

Efficient conversion of lignocellulosic biomass to levulin

Carbohydrate Polymers

181, 208-214

DOI: [10.1016/j.carbpol.2017.10.064](https://doi.org/10.1016/j.carbpol.2017.10.064)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Emerging technologies for the pretreatment of lignocellulosic biomass. <i>Bioresource Technology</i> , 2018, 262, 310-318.	9.6	568
2	How the surface wettability and modulus of elasticity of the Amazonian paricÃ; nanofibrils films are affected by the chemical changes of the natural fibers. <i>European Journal of Wood and Wood Products</i> , 2018, 76, 1581-1594.	2.9	18
3	Highly effectual synthesis of 4,6-diarylpyrimidin-2(1H)-ones using N,N,Nâ€²,Nâ€²-tetramethylethylenediaminium-N,Nâ€²-disulfonic acid hydrogen sulfate as a dual-functional catalyst. <i>Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences</i> , 2018, 73, 635-640.	0.7	11
4	A Bibliometric Study of Scientific Publications regarding Hemicellulose Valorization during the 2000â€“2016 Period: Identification of Alternatives and Hot Topics. <i>ChemEngineering</i> , 2018, 2, 7.	2.4	26
5	Kinetics and thermodynamic analysis of levulinic acid esterification using lignin-furfural carbon cryogel catalyst. <i>Renewable Energy</i> , 2019, 130, 547-557.	8.9	44
6	Catalytic Production of Levulinic Acid (LA) from Actual Biomass. <i>Molecules</i> , 2019, 24, 2760.	3.8	76
7	Production of biofuel precursors and value-added chemicals from hydrolysates resulting from hydrothermal processing of biomass: A review. <i>Biomass and Bioenergy</i> , 2019, 130, 105397.	5.7	62
8	Mixtures of tetrabutylammonium chloride salt with different glycol structures: Thermal stability and functional groups characterizations. <i>Journal of Molecular Liquids</i> , 2019, 294, 111588.	4.9	14
9	Zeolite catalyst design for the conversion of glucose to furans and other renewable fuels. <i>Fuel</i> , 2019, 258, 115851.	6.4	25
10	Synthesis and characterization of porous microspherical ionic liquid carbon cryogel catalyst for ethyl levulinate production. <i>Diamond and Related Materials</i> , 2019, 95, 154-165.	3.9	9
11	Thermophysical properties of dicationic imidazolium-based ionic compounds for thermal storage. <i>Journal of Molecular Liquids</i> , 2019, 282, 474-483.	4.9	40
12	Structural differences of the soluble oligomers and insoluble polymers from acid-catalyzed conversion of sugars with varied structures. <i>Carbohydrate Polymers</i> , 2019, 216, 167-179.	10.2	23
13	Levulinic acid synthesis from Indonesian sugarcane bagasse using two-step acid catalyzed treatment. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	3
14	Physical and chemical pretreatment of lignocellulosic biomass. , 2019, , 143-196.		57
15	WCl ₆ catalyzed cellulose degradation at 80â€°C and lower in [BMIM]Cl. <i>Carbohydrate Polymers</i> , 2019, 212, 289-296.	10.2	12
16	Progress on the pre-treatment of lignocellulosic biomass employing ionic liquids. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 105, 268-292.	16.4	154
17	Extraction of valuable chemicals from sustainable rice husk waste using ultrasonic assisted ionic liquids technology. <i>Journal of Cleaner Production</i> , 2019, 220, 620-629.	9.3	47
18	Comparative effect of ionic liquids pretreatment on thermogravimetric kinetics of crude oil palm biomass for possible sustainable exploitation. <i>Journal of Molecular Liquids</i> , 2019, 282, 88-96.	4.9	19

#	ARTICLE	IF	CITATIONS
19	Ionic Liquids for Pretreatment of Biomass. , 2019, , 190-198.		2
20	Ionic Liquid Antioxidant [X][C ₆ H ₂ (OH) ₃ COO] of Biodiesel and Its Theory Antioxidant Mechanism. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2023, 45, 6487-6499.	2.3	2
21	Recent advances for sustainable production of levulinic acid in ionic liquids from biomass: Current scenario, opportunities and challenges. Renewable and Sustainable Energy Reviews, 2019, 102, 266-284.	16.4	69
22	Volumetric Properties of Protic Ionic Liquids Based on Alkylammonium Cations at $T = (293.15\text{--}353.15)\text{ K}$ and Atmospheric Pressure. Journal of Chemical & Engineering Data, 2019, 64, 211-217.	1.9	8
23	Ionic Liquids in Biomass Processing. Israel Journal of Chemistry, 2019, 59, 789-802.	2.3	20
24	Optimisation studies on the conversion of oil palm biomass to levulinic acid and ethyl levulinate via indium trichloride-ionic liquids: A response surface methodology approach. Industrial Crops and Products, 2019, 128, 221-234.	5.2	28
25	Natural deep eutectic solvents (DES) for fractionation of waste lignocellulosic biomass and its cascade conversion to value-added bio-based chemicals. Biomass and Bioenergy, 2019, 120, 417-425.	5.7	170
26	Optimization of ionic liquid assisted sugar conversion and nanofiltration membrane separation for 5-hydroxymethylfurfural. Journal of Industrial and Engineering Chemistry, 2019, 69, 171-178.	5.8	31
27	Lignocellulosic conversion into value-added products: A review. Process Biochemistry, 2020, 89, 110-133.	3.7	91
28	Kinetic and thermodynamic studies of oil palm mesocarp fiber cellulose conversion to levulinic acid and upgrading to ethyl levulinate via indium trichloride-ionic liquids. Renewable Energy, 2020, 146, 932-943.	8.9	32
29	Current perspective on pretreatment technologies using lignocellulosic biomass: An emerging biorefinery concept. Fuel Processing Technology, 2020, 199, 106244.	7.2	386
30	Synchronous conversion of lignocellulosic polysaccharides to levulinic acid with synergic bifunctional catalysts in a biphasic cosolvent system. Industrial Crops and Products, 2020, 145, 112084.	5.2	26
31	Conversion of recalcitrant cellulose to alkyl levulinates and levulinic acid via oxidation pretreatment combined with alcoholysis over Al ₂ (SO ₄) ₃ . Cellulose, 2020, 27, 1451-1463.	4.9	25
32	Green Solvents for the Extraction of High Added-Value Compounds from Agri-food Waste. Food Engineering Reviews, 2020, 12, 83-100.	5.9	102
33	Understanding the <i>in situ</i> state of lignocellulosic biomass during ionic liquids-based engineering of renewable materials and chemicals. Green Chemistry, 2020, 22, 6748-6766.	9.0	18
34	Production of Levulinic Acid from Cellulose and Cellulosic Biomass in Different Catalytic Systems. Catalysts, 2020, 10, 1006.	3.5	33
35	Microorganisms and Enzymes Used in the Biological Pretreatment of the Substrate to Enhance Biogas Production: A Review. Sustainability, 2020, 12, 7205.	3.2	77
36	Thermochemical Mapping of Levulinic Acid Conversion to Pentane in Supercritical Water within the Framework of Density Functional Theory. Energy & Fuels, 2020, 34, 11061-11072.	5.1	3

#	ARTICLE	IF	CITATIONS
37	Efficient Depolymerization of Cellulosic Paper Towel Waste Using Organic Carbonate Solvents. ACS Sustainable Chemistry and Engineering, 2020, 8, 13100-13110.	6.7	18
38	Beneficiation of food processing by-products through extraction of bioactive compounds using neoteric solvents. LWT - Food Science and Technology, 2020, 134, 110263.	5.2	15
39	Kinetic Modeling of Conversion of Levulinic Acid to Valeric Acid in Supercritical Water Using the Density Functional Theory Framework. Industrial & Engineering Chemistry Research, 2020, 59, 18683-18692.	3.7	4
40	Recent advances of greener pretreatment technologies of lignocellulose. Current Research in Green and Sustainable Chemistry, 2020, 3, 100035.	5.6	122
41	Efficient Depolymerization of Alkaline Lignin to Phenolic Compounds at Low Temperatures with Formic Acid over Inexpensive Fe ²⁺ /Zn/Al ₂ O ₃ Catalyst. Energy & Fuels, 2020, 34, 7121-7130.	5.1	32
42	Futuristic advance and perspective of deep eutectic solvent for extractive desulfurization of fuel oil: A review. Journal of Molecular Liquids, 2020, 306, 112870.	4.9	65
43	Physical properties of dihydric Alcohol-based deep eutectic solvent for integrated fuel oil desulfurization. Materials Today: Proceedings, 2020, 29, 68-74.	1.8	3
44	Study on the Dissolution Mechanism of Cellulose by ChCl-Based Deep Eutectic Solvents. Materials, 2020, 13, 278.	2.9	62
45	Efficient catalytic production of biomass-derived levulinic acid over phosphotungstic acid in deep eutectic solvent. Industrial Crops and Products, 2020, 145, 112154.	5.2	50
46	Catalytic Conversion of Carbohydrate Biomass in Ionic Liquids to 5-Hydroxymethyl Furfural and Levulinic Acid: A Review. Bioenergy Research, 2020, 13, 693-736.	3.9	45
47	Different pretreatment technologies of lignocellulosic biomass for bioethanol production: An overview. Energy, 2020, 199, 117457.	8.8	292
48	Effect of imidazolium's ionic liquids with different anions and alkyl chain length on phytotoxicity and biochemical analysis of maize seedling. Journal of Molecular Liquids, 2021, 321, 114491.	4.9	9
49	Effect of ionic liquid assisted hydrothermal carbonization on the properties and gasification reactivity of hydrochar derived from eucalyptus. Journal of Colloid and Interface Science, 2021, 586, 423-432.	9.4	26
50	Değerli Metal Katalizörlerde Katalizör Destek Malzemesi Olarak Biyotabanlı Malzemelerin Üretilmesi ve Karakterizasyonu. European Journal of Science and Technology, 0, , .	0.5	1
51	Comparative analysis of the chemical and biochemical synthesis of keto acids. Biotechnology Advances, 2021, 47, 107706.	11.7	29
52	Enhancing surface performance of wool using reduced ionic liquid. Journal of the Textile Institute, 2022, 113, 983-992.	1.9	1
53	The Dual Effect of Ionic Liquid Pretreatment on the Eucalyptus Kraft Pulp during Oxygen Delignification Process. Polymers, 2021, 13, 1600.	4.5	1
54	Production of Levulinic Acid from Coconut Residues (Cocos nucifera) Using Different Approaches. Waste and Biomass Valorization, 2021, 12, 6875-6886.	3.4	7

#	ARTICLE	IF	CITATIONS
55	Conversion of levulinic acid to valuable chemicals: a review. <i>Journal of Chemical Technology and Biotechnology</i> , 2021, 96, 3009-3024.	3.2	29
56	High-efficiency recovery, regeneration and recycling of 1-ethyl-3-methylimidazolium hydrogen sulfate for levulinic acid production from sugarcane bagasse with membrane-based techniques. <i>Bioresource Technology</i> , 2021, 330, 124984.	9.6	17
57	Cooperation between hydrogenation and acidic sites in Cu-based catalyst for selective conversion of furfural to β -valerolactone. <i>Fuel</i> , 2021, 293, 120457.	6.4	38
58	Mini-Review on the Synthesis of Furfural and Levulinic Acid from Lignocellulosic Biomass. <i>Processes</i> , 2021, 9, 1234.	2.8	24
59	Evaluating the Effect of Ionic Liquid on Biosorption Potential of Peanut Waste: Experimental and Theoretical Studies. <i>ACS Omega</i> , 2021, 6, 22259-22271.	3.5	9
60	Processing of lignocellulose in ionic liquids: A cleaner and sustainable approach. <i>Journal of Cleaner Production</i> , 2021, 323, 129189.	9.3	25
61	Emerging Green Techniques for the Extraction of Antioxidants from Agri-Food By-Products as Promising Ingredients for the Food Industry. <i>Antioxidants</i> , 2021, 10, 1417.	5.1	66
62	Recent advances in green pre-treatment methods of lignocellulosic biomass for enhanced biofuel production. <i>Journal of Cleaner Production</i> , 2021, 321, 129038.	9.3	59
63	Insight into the recent advances of microwave pretreatment technologies for the conversion of lignocellulosic biomass into sustainable biofuel. <i>Chemosphere</i> , 2021, 281, 130878.	8.2	129
64	Direct conversion of cellulose to levulinic acid using SO ₃ H-functionalized ionic liquids containing halogen-anions. <i>Journal of Molecular Liquids</i> , 2021, 339, 117278.	4.9	13
65	Acid-based lignocellulosic biomass biorefinery for bioenergy production: Advantages, application constraints, and perspectives. <i>Journal of Environmental Management</i> , 2021, 296, 113194.	7.8	82
66	Preparation of sustainable activated carbon-alginate beads impregnated with ionic liquid for phenol decontamination. <i>Journal of Cleaner Production</i> , 2021, 321, 128899.	9.3	20
67	Progress on the lignocellulosic biomass pyrolysis for biofuel production toward environmental sustainability. <i>Fuel Processing Technology</i> , 2021, 223, 106997.	7.2	256
68	Protic ionic liquids from di- or triamines: even cheaper Brønsted acidic catalysts. <i>Green Chemistry</i> , 2021, 23, 4421-4429.	9.0	22
69	Upgrading agricultural biomass for sustainable energy storage: Bioprocessing, electrochemistry, mechanism. <i>Energy Storage Materials</i> , 2020, 31, 274-309.	18.0	38
70	Editorial: Properties and Applications of Ionic Liquids in Energy and Environmental Science. <i>Frontiers in Chemistry</i> , 2020, 8, 627213.	3.6	24
71	Effect of Ultrasonic-assisted Ionic Liquid Pretreatment on the Bleachability and Properties of Eucalyptus Kraft Pulp. <i>Palpu Chongi Gisul/Journal of Korea Technical Association of the Pulp and Paper Industry</i> , 2019, 51, 16-25.	0.4	1
72	Cost-Effective Processing of Carbon-Rich Materials in Ionic Liquids: An Expeditious Approach to Biofuels. <i>ACS Omega</i> , 2021, 6, 29233-29242.	3.5	8

#	ARTICLE	IF	CITATIONS
73	Depolymerization of cellulose promoted by lignin via oxidation-hydrolysis route. <i>Industrial Crops and Products</i> , 2021, 174, 114179.	5.2	5
74	Efficiently conversion of raw lignocellulose to levulinic acid and lignin nano-spheres in acidic lithium bromide-water system by two-step process. <i>Bioresource Technology</i> , 2022, 343, 126130.	9.6	7
75	Phytochemicals from the Fruits and Vegetable Waste: Holistic and Sustainable Approach. , 2020, , 87-112.		0
76	Application of Ionic Liquids for Sustainable Catalysis. <i>RSC Energy and Environment Series</i> , 2020, , 304-360.	0.5	0
77	1, 1- TM -Sulfinyldiethylammonium Bis (Hydrogen Sulfate) as a Recyclable Dicationic Ionic Liquid Catalyst for the Efficient Solvent-free Synthesis of 3, 4-Dihydropyrimidin-2(1H)-ones via Biginelli Reaction. <i>Combinatorial Chemistry and High Throughput Screening</i> , 2020, 23, 157-167.	1.1	3
78	Sustainable production of levulinic acid and its derivatives for fuel additives and chemicals: progress, challenges, and prospects. <i>Green Chemistry</i> , 2021, 23, 9198-9238.	9.0	61
79	Ionic liquids for bioenergy production. , 2022, , 235-256.		3
80	PolyE-IL, an Efficient and Recyclable Bronsted Acid Catalyst for Conversion of Rice Straw into Levulinic and Other Organic Acids. <i>Energy & Fuels</i> , 2022, 36, 1592-1603.	5.1	5
81	Introduction to ionic liquids and their environment-friendly applications. , 2022, , 1-15.		3
82	Kinetics and thermodynamic study of Calligonum polygonoides pyrolysis using model-free methods. <i>Chemical Engineering Research and Design</i> , 2022, 160, 130-138.	5.6	10
84	Levulinic acid production from furfural: process development and techno-economics. <i>Green Chemistry</i> , 0, , .	9.0	3
85	<sc>PolyE-IL</sc> : A Polymeric Brønsted acid Ionic liquid catalyst for Catalytic Thermo Liquefaction of Sugarcane bagasse into Carboxylic Acids. <i>Biofuels, Bioproducts and Biorefining</i> , 0, , .	3.7	0
86	One-pot levulinic acid production from rice straw by acid hydrolysis in deep eutectic solvent. <i>Chemical Engineering Communications</i> , 2024, 211, 366-378.	2.6	5
87	Reductive Upgrading of Biomass-Based Levulinic Acid to Î ³ -Valerolactone Over Ru-Based Single-Atom Catalysts. <i>Frontiers in Chemistry</i> , 2022, 10, 895198.	3.6	2
88	Biomass-derived biochar: From production to application in removing heavy metal-contaminated water. <i>Chemical Engineering Research and Design</i> , 2022, 160, 704-733.	5.6	86
89	An overview of carotenoid extractions using green solvents assisted by Z-isomerization. <i>Trends in Food Science and Technology</i> , 2022, 123, 145-160.	15.1	25
90	Recent advances in the conversion of lignocellulosic biomass and its degraded products to levulinic acid: A synergy of Brønsted-Lowry acid and Lewis acid. <i>Industrial Crops and Products</i> , 2022, 181, 114778.	5.2	14
91	A review of thermocatalytic conversion of biogenic wastes into crude biofuels and biochemical precursors. <i>Fuel</i> , 2022, 320, 123857.	6.4	16

#	ARTICLE	IF	CITATIONS
92	Review on development of ionic liquids in lignocellulosic biomass refining. Journal of Molecular Liquids, 2022, 359, 119326.	4.9	20
93	Comparative techno-economic assessment of sugarcane biorefineries producing glutamic acid, levulinic acid and xylitol from sugarcane. Industrial Crops and Products, 2022, 184, 115053.	5.2	14
94	Bioethanol Production from Corn Straw Pretreated with Novel Deep Eutectic Solvents. SSRN Electronic Journal, 0, , .	0.4	0
95	Levulinic acid: a potent green chemical in sustainable agriculture. , 2022, , 179-218.		1
96	Kinetic Study and Model Assessment for n-Butyl Levulinate Production from Alcoholysis of 5-(Hydroxymethyl)furfural over Amberlite IR-120. Industrial & Engineering Chemistry Research, 2022, 61, 10818-10836.	3.7	4
97	Catalytic conversion of agricultural waste biomass into valued chemical using bifunctional heterogeneous catalyst: A sustainable approach. Catalysis Communications, 2022, 171, 106516.	3.3	2
98	Advances in Biomass-Based Levulinic Acid Production. Waste and Biomass Valorization, 2023, 14, 1-22.	3.4	7
99	Review of Functional Aspects of Nanocellulose-Based Pickering Emulsifier for Non-Toxic Application and Its Colloid Stabilization Mechanism. Molecules, 2022, 27, 7170.	3.8	13
100	Sulphonic Acid-Functionalized Polymeric Ionic Liquids Catalyzed Conversion of Carbohydrates into Levulinic Acid in One-Pot Reaction. ChemCatChem, 2023, 15, .	3.7	2
101	Techno-economic assessment and logistics management of biomass in the conversion progress to bioenergy. Sustainable Energy Technologies and Assessments, 2023, 55, 102991.	2.7	9
102	Microwave radiation-assisted synthesis of levulinic acid from microcrystalline cellulose: Application to a melon rind residue. International Journal of Biological Macromolecules, 2023, 237, 124149.	7.5	5
103	Bioethanol production from corn straw pretreated with deep eutectic solvents. Electronic Journal of Biotechnology, 2023, 62, 27-35.	2.2	5
104	Thermal behaviour of hydrochar derived from hydrothermal carbonization of food waste using leachate as moisture source: Kinetic and thermodynamic analysis. Bioresource Technology, 2023, 373, 128734.	9.6	18
105	Cellulosic Ethanol Production from Weed Biomass Hydrolysate of Vietnamosasa pusilla. Polymers, 2023, 15, 1103.	4.5	1
106	Synergism of ionic liquids and lipases for lignocellulosic biomass valorization. Chemical Engineering Journal, 2023, 461, 142011.	12.7	9
107	Comparative study of microwave-assisted versus conventional heated reactions of biomass conversion into levulinic acid over hierarchical Mn3O4/ZSM-5 zeolite catalysts. Carbon Resources Conversion, 2023, 6, 245-252.	5.9	1
108	BİYOKİTLEĐEN GÄ-ZENEKLÄ KARBONLU MALZEME ÜRETİMİ: BİYOKİTLE TÄPÄ VE SICAKLIĐIN FÄZÄKOKÄMYASAL ÜZELLİKLERE ETKÄSİ. Konya Journal of Engineering Sciences, 0, , 261-273.	0.3	0
109	Biomass Polysaccharides to Building Blocks: Obtaining Renewable Organic Acids. , 2023, , 31-61.		0

#	ARTICLE	IF	CITATIONS
110	Waste-to-chemicals: Green solutions for bioeconomy markets. <i>Science of the Total Environment</i> , 2023, 887, 164006.	8.0	17
111	Pyrolysis of cellulose in Fe[<i>Bmim</i>]OTf catalyst for selective production of 4,4-dimethyl-2-cyclohexen-1-one. <i>Environmental Progress and Sustainable Energy</i> , 2023, 42, .	2.3	0
112	Effective conversion of corn stalk into ethyl levulinate and crude lignin catalyzed by ionic liquids. <i>Biomass and Bioenergy</i> , 2023, 175, 106894.	5.7	1
113	Extraction and Modification of Cellulose Microfibers Derived from Biomass of the Amazon Ochroma pyramidale Fruit. <i>Micro</i> , 2023, 3, 653-670.	2.0	0
114	Green chemical and hybrid enzymatic pretreatments for lignocellulosic biorefineries: Mechanism and challenges. <i>Bioresource Technology</i> , 2023, 387, 129560.	9.6	1
115	The Production of Bioethanol from Lignocellulosic Biomass: Pretreatment Methods, Fermentation, and Downstream Processing. <i>Energies</i> , 2023, 16, 7003.	3.1	4
116	One-pot directly conversion of passion fruit husk to levulinic acid using highly efficient and recyclable SO ₃ H-functionalized ionic liquids. <i>Fuel Processing Technology</i> , 2024, 253, 108025.	7.2	0
117	A critical review of the advances in valorizing agro-industrial wastes through mixed culture fermentation. <i>Journal of Environmental Chemical Engineering</i> , 2024, 12, 111838.	6.7	0
118	Catalytic Valorization of Sugarcane Bagasse to Chemicals and Aviation Fuel Precursors. <i>ACS Sustainable Chemistry and Engineering</i> , 2024, 12, 1632-1644.	6.7	0
119	One-pot direct conversion of passion fruit hull into 5-hydroxymethylfurfural catalysed by halogenated metal ionic liquids and organic acids. <i>Journal of Molecular Liquids</i> , 2024, 398, 124273.	4.9	0