characterization, and Utilization of a Lignin-Based Adsorbent for Effective Removal of Azo Dye from Aqueous Solution. ACS Omega, 2020, 5, 2865-2877. | 3.5 | 91 |
| 130 | Effect of Ethanol Organosolv Pretreatment on Enzymatic Hydrolysis of <i>Buddleja davidii</i> Stem Biomass. Industrial & Engineering Chemistry Research, 2010, 49, 1467-1472. | 3.7 | 90 |
| 131 | Biomass Characterization: Recent Progress in Understanding Biomass Recalcitrance. Industrial Biotechnology, 2012, 8, 191-208. | 0.8 | 90 |
| 132 | Hydrogels Prepared from Cross-Linked Nanofibrillated Cellulose. ACS Sustainable Chemistry and Engineering, 2014, 2, 772-780. | 6.7 | 90 |
| 133 | Effects of Lignin Structure on Hydrodeoxygenation Reactivity of Pine Wood Lignin to Valuable Chemicals. ACS Sustainable Chemistry and Engineering, 2017, 5, 1824-1830. | 6.7 | 90 |
| 134 | Structural changes in switchgrass lignin and hemicelluloses during pretreatments by NMR analysis. Polymer Degradation and Stability, 2011, 96, 2002-2009. | 5.8 | 88 |
| 135 | The effect of liquid hot water pretreatment on the chemicalâ€“structural alteration and the reduced recalcitrance in poplar. Biotechnology for Biofuels, 2017, 10, 237. | 6.2 | 88 |
| 136 | Synthesis of a novel cellulose nanowhisker-based drug delivery system. RSC Advances, 2012, 2, 3403. | 3.6 | 87 |
| 137 | Water transmission barrier properties of biodegradable films based on cellulosic whiskers and xylan. Carbohydrate Polymers, 2009, 78, 357-360. | 10.2 | 85 |
| 138 | A study of poplar organosolv lignin after melt rheology treatment as carbon fiber precursors. Green Chemistry, 2016, 18, 5015-5024. | 9.0 | 85 |
| 139 | Characterization of Milled Wood Lignin (MWL) in Loblolly Pine Stem Wood, Residue, and Bark. Journal of Agricultural and Food Chemistry, 2011, 59, 12910-12916. | 5.2 | 84 |
| 140 | Moisture barrier properties of xylan composite films. Carbohydrate Polymers, 2011, 84, 1371-1377. | 10.2 | 84 |
| 141 | Two Decades of Laccases: Advancing Sustainability in the Chemical Industry. Chemical Record, 2017, 17, 122-140. | 5.8 | 84 |
| 142 | Fast Fractionation of Technical Lignins by Organic Cosolvents. ACS Sustainable Chemistry and Engineering, 2018, 6, 6064-6072. | 6.7 | 84 |
| 143 | Catalytic hydrogenolysis of ethanol organosolv lignin. Holzforschung, 2009, 63, 513-520. | 1.9 | 83 |
| 144 | Investigation of a Lignin-Based Deep Eutectic Solvent Using <i>p</i>-Hydroxybenzoic Acid for Efficient Woody Biomass Conversion. ACS Sustainable Chemistry and Engineering, 2020, 8, 12542-12553. | 6.7 | 83 |

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| 145 | NMR Characterization of C3H and HCT Down-Regulated Alfalfa Lignin. Bioenergy Research, 2009, 2, 198-208. | 3.9 | 82 |
| 146 | Insights of biomass recalcitrance in natural <i>Populus trichocarpa</i> variants for biomass conversion. Green Chemistry, 2017, 19, 5467-5478. | 9.0 | 82 |
| 147 | Modification of high-lignin softwood kraft pulp with laccase and amino acids. Enzyme and Microbial Technology, 2009, 44, 176-181. | 3.2 | 81 |
| 148 | Ethanol: A Promising Green Solvent for the Deconstruction of Lignocellulose. ChemSusChem, 2018, 11, 3559-3575. | 6.8 | 81 |
| 149 | Oxidation and sulfonation of cellulosics. Cellulose, 2008, 15, 489-496. | 4.9 | 80 |
| 150 | Defined tetra-allelic gene disruption of the 4-coumarate:coenzyme A ligase 1 (Pv4CL1) gene by CRISPR/Cas9 in switchgrass results in lignin reduction and improved sugar release. Biotechnology for Biofuels, 2017, 10, 284. | 6.2 | 80 |
| 151 | Characterization of fractional cuts of co-solvent enhanced lignocellulosic fractionation lignin isolated by sequential precipitation. Bioresource Technology, 2019, 272, 202-208. | 9.6 | 80 |
| 152 | TEMPO-catalyzed oxidation of benzylic alcohols to aldehydes with the H2O2/HBr/ionic liquid [bmim]PF6 system. Tetrahedron Letters, 2005, 46, 3323-3326. | 1.4 | 79 |
| 153 | Catalytic fast co-pyrolysis of bamboo sawdust and waste tire using a tandem reactor with cascade bubbling fluidized bed and fixed bed system. Energy Conversion and Management, 2019, 180, 60-71. | 9.2 | 79 |
| 154 | Production of ethanol from carbohydrates from loblolly pine: A technical and economic assessment. Bioresource Technology, 2008, 99, 5051-5057. | 9.6 | 78 |
| 155 | Modification of High Lignin Content Kraft Pulps with Laccase to Improve Paper Strength Properties. 1. Laccase Treatment in the Presence of Gallic Acid. Biotechnology Progress, 2008, 20, 255-261. | 2.6 | 77 |
| 156 | The occurrence of tricin and its derivatives in plants. Green Chemistry, 2016, 18, 1439-1454. | 9.0 | 77 |
| 157 | A biomass pretreatment using cellulose-derived solvent Cyrene. Green Chemistry, 2020, 22, 2862-2872. | 9.0 | 77 |
| 158 | Recent Advances in Functional Materials through Cellulose Nanofiber Templating. Advanced Materials, 2021, 33, e2005538. | 21.0 | 77 |
| 159 | Novel nanocellulosic xylan composite film. Composites Part B: Engineering, 2009, 40, 727-730. | 12.0 | 76 |
| 160 | Thermo-responsive and fluorescent cellulose nanocrystals grafted with polymer brushes. Journal of Materials Chemistry A, 2015, 3, 1995-2005. | 10.3 | 76 |
| 161 | Comparison for the compositions of fast and slow pyrolysis oils by NMR characterization. Bioresource Technology, 2013, 147, 577-584. | 9.6 | 75 |
| 162 | Carbohydrate and lignin are simultaneously solubilized from unpretreated switchgrass by microbial action at high temperature. Energy and Environmental Science, 2013, 6, 2186. | 30.8 | 75 |

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| 163 | Advanced Chemical Design for Efficient Lignin Bioconversion. ACS Sustainable Chemistry and Engineering, 2017, 5, 2215-2223. | 6.7 | 75 |
| 164 | Surface modification of cellulosic fibers using dielectric-barrier discharge. Carbohydrate Polymers, 2006, 65, 179-184. | 10.2 | 74 |
| 165 | Investigation into nanocellulosics versus acacia reinforced acrylic films. Composites Part B: Engineering, 2007, 38, 360-366. | 12.0 | 73 |
| 166 | Physicochemical characterization of ethanol organosolv lignin (EOL) from Eucalyptus globulus: Effect of extraction conditions on the molecular structure. Polymer Degradation and Stability, 2014, 110, 184-194. | 5.8 | 73 |
| 167 | Physicochemical Structural Changes of Poplar and Switchgrass during Biomass Pretreatment and Enzymatic Hydrolysis. ACS Sustainable Chemistry and Engineering, 2016, 4, 4563-4572. | 6.7 | 73 |
| 168 | A Multifunctional Cosolvent Pair Reveals Molecular Principles of Biomass Deconstruction. Journal of the American Chemical Society, 2019, 141, 12545-12557. | 13.7 | 73 |
| 169 | Ligninâ€derived electrochemical energy materials and systems. Biofuels, Bioproducts and Biorefining, 2020, 14, 650-672. | 3.7 | 73 |
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