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Paving the Way for Lignin Valorisation: Recent Advances in Bioengineering, Biorefining and Catalysis

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1342	Rapid room temperature solubilization and depolymerization of polymeric lignin at high loadings. 2016 , 18, 6012-6020		46
1341	Synergetic Effects of Alcohol/Water Mixing on the Catalytic Reductive Fractionation of Poplar Wood. 2016 , 4, 6894-6904		97
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1338	Investigation of the Chemocatalytic and Biocatalytic Valorization of a Range of Different Lignin Preparations: The Importance of ED-4 Content. 2016 , 4, 6921-6930		59
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1336	Progress toward Lignin Valorization via Selective Catalytic Technologies and the Tailoring of Biosynthetic Pathways. 2016 , 4, 5123-5135		61
1335	Metal Triflates for the Production of Aromatics from Lignin. 2016 , 9, 2974-2981		61
1334	Tandem Catalytic Depolymerization of Lignin by Water-Tolerant Lewis Acids and Rhodium Complexes. 2016 , 9, 2074-9		76
1333	Catalytic Upstream Biorefining through Hydrogen Transfer Reactions: Understanding the Process from the Pulp Perspective. 2016 , 9, 3171-3180		52

1332	Effective Release of Lignin Fragments from Lignocellulose by Lewis Acid Metal Triflates in the Lignin-First Approach. 2016 , 9, 3262-3267	80
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1330	Aerobic Oxidation of 2-Phenoxyethanol Lignin Model Compounds Using Vanadium and Copper Catalysts. 2016 , 4, 6244-6251	22
1329	Application of Ni-Co/Mg-Al Catalyst System for Hydrogen Production via Supercritical Water Gasification of Lignocellulosic Biomass. 2016 , 146, 2596-2605	10
1328	Catalytic hydrotreatment of Alcell lignin fractions using a Ru/C catalyst. 2016 , 6, 7053-7067	30
1327	Laccase catalyzed grafting of NDH type mediators to lignin via radical-radical coupling. 2017 , 7, 3358-3368	29
1326	On the Reactivity of Dihydro-p-coumaryl Alcohol towards Reductive Processes Catalyzed by Raney Nickel. 2017 , 9, 2627-2632	11
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1323	Electronic and bite angle effects in catalytic C-O bond cleavage of a lignin model compound using ruthenium Xantphos complexes. 2017 , 7, 619-626	5
1322	GCMS study of thermochemical conversion of guaifenesin in the presence of 1-butyl-3-methylimidazolium-based ionic liquids. 2017 , 43, 4007-4021	3
1321	Catalysis Meets Nonthermal Separation for the Production of (Alkyl)phenols and Hydrocarbons from Pyrolysis Oil. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 2334-2339	16.4 60
1320	Lignin-Derived Thioacidolysis Dimers: Reevaluation, New Products, Authentication, and Quantification. 2017 , 10, 830-835	30
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1317	Sustainable sources need reliable standards. 2017 , 202, 281-301	3
1316	Reactivity of lignin model compounds through hydrogen transfer catalysis in ethanol/water mixtures. 2017 , 209, 265-272	32
1315	Synergistic Effect of EtOAc/H ₂ O Biphasic Solvent and Ru/C Catalyst for Cornstalk Hydrolysis Residue Depolymerization. 2017 , 5, 2981-2993	26

1314	Biphasic extraction of mechanocatalytically-depolymerized lignin from water-soluble wood and its catalytic downstream processing. 2017 , 19, 2803-2811	25
1313	Production and Application of Lignosulfonates and Sulfonated Lignin. 2017 , 10, 1861-1877	307
1312	BLISS: A Bioorthogonal Dual-Labeling Strategy to Unravel Lignification Dynamics in Plants. 2017 , 24, 326-338	30
1311	Fractionation of Degraded Lignin by Using a Water/1-Butanol Mixture with a Solid-Acid Catalyst: A Potential Source of Phenolic Compounds. 2017 , 9, 2875-2880	17
1310	Selective production of mono-aromatics from lignocellulose over Pd/C catalyst: the influence of acid co-catalysts. 2017 , 202, 141-156	58
1309	Chemocatalytic Conversion of Cellulosic Biomass to Methyl Glycolate, Ethylene Glycol, and Ethanol. 2017 , 10, 1390-1394	55
1308	Efficiency of Ni Nanoparticles Supported on Hierarchical Porous Nitrogen-Doped Carbon for Hydrogenolysis of Kraft Lignin in Flow and Batch Systems. 2017 , 5, 2415-2420	27
1307	Chemical characterization of Cedrus deodara wood extracts using water and molybdenum catalysts. 2017 , 37, 163-170	8
1306	Lignin Hydrogenolysis: Improving Lignin Disassembly through Formaldehyde Stabilization. 2017 , 10, 2111-2115	28
1305	2D NMR characterization of wheat straw residual lignin after dilute acid pretreatment with different severities. 2017 , 71, 461-469	36
1304	Effect of methanol in controlling defunctionalization of the propyl side chain of phenolics from catalytic upstream biorefining. 2017 , 202, 403-413	8
1303	Expanding the biomass derived chemical space. 2017 , 8, 4724-4738	74
1302	Pd/C-Catalyzed Hydrogenolysis of Dibenzodioxocin Lignin Model Compounds Using Silanes and Water as Hydrogen Source. 2017 , 5, 3726-3731	13
1301	On the Meaning and Origins of Lignin Recalcitrance: A Critical Analysis of the Catalytic Upgrading of Lignins Obtained from Mechanocatalytic Biorefining and Organosolv Pulping. 2017 , 9, 2691-2700	16
1300	Regulation of CONIFERALDEHYDE 5-HYDROXYLASE expression to modulate cell wall lignin structure in rice. 2017 , 246, 337-349	49
1299	³¹ P NMR Characterization of Tricin and Its Structurally Similar Flavonoids. 2017 , 2, 3557-3561	12
1298	Sustainable bisphenols from renewable softwood lignin feedstock for polycarbonates and cyanate ester resins. 2017 , 19, 2561-2570	70
1297	Lignin Functionalization through Chemical Demethylation: Preparation and Tannin-Like Properties of Demethylated Guaiacyl-Type Synthetic Lignins. 2017 , 5, 5424-5431	43

1296	Quantification and Classification of Carbonyls in Industrial Humins and Lignins by 19F NMR. 2017 , 5, 965-972	30
1295	Organocatalytic Chemoselective Primary Alcohol Oxidation and Subsequent Cleavage of Lignin Model Compounds and Lignin. 2017 , 10, 2707-2713	70
1294	Multi-step biocatalytic depolymerization of lignin. 2017 , 101, 6277-6287	41
1293	Lignin-first biomass fractionation: the advent of active stabilisation strategies. 2017 , 10, 1551-1557	357
1292	Preparative Aspects of Supported Ni2P Catalysts for Reductive Upgrading of Technical Lignin to Aromatics. 2017 , 147, 1722-1731	7
1291	Hydroxystilbenes Are Monomers in Palm Fruit Endocarp Lignins. 2017 , 174, 2072-2082	61
1290	Alkaline Peroxide Delignification of Corn Stover. 2017 , 5, 6310-6321	40
1289	Alkaline Pretreatment Severity Leads to Different Lignin Applications in Sugar Cane Biorefineries. 2017 , 5, 5702-5712	31
1288	From lignin subunits to aggregates: insights into lignin solubilization. 2017 , 19, 3272-3281	89
1287	Visible-Light-Driven Self-Hydrogen Transfer Hydrogenolysis of Lignin Models and Extracts into Phenolic Products. 2017 , 7, 4571-4580	117
1286	Integrating lignin valorization and bio-ethanol production: on the role of Ni-Al2O3 catalyst pellets during lignin-first fractionation. 2017 , 19, 3313-3326	185
1285	Production of Platform Chemicals from Sustainable Resources. 2017 ,	19
1284	Zeolites as sustainable catalysts for the selective synthesis of renewable bisphenols from lignin-derived monomers. 2017 , 10, 2249-2257	26
1283	Adsorption and separation of black liquor-derived phenol derivatives using anion exchange resins. 2017 , 181, 8-17	22
1282	Catalytic application of layered double hydroxide-derived catalysts for the conversion of biomass-derived molecules. 2017 , 7, 1622-1645	121
1281	Promoting Lignin Depolymerization and Restraining the Condensation via an OxidationHydrogenation Strategy. 2017 , 7, 3419-3429	126
1280	How Inter- and Intramolecular Reactions Dominate the Formation of Products in Lignin Pyrolysis. 2017 , 23, 8658-8668	10
1279	Disrupting Flavone Synthase II Alters Lignin and Improves Biomass Digestibility. 2017 , 174, 972-985	62

- 1278 Biochemical transformation of lignin for deriving valued commodities from lignocellulose. **2017**, 45, 120-126 66
- 1277 Renewable Aromatics from Kraft Lignin with Molybdenum-Based Catalysts. **2017**, 9, 2717-2726 19
- 1276 Catalysis Meets Nonthermal Separation for the Production of (Alkyl)phenols and Hydrocarbons from Pyrolysis Oil. **2017**, 129, 2374-2379 18
- 1275 A "Double Click" for Illuminating Plant Cell Walls. **2017**, 24, 246-247
- 1274 Lignin-Based Microsphere: Preparation and Performance on Encapsulating the Pesticide Avermectin. **2017**, 5, 3321-3328 76
- 1273 Depolymerization of lignin via a non-precious NiBe alloy catalyst supported on activated carbon. **2017**, 19, 1895-1903 118
- 1272 Phenolic acetals from lignins of varying compositions via iron(III) triflate catalysed depolymerisation. **2017**, 19, 2774-2782 103
- 1271 Conversion of lignin model compounds by *Pseudomonas putida* KT2440 and isolates from compost. **2017**, 101, 5059-5070 73
- 1270 Extractives from Cedar Deodara and *Alnus Cordata* in the Presence of Molybdenum Catalysts. **2017**, 2, 2536-2538 4
- 1269 Unconventional Pretreatment of Lignocellulose with Low-Temperature Plasma. **2017**, 10, 14-31 49
- 1268 In situ catalytic hydrogenation of model compounds and biomass-derived phenolic compounds for bio-oil upgrading. **2017**, 105, 140-148 35
- 1267 Effects of Extraction Methods on Structure and Valorization of Corn Stover Lignin by a Pd/C Catalyst. **2017**, 9, 1135-1143 23
- 1266 Depolymerization Pathways for Branching Lignin Spirodienone Units Revealed with ab Initio Steered Molecular Dynamics. **2017**, 121, 532-543 10
- 1265 Use of Bisulfite Processing To Generate High-EO-4 Content Water-Soluble Lignosulfonates. **2017**, 5, 1831-1839 13
- 1264 Silencing CHALCONE SYNTHASE in Maize Impedes the Incorporation of Tricin into Lignin and Increases Lignin Content. **2017**, 173, 998-1016 61
- 1263 Efficient Cleavage of Lignin-Carbohydrate Complexes and Ultrafast Extraction of Lignin Oligomers from Wood Biomass by Microwave-Assisted Treatment with Deep Eutectic Solvent. **2017**, 10, 1692-1700 226
- 1262 Effects of Lignin Structure on Hydrodeoxygenation Reactivity of Pine Wood Lignin to Valuable Chemicals. **2017**, 5, 1824-1830 64
- 1261 Effective Fractionation of lignocellulose in herbaceous biomass and hardwood using a mild acetone organosolv process. **2017**, 19, 5505-5514 75

1260	Exploiting Lignin: A Green Resource. 2017 , 91-116	3
1259	Catalytic Depolymerization of Lignin and Woody Biomass in Supercritical Ethanol: Influence of Reaction Temperature and Feedstock. 2017 , 5, 10864-10874	66
1258	Predicting lignin depolymerization yields from quantifiable properties using fractionated biorefinery lignins. 2017 , 19, 5131-5143	51
1257	Selective photocatalysis of lignin-inspired chemicals by integrating hybrid nanocatalysis in microfluidic reactors. 2017 , 46, 6675-6686	84
1256	Flowthrough Reductive Catalytic Fractionation of Biomass. 2017 , 1, 613-622	141
1255	Structural Characteristics of Lignin Macromolecules from Different Eucalyptus Species. 2017 , 5, 11618-11627	67
1254	Chemoselective C-H bond cleavage of saturated aryl ketones with amines leading to β -ketoamides: a copper-catalyzed aerobic oxidation process with air. 2017 , 4, 2375-2379	12
1253	Organic electrolyte solutions as versatile media for the dissolution and regeneration of cellulose. 2017 , 19, 4754-4768	32
1252	Selective Utilization of the Methoxy Group in Lignin to Produce Acetic Acid. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 14868-14872	16.4 53
1251	Bio-based amines through sustainable heterogeneous catalysis. 2017 , 19, 5303-5331	130
1250	Catalytic Hydrogenolysis of Lignins into Phenolic Compounds over Carbon Nanotube Supported Molybdenum Oxide. 2017 , 7, 7535-7542	139
1249	Mechanistic Investigation of the Catalyzed Cleavage for the Lignin EO-4 Linkage: Implications for Vanillin and Vanillic Acid Formation. 2017 , 5, 9818-9825	50
1248	Direct conversion of lignin into arene products catalyzed by a niobium-based material. 2017 , 62, 1231-1232	3
1247	Survey of Lignin-Structure Changes and Depolymerization during Ionic Liquid Pretreatment. 2017 , 5, 10116-10127	55
1246	Silencing Affects Lignification and Improves Saccharification in Poplar. 2017 , 175, 1040-1057	63
1245	Lignin Depolymerization Over Porous Copper-Based Mixed-Oxide Catalysts in Supercritical Ethanol. 2017 , 231-251	0
1244	A strategy for generating high-quality cellulose and lignin simultaneously from woody biomass. 2017 , 19, 4849-4857	53
1243	Emulsion electro-oxidation of kraft lignin. 2017 , 19, 4778-4784	34

1242	Selective Utilization of the Methoxy Group in Lignin to Produce Acetic Acid. 2017 , 129, 15064-15068	10
1241	Direct rate assessment of laccase catalysed radical formation in lignin by electron paramagnetic resonance spectroscopy. 2017 , 106, 88-96	24
1240	Lignin transformations for high value applications: towards targeted modifications using green chemistry. 2017 , 19, 4200-4233	384
1239	Biphasic 2-methyltetrahydrofuran/oxalic acid/water pretreatment to enhance cellulose enzymatic hydrolysis and lignin valorization. 2017 , 243, 1105-1111	25
1238	Facile preparation of well-combined lignin-based carbon/ZnO hybrid composite with excellent photocatalytic activity. 2017 , 426, 206-216	65
1237	Elucidating the Structural Changes to Populus Lignin during Consolidated Bioprocessing with <i>Clostridium thermocellum</i> . 2017 , 5, 7486-7491	20
1236	Selective production of arenes via direct lignin upgrading over a niobium-based catalyst. 2017 , 8, 16104	236
1235	A Biocatalytic One-Pot Approach for the Preparation of Lignin Oligomers Using an Oxidase/Peroxidase Cascade Enzyme System. 2017 , 359, 3354-3361	14
1234	Sequential two-step fractionation of lignocellulose with formic acid organosolv followed by alkaline hydrogen peroxide under mild conditions to prepare easily saccharified cellulose and value-added lignin. 2017 , 148, 1426-1437	47
1233	A Multiobjective Optimization Including Results of Life Cycle Assessment in Developing Biorenewables-Based Processes. 2017 , 10, 3632-3643	26
1232	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. 2017 , 5, 8171-8180	87
1231	OrganoCat pretreatment of perennial plants: Synergies between a biogenic fractionation and valuable feedstocks. 2017 , 244, 889-896	17
1230	Biosynthesis and Regulation of Phenylpropanoids in Plants. 2017 , 36, 257-290	161
1229	A Tandem for Lignin-First Biorefinery. 2017 , 1, 427-428	24
1228	Fractionation and DOSY NMR as Analytical Tools: From Model Polymers to a Technical Lignin. 2017 , 2, 8466-8474	22
1227	Systematic Optimization of Liquid-Liquid Extraction for Isolation of Unidentified Components. 2017 , 2, 7772-7776	9
1226	Thermally healable and remendable lignin-based materials through Diels-Alder click polymerization. 2017 , 133, 78-88	41
1225	Lignin depolymerization to monophenolic compounds in a flow-through system. 2017 , 19, 5767-5771	116

1224	Mechanistic Investigations of the Hydrogenolysis of Diaryl Ethers Catalyzed by Nickel Complexes of N-Heterocyclic Carbene Ligands. 2017 , 139, 17667-17676	52
1223	Sell a dummy: Adjacent functional group modification strategy for the catalytic cleavage of lignin $\beta\beta$ linkage. 2017 , 38, 1102-1107	16
1222	Scalable and Tunable Carbide/Phosphide Composite Catalyst System for the Thermochemical Conversion of Biomass. 2017 , 5, 7751-7758	5
1221	Biobased Epoxy Resins from Deconstructed Native Softwood Lignin. 2017 , 18, 2640-2648	70
1220	Decomposition of a $\beta\text{-O-4}$ lignin model compound over solid Cs-substituted polyoxometalates in anhydrous ethanol: acidity or redox property dependence?. 2017 , 38, 1216-1228	9
1219	A mild thermomechanical process for the enzymatic conversion of radiata pine into fermentable sugars and lignin. 2017 , 10, 61	15
1218	Valorization of Lignin to Simple Phenolic Compounds over Tungsten Carbide: Impact of Lignin Structure. 2017 , 10, 523-532	109
1217	Acid promoted C α bond oxidative cleavage of $\beta\text{-O-4}$ and $\beta\text{-5}$ lignin models to esters over a copper catalyst. 2017 , 19, 702-706	88
1216	Qualitative and Quantitative Methods for Isolation and Characterization of Lignin-Modifying Enzymes Secreted by Microorganisms. 2017 , 10, 248-266	21
1215	Pre-treatment of lignocellulosic feedstocks using biorenewable alcohols: towards complete biomass valorisation. 2017 , 19, 202-214	157
1214	Catalytic Transformation of Lignocellulose into Chemicals and Fuel Products in Ionic Liquids. 2017 , 117, 6834-6880	484
1213	Fast Track to Molar-Mass Distributions of Technical Lignins. 2017 , 10, 629-635	25
1212	Natural Phenol Polymers: Recent Advances in Food and Health Applications. 2017 , 6,	49
1211	a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. 2017 , 10, 241	93
1210	Opportunities for lignin valorization: an exploratory process. 2017 , 7,	16
1209	Production of Biofuel via Hydrogenation of Lignin from Biomass. 2017 ,	5
1208	Production of vanillin from lignin: The relationship between $\beta\text{-O-4}$ linkages and vanillin yield. 2018 , 116, 116-121	60
1207	Continuous catalytic depolymerisation and conversion of industrial kraft lignin into low-molecular-weight aromatics. 2018 , 8, 455-470	38

1206	Selective production of glycols from xylitol over Ru on covalent triazine frameworks Suppressing decarbonylation reactions. 2018 , 20, 1316-1322	19
1205	The Road to Biorenewables: Carbohydrates to Commodity Chemicals. 2018 , 6, 4464-4480	93
1204	Toward the oxidative deconstruction of lignin: oxidation of β 1 and β 5 linkages. 2018 , 16, 2330-2341	17
1203	Kinetic Studies of Lignin Solvolysis and Reduction by Reductive Catalytic Fractionation Decoupled in Flow-Through Reactors. 2018 , 6, 7951-7959	71
1202	Coupling organosolv fractionation and reductive depolymerization of woody biomass in a two-step catalytic process. 2018 , 20, 2308-2319	53
1201	TiN-Cu Heterogeneous Nanocatalysts for Effective Depolymerisation of Oxidised Lignin. 2018 , 3, 3379-3385	7
1200	Selective Fragmentation of Biorefinery Corncob Lignin into p-Hydroxycinnamic Esters with a Supported Zinc Molybdate Catalyst. 2018 , 11, 2114-2123	49
1199	Efficient reductive depolymerization of hardwood and softwood lignins with Brookhart's iridium(III) catalyst and hydrosilanes. 2018 , 20, 1981-1986	18
1198	Enzymatic Synthesis of Lignin-Based Concrete Dispersing Agents. 2018 , 19, 1365-1369	5
1197	Sustainable Hydrogels Based on Lignin-Methacrylate Copolymers with Enhanced Water Retention and Tunable Material Properties. 2018 , 19, 2665-2672	24
1196	A Convergent Approach for a Deep Converting Lignin-First Biorefinery Rendering High-Energy-Density Drop-in Fuels. 2018 , 2, 1118-1133	96
1195	Aqueous Choline Chloride: A Novel Solvent for Switchgrass Fractionation and Subsequent Hemicellulose Conversion into Furfural. 2018 , 6, 6910-6919	34
1194	Palladium-Catalyzed Formal Cross-Coupling of Diaryl Ethers with Amines: Slicing the 4-O-5 Linkage in Lignin Models. 2018 , 130, 3814-3819	26
1193	Covalent triazine framework catalytic oxidative cleavage of lignin models and organosolv lignin. 2018 , 20, 1270-1279	44
1192	Visualizing Lignification Dynamics in Plants with Click Chemistry: Dual Labeling is BLISS!. 2018 ,	4
1191	Selective Cleavage of Lignin β 4 Aryl Ether Bond by β 5 Etherase of the White-Rot Fungus. 2018 , 6, 2878-2882	43
1190	Temperature-Directed Biocatalysis for the Sustainable Production of Aromatic Aldehydes or Alcohols. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 1214-1217	16.4 26
1189	Palladium-Catalyzed Formal Cross-Coupling of Diaryl Ethers with Amines: Slicing the 4-O-5 Linkage in Lignin Models. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 3752-3757	16.4 67

1188	Promising bulk production of a potentially benign bisphenol A replacement from a hardwood lignin platform. 2018 , 20, 1050-1058	50
1187	Bright Side of Lignin Depolymerization: Toward New Platform Chemicals. 2018 , 118, 614-678	934
1186	Mechanochemical Oxidation and Cleavage of Lignin ED-4 Model Compounds and Lignin. 2018 , 6, 3242-3254	59
1185	Electrically Conducting Carbon Microparticles by Direct Carbonization of Spent Wood Pulping Liquor. 2018 , 6, 3385-3391	13
1184	Evaluating Gold and Selenium Chemistry for Selective Transformations of Lignin Model Compounds. 2018 , 360, 1376-1383	4
1183	Protection Group Effects During Diol Lignin Stabilization Promote High-Selectivity Monomer Production. 2018 , 130, 1370-1374	38
1182	Palladium-Catalyzed Reductive Insertion of Alcohols into Aryl Ether Bonds. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 3747-3751	16.4 18
1181	Palladium-Catalyzed Reductive Insertion of Alcohols into Aryl Ether Bonds. 2018 , 130, 3809-3813	6
1180	Lignin Conversion to Low-Molecular-Weight Aromatics via an Aerobic Oxidation-Hydrolysis Sequence: Comparison of Different Lignin Sources. 2018 , 6, 3367-3374	97
1179	NH ₂ OH-Mediated Lignin Conversion to Isoxazole and Nitrile. 2018 , 6, 3748-3753	23
1178	Modern Electrochemical Aspects for the Synthesis of Value-Added Organic Products. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 6018-6041	16.4 518
1177	Impact of Hydrophobic Organohybrid Silicas on the Stability of Ni ₂ P Catalyst Phase in the Hydrodeoxygenation of Biophenols. 2018 , 10, 2219-2231	9
1176	Moderne Aspekte der Elektrochemie zur Synthese hochwertiger organischer Produkte. 2018 , 130, 6124-6149	185
1175	Lignocellulose Liquefaction to Biocrude: A Tutorial Review. 2018 , 11, 997-1014	31
1174	Preparation of Lignosulfonate-Based Carbon Foams by Pyrolysis and Their Use in the Microencapsulation of a Phase Change Material. 2018 , 6, 2453-2461	21
1173	Temperature-Directed Biocatalysis for the Sustainable Production of Aromatic Aldehydes or Alcohols. 2018 , 130, 1228-1231	3
1172	Lignin modification in planta for valorization. 2018 , 17, 1305-1327	44
1171	Characterization of Lignin Streams during Bionic Liquid-Based Pretreatment from Grass, Hardwood, and Softwood. 2018 , 6, 3079-3090	56

1170	Lignin-to-Liquid-Solvolytic (LTL) of Organosolv Extracted Lignin. 2018 , 6, 3102-3112	14
1169	Chemicals from lignin: an interplay of lignocellulose fractionation, depolymerisation, and upgrading. 2018 , 47, 852-908	1125
1168	Lignin-polyurea microcapsules with anti-photolysis and sustained-release performances synthesized via pickering emulsion template. 2018 , 123, 115-121	34
1167	Selective Oxidation of Lignin Model Compounds. 2018 , 11, 2045-2050	26
1166	Preparation and evaluation of high-lignin content cellulose nanofibrils from eucalyptus pulp. 2018 , 25, 3121-3133	71
1165	Microbial β -etherases and glutathione lyases for lignin valorisation in biorefineries: current state and future perspectives. 2018 , 102, 5391-5401	13
1164	A one-pot biomimetic synthesis of selectively functionalized lignins from monomers: a green functionalization platform. 2018 , 20, 2651-2662	11
1163	Tetramethylpiperidine N-Oxyl (TEMPO), Phthalimide N-Oxyl (PINO), and Related N-Oxyl Species: Electrochemical Properties and Their Use in Electrocatalytic Reactions. 2018 , 118, 4834-4885	419
1162	Differences in extractability under subcritical water reveal interconnected hemicellulose and lignin recalcitrance in birch hardwoods. 2018 , 20, 2534-2546	46
1161	Valorization of Quercus suber Bark toward Hydrocarbon Bio-Oil and 4-Ethylguaiaicol. 2018 , 6, 5737-5742	19
1160	Selective hydrodeoxygenation of lignin β -O-4 model compounds and aromatic ketones promoted by palladium chloride with acidic CO ₂ /MeOH system. 2018 , 24, 328-333	8
1159	Performances of Several Solvents on the Cleavage of Inter- and Intramolecular Linkages of Lignin in Corncob Residue. 2018 , 11, 1494-1504	24
1158	Review on Catalytic Cleavage of C β Inter-unit Linkages in Lignin Model Compounds: Towards Lignin Depolymerisation. 2018 , 61, 183-198	76
1157	Lignin-based carbon fiber: a current overview. 2018 , 5, 072001	53
1156	Catalytic in Situ Hydrogenolysis of Lignin in Supercritical Ethanol: Effect of Phenol, Catalysts, and Reaction Temperature. 2018 , 6, 6867-6875	24
1155	From lignin to nylon: Cascaded chemical and biochemical conversion using metabolically engineered Pseudomonas putida. 2018 , 47, 279-293	140
1154	Understanding Lignin Fractionation and Characterization from Engineered Switchgrass Treated by an Aqueous Ionic Liquid. 2018 , 6, 6612-6623	42
1153	Hydrothermal Liquefaction of Enzymatic Hydrolysis Lignin: Biomass Pretreatment Severity Affects Lignin Valorization. 2018 , 6, 5940-5949	30

1152	Quenching of reactive intermediates during mechanochemical depolymerization of lignin. 2018 , 302, 180-189	31
1151	Wood anatomical and chemical properties related to the pulpability of <i>Eucalyptus globulus</i> : a review. 2018 , 80, 1-8	17
1150	The role of lignin in the densification of torrefied wood in relation to the final product properties. 2018 , 111, 248-262	18
1149	Catalytic transfer hydrogenolysis of organosolv lignin using B-containing FeNi alloyed catalysts. 2018 , 302, 190-195	42
1148	Imidazolium-Based Ionic Liquids as Efficient Reagents for the C-O Bond Cleavage of Lignin. 2018 , 11, 439-448	24
1147	Peroxidase-based oxidative polymerization of monolignols. 2018 , 21, 362-368	3
1146	Development of Solid Catalyst/Solid Substrate Reactions for Efficient Utilization of Biomass. 2018 , 91, 29-43	47
1145	Combined approaches to obtain cellulose nanocrystals, nanofibrils and fermentable sugars from elephant grass. 2018 , 180, 38-45	30
1144	Electrochemical Lignin Degradation in Ionic Liquids on Ternary Mixed Metal Electrodes. 2018 , 232, 189-208	23
1143	Tungsten-Based Bimetallic Catalysts for Selective Cleavage of Lignin C-O Bonds. 2018 , 10, 415-421	34
1142	Mechanistic studies of base-catalysed lignin depolymerisation in dimethyl carbonate. 2018 , 20, 170-182	53
1141	Valorization of Grass Lignins: Swift and Selective Recovery of Pendant Aromatic Groups with Ozone. 2018 , 6, 71-76	23
1140	Properties and chemical modifications of lignin: Towards lignin-based nanomaterials for biomedical applications. 2018 , 93, 233-269	313
1139	Synthesis of the natural product descourainolide and cyclic peptides from lignin-derived aromatics. 2018 , 16, 266-273	4
1138	Role of Substituents in the Solid Acid-Catalyzed Cleavage of the β -4 Linkage in Lignin Models. 2018 , 6, 1837-1847	15
1137	A strategy of ketalization for the catalytic selective dehydration of biomass-based polyols over H-beta zeolite. 2018 , 20, 634-640	16
1136	Protection Group Effects During β -Diol Lignin Stabilization Promote High-Selectivity Monomer Production. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 1356-1360	16.4 122
1135	Laccase-Catalyzed Synthesis of Low-Molecular-Weight Lignin-Like Oligomers and their Application as UV-Blocking Materials. 2018 , 13, 284-291	10

1134	Multi-site Cooperativity in Alkali-Metal-Exchanged Faujasites for the Production of Biomass-Derived Aromatics. 2018 , 19, 446-458	14
1133	Unravelling the enigma of lignin: can the oxidation of lignin be controlled?. 2018 , 9, 702-711	46
1132	Electrophilic aromatic substitution over zeolites generates Wheland-type reaction intermediates. 2018 , 1, 23-31	38
1131	Base-Catalyzed Depolymerization of Lignin: History, Challenges and Perspectives. 2018 ,	12
1130	Electrically-Conductive Sub-Micron Carbon Particles from Lignin: Elucidation of Nanostructure and Use as Filler in Cellulose Nanopapers. 2018 , 8,	6
1129	. 2018 ,	14
1128	Lignification and Advances in Lignin Imaging in Plant Cell Walls. 2018 , 909-940	5
1127	Unmodified kraft lignin isolated at room temperature from aqueous solution for preparation of highly flexible transparent polyurethane coatings.. 2018 , 8, 40765-40777	20
1126	A biodegradable Fe-fertilizer with high mechanical property and sustainable release for potential agriculture and horticulture applications. 2018 , 42, 19129-19136	9
1125	Oxidative Biphasic Depolymerization (BPD) of Kraft Lignin at Low pH. 2018 , 3, 11680-11686	7
1124	Copper Catalyzed Alcohol Oxidation and Cleavage of EO-4 Lignin Model Systems: From Development to Mechanistic Examination. 2018 , 3, 12446-12454	8
1123	One, Two, Three: A Bioorthogonal Triple Labelling Strategy for Studying the Dynamics of Plant Cell Wall Formation In Vivo. 2018 , 130, 16907-16913	7
1122	One, Two, Three: A Bioorthogonal Triple Labelling Strategy for Studying the Dynamics of Plant Cell Wall Formation In Vivo. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 16665-16671	16.4 17
1121	A Review of Microwave Assisted Liquefaction of Ligninin Hydrogen Donor Solvents: Effect of Solvents and Catalysts. 2018 , 11, 2877	11
1120	Simultaneous enzymatic saccharification and comminution for the valorization of lignocellulosic biomass toward natural products. 2018 , 18, 79	11
1119	In silico-designed lignin peroxidase from shows enhanced acid stability for depolymerization of lignin. 2018 , 11, 325	14
1118	Preparation of Novel Aromatic-Aliphatic Poly(ketone ester)s through Condensation of Biomass-Derived Monomers. 2018 , 10, 5377-5381	4
1117	Sustainable Carbon Sources and Renewable Energy: Challenges and Opportunities at the Interface of Catalysis and Reaction Engineering. 2018 , 90, 1699-1708	5

1116	Shell biorefinery: A comprehensive introduction. 2018 , 3, 318-327	45
1115	An "ideal lignin" facilitates full biomass utilization. 2018 , 4, eaau2968	108
1114	Potential of a short rotation coppice poplar as a feedstock for platform chemicals and lignin-based building blocks. 2018 , 123, 698-706	8
1113	Rapid characterization of the activities of lignin-modifying enzymes based on nanostructure-initiator mass spectrometry (NIMS). 2018 , 11, 266	6
1112	Solar energy-driven lignin-first approach to full utilization of lignocellulosic biomass under mild conditions. 2018 , 1, 772-780	232
1111	Conclusions and Future Perspectives. 2018 , 159-162	
1110	An Integrated Approach for Added-Value Products from Lignocellulosic Biorefineries. 2018 ,	5
1109	Direct upstream integration of biogasoline production into current light straight run naphtha petrorefinery processes. 2018 , 3, 969-977	45
1108	Advancement in technologies for the depolymerization of lignin. 2018 , 181, 115-132	100
1107	Sequential Fractionation of Palm Empty Fruit Bunch and Microwave-Assisted Depolymerization of Lignin for Producing Monophenolic Compounds. 2018 , 6, 16896-16906	20
1106	Selective Depolymerization of Lignin: Assessment of Yields of Monomeric Products. 2018 , 38, 409-415	8
1105	A Coenzyme-Free Biocatalyst for the Value-Added Utilization of Lignin-Derived Aromatics. 2018 , 140, 16001-16005	32
1104	Adsorption of Biomass-Derived Products on MoO: Hydrogen Bonding Interactions under the Spotlight. 2018 , 3, 14165-14172	7
1103	Lignocellulosic Biomass as Source for Lignin-Based Environmentally Benign Antioxidants. 2018 , 23,	44
1102	Scaling-Up Catalytic Depolymerisation of Lignin: Performance Criteria for Industrial Operation. 2018 , 61, 1901-1911	7
1101	Green and efficient conversion strategy of Eucalyptus based on mechanochemical pretreatment. 2018 , 175, 112-120	23
1100	Functionalised heterogeneous catalysts for sustainable biomass valorisation. 2018 , 47, 8349-8402	332
1099	Solvothermal liquefaction of alkali lignin to obtain a high yield of aromatic monomers while suppressing solvent consumption. 2018 , 20, 4957-4974	35

1098	A Xylenol Orange-Based Screening Assay for the Substrate Specificity of Flavin-Dependent para-Phenol Oxidases. 2018 , 23,	9
1097	Bacterial conversion of depolymerized Kraft lignin. 2018 , 11, 240	4
1096	Supported Ionic Liquid Membranes for Separation of Lignin Aqueous Solutions. 2018 , 6, 143	7
1095	Selective carboxylation of substituted phenols with engineered <i>Escherichia coli</i> whole-cells. 2018 , 59, 3810-3815	7
1094	Lewis acid-catalyzed biphasic 2-methyltetrahydrofuran/HO pretreatment of lignocelluloses to enhance cellulose enzymatic hydrolysis and lignin valorization. 2018 , 270, 55-61	27
1093	Formation and Fate of Carboxylic Acids in the Lignin-First Biorefining of Lignocellulose via H-Transfer Catalyzed by Raney Ni. 2018 , 6, 13408-13419	25
1092	Highly Active Catalytic Ruthenium/TiO Nanomaterials for Continuous Production of ϵ -Valerolactone. 2018 , 11, 2604-2611	17
1091	<i>Pseudomonas putida</i> as a functional chassis for industrial biocatalysis: From native biochemistry to trans-metabolism. 2018 , 50, 142-155	203
1090	Evaluation of an organosolv-based biorefinery process to fractionate wheat straw into ethanol and co-products. 2018 , 121, 294-302	26
1089	One-Step Lignocellulose Fractionation by using 2,5-Furandicarboxylic Acid as a Biogenic and Recyclable Catalyst. 2018 , 11, 2051-2056	22
1088	Chemicals from lignin: Recent depolymerization techniques and upgrading extended pathways. 2018 , 14, 33-39	38
1087	Influence of mediators on laccase catalyzed radical formation in lignin. 2018 , 116, 48-56	32
1086	Lignin/Polyacrylonitrile Carbon Fibers: The Effect of Fractionation and Purification on Properties of Derived Carbon Fibers. 2018 , 6, 8554-8562	42
1085	Isolation and Characterization of Polyethylene Glycol (PEG)-Modified Glycol Lignin via PEG Solvolysis of Softwood Biomass in a Large-Scale Batch Reactor. 2018 , 6, 7841-7848	12
1084	Elucidating the reactivity of methoxyphenol positional isomers towards hydrogen-transfer reactions by ATR-IR spectroscopy of the liquid/solid interface of RANEY \square Ni. 2018 , 8, 3107-3114	15
1083	Perspective on Lignin Oxidation: Advances, Challenges, and Future Directions. 2018 , 376, 30	46
1082	Comparative study of the fast pyrolysis behavior of ginkgo, poplar, and wheat straw lignin at different temperatures. 2018 , 122, 465-472	31
1081	Variation in energy sorghum hybrid TX08001 biomass composition and lignin chemistry during development under irrigated and non-irrigated field conditions. 2018 , 13, e0195863	18

1080	Hybrid Catalytic Biorefining of Hardwood Biomass to Methylated Furans and Depolymerized Technical Lignin. 2018 , 6, 10587-10594	22
1079	Rapid pretreatment of Miscanthus using the low-cost ionic liquid triethylammonium hydrogen sulfate at elevated temperatures. 2018 , 20, 3486-3498	66
1078	Lignocellulosic Biorefinery Wastes, or Resources?. 2018 , 267-297	21
1077	Effects of Sugars, Furans, and their Derivatives on Hydrodeoxygenation of Biorefinery Lignin-Rich Wastes to Hydrocarbons. 2018 , 11, 2562-2568	24
1076	Optimization of Component Yields and Thermal Properties by Organosolv Fractionation of Loblolly Pine (<i>Pinus taeda</i>) Using Response Surface Design. 2018 , 11, 652-664	1
1075	Lignocellulosic biomass to biofuels and biochemicals: A comprehensive review with a focus on ethanol organosolv pretreatment technology. 2018 , 115, 2683-2702	70
1074	Lignin Conversion: A Key to the Concept of Lignocellulosic Biomass-Based Integrated Biorefinery. 2018 , 409-444	32
1073	The path forward for lignocellulose biorefineries: Bottlenecks, solutions, and perspective on commercialization. 2018 , 264, 370-381	293
1072	Metagenomic discovery of a novel transaminase for valorization of monoaromatic compounds.. 2018 , 8, 22490-22497	6
1071	Propylphenol to Phenol and Propylene over Acidic Zeolites: Role of Shape Selectivity and Presence of Steam. 2018 , 8, 7861-7878	38
1070	Catalytic lignocellulose biorefining in n-butanol/water: a one-pot approach toward phenolics, polyols, and cellulose. 2018 , 20, 4607-4619	71
1069	Catalytic Fast Pyrolysis of Kraft Lignin With Conventional, Mesoporous and Nanosized ZSM-5 Zeolite for the Production of Alkyl-Phenols and Aromatics. 2018 , 6, 295	61
1068	Cobalt-Catalyzed Oxidation of the E _D -4 Bond in Lignin and Lignin Model Compounds. 2018 , 3, 8386-8392	19
1067	Alternatives for Chemical and Biochemical Lignin Valorization: Hot Topics from a Bibliometric Analysis of the Research Published During the 2000-2016 Period. 2018 , 6, 98	35
1066	Formation of Lignin Nanoparticles by Combining Organosolv Pretreatment of Birch Biomass and Homogenization Processes. 2018 , 23,	35
1065	Elucidating transfer hydrogenation mechanisms in non-catalytic lignin depolymerization. 2018 , 20, 3566-3580	6
1064	<i>Vanilla planifolia</i> The Source of the Unexpected Discovery of a New Lignin. 2018 , 447-455	
1063	Protic Ionic Liquids for Lignin Extraction-A Lignin Characterization Study. 2018 , 19,	44

1062	Microwave Assisted Depolymerization of Alkaline Lignin over Hydrotalcite-Based CuNiAl Mixed Oxides. 2018 , 6, 11519-11528	18
1061	Identification of a diagnostic structural motif reveals a new reaction intermediate and condensation pathway in kraft lignin formation. 2018 , 9, 6348-6360	90
1060	Catalytic conversion of furanic compounds over Ga-modified ZSM-5 zeolites as a route to biomass-derived aromatics. 2018 , 20, 3818-3827	24
1059	Getting Closer to Absolute Molar Masses of Technical Lignins. 2018 , 11, 3259-3268	43
1058	Conversion of Lignin Models by Photoredox Catalysis. 2018 , 11, 3071-3080	21
1057	Carbon Materials from Technical Lignins: Recent Advances. 2018 , 376, 33	25
1056	Revisiting alkaline aerobic lignin oxidation. 2018 , 20, 3828-3844	67
1055	Tuning hydroxyl groups for quality carbon fiber of lignin. 2018 , 139, 500-511	28
1054	Life cycle assessment of adipic acid production from lignin. 2018 , 20, 3857-3866	79
1053	Enzymatic Processes to Unlock the Lignin Value. 2018 , 6, 20	37
1052	Efficient Mechanochemical Bifunctional Nanocatalysts for the Conversion of Isoeugenol to Vanillin. 2018 , 6, 77	19
1051	Biological conversion of aromatic monolignol compounds by a Pseudomonas isolate from sediments of the Baltic Sea. 2018 , 8, 32	17
1050	A two-step approach for producing oxygen-free aromatics from lignin using formic acid as a hydrogen source. 2018 , 348, 799-810	30
1049	Comparative analysis of lignin chemical structures of sugarcane bagasse pretreated by alkaline, hydrothermal, and dilute sulfuric acid methods. 2018 , 121, 124-131	35
1048	Reductive Catalytic Fractionation of C-Lignin. 2018 , 6, 11211-11218	47
1047	Analysis of gas chromatography/mass spectrometry data for catalytic lignin depolymerization using positive matrix factorization. 2018 , 20, 4366-4377	3
1046	Extraction of ligninolytic enzymes from novel Klebsiella pneumoniae strains and its application in wastewater treatment. 2018 , 8, 1	14
1045	Formal Cross-Coupling of Diaryl Ethers with Ammonia by Dual C(Ar)D Bond Cleavages. 2018 , 8, 8873-8878	37

1044	Insight into structure-reactivity relationships for the iron-catalyzed hydrotreatment of technical lignins. 2018 , 267, 93-101	24
1043	Deconstruction of hybrid poplar to monomeric sugars and aromatics using ethanol organosolv fractionation. 2018 , 8, 813-824	19
1042	Catalytic Strategies Towards Lignin-Derived Chemicals. 2018 , 376, 36	49
1041	Effect of carbon-based materials and CeO ₂ on Ni catalysts for Kraft lignin liquefaction in supercritical water. 2018 , 20, 4308-4318	18
1040	Valorization of levulinic acid over non-noble metal catalysts: challenges and opportunities. 2018 , 20, 4391-4408	77
1039	Chemocatalytic Conversion of Cellulose into Key Platform Chemicals. 2018 , 2018, 1-21	17
1038	Lignin valorization for the production of renewable chemicals: State-of-the-art review and future prospects. 2018 , 269, 465-475	182
1037	BBr-Assisted Preparation of Aromatic Alkyl Bromides from Lignin and Lignin Model Compounds. 2018 , 83, 11019-11027	7
1036	ReaxFF Simulations of Lignin Fragmentation on a Palladium-Based Heterogeneous Catalyst in Methanol-Water Solution. 2018 , 9, 5233-5239	13
1035	Selective C–C Bond Cleavage of Methylene-Linked Lignin Models and Kraft Lignin. 2018 , 8, 6507-6512	56
1034	An uncondensed lignin depolymerized in the solid state and isolated from lignocellulosic biomass: a mechanistic study. 2018 , 20, 4224-4235	85
1033	Thermal Decompositions of the Lignin Model Compounds: Salicylaldehyde and Catechol. 2018 , 122, 5911-5924	16
1032	Electro-conversion as sustainable method for the fine chemical production from the biopolymer lignin. 2018 , 14, 19-25	37
1031	Downregulation of p-COUMAROYL ESTER 3-HYDROXYLASE in rice leads to altered cell wall structures and improves biomass saccharification. 2018 , 95, 796	43
1030	Cleave and couple: toward fully sustainable catalytic conversion of lignocellulose to value added building blocks and fuels. 2018 , 54, 7725-7745	38
1029	Dealkylation of Lignin to Phenol via Oxidation-Hydrogenation Strategy. 2018 , 8, 6837-6843	42
1028	Electrochemical strategies for C-H functionalization and C-N bond formation. 2018 , 47, 5786-5865	513
1027	Iridium-catalysed primary alcohol oxidation and hydrogen shuttling for the depolymerisation of lignin. 2018 , 20, 3214-3221	37

1026	Holistic Approach for Converting Biomass to Fuels. 2018 , 4, 1199-1200	5
1025	Application of 2-hydroxy-1,4-naphthoquinone- graphene oxide (HNQ-GO) composite as recyclable catalyst to enhance Cr(VI) reduction by <i>Shewanella xiamenensis</i> . 2019 , 94, 446-454	8
1024	Raw plant-based biorefinery: A new paradigm shift towards biotechnological approach to sustainable manufacturing of HMF. 2019 , 37, 107422	20
1023	Membrane Separation of the Base-Catalyzed Depolymerization of Black Liquor Retentate for Low-Molecular-Mass Compound Production. 2019 , 9,	8
1022	Photocatalytic Cleavage of Aryl Ether in Modified Lignin to Non-phenolic Aromatics. 2019 , 9, 8843-8851	30
1021	OscAlDOMT1 is a bifunctional O-methyltransferase involved in the biosynthesis of triclin-lignins in rice cell walls. 2019 , 9, 11597	19
1020	Novel deep eutectic solvents with different functional groups towards highly efficient dissolution of lignin. 2019 , 21, 5291-5297	53
1019	Biomimetic Reductive Cleavage of Keto Aryl Ether Bonds by Small-Molecule Thiols. 2019 , 12, 4775-4779	14
1018	Cleavage of lignin C β bonds over a heterogeneous rhenium catalyst through hydrogen transfer reactions. 2019 , 21, 5556-5564	36
1017	Sustainable valorization of lignin with levulinic acid and its application in polyimine thermosets. 2019 , 21, 4964-4970	23
1016	Ligand-Controlled Photocatalysis of CdS Quantum Dots for Lignin Valorization under Visible Light. 2019 , 9, 8443-8451	63
1015	Antimicrobial Activity of Lignin-Derived Polyurethane Coatings Prepared from Unmodified and Demethylated Lignins. 2019 , 9, 494	19
1014	Understanding the Role of Choline Chloride in Deep Eutectic Solvents Used for Biomass Delignification. 2019 , 58, 16348-16357	47
1013	Biocatalysis in ionic liquids for lignin valorization: Opportunities and recent developments. 2019 , 37, 107418	22
1012	Catalytic pyrolysis of soda lignin over zeolites using pyrolysis gas chromatography-mass spectrometry. 2019 , 291, 121822	29
1011	Overcoming cellulose recalcitrance in woody biomass for the lignin-first biorefinery. 2019 , 12, 171	28
1010	A review on biopolymer production via lignin valorization. 2019 , 290, 121790	107
1009	Fabrication of Light-Colored Lignin Microspheres for Developing Natural Sunscreens with Favorable UV Absorbability and Staining Resistance. 2019 , 58, 13858-13867	25

1008	Hansen Solubility Parameters: A Tool for Solvent Selection for Organosolv Delignification. 2019 , 58, 14520-14528	28
1007	Lignin Engineering in Forest Trees. 2019 , 10, 912	48
1006	Valorization of wood biomass-lignin via selective bond scission: A minireview. 2019 , 257, 117936	40
1005	Metal-Free Photochemical Degradation of Lignin-Derived Aryl Ethers and Lignin by Autologous Radicals through Ionic Liquid Induction. 2019 , 12, 4005-4013	17
1004	From levulinic acid biorefineries to Valerolactone (GVL) using a bi-functional Zr-Al-Beta catalyst. 2019 , 4, 1834-1843	18
1003	Fiber formation and properties of polyester/lignin blends. 2019 , 136, 48257	6
1002	Transforming lignin into porous graphene direct laser writing for solid-state supercapacitors.. 2019 , 9, 22713-22720	34
1001	Advances in lignin valorization towards bio-based chemicals and fuels: Lignin biorefinery. 2019 , 291, 121878	113
1000	Catalytic Conversion of Lignin in Woody Biomass into Phenolic Monomers in Methanol/Water Mixtures without External Hydrogen. 2019 , 7, 13764-13773	47
999	A concise review of current lignin production, applications, products and their environmental impact. 2019 , 139, 111526	287
998	Activation of lignin by selective oxidation: An emerging strategy for boosting lignin depolymerization to aromatics. 2019 , 291, 121885	40
997	A two-stage pretreatment using dilute sodium hydroxide solution followed by an ionic liquid at low temperatures: Toward construction of lignin-first biomass pretreatment. 2019 , 7, 100286	10
996	Rapid flow-through fractionation of biomass to preserve labile aryl ether bonds in native lignin. 2019 , 21, 4625-4632	27
995	Laboratory Investigation of Lignocellulosic Biomass as Performance Improver for Bituminous Materials. 2019 , 11,	12
994	The lignin toolbox of the model grass <i>Setaria viridis</i> . 2019 , 101, 235-255	15
993	Supported Mo ₂ C on Carbon Materials for Kraft Lignin Decomposition into Aromatic Monomers in Ethanol. 2019 , 58, 12602-12610	10
992	Renewable antioxidant additive for biodiesel obtained from black liquor. 2019 , 254, 115689	8
991	A comparative study of secondary depolymerization methods on oxidized lignins. 2019 , 21, 3940-3947	23

990	Promoting microbial utilization of phenolic substrates from bio-oil. 2019 , 46, 1531-1545	12
989	One-Pot Production of Cellulosic Ethanol via Tandem Catalysis over a Multifunctional Mo/Pt/WO _x Catalyst. 2019 , 3, 1937-1948	36
988	Variation in lignocellulose characteristics of 30 Indonesian sorghum (<i>Sorghum bicolor</i>) accessions. 2019 , 142, 111840	8
987	Synthesis-Controlled μ and γ Molybdenum Carbide for Base-Promoted Transfer Hydrogenation of Lignin to Aromatic Monomers in Ethanol. 2019 , 58, 20270-20281	18
986	Nitrogen Dioxide Catalyzed Aerobic Oxidative Cleavage of C(OH)-C Bonds of Secondary Alcohols to Produce Acids. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 17393-17398	16.4 30
985	Nitrogen Dioxide Catalyzed Aerobic Oxidative Cleavage of C(OH)C Bonds of Secondary Alcohols to Produce Acids. 2019 , 131, 17554-17559	14
984	The White-Rot Basidiomycete Shows Highly Specific Transcriptional Response to Lignocellulose-Related Aromatic Compounds. 2019 , 7, 229	14
983	Identification and structural characterization of oligomers formed from the pyrolysis of biomass. 2019 , 144, 104696	16
982	Stepwise degradation of hydroxyl compounds to aldehydes via successive C-C bond cleavage. 2019 , 55, 925-928	14
981	Lignocellulosic biomass: Hurdles and challenges in its valorization. 2019 , 103, 9305-9320	60
980	Synthesis, thermal, rheological characteristics, and enzymatic degradation of aliphatic polyesters with lignin-based aromatic pendant groups. 2019 , 57, 2314-2323	5
979	Highly Selective Photocatalytic Valorization of Lignin Model Compounds Using Ultrathin Metal/CdS. 2019 , 9, 11341-11349	29
978	Immobilized Ni Clusters in Mesoporous Aluminum Silica Nanospheres for Catalytic Hydrogenolysis of Lignin. 2019 , 7, 19034-19041	22
977	Unassisted solar lignin valorisation using a compartmented photo-electro-biochemical cell. 2019 , 10, 5123	25
976	Visible-Light-Driven Cleavage of C-O Linkage for Lignin Valorization to Functionalized Aromatics. 2019 , 12, 5023-5031	37
975	Lignin-KMC: A Toolkit for Simulating Lignin Biosynthesis. 2019 , 7, 18313-18322	17
974	Effect of HCOOK/Ethanol on Fe/HUSY, Ni/HUSY, and Ni-Fe/HUSY Catalysts on Lignin Depolymerization to Benzyl Alcohols and Bioaromatics. 2019 , 4, 16980-16993	7
973	Metamorphic meta isomer: carbon dioxide and ketenes are formed via retro-Diels-Alder reactions in the decomposition of meta-benzenediol. 2019 , 21, 19480-19487	11

972	Structure, chemistry and physicochemistry of lignin for material functionalization. 2019 , 1, 1	11
971	Electrochemical Aminoxyl-Mediated Oxidation of Primary Alcohols in Lignin to Carboxylic Acids: Polymer Modification and Depolymerization. 2019 , 141, 15266-15276	58
970	Changing the Molecular Structure of Kraft Lignins by Ozonolysis Treatment at Alkaline Conditions. 2019 , 7, 15163-15172	5
969	Lignin Depolymerization to BTXs. 2019 , 377, 26	11
968	Lignin: A Biopolymer from Forestry Biomass for Biocomposites and 3D Printing. 2019 , 12,	54
967	Controlled Preparation of Corncob Lignin Nanoparticles and their Size-Dependent Antioxidant Properties: Toward High Value Utilization of Lignin. 2019 , 7, 17166-17174	25
966	Lignins from sugarcane bagasse: Renewable source of nanoparticles as Pickering emulsions stabilizers for bioactive compounds encapsulation. 2019 , 140, 111591	42
965	Reductive catalytic fractionation of black locust bark. 2019 , 21, 5841-5851	26
964	One-pot bio-derived ionic liquid conversion followed by hydrogenolysis reaction for biomass valorization: A promising approach affecting the morphology and quality of lignin of switchgrass and poplar. 2019 , 294, 122214	23
963	A Road to Profitability from Lignin via the Production of Bioactive Molecules. 2019 , 5, 1642-1644	15
962	Catalyst Support and Solvent Effects during Lignin Depolymerization and Hydrodeoxygenation. 2019 , 7, 16952-16958	21
961	Structural and Thermal Analysis of Softwood Lignins from a Pressurized Hot Water Extraction Biorefinery Process and Modified Derivatives. 2019 , 24,	7
960	Hydrothermal base catalyzed depolymerization and conversion of technical lignin: An introductory review. 2019 , 2, 59-71	23
959	Xylochemical Synthesis of Cytotoxic 2-Aminophenoxazinone-Type Natural Products Through Oxidative Cross Coupling. 2019 , 7, 4414-4419	14
958	Investigating homogeneous Co/Br ₂ /H ₂ O ₂ catalysed oxidation of lignin model compounds in acetic acid. 2019 , 9, 384-397	4
957	Highly-efficient and magnetically-separable ZnO/Co@N-CNTs catalyst for hydrodeoxygenation of lignin and its derived species under mild conditions. 2019 , 21, 1021-1042	45
956	Selective utilization of methoxy groups in lignin for -methylation reaction of anilines. 2019 , 10, 1082-1088	21
955	Fractionation of Lignocellulosic Biomass over Core-Shell Ni@Al ₂ O ₃ Catalysts with Formic Acid as a Cocatalyst and Hydrogen Source. 2019 , 12, 1743-1762	21

954	Optimization of Lignin Extraction from Pine Wood for Fast Pyrolysis by Using a γ -Valerolactone-Based Binary Solvent System. 2019 , 7, 4058-4068	14
953	Deoxygenation of biomass pyrolysis vapors: Improving clarity on the fate of carbon. 2019 , 104, 262-280	51
952	Catalytic Transfer Hydrogenolysis Reactions for Lignin Valorization to Fuels and Chemicals. 2019 , 9, 43	28
951	Membrane Fractionation of Liquors from Lignin-First Biorefining. 2019 , 12, 1203-1212	22
950	Comparative study of chemical and topological structure of macromolecules of lignins of birch (<i>Betula verrucosa</i>) and apple (<i>Malus domestica</i>) wood. 2019 , 128, 40-48	12
949	Carboxylation of Hydroxyaromatic Compounds with HCO_3^- by Enzyme Catalysis: Recent Advances Open the Perspective for Valorization of Lignin-Derived Aromatics. 2019 , 9, 37	12
948	Kinetic understanding of the effect of Na and Mg on pyrolytic behavior of lignin using a distributed activation energy model and density functional theory modeling. 2019 , 21, 1099-1107	17
947	Upgrading of pyrolytic lignin into hexamethylbenzene with high purity: demonstration of the H_2 -to-one biochemical production strategy in thermo-chemical conversion. 2019 , 21, 1000-1005	12
946	Plant Molecular Farming - Integration and Exploitation of Side Streams to Achieve Sustainable Biomanufacturing. 2018 , 9, 1893	51
945	Defining lignin nanoparticle properties through tailored lignin reactivity by sequential organosolv fragmentation approach (SOFA). 2019 , 21, 245-260	54
944	Selective depolymerization of lignin catalyzed by nickel supported on zirconium phosphate. 2019 , 21, 658-668	61
943	Catalytic depolymerization of lignin over cesium exchanged and transition-metal substituted heterogeneous polyoxometalates. 2019 , 135, 171-179	10
942	Selective Depolymerisation of O -Oxidised Lignin via NHC Catalysed Redox Esterification. 2019 , 11, 3182-3186	7
941	Lignin catalytic hydroconversion in a semi-continuous reactor: An experimental study. 2019 , 256, 117769	9
940	Dissolution of less-processed wood fibers without bleaching in an ionic liquid: Effect of lignin condensation on wood component dissolution. 2019 , 134, 740-748	4
939	Bio-sourced Lignin: Recovery Techniques and Principles. 2019 , 65-150	
938	Preparation and Reaction of O -4 Aldehyde-Containing Butanosolv Lignins. 2019 ,	4
937	Improved enzymatic hydrolysis of hardwood and cellulase stability by biomass kraft lignin-based polyoxyethylene ether. 2019 , 136, 540-546	8

936	Highly Efficient Lignin Depolymerization via Effective Inhibition of Condensation during Polyoxometalate-Mediated Oxidation. 2019 , 33, 6483-6490	16
935	Insights into the Structural Changes and Potentials of Lignin from Bagasse during the Integrated Delignification Process. 2019 , 7, 13886-13897	11
934	Molybdenum-Catalyzed Oxidative Cleavage of Raw Poplar Sawdust into Mono-Aromatics and Organic Acid Esters. 2019 , 8, 1348-1353	0
933	Enabling microbial syringol conversion through structure-guided protein engineering. 2019 , 116, 13970-13976	22
932	Design of Nickel Supported on Water-Tolerant NbO Catalysts for the Hydrotreating of Lignin Streams Obtained from Lignin-First Biorefining. 2019 , 15, 467-488	30
931	Effectiveness of agro-pulping process in the sustainable production of black liquor-based activated carbons. 2019 , 6, 190173	1
930	Rapid determination of lignosulfonate depolymerization products by advanced polymer chromatography. 2019 , 42, 2289-2297	4
929	Low-Input Crops as Lignocellulosic Feedstock for Second-Generation Biorefineries and the Potential of Chemometrics in Biomass Quality Control. 2019 , 9, 2252	16
928	Depolymerization of Laccase-Oxidized Lignin in Aqueous Alkaline Solution at 37 °C. 2019 , 7, 11150-11156	17
927	Zeolite-supported metal catalysts for selective hydrodeoxygenation of biomass-derived platform molecules. 2019 , 21, 3744-3768	100
926	Oxidative Depolymerization of Kraft Lignin for Microbial Conversion. 2019 , 7, 11640-11652	34
925	Co-production of bioethanol and furfural from poplar wood via low temperature (90 °C) acid hydrotropic fractionation (AHF). 2019 , 254, 115572	35
924	Steric effects of bulky tethered arylpiperazines on the reactivity of Co-Schiff base oxidation catalysts: a synthetic and computational study. 2019 , 75, 3118-3127	3
923	Preserving Both Lignin and Cellulose Chemical Structures: Flow-Through Acid Hydrotropic Fractionation at Atmospheric Pressure for Complete Wood Valorization. 2019 , 7, 10808-10820	34
922	Using Green Valerolactone/Water Solvent To Decrease Lignin Heterogeneity by Gradient Precipitation. 2019 , 7, 10112-10120	40
921	Combining loss of function of and --- for lignin reduction and improved saccharification efficiency in. 2019 , 12, 108	11
920	A Phosphotungstic Acid Catalyst for Depolymerization in Bulrush Lignin. 2019 , 9, 399	11
919	Aromatics from Beechwood Organosolv Lignin through Thermal and Catalytic Pyrolysis. 2019 , 12, 1606	14

918	Modular Engineering of Biomass Degradation Pathways. 2019 , 7, 230	6
917	Toward Sustainable and Complete Wood Valorization by Fractionating Lignin with Low Condensation Using an Acid Hydrotrope at Low Temperatures (80 °C). 2019 , 58, 7063-7073	22
916	Diol pretreatment to fractionate a reactive lignin in lignocellulosic biomass biorefineries. 2019 , 21, 2788-2800	63
915	Conversion of depolymerized sugars and aromatics from engineered feedstocks by two oleaginous red yeasts. 2019 , 286, 121365	14
914	Preparation of Lignin-Based Carbon Materials and Its Application as a Sorbent. 2019 , 12,	9
913	Discovery of a Highly Active Catalyst for Hydrogenolysis of C-O Bonds via Systematic, Multi-metallic Catalyst Screening. 2019 , 11, 2743-2752	7
912	Investigation on the Catalytic Hydrogenolysis of Lignin over NbOx/Ni/ZnO/Al ₂ O ₃ . 2019 , 58, 7866-7875	14
911	Breaking the Limit of Lignin Monomer Production via Cleavage of Interunit Carbon-Carbon Linkages. 2019 , 5, 1521-1536	84
910	Differences in S/G ratio in natural poplar variants do not predict catalytic depolymerization monomer yields. 2019 , 10, 2033	66
909	Effective low-temperature hydrogenolysis of lignin using carbon-supported ruthenium and formic acid as reducing agent. 2019 , 126, 30-34	13
908	Antimicrobial Activity of Lignin and Lignin-Derived Cellulose and Chitosan Composites Against Selected Pathogenic and Spoilage Microorganisms. 2019 , 11,	80
907	BioLogicTool: A Simple Visual Tool for Assisting in the Logical Selection of Pathways from Biomass to Products. 2019 , 58, 15945-15957	10
906	Subdivision of bamboo kraft lignin by one-step ethanol fractionation to enhance its water-solubility and antibacterial performance. 2019 , 133, 156-164	31
905	Kinetic and mechanistic insights into hydrogenolysis of lignin to monomers in a continuous flow reactor. 2019 , 21, 3561-3572	35
904	Techno-economic comparative assessment of novel lignin depolymerization routes to bio-based aromatics. 2019 , 13, 1068-1084	30
903	Using Fractionation and Diffusion Ordered Spectroscopy to Study Lignin Molecular Weight. 2019 , 8, 601-605	12
902	Selective cleavage of lignin and lignin model compounds without external hydrogen, catalyzed by heterogeneous nickel catalysts. 2019 , 10, 4458-4468	85
901	Revealing Structural Differences between Alkaline and Kraft Lignins by HSQC NMR. 2019 , 58, 5707-5714	35

900	Effect of the isoelectric point of pH-responsive lignin-based amphoteric surfactant on the enzymatic hydrolysis of lignocellulose. 2019 , 283, 112-119	15
899	Lignin structure and its engineering. 2019 , 56, 240-249	247
898	Relationships between Cell Wall Digestibility and Lignin Content as Influenced by Lignin Type and Analysis Method. 2019 , 59, 1122-1132	1
897	Mechanistic Insights into Formaldehyde-Blocked Lignin Condensation: A DFT Study. 2019 , 123, 8640-8648	6
896	A consolidated road map for economically gainful efficient utilization of agro-wastes for eco-friendly products. 2019 , 13, 899-911	5
895	Comparative evaluations of lignocellulose reactivity and usability in transgenic rice plants with altered lignin composition. 2019 , 65,	14
894	Photoresponsive nanostructure assisted green synthesis of organics and polymers. 2019 , 249, 172-210	25
893	Hydrothermal base catalysed treatment of Kraft lignin - time dependent analysis and a techno-economic evaluation for carbon fibre applications. 2019 , 6, 241-250	4
892	Ru-Catalyzed Hydrogenolysis of Lignin: Base-Dependent Tunability of Monomeric Phenols and Mechanistic Study. 2019 , 9, 4054-4064	64
891	Preparation of epoxy resins derived from lignin solubilized in tetrabutylphosphonium hydroxide aqueous solutions. 2019 , 132, 585-591	12
890	Estimation of Syringyl Units in Wood Lignins by FT-Raman Spectroscopy. 2019 , 67, 4367-4374	10
889	Bacterial conversion of depolymerized Kraft lignin. 2019 , 12, 56	24
888	Thermo-Photocatalysis: Environmental and Energy Applications. 2019 , 12, 2098-2116	69
887	Valorization of lignin in polymer and composite systems for advanced engineering applications - A review. 2019 , 131, 828-849	200
886	Synthetic metabolic pathway for the production of 1-alkenes from lignin-derived molecules. 2019 , 18, 48	20
885	Toward Sustainable Phenolic Thermosets with High Thermal Performances. 2019 , 7, 7209-7217	18
884	Sequential utilization of bamboo biomass through reductive catalytic fractionation of lignin. 2019 , 285, 121335	40
883	Population-level approaches reveal novel aspects of lignin biosynthesis, content, composition and structure. 2019 , 56, 250-257	17

882	Efficient depolymerization of Kraft lignin to liquid fuels over an amorphous titanium-zirconium mixed oxide supported partially reduced nickel-cobalt catalyst. 2019 , 284, 293-301	25
881	Solubility of lignin and chitin in ionic liquids and their biomedical applications. 2019 , 132, 265-277	56
880	Pilot scale recovery of lignin from black liquor and advanced characterization of the final product. 2019 , 221, 226-235	18
879	Oxidative Depolymerisation of Lignosulphonate Lignin into Low-Molecular-Weight Products with CuMn/Al ₂ O ₃ . 2019 , 62, 639-648	17
878	Adsorption Isotherms of Lignin-Derived Compounds on a Palladium Catalyst. 2019 , 58, 6899-6906	6
877	A field of dreams: Lignin valorization into chemicals, materials, fuels, and health-care products. 2019 , 37, 107360	169
876	Heterogeneous Catalysis as a Tool for Production of Aromatic Compounds From Lignin. 2019 , 178, 257-275	7
875	Selective C-D Bond Cleavage of Lignin Systems and Polymers Enabled by Sequential Palladium-Catalyzed Aerobic Oxidation and Visible-Light Photoredox Catalysis. 2019 , 9, 2252-2260	55
874	Lignin-derived platform molecules through TEMPO catalytic oxidation strategies. 2019 , 72, 59-89	39
873	Recovering cellulase and increasing glucose yield during lignocellulosic hydrolysis using lignin-MPEG with a sensitive pH response. 2019 , 21, 1141-1151	25
872	Fragmentation of Woody Lignocellulose into Primary Monolignols and Their Derivatives. 2019 , 7, 4666-4674	34
871	Aromatics from lignin through ultrafast reactions in water. 2019 , 21, 1351-1360	23
870	Recent advances in lignin valorization with bacterial cultures: microorganisms, metabolic pathways, and bio-products. 2019 , 12, 32	119
869	Geminal Coordinatively Unsaturated Sites on MOF-808 for the Selective Uptake of Phenolics from a Real Bio-Oil Mixture. 2019 , 12, 1256-1266	20
868	Identifying and creating pathways to improve biological lignin valorization. 2019 , 105, 349-362	64
867	On the R&D Landscape Evolution in Catalytic Upgrading of Biomass. 2019 , 149-171	1
866	Isolation of phenolic monomers from kraft lignin using a magnetically recyclable TEMPO nanocatalyst. 2019 , 21, 785-791	11
865	Functionalized spirolactones by photoinduced dearomatization of biaryl compounds. 2019 , 10, 3681-3686	26

864	Advances in porous and nanoscale catalysts for viable biomass conversion. 2019 , 48, 2366-2421	281
863	Corncob Biorefinery for Platform Chemicals and Lignin Coproduction: Metal Chlorides as Catalysts. 2019 , 7, 5309-5317	8
862	Bio-based Aromatic Amines from Lignin-Derived Monomers. 2019 , 7, 6906-6916	30
861	Kinetic analysis of delignification of cedar wood during organosolv treatment with a two-phase solvent using the unreacted-core model. 2019 , 368, 71-78	17
860	Chemodivergent hydrogenolysis of eucalyptus lignin with Ni@ZIF-8 catalyst. 2019 , 21, 1498-1504	38
859	Selective C ₁ Alcohol Oxidation of Lignin Substrates Featuring a EO-4 Linkage by a Dinuclear Oxovanadium Catalyst via Two-Electron Redox Processes. 2019 , 2019, 4637-4646	4
858	Extraordinary solution-processability of lignin in phenolmaleic anhydride and dielectric films with controllable properties. 2019 , 7, 23162-23172	11
857	AuPd alloy cooperates with covalent triazine frameworks for the catalytic oxidative cleavage of EO-4 linkages. 2019 , 21, 6707-6716	10
856	Self-supported hydrogenolysis of aromatic ethers to arenes. 2019 , 5, eaax6839	20
855	A Quantitative Molecular Atlas for Interactions Between Lignin and Cellulose. 2019 , 7, 19570-19583	9
854	Highly Efficient Dissolution of Lignin by Eutectic Molecular Liquids. 2019 , 58, 23438-23444	12
853	Influence of Base-Catalyzed Organosolv Fractionation of Larch Wood Sawdust on Fraction Yields and Lignin Properties. 2019 , 9, 996	4
852	Catalytic Fast Pyrolysis of Lignin Isolated by Hybrid OrganosolvSteam Explosion Pretreatment of Hardwood and Softwood Biomass for the Production of Phenolics and Aromatics. 2019 , 9, 935	16
851	Grafting strategies for hydroxy groups of lignin for producing materials. 2019 , 21, 5714-5752	57
850	Hydrogenolysis of biorefinery corn cob lignin into aromatic phenols over activated carbon-supported nickel. 2019 , 3, 401-408	29
849	From lignin to valuable products-strategies, challenges, and prospects. 2019 , 271, 449-461	335
848	Preparation and Reactivity of Biomass-Derived Dihydro-Dioxins. 2019 , 12, 190-193	3
847	Biorefinery of Lignocellulosic Biomass from an Elm Clone: Production of Fermentable Sugars and Lignin-Derived Biochar for Energy and Environmental Applications. 2019 , 7, 277-287	18

846	Anodic Degradation of Lignin at Active Transition Metal-based Alloys and Performance-enhanced Anodes. 2019 , 6, 155-161	30
845	On the solution structure of kraft lignin in ethylene glycol and its implication for nanoparticle preparation. 2019 , 1, 299-304	20
844	Selective redox photocatalysis: Is there any chance for solar bio-refineries?. 2019 , 15, 38-46	20
843	Fast pyrolysis of lignins with different molecular weight: Experiments and modelling. 2019 , 236, 1125-1137	33
842	Mechanistic insight into β -O-4 linkage cleavage of lignin model compound catalyzed by a SO ₃ H-functionalized imidazolium ionic liquid: An unconventional E1 elimination. 2019 , 463, 140-149	6
841	Highly Selective Oxidation and Depolymerization of β -Diol-Protected Lignin. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 2649-2654	16.4 53
840	Automated Transformation of Lignin Topologies into Atomic Structures with LigninBuilder. 2019 , 7, 3443-3453	21
839	Adsorption of Lignin β -O-4 Dimers on Metal Surfaces in Vacuum and Solvated Environments. 2019 , 7, 2667-2678	7
838	Integrated Separation Process of C5 Sugars and Phenolics from Poplar Wood Using CO ₂ -Assisted Hydrolysis Followed by Hydrogenolysis. 2019 , 7, 526-536	7
837	Codesign of Combinatorial Organosolv Pretreatment (COP) and Lignin Nanoparticles (LNPs) in Biorefineries. 2019 , 7, 2634-2647	26
836	Highly Selective Oxidation and Depolymerization of β -Diol-Protected Lignin. 2019 , 131, 2675-2680	17
835	Structure, chemical reactivity and solubility of lignin: a fresh look. 2019 , 53, 7-47	35
834	Lignin Valorization by Cobalt-Catalyzed Fractionation of Lignocellulose to Yield Monophenolic Compounds. 2019 , 12, 404-408	44
833	Hydrothermal base catalysed treatment of Kraft Lignin for the preparation of a sustainable carbon fibre precursor. 2019 , 5, 251-260	3
832	Lignin-based polymers and nanomaterials. 2019 , 56, 112-120	90
831	Preparation of nitrogen and sulfur co-doped ultrathin graphitic carbon via annealing bagasse lignin as potential electrocatalyst towards oxygen reduction reaction in alkaline and acid media. 2019 , 34, 33-42	22
830	ReOx/AC-Catalyzed Cleavage of C-O Bonds in Lignin Model Compounds and Alkaline Lignins. 2019 , 7, 208-215	33
829	Lignin Separation and Fractionation by Ultrafiltration. 2019 , 229-265	12

828	Enhancing Lignocellulosic Biomass Hydrolysis by Hydrothermal Pretreatment, Extraction of Surface Lignin, Wet Milling and Production of Cellulolytic Enzymes. 2019 , 12, 1179-1195	46
827	Advances in Bio-based Thermosetting Polymers. 2019 , 285-334	4
826	Reductive catalytic fractionation: state of the art of the lignin-first biorefinery. 2019 , 56, 193-201	153
825	Lignosulfonate: A Convenient Fluorescence Resonance Energy Transfer Platform for the Construction of a Ratiometric Fluorescence pH-Sensing Probe. 2019 , 67, 1044-1051	9
824	Linkage Abundance and Molecular Weight Characteristics of Technical Lignins by Attenuated Total Reflection-FTIR Spectroscopy Combined with Multivariate Analysis. 2019 , 12, 1139-1146	31
823	Liquefaction of Lignosulfonate in Supercritical Ethanol Using Alumina-Supported NiMo Catalyst. 2019 , 33, 1196-1209	8
822	Condensation of pentose-derived furan compounds to C15 fuel precursors using supported phosphotungstic acid catalysts: Strategy for designing heterogeneous acid catalysts based on the acid strength and pore structures. 2019 , 570, 238-244	12
821	Catalytic activation of unstrained C(aryl)-C(aryl) bonds in 2,2'-biphenols. 2019 , 11, 45-51	43
820	Lignin characterization of rice CONIFERALDEHYDE 5-HYDROXYLASE loss-of-function mutants generated with the CRISPR/Cas9 system. 2019 , 97, 543-554	22
819	Effect of heat treatment on wood chemical composition, extraction yield and quality of the extractives of some wood species by the use of molybdenum catalysts. 2019 , 53, 119-133	6
818	A Green Approach to Copper-Containing Pesticides: Antimicrobial and Antifungal Activity of Brochantite Supported on Lignin for the Development of Biobased Plant Protection Products. 2019 , 7, 3213-3221	25
817	Ultrasound assisted ZnO coating in a microflow based photoreactor for selective oxidation of benzyl alcohol to benzaldehyde. 2019 , 21, 1241-1246	24
816	Moving towards the second generation of lignocellulosic biorefineries in the EU: Drivers, challenges, and opportunities. 2019 , 101, 590-599	150
815	Dual Function Lewis Acid Catalyzed Depolymerization of Industrial Corn Stover Lignin into Stable Monomeric Phenols. 2019 , 7, 1362-1371	16
814	Physical and enzymatic properties of a new manganese peroxidase from the white-rot fungus <i>Trametes pubescens</i> strain i8 for lignin biodegradation and textile-dyes biodecolorization. 2019 , 125, 514-525	48
813	Task-Specific Catalyst Development for Lignin-First Biorefinery toward Hemicellulose Retention or Feedstock Extension. 2019 , 12, 944-954	12
812	Characterization of fractional cuts of co-solvent enhanced lignocellulosic fractionation lignin isolated by sequential precipitation. 2019 , 272, 202-208	52
811	Production of phenolic hydrocarbons from organosolv lignin and lignocellulose feedstocks of hardwood, softwood, grass and agricultural waste. 2019 , 69, 304-314	20

810	Comparative study of solvolysis of technical lignins in flow reactor. 2020 , 10, 351-366	8
809	Catalytic cracking of lignin model compounds and degraded lignin dissolved in inert solvent over mixed catalyst of iron oxide and MFI zeolite for phenol recovery. 2020 , 197, 106190	4
808	Recovery of lignin from deep eutectic solvents by liquid-liquid extraction. 2020 , 235, 116127	41
807	Sequential Fractionation of Lignocellulosic Biomass Using CO ₂ -Assisted Hydrolysis Combined with γ -Valerolactone Treatment. 2020 , 8, 1900949	1
806	Effect of Process Variables on the Solvolysis Depolymerization of Pine Kraft Lignin. 2020 , 11, 3195-3206	4
805	Support effects in the de-methoxylation of lignin monomer 4-propylguaiacol over molybdenum-based catalysts. 2020 , 199, 106224	13
804	From lignin-derived bio-oil to lignin-g-polyacrylonitrile nanofiber: High lignin substitution ratio and maintaining good nanofiber morphology. 2020 , 81, 106207	11
803	Database Mining for Novel Bacterial β -Esterases, Glutathione-Dependent Lignin-Degrading Enzymes. 2020 , 86,	9
802	Enzymatic Oxidation of Lignin: Challenges and Barriers Toward Practical Applications. 2020 , 12, 401-425	34
801	A novel environmentally friendly process for depolymerization of hydrolysis lignin using Kraft cooking liquor: chemicals recoverable by the Kraft recovery cycle. 2020 , 14, 138-151	3
800	Recent developments in modification of lignin using ionic liquids for the fabrication of advanced materials: A review. 2020 , 301, 112417	45
799	Selective catalytic transformation of lignin with guaiacol as the only liquid product. 2019 , 11, 1347-1352	27
798	Ozone mediated depolymerization and solvolysis of technical lignins under ambient conditions in ethanol. 2020 , 4, 265-276	13
797	CNN pincer ruthenium complexes for efficient transfer hydrogenation of biomass-derived carbonyl compounds. 2020 , 49, 453-465	8
796	Highly efficient and selective fractionation strategy for lignocellulosic biomass with recyclable dioxane/ethylene glycol binary solvent. 2020 , 144, 112038	12
795	A Review on Lignin Liquefaction: Advanced Characterization of Structure and Microkinetic Modeling. 2020 , 59, 526-555	22
794	Structural Variations of Lignin Macromolecules from Early Growth Stages of Poplar Cell Walls. 2020 , 8, 1813-1822	23
793	Structural and Morphological Transformations of Lignin Macromolecules during Bio-Based Deep Eutectic Solvent (DES) Pretreatment. 2020 , 8, 2130-2137	53

792	Chemicals from Lignin: A Review of Catalytic Conversion Involving Hydrogen. 2020 , 13, 4181-4198	42
791	Photoinduced Upgrading of Lactic Acid-Based Solvents to Block Copolymer Surfactants. 2020 , 8, 1276-1284	12
790	Lignin Valorization via Reductive Depolymerization. 2020 , 395-437	3
789	Lewis Acid-Facilitated Deep Eutectic Solvent (DES) Pretreatment for Producing High-Purity and Antioxidative Lignin. 2020 , 8, 1050-1057	45
788	Process development for separation of lignin from OrganoCat lignocellulose fractionation using antisolvent precipitation. 2020 , 236, 116295	8
787	Characterization of Wood-based Industrial Biorefinery Lignosulfonates and Supercritical Water Hydrolysis Lignin. 2020 , 11, 5835-5845	9
786	Greener synthesis of lignin nanoparticles and their applications. 2020 , 22, 612-636	169
785	Biphenyl structure and its impact on the macromolecular structure of lignin: A critical review. 2020 , 40, 81-90	7
784	Ball milling promoted direct liquefaction of lignocellulosic biomass in supercritical ethanol. 2020 , 14, 605-613	3
783	Corn stover valorization by one-step formic acid fractionation and formylation for 5-hydroxymethylfurfural and high guaiacyl lignin production. 2020 , 299, 122586	20
782	Catalytic applications of layered double hydroxides in biomass valorisation. 2020 , 22, 29-38	10
781	Hydrogel synthesis based on lignin/sodium alginate and application in agriculture. 2020 , 144, 219-230	48
780	Conversion of Lignin to Value-added Chemicals via Oxidative Depolymerization. 2020 , 357-393	1
779	Novel in-situ preparation of nano sized Ni (0) catalyst for depolymerization of lignin-rich waste from industrial biorefinery. 2020 , 10, 100355	2
778	NiMgAl Catalysts Effectively Promote Depolymerization of Rice Husk Lignin to Bio-Oil. 2020 , 150, 1591-1604	3
777	Bronsted Acid Catalyzed Tandem Defunctionalization of Biorenewable Ferulic acid and Derivates into Bio-Catechol. 2020 , 132, 3087-3092	5
776	Bronsted Acid Catalyzed Tandem Defunctionalization of Biorenewable Ferulic acid and Derivates into Bio-Catechol. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 3063-3068	16.4 13
775	Molecular weight-based fractionation of lignin oils by membrane separation technology. 2020 , 74, 166-174	3

774	Pretreatment of lignocellulosic biomass for efficient enzymatic saccharification of cellulose. 2020 , 17-65	17
773	Recent developments in selective catalytic conversion of lignin into aromatics and their derivatives. 2020 , 10, 873-883	10
772	Advances in thermostable laccase and its current application in lignin-first biorefinery: A review. 2020 , 298, 122511	34
771	Melt Stable Functionalized Organosolv and Kraft Lignin Thermoplastic. 2020 , 8, 1108	8
770	Reductive catalytic fractionation of agricultural residue and energy crop lignin and application of lignin oil in antimicrobials. 2020 , 22, 7435-7447	17
769	Aerobic Oxidative Cleavage and Esterification of C(OH)C Bonds. 2020 , 6, 3288-3296	21
768	Process development for biomass delignification using deep eutectic solvents. Conceptual design supported by experiments. 2020 , 164, 86-101	8
767	Lignin for pharmaceutical and biomedical applications [Could this become a reality?]. 2020 , 18, 100320	14
766	Visible-light-induced C-C bond cleavage of lignin model compounds with cyanobenziodoxolone. 2020 , 61, 152420	3
765	Reductive catalytic fractionation of pine wood: elucidating and quantifying the molecular structures in the lignin oil. 2020 , 11, 11498-11508	35
764	Engineered <i>Pseudomonas putida</i> simultaneously catabolizes five major components of corn stover lignocellulose: Glucose, xylose, arabinose, p-coumaric acid, and acetic acid. 2020 , 62, 62-71	25
763	Characterization of alkylguaiacol-degrading cytochromes P450 for the biocatalytic valorization of lignin. 2020 , 117, 25771-25778	17
762	Visible-light-driven amino acids production from biomass-based feedstocks over ultrathin CdS nanosheets. 2020 , 11, 4899	42
761	Mild thermolytic solvolysis of technical lignins in polar organic solvents to a crude lignin oil. 2020 , 4, 6212-6226	11
760	Bromide-Based Ionic Liquid Treatment of Hardwood Organosolv Lignin Yielded a More Reactive Biobased Polyol. 2020 , 59, 18740-18747	4
759	Discrepancy of lignin dissolution from eucalyptus during formic acid fractionation. 2020 , 164, 4662-4670	3
758	Towards Lignin-Derived Chemicals Using Atom-Efficient Catalytic Routes. 2020 , 2, 898-913	9
757	Adaptive laboratory evolution of KT2440 improves p-coumaric and ferulic acid catabolism and tolerance. 2020 , 11, e00143	40

756	Highly Efficient Reductive Catalytic Fractionation of Lignocellulosic Biomass over Extremely Low-Loaded Pd Catalysts. 2020 , 10, 12487-12506	12
755	Efficient dissolution of lignin in novel ternary deep eutectic solvents and its application in polyurethane. 2020 , 164, 480-488	8
754	Perspective on Overcoming Scale-Up Hurdles for the Reductive Catalytic Fractionation of Lignocellulose Biomass. 2020 , 59, 17035-17045	28
753	Cobalt-Catalyzed Reductive C-O Bond Cleavage of Lignin EO-4 Ketone Models via In Situ Generation of the Cobalt-Boryl Species. 2020 , 22, 6055-6060	6
752	Coupling and Reactions of Lignols and New Lignin Monomers: A Density Functional Theory Study. 2020 , 8, 11033-11045	9
751	The Fractionation of woody biomass under mild conditions using bifunctional phenol-4-sulfonic acid as a catalyst and lignin solvent. 2020 , 22, 5414-5422	12
750	Influence of phenylpropanoid units of lignin and its oxidized derivatives on the stability and D ₄ binding properties: DFT and QTAIM approach. 2020 , 18, 5897-5905	5
749	Photocatalytic Production of Vanillin over CeO _x and ZrO ₂ Modified Biomass-Templated Titania. 2020 , 59, 17085-17093	6
748	Advances in catalytic production processes of biomass-derived vinyl monomers. 2020 , 10, 5411-5437	10
747	Deconstruction of biomass enabled by local demixing of cosolvents at cellulose and lignin surfaces. 2020 , 117, 16776-16781	13
746	Oxidative depolymerization of lignins for producing aromatics: variation of botanical origin and extraction methods. 2020 , 1	15
745	The cornerstone of realizing lignin value-addition: Exploiting the native structure and properties of lignin by extraction methods. 2020 , 402, 126237	36
744	Cobalt Nanoparticles-Catalyzed Widely Applicable Successive C-C Bond Cleavage in Alcohols to Access Esters. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 19268-19274	16.4 31
743	Recent Advances in the Catalytic Depolymerization of Lignin towards Phenolic Chemicals: A Review. 2020 , 13, 4296-4317	73
742	Lignin isolation from black liquor from oil palm empty fruit bunch using acid. 2020 , 9, 11382-11391	3
741	Molecular Insight into the Cosolvent Effect on Lignin-Cellulose Adhesion. 2020 , 36, 14403-14416	1
740	Molecular Lignin Solubility and Structure in Organic Solvents. 2020 , 8, 17839-17850	16
739	Production of renewable alcohols from maple wood using supercritical methanol hydrodeoxygenation in a semi-continuous flowthrough reactor. 2020 , 22, 8462-8477	6

- 738 Lignin Based Activated Carbon Using HPO Activation. **2020**, 12, 11
- 737 Production of p-Coumaric Acid from Corn GVL-Lignin. **2020**, 8, 17427-17438 16
- 736 Revisiting Alkaline Pretreatment of Lignocellulose: Understanding the Structural Evolution of Three Components. **2020**, 4, 2000067 4
- 735 Cobalt Nanoparticles-Catalyzed Widely Applicable Successive C–O Bond Cleavage in Alcohols to Access Esters. **2020**, 132, 19430-19436 3
- 734 Emerging Strategies for Modifying Lignin Chemistry to Enhance Biological Lignin Valorization. **2020**, 13, 5423-5432 14
- 733 Profiling of the formation of lignin-derived monomers and dimers from Eucalyptus alkali lignin. **2020**, 22, 7366-7375 22
- 732 Trichoderma potential in biofuel production and biorefinery. **2020**, 221-239
- 731 Structural and Thermal Characterization of Novel Organosolv Lignins from Wood and Herbaceous Sources. **2020**, 8, 860 10
- 730 Perspectives. **2020**, 279-291
- 729 Application of computational methods for pretreatment processes of different biomass feedstocks. **2020**, 26, 100366 4
- 728 Oxide-catalyzed self- and cross-condensation of cycloketones. Kinetically relevant steps that determine product distribution. **2020**, 391, 163-174 5
- 727 Molecular Oxygen Lignin Depolymerization: An Insight into the Stability of Phenolic Monomers. **2020**, 13, 4743-4758 4
- 726 Biomass-derived chemical substitutes for bisphenol A: recent advancements in catalytic synthesis. **2020**, 49, 6329-6363 30
- 725 Photocatalytic transformations of lignocellulosic biomass into chemicals. **2020**, 49, 6198-6223 131
- 724 Synthesis of Functional Chemicals from Lignin-derived Monomers by Selective Organic Transformations. **2020**, 362, 5143-5169 17
- 723 Biobased Epoxy Thermoset Polymers from Depolymerized Native Hardwood Lignin. **2020**, 9, 1155-1160 22
- 722 Preface to Special Issue of ChemSusChem on Lignin Valorization: From Theory to Practice. **2020**, 13, 4175-4180
- 721 Nano molybdenum carbides supported on porous zeolites for Kraft lignin decomposition to aromatic monomers in ethanol. **2020**, 11, 100484 3

720	Efficient hydrogenolysis of aryl ethers over Ce-MOF supported Pd NPs under mild conditions: mechanistic insight using density functional theoretical calculations. 2020 , 10, 6892-6901	6
719	Studies of the Fragmentation Mechanisms of Deprotonated Lignin Model Compounds in Tandem Mass Spectrometry. 2020 , 92, 11895-11903	4
718	Reductive catalytic fractionation of lignin in birch sawdust to monophenolic compounds with high selectivity. 2020 , 495, 111164	8
717	MYB-mediated regulation of lignin biosynthesis in grasses. 2020 , 24, 100174	5
716	Enzymes for lignocellulosic biomass polysaccharide valorization and production of nanomaterials. 2020 , 26, 100397	5
715	Lignin Intermediates on Palladium: Insights into Keto-Enol Tautomerization from Theoretical Modelling. 2020 , 13, 6574-6581	3
714	Improving the Yield and Rate of Acid-Catalyzed Deconstruction of Lignin by Mechanochemical Activation. 2020 , 21, 2660-2666	3
713	Catalytic Hydrotreatment of EO-4 Ether in Lignin: Cleavage of the C ₁ O Bond and Hydrodeoxygenation of Lignin-Derived Phenols in One Pot. 2020 , 8, 14511-14523	12
712	Fabrication and characterization of lignin-xylan hybrid nanospheres as pesticide carriers with enzyme-mediated release property. 2020 ,	5
711	Structure-function relationships of deep eutectic solvents for lignin extraction and chemical transformation. 2020 , 22, 7219-7232	43
710	Paving the Way for the Lignin Hydrogenolysis Mechanism by Deuterium-Incorporated EO-4 Mimics. 2020 , 10, 12229-12238	17
709	Progress in the solvent depolymerization of lignin. 2020 , 133, 110359	30
708	Understanding Plant Biomass via Computational Modeling. 2021 , 33, e2003206	10
707	Aromatics from Lignocellulosic Biomass: A Platform for High-Performance Thermosets. 2020 , 8, 15072-15096	29
706	Improving fast pyrolysis of lignin using three additives with different modes of action. 2020 , 22, 6471-6488	16
705	Sustainable electroorganic synthesis of lignin-derived dicarboxylic acids. 2020 , 22, 5956-5960	12
704	Transformations of Less-Activated Phenols and Phenol Derivatives via C-O Cleavage. 2020 , 120, 10454-10515	61
703	Reductive catalytic fractionation of lignocellulose: when should the catalyst meet depolymerized lignin fragments?. 2020 , 4, 5588-5594	6

702	Biopolymers Derived from Trees as Sustainable Multifunctional Materials: A Review. 2021 , 33, e2001654	21
701	Understanding the Structural Changes of Lignin Macromolecules From Balsa Wood at Different Growth Stages. 2020 , 8,	4
700	Production of Aromatic Compounds by Catalytic Depolymerization of Technical and Downstream Biorefinery Lignins. 2020 , 10,	3
699	Investigation on the thermal degradation behavior of enzymatic hydrolysis lignin with or without steam explosion treatment characterized by TG-FTIR and Py-GC/MS. 2020 , 1	6
698	Multiscale analysis of lignocellulose recalcitrance towards OrganoCat pretreatment and fractionation. 2020 , 13, 155	6
697	Progress in Modeling of Biomass Fast Pyrolysis: A Review. 2020 , 34, 15195-15216	16
696	Insights into the Potential of Hardwood Kraft Lignin to Be a Green Platform Material for Emergence of the Biorefinery. 2020 , 12,	18
695	Ligninolysis Potential of Ligninolytic Enzymes: A Green and Sustainable Approach to Bio-transform Lignocellulosic Biomass into High-Value Entities. 2020 , 151-171	5
694	Naphthalene Structures Derived from Lignins During Phenolation. 2020 , 13, 5549-5555	3
693	Derived high reducing sugar and lignin colloid particles from corn stover. 2020 , 14, 72	3
692	Biobased Resins Using Lignin and Glyoxal. 2020 , 8, 18789-18809	24
691	Hydrogen-Free Production of 4-Alkylphenols from Lignin via Self-Reforming-Driven Depolymerization and Hydrogenolysis. 2020 , 10, 15197-15206	21
690	Facile Prepolymer Formation with Ozone-Pretreated Grass Lignin by In Situ Grafting of Endogenous Aromatics. 2020 , 8, 17001-17007	1
689	Catalytic Conversion of Lignocellulosic Biomass: Application of Heterogeneous and Homogeneous Catalysts to Process Biomass into Value-Added Compounds. 2020 , 151-182	2
688	Why Can We Make Anything from Lignin Except Money? Towards a Broader Economic Perspective in Lignin Research. 2020 , 6, 294-308	10
687	Acetylated lignin nanoparticles as a possible vehicle for photosensitizing molecules. 2020 , 2, 5648-5658	4
686	Unlocking Structure-Reactivity Relationships for Catalytic Hydrogenolysis of Lignin into Phenolic Monomers. 2020 , 13, 4548-4556	16
685	Highly Efficient Cleavage of Ether Bonds in Lignin Models by Transfer Hydrogenolysis over Dual-Functional Ruthenium/Montmorillonite. 2020 , 13, 4579-4586	7

684	Dehydroxyalkylative halogenation of C(aryl)-C bonds of aryl alcohols. 2020 , 56, 7120-7123	2
683	Electro-organic synthesis - a 21 century technique. 2020 , 11, 12386-12400	148
682	All-Lignin-Based Hydrogel with Fast pH-Stimuli Responsiveness for Mechanical Switching and Actuation. 2020 , 32, 4324-4330	55
681	Efficient Depolymerization of Alkaline Lignin to Phenolic Compounds at Low Temperatures with Formic Acid over Inexpensive Fe ⁰ /Al ₂ O ₃ Catalyst. 2020 , 34, 7121-7130	18
680	Copper-Mediated Conversion of Complex Ethers to Esters: Enabling Biopolymer Depolymerisation under Mild Conditions. 2020 , 26, 12397-12402	3
679	Combined lignin defunctionalisation and synthesis gas formation by acceptorless dehydrogenative decarbonylation. 2020 , 22, 3791-3801	12
678	Lignin-Based Adhesives. 2020 , 25-56	6
677	Novel two-pot approach ultrasonication and deep eutectic solvent pretreatments for watermelon rind delignification: Parametric screening and optimization via response surface methodology. 2020 , 203, 117872	14
676	Fractionation of herbaceous biomass using a recyclable hydrotropic p-toluenesulfonic acid (pTsOH)/choline chloride (ChCl) solvent system at low temperatures. 2020 , 150, 112423	13
675	Bulk and Specialty Chemicals from Plant Cell Wall Chemistry. 2020 , 7-28	1
674	Product-oriented Direct Cleavage of Chemical Linkages in Lignin. 2020 , 13, 4367-4381	23
673	Comparison of Two Acid Hydrotropes for Sustainable Fractionation of Birch Wood. 2020 , 13, 4649-4659	18
672	Catalytic hydrogenolysis of native and organosolv lignins of aspen wood to liquid products in supercritical ethanol medium. 2020 ,	8
671	Heteroatom-participated lignin cleavage to functionalized aromatics. 2020 , 49, 3748-3763	32
670	Using Lignin Monomer As a Novel Capping Agent for Efficient Acid-Catalyzed Depolymerization of High Molecular Weight Lignin to Improve Its Antioxidant Activity. 2020 , 8, 9104-9114	12
669	Greener Routes to Biomass Waste Valorization: Lignin Transformation Through Electrocatalysis for Renewable Chemicals and Fuels Production. 2020 , 13, 4214-4237	58
668	VS and its doped composition: Catalytic depolymerization of alkali lignin for increased bio-oil production. 2020 , 156, 94-102	2
667	Amine-Mediated Bond Cleavage in Oxidized Lignin Models. 2020 , 13, 4660-4665	7

666	Similarities in Recalcitrant Structures of Industrial Non-Kraft and Kraft Lignin. 2020 , 13, 4624-4632	4
665	Polymer principles behind solubilizing lignin with organic cosolvents for bioenergy. 2020 , 22, 4331-4340	3
664	A Trojan Horse Camouflage Strategy for High-Performance Cellulose Paper and Separators. 2020 , 30, 2002169	20
663	Controlled hydrogenolysis over heterogeneous catalysts for lignin valorization. 2020 , 62, 607-630	7
662	Conceptual Design of a Kraft Lignin Biorefinery for the Production of Valuable Chemicals via Oxidative Depolymerization. 2020 , 8, 8823-8829	13
661	Pulsed-ozonolysis assisted oxidative treatment of forestry biomass for lignin fractionation. 2020 , 313, 123638	5
660	Highly Bleachable Wood Fibers Containing Less Condensed Lignin from Acid Hydrotropic Fractionation (AHF). 2020 , 8, 9046-9057	8
659	Subcritical Ethanol Catalyzed with Deep Eutectic Solvent Extract Phenolic Lignin for Preparation of an Ultraviolet-Blocking Composite Film. 2020 , 34, 8395-8402	4
658	An Introduction to Model Compounds of Lignin Linking Motifs; Synthesis and Selection Considerations for Reactivity Studies. 2020 , 13, 4238-4265	17
657	Lignin Depolymerization: A Comparison of Methods to Analyze Monomers and Oligomers. 2020 , 13, 4633-4648	5
656	Scaling of lignin monomer hydrogenation, hydrodeoxygenation and hydrocracking reaction micro-kinetics over solid metal/acid catalysts to aromatic oligomers. 2020 , 399, 125712	17
655	Effluent of biomass cooking with active oxygen and solid alkali (CAOSA): component separation, recovery and characterization.. 2020 , 10, 16481-16489	2
654	Bioprospecting Microbial Diversity for Lignin Valorization: Dry and Wet Screening Methods. 2020 , 11, 1081	11
653	Development of 'Lignin-First' Approaches for the Valorization of Lignocellulosic Biomass. 2020 , 25,	44
652	Extraction of lignin and therapeutic applications of lignin-derived compounds. A review. 2020 , 18, 771-785	23
651	Catalytic Oxidations in a Bio-Based Economy. 2020 , 8, 132	15
650	Biofibers and Biopolymers for Biocomposites. 2020 ,	3
649	A combination of experimental and computational methods to study the reactions during a Lignin-First approach. 2020 , 92, 631-639	4

648	Mild Organosolv Lignin Extraction with Alcohols: The Importance of Benzylic Alkoxylation. 2020 , 8, 5119-5131	43
647	Fully Biobased Epoxy Resins from Fatty Acids and Lignin. 2020 , 25,	17
646	Aldehydes-Aided Lignin-First Deconstruction Strategy for Facilitating Lignin Monomers and Fermentable Glucose Production from Poplar Wood. 2020 , 13, 1113	3
645	Taking on all of the biomass for conversion. 2020 , 367, 1305-1306	17
644	Lignin Chemistry. 2020 ,	3
643	Mechanistic Study of Diaryl Ether Bond Cleavage during Palladium-Catalyzed Lignin Hydrogenolysis. 2020 , 13, 4487-4494	20
642	Solvent Selection for the Separation of Lignin-Derived Monomers Using the Conductor-like Screening Model for Real Solvents. 2020 , 59, 7755-7764	8
641	Contributions to Lignomics: Stochastic Generation of Oligomeric Lignin Structures for Interpretation of MALDI-FT-ICR-MS Results. 2020 , 13, 4428-4445	10
640	Lignin Monomers from beyond the Canonical Monolignol Biosynthetic Pathway: Another Brick in the Wall. 2020 , 8, 4997-5012	73
639	Effects of the novel catalyst Ni-SO ₄ -KO/TiO ₂ on efficient lignin depolymerization.. 2020 , 10, 8558-8567	0
638	Conversion of birch bark to biofuels. 2020 , 22, 2255-2263	14
637	Sequential Cleavage of Lignin Systems by Nitrogen Monoxide and Hydrazine. 2020 , 362, 1485-1489	2
636	Stable Continuous Production of γ -Valerolactone from Biomass-Derived Levulinic Acid over Zr-Al-Beta Zeolite Catalyst. 2020 , 10, 678	12
635	Selective production of bio-based aromatics by aerobic oxidation of native soft wood lignin in tetrabutylammonium hydroxide.. 2020 , 10, 19199-19210	9
634	Downstream processing of lignin derived feedstock into end products. 2020 , 49, 5510-5560	117
633	Lignin-fueled photoelectrochemical platform for light-driven redox biotransformation. 2020 , 22, 5151-5160	7
632	Coupling structural characterization with secretomic analysis reveals the mechanism of disruption of the cross-linked structure of bamboo culms. 2020 , 4, 4743-4753	2
631	Lignin Source and Structural Characterization. 2020 , 13, 4385-4393	34

630	Technical lignin and its potential modification routes: A mini-review. 2020 , 154, 112732	41
629	Current advancement on the isolation, characterization and application of lignin. 2020 , 162, 985-1024	89
628	Evaluation on the properties of deep eutectic solvent-extracted lignin for potential aromatic bio-products conversion. 2020 , 154, 112729	5
627	Unlocking the response of lignin structure by depolymerization process improved lignin-based carbon nanofibers preparation and mechanical strength. 2020 , 156, 669-680	13
626	Hydrotropic Solutions Enable Homogeneous Fenton Treatment of Lignin. 2020 , 59, 4229-4238	5
625	Lignin-Inorganic Interfaces: Chemistry and Applications from Adsorbents to Catalysts and Energy Storage Materials. 2020 , 13, 4344-4355	37
624	Structural insights into the alkali lignins involving the formation and transformation of arylglycerols and enol ethers. 2020 , 152, 411-417	12
623	Preparation of low carbon impact lignin nanoparticles with controllable size by using different strategies for particles recovery. 2020 , 147, 112243	19
622	Valorization of Bark Using Ethanol/Water Organosolv Treatment: Isolation and Characterization of Crude Lignin. 2020 , 8, 4745-4754	14
621	Bio/hydrochar Sorbents for Environmental Remediation. 2020 , 3, 453-468	18
620	Enzymatic treatment improves fast pyrolysis product selectivity of softwood and hardwood lignin. 2020 , 717, 137241	13
619	Lignin solvated in zwitterionic Good's buffers displays antibacterial synergy against <i>Staphylococcus aureus</i> . 2020 , 137, 49107	2
618	Selective Deoxygenation of Lignin-Derived Phenols and Dimeric Ethers with Protic Ionic Liquids. 2020 , 59, 4864-4871	5
617	Regulating Aromatic Alcohols Distributions by Cofeeding Methanol with Ethanol over Cobalt-Hydroxyapatite Catalyst. 2020 , 12, 2341-2347	3
616	High Purity and Low Molecular Weight Lignin Nano-Particles Extracted from Acid-Assisted MIBK Pretreatment. 2020 , 12,	9
615	A sustainable wood biorefinery for low-carbon footprint chemicals production. 2020 , 367, 1385-1390	295
614	Vanadium-Substituted Phosphomolybdic Acids for the Aerobic Cleavage of Lignin Models-Mechanistic Aspect and Extension to Lignin. 2020 , 13,	4
613	Alkaline wet oxidation of lignin over Cu-Mn mixed oxide catalysts for production of vanillin. 2020 , 352, 95-103	19

612	Utilization of Lignin-Derived Small Molecules: Epoxy Polymers from Lignin Oxidation Products.. 2020 , 3, 881-890	7
611	One-Pot Conversion of Lignin into Naphthenes Catalyzed by a Heterogeneous Rhenium Oxide-Modified Iridium Compound. 2020 , 13, 4409-4419	28
610	Phenolic cross-links: building and de-constructing the plant cell wall. 2020 , 37, 919-961	53
609	Hydrothermal Liquefaction of β -4 Aryl Ether Linkages in Lignin. 2020 , 13, 2002-2006	4
608	Complementing Vanillin and Cellulose Production by Oxidation of Lignocellulose with Stirring Control. 2020 , 8, 2361-2374	28
607	Model Compounds Study for the Mechanism of Horseradish Peroxidase-Catalyzed Lignin Modification. 2020 , 191, 981-995	2
606	Maleic acid as a dicarboxylic acid hydrotrope for sustainable fractionation of wood at atmospheric pressure and 100 °C: mode and utility of lignin esterification. 2020 , 22, 1605-1617	55
605	Total utilization of lignin and carbohydrates in : an integrated biorefinery strategy towards phenolics, levulinic acid, and furfural. 2020 , 13, 2	18
604	Controllable depolymerization of lignin using carbocatalyst graphene oxide under mild conditions. 2020 , 267, 117100	14
603	A Cast Net Thrown onto an Interface: Wrapping 3D Objects with an Interfacially Jammed Amphiphilic Sheet. 2020 , 7, 1901751	1
602	Nickel on nitrogen-doped carbon pellets for continuous-flow hydrogenation of biomass-derived compounds in water. 2020 , 22, 2755-2766	25
601	Solvent assisted catalytic conversion of beech wood and organosolv lignin over NiMo/ γ -Al ₂ O ₃ . 2020 , 4, 1844-1854	6
600	Mechanochemical cleavage of lignin models and lignin via oxidation and a subsequent base-catalyzed strategy. 2020 , 22, 3489-3494	17
599	Antimicrobial Polymer-Based Materials for Food Packaging Applications. 2020 , 12,	10
598	Continuous-flow production of petroleum-replacing fuels from highly viscous Kraft lignin pyrolysis oil using its hydrocracked oil as a solvent. 2020 , 213, 112728	6
597	Mesoscale Reaction-Diffusion Phenomena Governing Lignin-First Biomass Fractionation. 2020 , 13, 4495-4509	15
596	A lignin-biochar with high oxygen-containing groups for adsorbing lead ion prepared by simultaneous oxidization and carbonization. 2020 , 307, 123165	20
595	Fabrication of lignin based renewable dynamic networks and its applications as self-healing, antifungal and conductive adhesives. 2020 , 394, 124896	21

594	Insights into the effect of aggregation on lignin fluorescence and its application for microstructure analysis. 2020 , 154, 981-988	11
593	The role of pretreatment in the catalytic valorization of cellulose. 2020 , 487, 110883	30
592	Lignin Functionalization for the Production of Novel Materials. 2020 , 2, 440-453	65
591	Catechyl Lignin Extracted from Castor Seed Coats Using Deep Eutectic Solvents: Characterization and Depolymerization. 2020 , 8, 7031-7038	31
590	Recent progresses in the application of lignin derived (nano)catalysts in oxidation reactions. 2020 , 489, 110942	21
589	Methylation-triggered fractionation of lignocellulosic biomass to afford cellulose-, hemicellulose-, and lignin-based functional polymers via click chemistry. 2020 , 22, 2909-2928	8
588	Atmospheric pressure ionization mass spectrometry as a tool for structural characterization of lignin. 2020 , 34, e8813	5
587	Molybdenum-catalyzed oxidative depolymerization of alkali lignin: Selective production of Vanillin. 2020 , 598, 117567	19
586	High-Temperature Electrolysis of Kraft Lignin for Selective Vanillin Formation. 2020 , 8, 7300-7307	23
585	Co(salen)-Catalyzed Oxidation of Lignin Models to Form Benzoquinones and Benzaldehydes: A Computational and Experimental Study. 2020 , 8, 7225-7234	10
584	Synthesis of thioethers, arenes and arylated benzoxazoles by transformation of the C(aryl)-C bond of aryl alcohols. 2020 , 11, 7634-7640	3
583	The molecular design and experimental study on the catalytic cleavage of linkages in lignin with binuclear ionic liquid. 2020 , 308, 113128	3
582	Electrochemical reduction selectivity of crotonaldehyde on copper. 2021 , 51, 5-17	3
581	Basic carrier promoted Pt-catalyzed hydrogenolysis of alkaline lignin. 2021 , 365, 193-198	3
580	Progress in green nanocomposites for high-performance applications. 2021 , 25, 53-65	18
579	Formaldehyde-free self-polymerization of lignin-derived monomers for synthesis of renewable phenolic resin. 2021 , 166, 1312-1319	10
578	Hierarchical meso- and macroporous carbon from lignin for kraft lignin decomposition to aromatic monomers. 2021 , 365, 214-222	3
577	Valorization of alkaline lignin and optimization of vanillin production by heterogeneous Fenton-type catalysts. 2021 , 11, 1029-1039	

576	Microwave-assisted catalytic depolymerization of lignin from birch sawdust to produce phenolic monomers utilizing a hydrogen-free strategy. 2021 , 402, 123490	14
575	Lignin bioconversion into valuable products: fractionation, depolymerization, aromatic compound conversion, and bioproduct formation. 2021 , 1, 166-185	3
574	Guidelines for performing lignin-first biorefining. 2021 , 14, 262-292	143
573	Production of Aromatic Hydrocarbons from Biomass. 2021 , 61, 15-34	1
572	Influence of chain length in protic ionic liquids on physicochemical and structural features of lignins from sugarcane bagasse. 2021 , 159, 113080	5
571	Electrospinning as a route to advanced carbon fibre materials for selected low-temperature electrochemical devices: A review. 2021 , 59, 492-529	14
570	Lignin degradation in cooking with active oxygen and solid Alkali process: A mechanism study. 2021 , 278, 123984	6
569	New Opportunities in the Valorization of Technical Lignins. 2021 , 14, 1016-1036	31
568	Biomass waste conversion into low-cost carbon-based materials for supercapacitors: A sustainable approach for the energy scenario. 2021 , 880, 114899	14
567	Sono- and mechanochemical technologies in the catalytic conversion of biomass. 2021 , 50, 1785-1812	24
566	Dimethyl sulfide facilitates acid catalysed ring opening of the bicyclic monoterpenes in crude sulfate turpentine to afford p-menthadienes in good yield. 2021 , 23, 597-610	7
565	Green and sustainable route for oxidative depolymerization of lignin: New platform for fine chemicals and fuels. 2021 , 37, e3111	4
564	A Heterogeneous Pt-ReO _x /C Catalyst for Making Renewable Adipates in One Step from Sugar Acids. 2021 , 11, 95-109	5
563	Hydrogenolysis of lignin to produce aromatic monomers over FePd bimetallic catalyst supported on HZSM-5. 2021 , 213, 106713	11
562	Techno-economic analysis of different integrated biorefinery scenarios using lignocellulosic waste streams as source for phenolic alcohols production. 2021 , 285, 124829	4
561	Toward Replacing Ethylene Oxide in a Sustainable World: Glycolaldehyde as a Bio-Based C ₂ Platform Molecule. 2021 , 133, 12312-12331	0
560	Toward Replacing Ethylene Oxide in a Sustainable World: Glycolaldehyde as a Bio-Based C Platform Molecule. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 12204-12223	16.4 10
559	Multiproduct Biorefining from Lignocellulosic Biomass Using Steam Explosion Technology. 2021 , 111-132	

558	Deconstruction of Lignocellulose Recalcitrance by Organosolv Fractionating Pretreatment for Enzymatic Hydrolysis. 2021 , 23-56	
557	Types of lignins and characteristics. 2021 , 51-66	0
556	Enhancing product selectivity in biomass and bioalcohol reactions over Cu-doped porous metal oxides. 2021 , 77, 299-341	
555	Lignin chemistry and valorization. 2021 , 145-183	0
554	Introduction. 2021 , 1-6	
553	Recent Advances in Renewable Polymer Production from Lignin-Derived Aldehydes. 2021 , 13,	3
552	Lignin extraction and isolation methods. 2021 , 61-104	1
551	Production of active pharmaceutical ingredients (APIs) from lignin-derived phenol and catechol.	4
550	Catalytic lignin valorization over HSZ-supported CuNiAl-based catalysts with microwave heating. 2021 , 45, 8258-8268	3
549	Lignin and Lignocellulosic Materials: A Glance on the Current Opportunities for Energy and Sustainability. 2021 , 621-652	1
548	Isomer-dependent catalytic pyrolysis mechanism of the lignin model compounds catechol, resorcinol and hydroquinone. 2021 , 12, 3161-3169	13
547	Electrochemical upgrading of depolymerized lignin: a review of model compound studies. 2021 , 23, 2868-2899	20
546	Conversion of glucose to levulinic acid and upgradation to Valerolactone on Ru/TiO ₂ catalysts. 2021 , 45, 14406-14413	2
545	Formation of p-Unsubstituted Phenols in Base-catalyzed Lignin Depolymerization. 2021 , 333, 05006	1
544	Electrochemical synthesis of biobased polymers and polymer building blocks from vanillin.. 2021 , 11, 8970-8985	3
543	Coupling of Flavonoid Initiation Sites with Monolignols Studied by Density Functional Theory. 2021 , 9, 1518-1528	3
542	Biomass-based flexible nanoscale carbon fibers: effects of chemical structure on energy storage properties. 2021 , 9, 10120-10134	10
541	Reductive Catalytic Fractionation: From Waste Wood to Functional Phenolic Oligomers for Attractive, Value-Added Applications. 2021 , 37-60	1

540	Recent Advances in Synthesis and Application of Lignin Nanoparticles. 2021 , 273-293	3
539	Advanced and versatile lignin-derived biodegradable composite film materials toward a sustainable world. 2021 , 23, 3790-3817	30
538	Design of task-specific metal phosphides for the sustainable manufacture of advanced biofuels. 2021 , 77, 219-239	2
537	The tree fractionation: the extraction of natural polyphenols. 2021 , 33-84	1
536	Natural polyphenols applications. 2021 , 259-314	
535	Breeding Targets to Improve Biomass Quality in Miscanthus. 2021 , 26,	4
534	Continuous hydrogenolysis of acetal-stabilized lignin in flow. 2021 , 23, 320-327	6
533	Nanoengineered Electrodes for Biomass-Derived 5-Hydroxymethylfurfural Electrocatalytic Oxidation to 2,5-Furandicarboxylic Acid. 2021 , 9, 1970-1993	22
532	Valorization of lignin into high value products. 2021 , 141-152	
531	Multicomponent Polymer Systems Based on Agro-Industrial Waste. 2021 , 467-513	0
530	A well-defined lignin-based filler for tuning the mechanical properties of polymethyl methacrylate. 2021 , 23, 2329-2335	19
529	Lignin extraction and valorization using heterogeneous transition metal catalysts. 2021 , 77, 137-174	3
528	Lignin: an innovative, complex, and highly flexible plant material/component. 2021 , 35-60	1
527	Electrochemical oxidation of biomass derived 5-hydroxymethylfurfural (HMF): pathway, mechanism, catalysts and coupling reactions. 2021 , 23, 4228-4254	47
526	Selective hydrogenolysis of catechyl lignin into propenylcatechol over an atomically dispersed ruthenium catalyst. 2021 , 12, 416	28
525	Role of peracetic acid on the disruption of lignin packing structure and its consequence on lignin depolymerisation.	1
524	Mild selective oxidative cleavage of lignin C α bonds over a copper catalyst in water. 2021 , 23, 7030-7040	5
523	Challenges and Perspectives of Biorefineries. 2021 , 1-21	

522	Lignin Valorization in Biorefineries Through Integrated Fractionation, Advanced Characterization, and Fermentation Intensification Strategies. 2021 , 337-362	
521	Lignin-based materials with antioxidant and antimicrobial properties. 2021 , 291-326	0
520	Types of lignin, properties, and structural characterization techniques. 2021 , 105-158	0
519	Revisiting lignin: a tour through its structural features, characterization methods and applications. 2021 , 45, 6986-7013	23
518	Efficient demethylation of aromatic methyl ethers with HCl in water. 2021 , 23, 1995-2009	7
517	Selective lignin fractionation using CO ₂ -expanded 2-methyltetrahydrofuran (2-MTHF). 2021 , 23, 6330-6336	4
516	Comprehensive valorisation of technically relevant organosolv lignins via anodic oxidation. 2021 , 23, 6449-6455	5
515	Mechanisms of Caromatic-C bonds cleavage in lignin over NbO _x -supported Ru catalyst. 2021 , 394, 94-103	5
514	Hydrogenolysis of Lignin-Derived Aromatic Ethers over Heterogeneous Catalysts. 2021 , 9, 3379-3407	17
513	Engineering a Cytochrome P450 for Demethylation of Lignin-Derived Aromatic Aldehydes. 2021 , 1, 252-261	7
512	Green Deep Eutectic Solvents for Microwave-Assisted Biomass Delignification and Valorisation. 2021 , 26,	10
511	Study of the formation of lignin hydrogels with metal cations. 1-10	2
510	Recent Catalytic Approaches for the Production of Cycloalkane Intermediates from Lignin-Based Aromatic Compounds: A Review. 2021 , 6, 1715-1733	1
509	High-Yield Production of Deoxygenated Monomers from Kraft Lignin over ZnO-Co/N-CNTs in Water. 2021 , 9, 3232-3245	5
508	Lignin-based nanogels for the release of payloads in alkaline conditions. 2021 , 145, 110241	6
507	Facile adjusting the concentration of siliceous seed to obtain different HZSM-5 zeolite catalysts for effective catalytic depolymerization reaction of lignin. 1	3
506	Lignins Isolated via Catalyst-Free Organosolv Pulping from , , and : A Comparative Study. 2021 , 26,	2
505	A Review: Research Progress in Modification of Poly (Lactic Acid) by Lignin and Cellulose. 2021 , 13,	7

504	Comparative studies on lignin structures in normal and tension wood of <i>Populus Euramericana</i> cv. "74/76". 2021 , 172, 178-185	1
503	Facilitation of aldol condensation for lignin alkaline cupric (II) oxidation products having long-wavelength UV absorption. 2021 , 46, 25-28	
502	A review of lignin hydrogen peroxide oxidation chemistry with emphasis on aromatic aldehydes and acids. 2021 , 75, 806-823	3
501	Production and Application of Lignin-Based Chemicals and Materials in the Cellulosic Ethanol Production: An Overview on Lignin Closed-Loop Biorefinery Approaches. 2021 , 12, 6309	4
500	Tree bark characterization envisioning an integrated use in a biorefinery. 1	3
499	Fractionation of Poplar Wood Using a Bifunctional Aromatic Acid under Mild Conditions. 2021 , 9, 5364-5376	4
498	A review on trends in lignin extraction and valorization of lignocellulosic biomass for energy applications. 2021 , 293, 126123	28
497	Lignin Monomers Derived from the Flavonoid and Hydroxystilbene Biosynthetic Pathways. 2021 , 177-206	3
496	Recent advances in the valorization of plant biomass. 2021 , 14, 102	28
495	Lignin peroxidase in focus for catalytic elimination of contaminants - A critical review on recent progress and perspectives. 2021 , 177, 58-82	38
494	The pyrolysis of lignin: Pathway and interaction studies. 2021 , 290, 120078	16
493	Supported-Metal Catalysts in Upgrading Lignin to Aromatics by Oxidative Depolymerization. 2021 , 11, 467	9
492	Biosurfactant Production Using Bioreactors from Industrial Byproducts. 2021 , 59-78	3
491	Preparation of amine-modified lignin and its applicability toward online micro-solid phase extraction of valsartan and losartan in urine samples. 2021 , 1643, 462081	2
490	Prediction of yields and composition of char from fast pyrolysis of commercial lignocellulosic materials, organosolv fractionated and torrefied olive stones. 2021 , 289, 119862	12
489	Lignin and Lignin-Derived Compounds for Wood Applications-A Review. 2021 , 26,	14
488	Advances in Versatile Nanoscale Catalyst for the Reductive Catalytic Fractionation of Lignin. 2021 , 14, 2268-2294	5
487	More sustainable biomass production and biorefining to boost the bioeconomy. 2021 , 15, 1221-1232	3

486	Preparation of carboxylated lignin-based epoxy resin with excellent mechanical properties. 2021 , 150, 110389	6
485	Metabolism of syringyl lignin-derived compounds in <i>Pseudomonas putida</i> enables convergent production of 2-pyrone-4,6-dicarboxylic acid. 2021 , 65, 111-122	13
484	Biomass Processing via Photochemical Means. 2021 , 265-288	
483	Examination of how variations in lignin properties from Kraft and organosolv extraction influence the physicochemical characteristics of hydrothermal carbon. 2021 , 155, 105095	6
482	Investigating Lignin-Derived Monomers and Oligomers in Low-Molecular-Weight Fractions Separated from Depolymerized Black Liquor Retentate by Membrane Filtration. 2021 , 26,	1
481	Heterologous Expression, Engineering and Characterization of a Novel Laccase of with Promising Properties as Biocatalyst. 2021 , 7,	1
480	Unexpected Formation of Organic Siloxanes alongside Ethylphenols in the Catalytic Hydrogenation of Waste Enzymatic Lignin. 2021 , 2, 2100059	
479	Identifying the Interunit Linkages Connecting Free Phenolic Terminal Units in Lignin. 2021 , 14, 2554-2563	0
478	Towards sustainable production and utilization of plant-biomass-based nanomaterials: a review and analysis of recent developments. 2021 , 14, 114	22
477	Pathway discovery and engineering for cleavage of a β lignin-derived biaryl compound. 2021 , 65, 1-10	3
476	Oxidative Catalytic Fractionation and Depolymerization of Lignin in a One-Pot Single-Catalyst System. 2021 , 9, 7719-7727	5
475	On Laccase-Catalyzed Polymerization of Biorefinery Lignin Fractions and Alignment of Lignin Nanoparticles on the Nanocellulose Surface via One-Pot Water-Phase Synthesis. 2021 , 9, 8770-8782	6
474	The Impact of Biomass and Acid Loading on Methanolysis during Two-Step Lignin-First Processing of Birchwood. 2021 , 11, 750	1
473	Nano β Mo ₂ C supported on ordered mesoporous carbon for Kraft lignin decomposition to aromatic monomers. 1	0
472	Microwave Hydrophobized Lignin with Antioxidant Activity for Fused Filament Fabrication. 2021 , 3, 3538-3548	5
471	Tuning the functional properties of lignocellulosic films by controlling the molecular and supramolecular structure of lignin. 2021 , 181, 136-149	5
470	Green synthesis of lignin nanorods/g-CN nanocomposite materials for efficient photocatalytic degradation of triclosan in environmental water. 2021 , 272, 129801	6
469	Metabolic Engineering of <i>Corynebacterium glutamicum</i> . 2021 , 403-468	

468	Synthesis and characterization of an amphiphilic lignin-based cationic surfactant. 2021 , 164, 113376	5
467	The Pretreatment of Lignocelluloses With Green Solvent as Biorefinery Preprocess: A Minor Review. 2021 , 12, 670061	8
466	Staged biorefinery of Moso bamboo by integrating polysaccharide hydrolysis and lignin reductive catalytic fractionation (RCF) for the sequential production of sugars and aromatics. 2021 , 164, 113358	2
465	Transcriptome-wide identification and characterization of microRNAs in diverse phases of wood formation in <i>Populus trichocarpa</i> . 2021 , 11,	2
464	Can Sustainable Packaging Help to Reduce Food Waste? A Status Quo Focusing Plant-Derived Polymers and Additives. 2021 , 11, 5307	1
463	Recent advances in lignocellulose prior-fractionation for biomaterials, biochemicals, and bioenergy. 2021 , 261, 117884	25
462	Metal Sulfide Photocatalysts for Lignocellulose Valorization. 2021 , e2007129	16
461	Maleic acid hydrotropic fractionation of wheat straw to facilitate value-added multi-product biorefinery at atmospheric pressure. 2021 , 13, 1407-1424	3
460	Acid Hydrotropic Fractionation of Lignocelluloses for Sustainable Biorefinery: Advantages, Opportunities, and Research Needs. 2021 , 14, 3031-3046	8
459	Catalytic Liquefaction of Kraft Lignin with Solvothermal Approach. 2021 , 11, 875	1
458	The Promotor and Poison Effects of the Inorganic Elements of Kraft Lignin during Hydrotreatment over NiMoS Catalyst. 2021 , 11, 874	2
457	Catalytic transfer hydrogenolysis of C-O bonds in lignin model compounds without arene hydrogenation. 2021 ,	0
456	The effects of mild Lewis acids-catalyzed ethanol pretreatment on the structural variations of lignin and cellulose conversion in balsa wood. 2021 , 183, 1362-1370	4
455	Probing the molecular weights of sweetgum and pine kraft lignin fractions. 2021 , 20, 381-391	2
454	Enzymes, Biocatalysis, and Metabolic Engineering for Enabling a Circular Economy and Sustainability. 2021 , 121, 10367-10451	20
453	Added-Value Chemicals from Lignin Oxidation. 2021 , 26,	4
452	Understanding the dissolution of softwood lignin in ionic liquid and water mixed solvents. 2021 , 182, 402-412	5
451	Effective extraction of aromatic monomers from lignin oil using a binary petroleum ether/dichloromethane solvent. 2021 , 267, 118599	9

450	Bringing Material Concepts into Conventional Biorefineries: Considerations of Sources, Preparations, and Applications of Lignin Nanomaterials. 2021 , 9, 10403-10423	8
449	Sustainable Production of Benzylamines from Lignin. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 20666-20671	16.4 12
448	Sustainable Production of Benzylamines from Lignin. 2021 , 133, 20834-20839	0
447	Molybdenum-catalyzed hydrogenolysis of herbaceous biomass: A procedure integrated lignin fragmentation and components fractionation. 2021 , 333, 124977	7
446	Fast screening of Depolymerized Lignin Samples Through 2D-Liquid Chromatography Mapping. 2021 , 10, 740-747	1
445	Non-productive binding of cellobiohydrolase i investigated by surface plasmon resonance spectroscopy. 2021 , 28, 9525-9545	3
444	Technical Lignin Valorization in Biodegradable Polyester-Based Plastics (BPPs). 2021 , 9, 12017-12042	5
443	Enzymes [Key Elements of the Future Biorefineries.	
442	A review of artificial intelligence methods combined with Raman spectroscopy to identify the composition of substances.	4
441	Kraft Lignin Derived Molybdenum Carbide/Nitrogen-Doped Carbon Composite for Efficient Hydrogen Evolution Reaction. 2021 , 168, 084511	0
440	Vessel- and ray-specific monolignol biosynthesis as an approach to engineer fiber-hypolignification and enhanced saccharification in poplar. 2021 , 108, 752-765	1
439	Enhancement of Kraft lignin molecular relaxation based on laccases from <i>Pycnoporus sanguineus</i> produced in instrumented bioreactors. 1	0
438	Reductive or oxidative catalytic lignin depolymerization: An overview of recent advances. 2021 , 373, 24-37	9
437	Tricin Biosynthesis and Bioengineering. 2021 , 12, 733198	4
436	Hard Carbon Anodes for Next-Generation Li-Ion Batteries: Review and Perspective. 2021 , 11, 2101650	35
435	Colloidal lignin nanoparticles from acid hydrotropic fractionation for producing tough, biodegradable, and UV blocking PVA nanocomposite. 2021 , 168, 113584	1
434	Laccase as a Tool in Building Advanced Lignin-Based Materials. 2021 , 14, 4615-4635	11
433	Mechanism insight into photocatalytic conversion of lignin for valuable chemicals and fuels production: A state-of-the-art review. 2021 , 147, 111217	13

432	CRISPR-Knockout of Gene Improves Saccharification Efficiency by Reducing Lignin Content in Hybrid Poplar. 2021 , 22,	3
431	Evaluation of bacterial hosts for conversion of lignin-derived p-coumaric acid to 4-vinylphenol. 2021 , 20, 181	1
430	Oxidative Catalytic Fractionation of Lignocellulosic Biomass under Non-alkaline Conditions. 2021 , 143, 15462-15470	11
429	Lignin to Monoaromatics with a Carbon-Nanofiber-Supported NiCeO ₂ Catalyst Synthesized in a One-Pot Hydrothermal Process. 2021 , 9, 12800-12812	2
428	Substituent effects in dioxovanadium(V) schiff-base complexes: Tuning the outcomes of oxidation reactions. 2021 , 205, 115268	1
427	Self-Hydrogen Transfer Hydrogenolysis of Native Lignin over Pd-PdO/TiO ₂ . 2021 , 301, 120767	3
426	Alkylation of monomeric, dimeric, and polymeric lignin models through carbon-hydrogen activation using Ru-catalyzed Murai reaction. 2021 , 100, 132475	
425	Selective biomass photoreforming for valuable chemicals and fuels: A critical review. 2021 , 148, 111266	14
424	Boosted Hydrodeoxygenation of Lignin-Derived Phenolics to Cycloalkanes with a Complex Copper Acid Catalyst.	4
423	Comparison of structure, thermal stability, and pyrolysis products of lignin extracted with CHCl ₃ -formic acid/lactic acid systems. 2021 , 14, 841-850	1
422	A review on catalytic conversion of lignin into high-value chemicals over Ni-based catalysts. 1	1
421	Effect of metal triflates on the microwave-assisted catalytic hydrogenolysis of birch wood lignin to monophenolic compounds. 2021 , 167, 113515	2
420	Monitoring Aqueous Phase Reactions by Operando ATR-IR Spectroscopy at High Temperature and Pressure: A Biomass Conversion Showcase.	1
419	Heterogeneous Cobalt-Catalyzed C-C Bond Cleavage in Alcohols to Carbonyl Compounds. 2021 , 13, 4355	3
418	Improved value and carbon footprint by complete utilization of corncob lignocellulose. 2021 , 419, 129565	15
417	Oxidative cleavage of C-C bonds in lignin. 2021 , 13, 1118-1125	10
416	Synthesis of bio-based 2-thiothiophenes. 2021 , 379, 20200350	
415	The effect of ball milling on birch, pine, reed, walnut shell enzymatic hydrolysis recalcitrance and the structure of the isolated residual enzyme lignin. 2021 , 167, 113493	11

4 ¹⁴	Can lignin be transformed into agrochemicals? Recent advances in the agricultural applications of lignin. 2021 , 170, 113646	7
4 ¹³	Three-step conversion of Indulin AT to muconic acid under mild conditions. 2021 , 153, 106232	1
4 ¹²	Economical concerns of lignin in the energy sector. 2021 , 4, 100258	5
4 ¹¹	Dual lignin valorization enabled by carbon quantum dots and lithium-sulfur cathode. 2021 , 170, 113801	4
4 ¹⁰	Lignin valorization toward value-added chemicals and fuels via electrocatalysis: A perspective. 2021 , 42, 1831-1842	10
4 ⁰⁹	Lignin-to-chemicals: Application of catalytic hydrogenolysis of lignin to produce phenols and terephthalic acid via metal-based catalysts. 2021 , 190, 72-85	6
4 ⁰⁸	Phosphotungstic acid assisted with neutral deep eutectic solvent boost corn straw pretreatment for enzymatic saccharification and lignin extraction. 2021 , 172, 114058	3
4 ⁰⁷	Copper atoms inlaid in titanium zirconium oxide spherical shell confine free radicals for the robust Fenton-like treatment of complex biogas slurry. 2021 , 298, 120555	1
4 ⁰⁶	One-step catalytic hydrotreatment of lignin dimer model compounds to cycloalkane and cycloalcohol by spherical metal-organic framework derived NiLa bimetallic materials. 2021 , 99, 105-119	4
4 ⁰⁵	Hydrothermal oxidative valorisation of lignin into functional chemicals: A review. 2021 , 342, 126016	7
4 ⁰⁴	In-situ oxidation/reduction facilitates one-pot conversion of lignocellulosic biomass to bulk chemicals in alkaline solution. 2022 , 429, 132365	4
4 ⁰³	High-solid ethylenediamine pretreatment to fractionate new lignin streams from lignocellulosic biomass. 2022 , 427, 130962	8
4 ⁰²	Capitalizing on lignin and tannin value: their chemical reactivity and their potential. 2021 , 183-258	
4 ⁰¹	Disassembling catechyl and guaiacyl/syringyl lignins coexisting in Euphorbiaceae seed coats. 2021 , 23, 7235-7242	5
4 ⁰⁰	Behavior characterization of liginosulfonate depolymerization products under acid-catalyzed conditions using gas chromatography-mass spectrometry. 2021 , 84, 109-116	2
3 ⁹⁹	One-pot route to convert technical lignin into versatile lignin esters for tailored bioplastics and sustainable materials. 2021 , 23, 4567-4579	4
3 ⁹⁸	Electrochemically site-selective alkoxylation of twisted 2-arylbenzoic acids via spiro-lactonization. 2021 , 8, 5130-5138	0
3 ⁹⁷	Opportunities and Challenges of Lignin Utilization. 2021 , 1-12	2

396	The RCF biorefinery: Building on a chemical platform from lignin. 2021 , 241-297	3
395	Polyesters with bio-based ferulic acid units: crosslinking paves the way to property consolidation. 2021 , 12, 5139-5148	1
394	The Route of Lignin Biodegradation for Its Valorization. 2021 , 289-325	
393	Structural characterization of potassium hydroxide liquor lignin and its application in biorefinery. 1	2
392	Flow-through solvolysis enables production of native-like lignin from biomass. 2021 , 23, 5437-5441	4
391	Enhancing lignin depolymerization via a dithionite-assisted organosolv fractionation of birch sawdust. 2021 , 23, 3268-3276	3
390	Multifunctional lignin-based nanocomposites and nanohybrids. 2021 , 23, 6698-6760	25
389	Sequential oxidation-depolymerization strategies for lignin conversion to low molecular weight aromatic chemicals. 2021 , 77, 99-136	2
388	Controlled liginosulfonate depolymerization via solvothermal fragmentation coupled with catalytic hydrogenolysis/hydrogenation in a continuous flow reactor.	4
387	Effect of Heating Rate on Yields and Distribution of Oil Products from the Pyrolysis of Pubescen. 2018 , 6, 366-378	13
386	Biogene Produkte: Guter Geschmack aus Holz. 2020 , 68, 42-44	1
385	Ionic Liquids Based Processing of Renewable and Sustainable Biopolymers. 2020 , 181-207	6
384	Lignocellulosic Biomass for Energy, Biofuels, Biomaterials, and Chemicals. 2018 , 95-132	6
383	Production of Valerolactone from Biomass. 2017 , 413-436	1
382	Process Improvements and Techno-Economic Feasibility of Hydrothermal Liquefaction and Pyrolysis of Biomass for Biocrude Oil Production. 2020 , 221-248	1
381	Lignin valorization and cleavage of arylether bonds in chemical processing of wood: a mini-review. 2020 , 54, 787-820	7
380	Extraction and characterization of lignins from cashew apple bagasse obtained by different treatments. 2020 , 141, 105728	8
379	Exploring the role of lignin structure in molecular dynamics of lignin/bio-derived thermoplastic elastomer polyurethane blends. 2020 ,	55

378	Alkali-Based Pretreatment-Facilitated Lignin Valorization: A Review. 2020 , 59, 16923-16938	22
377	Uniformly ¹³ C Labeled Lignin Internal Standards for Quantitative Pyrolysis-GCMS Analysis of Grass and Wood. 2019 , 7, 20070-20076	14
376	Stabilization strategies in biomass depolymerization using chemical functionalization. 2020 , 4, 311-330	89
375	Rhodospiridium toruloides: A new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts.	1
374	HYDROGENATION OF ABIES WOOD AND ETHANOL-LIGNIN BY MOLECULAR HYDROGEN IN SUPERCRITICAL ETHANOL OVER BIFUNCTIONAL RU/C CATALYST. 2019 , 15-26	3
373	Lignin Metabolic Engineering in Grass Biomass Plants for Primary Lignin Valorization. 2020 , 74, 1067-1070	1
372	Lignin is a promising biomass resource. 2018 , 17, 125-141	12
371	Reductive Catalytic Fractionation of Flax Shive over Ru/C Catalysts. 2021 , 11, 42	9
370	Lignin for Bioeconomy: The Present and Future Role of Technical Lignin. 2020 , 22,	19
369	Transcriptome Analysis of White-Rot Fungi in Response to Lignocellulose or Lignocellulose-Derived Material Using RNA Sequencing Technology. 2020 , 11, 355-368	2
368	Incorporation of catechyl monomers into lignins: lignification from the non-phenolic end via Diels-Alder cycloaddition?. 2021 , 23, 8995-9013	1
367	Catalytic Conversion of Lignin to Liquid Fuels with an Improved H ₂ /Ceff Value over Bimetallic NiMo-MOF-Derived Catalysts. 2021 , 9, 13937-13952	4
366	Exploring the potential of ligninolytic armory for lignin valorization: A way forward for sustainable and cleaner production. 2021 , 326, 129420	7
365	Depolymerization of Technical Lignins in Supercritical Ethanol: Effects of Lignin Structure and Catalyst.	0
364	Efficient activation of H ₂ on copper species immobilized by MCM-41 for selective hydrogenation of furfural at ambient pressure. 2021 , 515, 111921	1
363	Production of oxalic acid from sawdust using coal fly ash as a catalyst. 2021 , 3, 1	1
362	The Effect of Lignin Composition on Ruminant Fiber Fractions Degradation from Different Roughage Sources in Water Buffalo (Bubalus bubalis). 2021 , 11, 1015	2
361	A renewable lignin-derived bio-oil for boosting the oxidation stability of biodiesel. 2022 , 182, 867-878	5

360	Design of Water-Tolerant Ni-Supported Nb ₂ O ₅ Nanorods for the Hydrotreating of Lignin Streams Obtained from Lignin-First Biorefining.	
359	Synthetic Metabolic Pathway for the Production of 1-Alkenes from Lignin-derived Molecules.	
358	Encyclopedia of Ionic Liquids. 2019 , 1-22	
357	Relationship of Phenolic Metabolism to Growth in Plant and Cell Cultures Under Stress. 2019 , 1-32	
356	Chapter 1:Introduction to Nanocatalysts. 2019 , 1-36	3
355	Hydrogenation of Abies Wood and Ethanol Lignin by Hydrogen in Supercritical Ethanol in the Presence of Bifunctional Catalyst Pt/ZrO ₂ 2019 , 550-561	2
354	ToF-SIMS imaging reveals that p-hydroxybenzoate groups specifically decorate the lignin of fibres in the xylem of poplar and willow. 2021 , 75, 452-462	4
353	Fruit pomace-lignin as a sustainable biopolymer for biomedical applications. 2021 , 328, 129498	5
352	Investigating (Pseudo)-Heterogeneous Pd-Catalysts for Kraft Lignin Depolymerization under Mild Aqueous Basic Conditions. 2021 , 11, 1311	0
351	From Lignin to Valuable Aromatic Chemicals: Lignin Depolymerization and Monomer Separation via Centrifugal Partition Chromatography. 2021 , 7, 1831-1837	4
350	Reductive Amination, Hydrogenation and Hydrodeoxygenation of 5-Hydroxymethylfurfural using Silica-supported Cobalt- Nanoparticles.	0
349	Oxidative Depolymerization of Alkaline Lignin from Pinus Pinaster by Oxygen and Air for Value-Added Bio-Sourced Synthons. 2021 , 13,	1
348	Regulating lignin content to obtain excellent bamboo-derived electromagnetic wave absorber with thermal stability. 2021 , 430, 133178	7
347	Relationship of Phenolic Metabolism to Growth in Plant and Cell Cultures Under Stress. 2021 , 837-868	0
346	Sustainable production of succinic acid and 3-hydroxypropionic acid from renewable feedstocks. 2022 , 367-386	0
345	Lignin: value addition is key to profitable biomass biorefinery. 2022 , 233-247	0
344	Plant Cell Manipulation Technology for Biorefinery. 2020 , 461-490	
343	Biomassa lignocelulósica: estrutura e composição. 2020 , 9-30	

- 342 Applications of Lignin in the Agri-Food Industry. **2020**, 275-298 0
- 341 Aproveitamento de ligninas: o papel da catálise nas etapas iniciais do refino de materiais lignocelulósicos. **2020**, 149-180
- 340 Active role of lignin in anchoring wood-based stabilizers to the emulsion interface. 2
- 339 Ionic liquids screening for lignin dissolution: COSMO-RS simulations and experimental characterization. **2021**, 348, 118007 1
- 338 Comprehensive Review on Silicon-enhanced Green Nanocomposites Towards Sustainable Development. 1
- 337 Cleavage via Selective Catalytic Oxidation of Lignin or Lignin Model Compounds into Functional Chemicals. **2021**, 5, 74
- 336 Depolymerization and Demethylation of Kraft Lignin in Molten Salt Hydrate and Applications as an Antioxidant and Metal Ion Scavenger. **2021**, 69, 13568-13577 3
- 335 Differences in the content, composition and structure of the lignins from rind and pith of papyrus (*Cyperus papyrus* L.) culms. **2021**, 174, 114226 1
- 334 Z-Scheme nanocomposite with high redox ability for efficient cleavage of lignin C₁ bonds under simulated solar light. 1
- 333 Lignocellulosic biomass and its potential derivative products. **2022**, 79-120 0
- 332 Ligninolytic enzymes: a promising tools for bioremediation of waste water. **2022**, 221-242 0
- 331 Micromorphology control of the lignin-based activated carbon and the study on the pyrolysis and adsorption kinetics. **2022**, 175, 114266 1
- 330 Reductive Catalytic Fractionation of Lignocellulosic Biomass: A New Promising Method of its Integrated Processing. **2021**, 21, 425-443
- 329 Lignin-Assisted Water Electrolysis for Energy-Saving Hydrogen Production With Ti/PbO₂ as the Anode. **2021**, 9, 0
- 328 Superhydrophobic aerogel membrane with integrated functions of biopolymers for efficient oil/water separation. **2021**, 282, 120138 6
- 327 Fractionation of Birch Wood by Integrating Alkaline-Acid Treatments and Hydrogenation in Ethanol over a Bifunctional Ruthenium Catalyst. **2021**, 11, 1362 4
- 326 Alkaline aerobic oxidation of native softwood lignin in the presence of Na⁺-cyclic polyether complexes. 1-14
- 325 Monitoring Molecular Weight Changes during Technical Lignin Depolymerization by Operando Attenuated Total Reflectance Infrared Spectroscopy and Chemometrics. **2021**, 14, 5517 1

324	Effects of P-Coumarate 3-Hydroxylase Downregulation on the Compositional and Structural Characteristics of Lignin and Hemicelluloses in Poplar Wood (). 2021 , 9, 790539	0
323	Laboratory simulation and mechanical performance of asphalt materials under the action of saline. 2021 , 313, 125387	0
322	Guiding stars to the field of dreams: Metabolically engineered pathways and microbial platforms for a sustainable lignin-based industry. 2021 ,	2
321	Urchin-like Nb ₂ O ₅ hollow microspheres enabling efficient and selective photocatalytic C _α bond cleavage in lignin models under ambient conditions. 2021 ,	0
320	Strikingly high amount of tricin-lignin observed from vanilla (<i>Vanilla planifolia</i>) aerial roots.	2
319	Organic amine mediated cleavage of C-C bonds in lignin and its platform molecules.. 2021 , 12, 15110-15115	0
318	Lignin-derived materials and their applications in rechargeable batteries.	7
317	Identification and quantification of lignin monomers and oligomers from reductive catalytic fractionation of pine wood with GC GC FID/MS. 2022 , 24, 191-206	9
316	Ultrafast fractionation of wild-type and CSE down-regulated poplars by microwave-assisted deep eutectic solvents (DES) for cellulose bioconversion enhancement and lignin nanoparticles fabrication. 2022 , 176, 114275	1
315	Structural analysis of light-colored separated lignin (lignocresol) and its antioxidant properties.. 2021 , 197, 169-169	4
314	Experimental and theoretical study on the catalytic degradation of lignin by temperature-responsive deep eutectic solvents. 2022 , 177, 114430	2
313	Mild hydrodeoxygenation of lignin-derived bio-oils to hydrocarbons over bifunctional ZrP ₂ O ₇ -Ni ₁₂ P ₅ catalysts. 2022 , 313, 123044	3
312	Ethanol organosolv lignin from different agricultural residues: Toward basic structural units and antioxidant activity.. 2021 , 376, 131895	6
311	Comprehensive approach of methods for microstructural analysis and analytical tools in lignocellulosic biomass assessment - A Review.. 2021 , 126627	1
310	Photocatalytic Biomass Transformation into Valuable Products. 2022 , 243-265	
309	Microlignin. 2022 , 1-23	
308	Selective Degradation of Lignosulfonate and Lignin with Periodate to 5-Iodovanillin. 2100391	1
307	Toward a Fundamental Understanding of the Role of Lignin in the Biorefinery Process. 9,	2

306	Exergoeconomic analysis of Kraft Lignin oxidative depolymerization in a biorefinery. 2022 , 76, 2317		
305	Carbohydrate-aromatic interface and molecular architecture of lignocellulose.. 2022 , 13, 538		2
304	Synthesis of phenol from degraded lignin using synergistic effect of iron-oxide based catalysts: Oxidative cracking ability and acid-base properties. 2022 ,		
303	Research Progress of Niobium-Based Catalysts in the Depolymerization of Lignin. 2022 , 10, 6-12		0
302	Lignin-First Monomers to Catechol: Rational Cleavage of C-O and C-C Bonds over Zeolites.. 2021 ,		2
301	Dynamic control systems that mimic natural regulation of catabolic pathways enable rapid production of lignocellulose-derived bioproducts.		0
300	Depolymerization of Lignin via a Microscopic Reverse Biosynthesis Pathway. 2532-2539		0
299	A recent advancement on preparation, characterization and application of nanolignin.. 2022 , 200, 303-326		6
298	From acetone fractionation to lignin-based phenolic and polyurethane resins. 2022 , 178, 114604		2
297	Selective cleavage of C-O bond in lignin and lignin model compounds over iron/nitrogen co-doped carbon supported Ni catalyst. 2022 , 316, 123338		0
296	Catalytic transformation of biomass-based feedstocks in green solvents. 2022 , 673-720		
295	Toward low-cost biological and hybrid biological/catalytic conversion of cellulosic biomass to fuels.		7
294	Promoted Production of Phenolic Monomers from Lignin-First Depolymerization of Lignocellulose over Ru Supported on Biochar by N,P-co-Doping.		2
293	A review on organosolv pretreatment of softwood with a focus on enzymatic hydrolysis of cellulose. 1		3
292	Radical generation and fate control for photocatalytic biomass conversion.		4
291	Green Carbon Science: Efficient Carbon Resource Processing, Utilization, and Recycling towards Carbon Neutrality.		0
290	Green Carbon Science: Efficient Carbon Resource Processing, Utilization, and Recycling Towards Carbon Neutrality.. <i>Angewandte Chemie - International Edition</i> , 2021 ,	16.4	13
289	Ligninolytic Fungi from the Indian Subcontinent and Their Contribution to Enzyme Biotechnology. 2021 , 139-184		0

288	Environmentally sustainable, high-performance lignin-derived universal adhesive. 2022 , 24, 2624-2635	2
287	Integrating lignin depolymerization with microbial funneling processes using agronomically relevant feedstocks. 2022 , 24, 2795-2811	0
286	Hydrothermal Liquefaction (HTL) of Kraft Lignin (KL) Recovered from Lignocellulosic Biomass: State of the Art. 2022 , 267-292	
285	Construction of biocatalytic cascades for the synthesis of benzylisoquinoline alkaloids from p-coumaric acid derivatives and dopamine.	0
284	Processing of lignocellulosic polymer wastes using microwave irradiation. 2022 , 32, 1-8	0
283	Lignin synthesis and bioengineering approaches toward lignin modification. 2022 ,	0
282	Plasma technology for lignocellulosic biomass conversion toward an electrified biorefinery. 2022 , 24, 2680-2721	1
281	Chemicals from lignin by diol-stabilized acidolysis: reaction pathways and kinetics.	3
280	Recovery of low molecular weight compounds from alkaline pretreatment liquor via membrane separations.	0
279	Lignin-based materials for electrochemical energy storage devices. 2022 ,	1
278	In-Depth Identification of Phenolics Fractionated from Eucalyptus Kraft Lignin. 2100406	1
277	Critical enzyme reactions in aromatic catabolism for microbial lignin conversion. 2022 , 5, 86-98	3
276	Microwave-Assisted Conversion of Carbohydrates.. 2022 , 27,	0
275	Waste-to-Fuel Approach: Valorization of Lignin from Coconut Coir Pith.	0
274	Microwave-Assisted Lignin Wet Peroxide Oxidation to C4 Dicarboxylic Acids. 2022 , 61, 3570-3581	0
273	Lignin-inspired Polybenzylethersulfone Synthesis via S N Ar Reaction. 2100484	
272	Manipulation of Lignin Monomer Composition Combined with the Introduction of Monolignol Conjugate Biosynthesis Leads to Synergistic Changes in Lignin Structure.. 2022 ,	0
271	The Critical Role of Process Analysis in Chemical Recycling and Upcycling of Waste Plastics.. 2022 ,	10

270	Trends in Lignin Biotransformations for Bio-Based Products and Energy Applications. 1	2
269	Nickel-catalyzed Csp ² -OMe functionalization for chemoselective aromatic homologation en route to nanographenes.. 2022,	2
268	Elucidating the role of NiMoS-USY during the hydrotreatment of Kraft lignin. 2022, 136216	1
267	Hydrogenolysis Cleavage of the Csp ² -Csp ³ Bond over a Metal-Free NbOPO ₄ Catalyst. 4806-4812	0
266	A synergistic hydrothermal-deep eutectic solvents (DES) pretreatment for acquiring xylooligosaccharides and lignin nanoparticles from Eucommia ulmoides wood.. 2022, 209, 188-197	0
265	Tuning the properties of pH-responsive lignin-based hydrogels by regulating hydroxyl content. 2022, 643, 128815	0
264	Integrating bio-oil and carbohydrate valorization on the fractionation of sugarcane bagasse via Organosolv process using Mo ₂ C-based catalysts. 2022, 230, 107208	0
263	Organosolv fractionation of a lignocellulosic biomass feedstock using a pilot scale microwave-heating reactor. 2022, 180, 114700	0
262	Role of solvent in enhancing the production of butyl levulinate from fructose. 2022, 318, 123703	1
261	Tuning the mesopore size of lignin-based porous carbon via salt templating for kraft lignin decomposition. 2022, 181, 114865	0
260	Rapid adsorption of dyes from aqueous solutions by modified lignin derived superparamagnetic composites. 2022, 1261, 132954	2
259	pHBMT1, a BAHD-family monolignol acyltransferase, mediates lignin acylation in poplar.. 2021,	0
258	Production of Jet Fuel Precursors from Waste Kraft Lignin with a Complex Copper Acid Catalyst. 2022, 10, 495-507	2
257	Multilayer two-dimensional lignin/ZnO composites with excellent anti-UV aging properties for polymer films. 2021,	0
256	Holistic Valorization of Hemp through Reductive Catalytic Fractionation.. 2021, 9, 17207-17213	1
255	Deficiency in flavonoid biosynthesis genes CHS, CHI, and CHIL alters rice flavonoid and lignin profiles.. 2021,	0
254	Genome-Wide Identification and Characterization of Gene Family in Soybean.. 2021, 10,	2
253	Graphitized Biocarbon Derived from Hydrothermally Liquefied Low-Ash Corn Stover. 2022, 61, 392-402	0

252	Effect of the phenyl substituent's position on the encapsulation of porphyrins inside lignin nanoparticles: Photophysical and antibacterial properties.	
251	Effective pretreatment of lignin-rich coconut wastes using a low-cost ionic liquid.. 2022 , 12, 6108	2
250	NbO-Based Catalysts for the Activation of C-O and C-C Bonds in the Valorization of Waste Carbon Resources.. 2022 ,	0
249	Advances in value-added aromatics by oxidation of lignin with transition metal complexes. 1	1
248	Lignin-first biorefinery of corn stalk via zirconium(IV) chloride/sodium hydroxide-catalyzed aerobic oxidation to produce phenolic carbonyls.. 2022 , 127183	1
247	Online Investigation of Lignin Depolymerization via Reactor-integrated Electrospray Ionization High-resolution Mass Spectrometry. 2022 , 100069	0
246	Sustainable production of lignin-derived porous carbons for high-voltage electrochemical capacitors. 2022 , 255, 117672	2
245	Sustainable production of methanol from one-pot catalytic conversion of cellulose over non-precious copper-based catalysts. 2022 , 322, 123882	1
244	Data_Sheet_1.PDF. 2018 ,	
243	Data_Sheet_1.DOCX. 2020 ,	
242	Image_1.JPEG. 2019 ,	
241	Image_2.JPEG. 2019 ,	
240	Image_3.JPEG. 2019 ,	
239	Table_1.XLSX. 2019 ,	
238	Table_2.XLSX. 2019 ,	
237	Table_3.XLSX. 2019 ,	
236	Table_4.XLSX. 2019 ,	
235	Data_Sheet_1.xlsx. 2020 ,	

234	Table_1.pdf. 2019,	
233	From residue to resource: new insights into the synthesis of functionalized lignin micro/nanospheres by self-assembly technology for waste resource utilization.	0
232	Facile preparation of N-doped graphitic carbon encapsulated nickel catalysts for transfer hydrogenolysis of lignin ED-4 model compounds to aromatics.	1
231	LIGNIN VALORIZATION PROBLEMS. 2022, 11-33	1
230	Copper Clusters Encapsulated in Carbonaceous Mesoporous Silica Nanospheres for the Valorization of Biomass-Derived Molecules. 2022, 12, 5711-5725	0
229	Technology overview of fast pyrolysis of lignin: current state and potential for scale-up.. 2022,	0
228	Catalytic Complete Cleavage of C _D and C _T Bonds in Biomass to Natural Gas over Ru(0). 2022, 12, 5549-5558	0
227	Ultrastructural elucidation of lignin macromolecule from different growth stages of Chinese pine.. 2022,	0
226	An overview of lignin pathways of valorization: from isolation to refining and conversion into value-added products. 1	1
225	Lignocellulosic biomass analysis: acidic lignin recovery, characterisation, and depolymerisation. 1	0
224	Sustainable Production of Bioactive Molecules from C-Lignin-derived Propenylcatechol.. 2022,	0
223	Technoeconomic evaluation of recent process improvements in production of sugar and high-value lignin co-products via two-stage Cu-catalyzed alkaline-oxidative pretreatment.. 2022, 15, 45	0
222	Tuning lignin properties by mild ionic-liquid-mediated selective alcohol incorporation. 2022,	3
221	A review on lignin antioxidants: Their sources, isolations, antioxidant activities and various applications.. 2022,	9
220	Antimicrobial Potential of Conjugated Lignin/Morin/Chitosan Combinations as a Function of System Complexity. 2022, 11, 650	1
219	Engineering Pseudomonas putida for improved utilization of syringyl aromatics.. 2022,	0
218	Some recent developments in valorization of chitosan to a valuable platform chemical, 5-HMF: A short review. 2022,	
217	Carbon-Based Nanocatalysts (CnCs) for Biomass Valorization and Hazardous Organics Remediation. 2022, 12, 1679	1

216	Valorization potential of technical lignins from Norway spruce (<i>Picea abies</i>) via pyrolysis. 2022 , 105549	0
215	Development of an eco-friendly acetosolv protocol for tuning the acetylation of coconut shell lignin: Structural, antioxidant, solubility and UV-blocking properties.. 2022 , 211, 271-280	0
214	Catalytic Conversion of High S-Lignin to a Sustainable Tri-epoxide Polymer Precursor.	0
213	Sustainable Green Methods for the Extraction of Biopolymers. 2022 , 73-110	1
212	Producing Value-added Products from Organic Solid Wastes with Mechanochemical Processes. 2022 , 317-338	
211	The Use of GVL for Holistic Valorization of Biomass. 2022 , 107849	0
210	Efficient sugar production from plant biomass: Current status, challenges, and future directions. 2022 , 164, 112583	2
209	Complete Utilization of Waste Lignin: Preparation of Lignin-derived Carbon Supports and Conversion of Lignin-derived Guaiacol to Nylon Precursors.	0
208	Integrated Chemical and Biological Process for Production of 100% Lignocellulose-Based Nylons.	
207	Investigation into the Correlation between the Chemical Structure of Lignin and its Temperature-Dependent Pyrolytic Product Evolution.	
206	Discovery, characterization, and metabolic engineering of Rieske non-heme iron monooxygenases for guaiacol O-demethylation. 2022 ,	2
205	Enhanced Catalytic Depolymerization of a Kraft Lignin by a Mechanochemical Approach.	1
204	Bacterial conversion routes for lignin valorization. 2022 , 108000	2
203	Oxidative delignification: The roles of lignin reactivity and accessibility. 2022 , 363, 132351	1
202	Fast pyrolysis of guaiacyl-syringyl (GS) type milled wood lignin: Product characteristics and CH ₄ formation mechanism study. 2022 , 838, 156395	1
201	Enhancing Etherification of lignin in Eucalyptus diol pretreatment to improve lignin monomer production. 2022 , 185, 115130	0
200	Striding the threshold of photocatalytic lignin-first biorefinery via a bottom-up approach: From model compounds to realistic lignin.	3
199	Lignin Fungal Depolymerization: From Substrate Characterization to Oligomers Valorization. 2022 , 329-391	

- 198 Lignin biorefinery: Lignin source, isolation, characterization, and bioconversion. **2022**,
- 197 Depolymerization of Lignin by Homogeneous Photocatalysis. **2022**, 1537-1562
- 196 A Value-Added Utilization Method of Sugar Production By-Products from Rice Straw: Extraction of Lignin and Evaluation of Its Antioxidant Activity. **2022**, 10, 1210 0
- 195 Reductive Catalytic Fractionation of Lignocellulosic Biomass: A New Promising Method for Its Complex Processing. **2022**, 14, 231-250 1
- 194 Looking into the world's largest elephant population in search of ligninolytic microorganisms for biorefineries: a mini-review. **2022**, 15,
- 193 Metal/acid bifunctional catalysts for the reductive catalytic fractionation of lignocellulose into phenols and holocellulose. **2022**, 108085 0
- 192 Degradation of Lignin by Infrared Free Electron Laser. **2022**, 14, 2401 2
- 191 Porphyrin-loaded acetylated lignin nanoparticles as a remarkable biomarker emitting in the first optical window.
- 190 Beta zeolite as an efficient catalyst for the synthesis of diphenolic acid (DPA) from renewable levulinic acid. **2022**, 1 1
- 189 Solvent Effect in Catalytic Lignin Hydrogenolysis. **2022**, 12, 664 0
- 188 Selective Interactions of Soil Organic Matter Compounds with Calcite and the Role of Aqueous Ca.
- 187 Single-Site Mutation Induces Water-Mediated Promiscuity in Lignin Breaking Cytochrome P450GcoA. **2022**, 7, 21109-21118 1
- 186 Systems biology-guided understanding of white-rot fungi for biotechnological applications: a review. **2022**, 104640 3
- 185 Systematic review on lignin valorization in the agro-food system: From sources to applications. **2022**, 317, 115258 2
- 184 Selective Demethoxylation of Guaiacols to Phenols using Supported MoO₃ Catalysts. 0
- 183 Transition-metal-free synthesis of pyrimidines from lignin EO-4 segments via a one-pot multi-component reaction. **2022**, 13, 2
- 182 Molecular Engineering of Biorefining Lignin Waste for Solid-State Electrolyte. **2022**, 10, 8704-8714 0
- 181 Preparation and properties of lignin-based carbon/ZnO photocatalytic materials.

180	Depolymerisation of kraft lignin to obtain high value-added products: antioxidants and UV absorbers. 2022 ,	2
179	Roles of metal and acid sites in the reductive depolymerization of concentrated lignin over supported Pd catalysts. 2022 ,	1
178	Spatio-Temporal Modification of Lignin Biosynthesis in Plants: A Promising Strategy for Lignocellulose Improvement and Lignin Valorization. 10,	0
177	Multi-pass flow-through reductive catalytic fractionation. 2022 ,	0
176	Recent advances research and application of lignin-based fluorescent probes. 2022 , 105354	1
175	Recent developments in lignin modification and its application in lignin-based green composites: A review.	4
174	Field and saccharification performances of poplars severely downregulated in CAD1 .	1
173	A new insight of lignin pyrolysis characteristics based on dehydrogenation polymers (DHPs). 2022 , 236, 107397	0
172	LigninGraphs: lignin structure determination with multiscale graph modeling. 2022 , 14,	0
171	Catalytic conversion of lignocellulosic biomass into chemicals and fuels. 2022 ,	4
170	Transition-Metal-Free Synthesis of Functionalized Quinolines by Direct Conversion of E0-4 Linkages.	
169	Transition-Metal-Free Synthesis of Functionalized Quinolines by Direct Conversion of E0-4 Linkages. <i>Angewandte Chemie - International Edition</i> ,	16.4 0
168	Hydrogenation of Lignin-Derived Feedstocks and Bio-oil using Active and Stable Ruthenium Catalyst. 2022 ,	
167	High-Throughput Computational Solvent Screening for Lignocellulosic Biomass Processing.	
166	Thermochemical and Catalytic Conversion of Lignin. 2022 , 133-200	
165	Recent advances in epoxy resins and composites derived from lignin and related bio-oils. 2022 , 100687	0
164	Rational highly dispersed ruthenium for reductive catalytic fractionation of lignocellulose. 2022 , 13,	3
163	Multiscale Molecular Simulation Strategies for Understanding the Delignification Mechanism of Biomass in Cyrene. 2022 , 10, 11016-11029	0

162	Simultaneous Generation of Methyl Esters and CO in Lignin Transformation.	0
161	Simultaneous Generation of Methyl Esters and CO in Lignin Transformation.	0
160	On the oxidative valorization of lignin to high-value chemicals: A critical review of opportunities and challenges.	2
159	Valorization of Lignin from Biorefinery: Colloidal Lignin Micro-Nanospheres as Multifunctional Bio-Based Fillers for Waterborne Wood Coating Enhancement.	1
158	Lignin-Based Water-Soluble Polymers Exhibiting Biodegradability and Activity as Flocculating Agents.	0
157	Slurry Hydroconversion of Solid Kraft Lignin to Liquid Products Using Molybdenum- and Iron-Based Catalysts.	0
156	The temptation from homogeneous linear catechyl lignin. 2022 ,	1
155	Fractionation of Lignocellulosic Fibrous Straw Digestate by Combined Hydrothermal and Enzymatic Treatment. 2022 , 15, 6111	0
154	Vacuum Low-Temperature Microwave-Assisted Pyrolysis of Technical Lignins. 2022 , 14, 3383	0
153	Thermochemical depolymerization of lignin: Process analysis with state-of-the-art soft ionization mass spectrometry. 4,	0
152	Breaking C-C Bonds and Preserving C-O Bonds in Aromatic Plastics and Lignin via a Reversing Bond Energy Cleavage Strategy. 10690-10699	0
151	Deciphering the nonlinear variation of subunits during the delignification of bamboo. 2022 , 121, 413-424	0
150	Computational simulation and energy storage performance of lignin monomers as electrolytes for flow batteries. 2022 , 187, 115431	1
149	A sustainable and environmental benign catalytic process for the production of valuable flavors and fragrances from lignin platform chemicals. 2022 , 187, 115460	0
148	Highly porous and conductive functional carbon fibers from electrospun phosphorus-containing lignin fibers. 2022 , 200, 134-148	0
147	Unleashing lignin potential through the dithionite-assisted organosolv fractionation of lignocellulosic biomass. 2022 , 450, 138179	1
146	Biocatalyst and continuous microfluidic reactor for an intensified production of n-butyl levulinate: Kinetic model assessment. 2023 , 451, 138541	0
145	Fabrication of Z-scheme CdS/H5PMo10V2O40/g-C3N4 for the photocatalytic depolymerization of lignin into aromatic monomers. 2022 , 238, 107481	1

144	Lignin-derived carbon-supported MoCBeNi heterostructure as efficient electrocatalysts for oxygen evolution reaction. 2023 , 629, 822-831	1
143	Structural properties and antioxidation activities of lignins isolated from sequential two-step formosolv fractionation. 2022 , 12, 24242-24251	1
142	Electro-oxidative depolymerization of lignin for production of value-added chemicals.	1
141	Mystifications and Misconceptions of Lignin: Revisiting Understandings.	0
140	One-pot conversion of engineered poplar into biochemicals and biofuels using biocompatible deep eutectic solvents.	0
139	Chemical Reactions in Ionic Liquids. 2022 , 1-9	0
138	Biochemical Conversion of Lignin. 2022 , 85-105	0
137	Extraction of monophenols and fractionation of depolymerized lignin oil with nanofiltration membranes. 2023 , 452, 139418	0
136	High-throughput computational solvent screening for lignocellulosic biomass processing. 2023 , 452, 139476	0
135	Lignin-first biorefining of Nordic poplar to produce cellulose fibers could displace cotton production on agricultural lands. 2022 , 6, 1845-1858	1
134	Novel method for extraction of lignin from <i>Pinus roxburghii</i> (PR) needles and its application for antimicrobial lignin-silver composite synthesis. 2022 ,	0
133	Scientific Questions for Lignin Conversion and a Brief Summary of Methods for Lignin Depolymerization. 2022 , 79-130	0
132	Recent Advancements and Challenges in Lignin Valorization: Green Routes towards Sustainable Bioproducts. 2022 , 27, 6055	0
131	Biobased Polymer Composites: A Review. 2022 , 6, 255	4
130	Metabolic engineering of p-hydroxybenzoate in poplar lignin.	2
129	The Effect of Acidic Ternary Deep Eutectic Solvent Treatment on Native Lignin. 2022 , 10, 12569-12579	0
128	Developing <i>Rhodococcus opacus</i> and <i>Sphingobium</i> sp. coculture systems for valorization of lignin-derived dimers.	0
127	Molybdenum Carbide Anchored on N,S Co-Doped Carbon Composite Derived from Lignosulfonate as a High Performance Electrocatalyst for Hydrogen Evolution Reaction. 2022 , 12, 3047	0

126	Combinations of mild chemical and bacterial pretreatment for improving enzymatic saccharification of corn stover. 2022 , 36, 598-608	0
125	Summary on Lignin Utilization and Perspectives on Preparation of Aromatic Chemicals. 2022 , 409-438	0
124	Pyrolysis of pistachio shell, orange peel and saffron petals for bioenergy production. 2022 , 19, 101209	1
123	Lignocellulose molecular assembly and deconstruction properties of lignin-altered rice mutants.	0
122	Energy-resolved mass spectrometry as a tool for identification of lignin depolymerization products.	1
121	Lignin-based nanomaterials as drug delivery vehicles: A review. 2022 ,	0
120	Lignin alkaline oxidation using reversibly-soluble bases.	1
119	Lignin for energy applications [State of the art, life cycle, techno-economic analysis and future trends. 2022 , 24, 8193-8226	1
118	Molecular structural dataset of lignin macromolecule elucidating experimental structural compositions. 2022 , 9,	0
117	Lignin: A Sustainable Antiviral Coating Material. 2022 , 10, 14001-14010	3
116	From Lignin to Chemicals: An Expedition from Classical to Modern Catalytic Valorization Technologies. 2022 , 94, 1611-1627	0
115	A review on lignin pyrolysis: pyrolytic behavior, mechanism, and relevant upgrading for improving process efficiency. 2022 , 15,	0
114	Polymers without Petrochemicals: Sustainable Routes to Conventional Monomers.	3
113	Hydrodeoxygenation of lignin biophenolics to cyclohexanes over sub-nanometric Ru multifunctional catalyst. 2022 ,	0
112	Preparation of activated lignin with high hydroxyl content using lewis acid as demethylation reagent. 2022 ,	0
111	Creative biological lignin conversion routes toward lignin valorization. 2022 ,	2
110	The regulation of plant lignin biosynthesis under boron deficiency conditions.	0
109	Exploring the compatibility between hydrothermal depolymerization of alkaline lignin from sugarcane bagasse and metabolization of the aromatics by bacteria. 2022 ,	0

- 108 Catalytic oxidation of native lignin to phenolic monomers: Insight into aldehydes formation and stabilization. **2022**, 172, 106532 ○
- 107 Valorization of carbonaceous waste into graphene materials and their potential application in water & wastewater treatment: a review. **2022**, 26, 101192 1
- 106 Understanding sulfonated kraft lignin re-polymerization by ultrafast reactions in supercritical water. **2022**, 191, 105768 ○
- 105 Extracting high β -D-4 content lignin and by-producing substrate susceptible to enzymatic hydrolysis by a green flow through process. **2023**, 453, 139730 ○
- 104 Efficient O-demethylation of lignin monoaromatics using the peroxygenase activity of cytochrome P450 enzymes. ○
- 103 Catalytic hydrodeoxygenation of corn cob and pinus bark derived lignin into hydrocarbons and phenols using Ru@CNF with mechanistic details. ○
- 102 Boosting the Catalytic Activity and Stability of Ru Metal Clusters in Hydrodeoxygenation of Guaiacol through MWW Zeolite Pore Constraints. 14717-14726 ○
- 101 Critical evaluation of novel applications of aquatic weed Azolla as sustainable feedstock for deriving bioenergy and feed supplement. ○
- 100 Acylation of phenols to phenolic esters with organic salts. **2022**, 24, 9763-9771 ○
- 99 Solvent Effect on the Production of Spherical Lignin Nanoparticles. ○
- 98 Recent advances in the development of green furan ring-containing polymeric materials based on renewable plant biomass. ○
- 97 The selective hydrodeoxygenation of guaiacol to cyclohexanol over cobalt-modified TS-1 catalysts. **2023**, 348, 112347 ○
- 96 Catalytic modification of corn straw facilitates the remediation of Cd contaminated water and soil. **2023**, 445, 130582 ○
- 95 New Parameters to Model Microwave-Assisted Deep Eutectic Solvent Extraction of Lignin Using Analytical Pyrolysis GC/MS. **2022**, 10, 15660-15669 ○
- 94 A sustainable process to 100% bio-based nylons integrated chemical and biological conversion of lignocellulose. **2022**, ○
- 93 Phenol-assisted depolymerisation of condensed lignins to mono-/poly-phenols and bisphenols. **2022**, 140628 ○
- 92 An investigation of the factors controlling the chemical structures of lignin dehydrogenation polymers. **2022**, ○
- 91 Selective Photocatalytic Transformation of Lignin to Aromatic Chemicals by Crystalline Carbon Nitride in Water/Acetonitrile Solutions. **2022**, 19, 15707 ○

- 90 Heterogeneous Iron-Catalyzed Aerobic Oxidative Cleavage of C_T Bonds in Alcohols to Esters. **2022**, 10, 16527-16537 ○
- 89 Boosting Capacity Performance of Bio-Waste Lignin-Derived Hierarchical Porous Carbon with Self-Doped Oxygen-Heteroatoms. **2022**, 8, 286 ○
- 88 Simple lignin-based, light-driven shape memory polymers with excellent mechanical properties and wide range of glass transition temperatures. **2022**, ○
- 87 Degradation of Lignosulfonate to Vanillic Acid Using Ferrate. 2200431 ○
- 86 Cyclic synthesis of lignin anthraquinone electrolytes for aqueous redox flow batteries. **2022**, ○
- 85 Structure and Properties of Lignin Extracted from Cotton Stalk by Non-polluting Ethanol-Assisted Hot Water Pretreatment and its High-Value Utilization for Methylene Blue Removal. ○
- 84 Reductive Catalytic Fractionation of Lignocellulosic Biomass: Unveiling of the Reaction Mechanism. ○
- 83 Mechanistic insights into the photocatalytic valorization of lignin models via C_D/C_T cleavage or C_T/C_N coupling. **2022**, 100470 ○
- 82 Zeolitic Imidazolate Framework Decorated Molybdenum Carbide Catalysts for Hydrodeoxygenation of Guaiacol to Phenol. **2022**, 12, 1605 1
- 81 Lignin Stabilization and Carbohydrate Nature in H-transfer Reductive Catalytic Fractionation: The Role of Solvent Fractionation of Lignin Oil in Structural Profiling**. ○
- 80 Organosolv Lignin as a Green Sizing Agent for Thermoformed Pulp Products. **2022**, 7, 46583-46593 ○
- 79 Single-Standard Quantification Strategy for Lignin Dimers by Supercritical Fluid Chromatography with Charged Aerosol Detection. ○
- 78 Efficient Fractionation and Valorization of Raw Biomass in ε-Caprolactone and Water. ○
- 77 High-strength hydrogels: Fabrication, reinforcement mechanisms, and applications. 1
- 76 Thymol Edible Coating Controls Postharvest Anthracnose by Regulating the Synthesis Pathway of Okra Lignin. **2023**, 12, 395 ○
- 75 Multiscale molecular simulations for the solvation of lignin in ionic liquids. **2023**, 13, ○
- 74 Selective Electrochemical Degradation of Lignosulfonate to Bio-Based Aldehydes. ○
- 73 Tailoring the Electronic Ru-Al₂O₃ Interaction to Regulate Reaction Barriers for Selective Hydrogenolysis of Aromatic Ether. ○

72	Metabolite profiling and transcriptome analyses provide insight into the regulatory network of graft incompatibility in litchi. 13,	0
71	Electrochemical oxidation of lignin for the simultaneous production of bioadhesive precursors and value-added chemicals. 2023 , 169, 106693	0
70	Thermoplastic and biodegradable sugarcane lignin-based biocomposites prepared via a wholly solvent-free method. 2023 , 386, 135834	1
69	Fabrication of ultraviolet resistant and anti-bacterial non-isocyanate polyurethanes using the oligomers from the reductive catalytic fractionated lignin oil. 2023 , 193, 116213	0
68	Depolymerization of technical lignin to valuable platform aromatics in lower alcohol without added catalyst and external hydrogen. 2023 , 242, 107637	1
67	Kinetic and thermodynamic compensation phenomena in C3 and C4 energy crops pyrolysis: Implications on reaction mechanisms and product distributions. 2023 , 194, 116275	0
66	Molybdenum carbide, supercritical ethanol and base: Keys for unlocking renewable BTEX from lignin. 2023 , 325, 122351	0
65	Fractionation and Absolute Molecular Weight Determination of Organosolv Lignin and Its Fractions: Analysis by a Novel Acetone-Based SEC-MALS Method. 2023 , 11, 766-776	1
64	Valorization of Lignin under Mild Conditions: Biorefining Flavonoids and Lignin Nanoparticles. 2023 , 11, 491-501	0
63	New insights into the base catalyzed depolymerization of technical lignins: a systematic comparison. 2023 , 13, 4898-4909	0
62	Lignin and metal-organic frameworks: mutual partners on the road to sustainability. 2023 , 11, 2595-2617	1
61	Peroxod carbonate as a Green Oxidizer for the Selective Degradation of Kraft Lignin into Vanillin.	0
60	Peroxod carbonate as a Green Oxidizer for the Selective Degradation of Kraft Lignin into Vanillin.	0
59	Flow-through reductive catalytic fractionation of beech wood sawdust.	0
58	Alexandrian Cut in Downstream Lignin Valorization to Yield Novel Plasticizers.	0
57	Ni- and Ni/Pd-Catalyzed Reductive Coupling of Lignin-Derived Aromatics to Access Biobased Plasticizers.	0
56	Streptomyces spp. as biocatalyst sources in pulp and paper and textile industries: Biodegradation, bioconversion and valorization of waste.	0
55	Valorization of lignin through reductive catalytic fractionation of fermented corn stover residues. 2023 , 373, 128752	0

- 54 Characterization and 3D printing of a biodegradable polylactic acid/thermoplastic polyurethane blend with laccase-modified lignin as a nucleating agent. **2023**, 236, 123881 ○
- 53 State-of-the-art and future directions of machine learning for biomass characterization and for sustainable biorefinery. **2023**, 81, 42-63 ○
- 52 Microwave-assisted catalytic transfer hydrogenolysis of lignin-derived aromatic ethers over Ru/C. **2023**, 542, 113082 ○
- 51 Discovery, disassembly, depolymerization and derivatization of catechyl lignin in Chinese tallow seed coats. **2023**, 239, 124256 ○
- 50 Depolymerization of enzymatic hydrolysis lignin: Review of technologies and opportunities for research. **2023**, 342, 127796 ○
- 49 Mild isolation and characterization of surface lignin from hydrothermally pretreated lignocellulosic forestry and agro-industrial waste biomass. **2023**, 33, 101056 ○
- 48 Selective value-added conversion of lignin derivatives over heterogeneous catalysts of TEMPO-functionalized metal-organic frameworks. **2023**, 11, 109700 ○
- 47 Recent advances in transforming agricultural biorefinery lignins into value-added products. **2023**, 12, 100545 ○
- 46 Flower-like bismuth oxycarbonate-mediated selective oxidative cleavage of C α bond in the presence of molecular oxygen. **2023**, 22, 100380 ○
- 45 Construction of triazine-heptazine-based carbon nitride heterojunctions boosts the selective photocatalytic C α bond cleavage of lignin models. **2023**, 331, 122688 ○
- 44 Photoreforming of Waste Polymers for Sustainable Hydrogen Fuel and Chemicals Feedstock: Waste to Energy. ○
- 43 High quantum-yield lignin fluorescence materials based on polymer confinement strategy and its application as a natural ratiometric pH sensor film. **2023**, 194, 116384 ○
- 42 Green and highly selective hydrogenation of lignin-derived aromatics at low temperature over Ru-Fe bimetallic nanoparticles supported on porous nitrogen-doped carbon. **2023**, 247, 107754 ○
- 41 Enhanced catalytic cleavage of C-O and C-C bonds of raw biomass into lignin monomers and glucose. **2023**, 197, 116659 ○
- 40 Exploring how lignin structure influences the interaction between carbohydrate-binding module and lignin using AFM. **2023**, 232, 123313 ○
- 39 Structure and properties of eucalyptus lignin extracted with benzenesulfonic and p-toluenesulfonic acids under mild conditions. **2023**, 194, 116269 ○
- 38 Employing Cu(II) complexes of N,O-donor ligand for catalysis in visible light driven cleavage of lignin C-C bonds. **2023**, 537, 112947 ○
- 37 Rigid polyurethane foams refined by the lignin oligomers from catalytic upstream biorefining process. **2023**, 35, e00577 ○

- 36 Ionic Liquids as Solvents for the Production of Materials from Biomass. **2022**, 642-663 ○
- 35 Lignins and Lignification. **2023**, 1-50 ○
- 34 Chemical Reactions in Ionic Liquids. **2022**, 179-188 ○
- 33 Catalytic Transformation of Biomass-Derived Hemicellulose Sugars by the One-Pot Method into Oxalic, Lactic, and Levulinic Acids Using a Homogeneous H₂SO₄ Catalyst. **2023**, 13, 349 ○
- 32 Funneled Depolymerization of Ionic Liquid-Based Biorefinery Heterogeneous Lignin into Guaiacols over Reusable Palladium Catalyst. ○
- 31 Improved photocatalytic property of lignin-derived carbon nanofibers through catalyst synergy. **2023**, 233, 123588 1
- 30 Evolution of the Cellulose Microfibril through Gamma-Valerolactone-Assisted Co-Solvent and Enzymatic Hydrolysis. **2023**, 11, 3270-3283 ○
- 29 Design of Multicationic Copper-Bearing Layered Double Hydroxides for Catalytic Application in Biorefinery. **2023**, 15, ○
- 28 Anaerobic demethylation of guaiacyl-derived monolignols enabled by a designed artificial cobalamin methyltransferase fusion enzyme. **2023**, 13, 5770-5777 ○
- 27 Sustainable lignin modifications and processing methods: green chemistry as the way forward. **2023**, 25, 2042-2086 ○
- 26 Solvent-Free Catalytic Hydrotreatment of Alcell Lignin Using Mono- and Bimetallic Ni(Mo) Catalysts Supported on Mesoporous Alumina. **2023**, 11, 3170-3181 ○
- 25 Reductive Catalytic Fractionation of Abies Wood into Bioliquids and Cellulose with Hydrogen in an Ethanol Medium over NiCuMo/SiO₂ Catalyst. **2023**, 13, 413 ○
- 24 Strategizing Assistive Heating Techniques on Delignification of Empty Fruit Bunch with Incorporation of Deep Eutectic Solvent. ○
- 23 Substituting phenol in phenol-formaldehyde resins for wood modification by phenolic cleavage products from vacuum low-temperature microwave-assisted pyrolysis of softwood kraft lignin. ○
- 22 Catalytic conversion network for lignocellulosic biomass valorization: a panoramic view. ○
- 21 NiBe Cocatalysts on Magnesium Silicate Supports for the Depolymerization of Kraft Lignin. **2023**, 8, 8675-8682 ○
- 20 Bio-based lignin and its applications. **2023**, 441-474 ○
- 19 Click Synthesis of Triazole Polymers Based on Lignin-Derived Metabolic Intermediate and Their Strong Adhesive Properties to Cu Plate. **2023**, 15, 1349 ○

- 18 Lignin Valorization: Production of High Value-Added Compounds by Engineered Microorganisms. **2023**, 13, 555 ○
- 17 BTX from Lignin. **2023**, 1859-1907 ○
- 16 Sunlight Assisted Photocatalytic Valorization of Lignin Using Recyclable Light Harvesters. **2023**, 11, 4568-4579 ○
- 15 Efficient pretreatment of cornstalks for lignin valorization using p-toluene sulfonic acid coupling ethylene glycol. ○
- 14 Quantification of Phenolic Hydroxyl Groups in Lignin via 19F NMR Spectroscopy. **2023**, 11, 5644-5655 ○
- 13 The Future Biorefinery: The Impact of Upscaling the Reductive Catalytic Fractionation of Lignocellulose Biomass on the Quality of the Lignin Oil, Carbohydrate Products, and Pulp. **2023**, 11, 5440-5450 ○
- 12 Reductive Partial Depolymerization of Acetone Organosolv Lignin to Tailor Lignin Molar Mass, Dispersity, and Reactivity for Polymer Applications. **2023**, 11, 6070-6080 ○
- 11 Hexaniobate as a Recyclable Solid Base Catalyst to Activate C-H Bonds in Lignin Linkage Boosting the Production of Aromatic Monomers. **2023**, 13, 5272-5284 ○
- 10 Wood Chemistry. **2023**, 179-279 ○
- 9 Lignin Degradation and Valorization by Filamentous Fungi. **2023**, 1-31 ○
- 8 Biotransformation of Lignocellulosic-Based Biomass Waste into Value-Added Energy Products. **2023**, ○
- 7 Catalytic Strategies and Mechanism Analysis Orbiting the Center of Critical Intermediates in Lignin Depolymerization. ○
- 6 Structural Characterization of the Milled-Wood Lignin Isolated from Sweet Orange Tree (*Citrus sinensis*) Pruning Residue. **2023**, 15, 1840 ○
- 5 Feedstock-agnostic reductive catalytic fractionation in alcohol and alcohol/water mixtures. ○
- 4 RB-TnSeq identifies genetic targets for improved tolerance of *Pseudomonas putida* towards compounds relevant to lignin conversion. **2023**, 77, 208-218 ○
- 3 Lignin-Based Catalysts for C-H Bond-Forming Reactions. **2023**, 28, 3513 ○
- 2 Identifying the Activity Origin of a Single-Atom Au¹/Nb₂O₅ Catalyst for Hydrodeoxygenation of Methylcatechol: A Stable Substitutional Au⁺ Site. 6093-6103 ○
- 1 Introduction. **2023**, 1-5 ○

