Paavo A PenttilÃ¤

List of Publications by Year
in descending order

49 papers	1,476 citations	279701 23 h-index	330025 37 g-index
50 all docs	50 docs citations	50 times ranked	1947 citing authors

#	Article	IF	Citations
1	Effect of Moisture on Polymer Deconstruction in HCl Gas Hydrolysis of Wood. ACS Omega, 2022, 7, 7074-7083.	1.6	4
2	Size-dependent filling effect of crystalline celluloses in structural engineering of composite oleogels. LWT - Food Science and Technology, 2022, 160, 113331.	2.5	7
3	Nanoscale Mechanism of Moisture-Induced Swelling in Wood Microfibril Bundles. Nano Letters, 2022, 22, 5143-5150.	4.5	19
4	Combining scattering analysis and atomistic simulation of wood-water interactions. Carbohydrate Polymers, 2021, 251, 117064.	5.1	11
5	Directed Assembly of Cellulose Nanocrystals in Their Native Solidâ€State Template of a Processed Fiber Cell Wall. Macromolecular Rapid Communications, 2021, 42, e2100092.	2.0	8
6	Green Fabrication Approaches of Lignin Nanoparticles from Different Technical Lignins: A Comparison Study. ChemSusChem, 2021, 14, 4718-4730.	3.6	32
7	Deswelling of microfibril bundles in drying wood studied by small-angle neutron scattering and molecular dynamics. Cellulose, 2021, 28, 10765-10776.	2.4	11
8	Water-accessibility of interfibrillar spaces in spruce wood cell walls. Cellulose, 2021, 28, 11231-11245.	2.4	10
9	Experimental and Simulation Study of the Solvent Effects on the Intrinsic Properties of Spherical Lignin Nanoparticles. Journal of Physical Chemistry B, 2021, 125, 12315-12328.	1.2	21
10	Moisture-related changes in the nanostructure of woods studied with X-ray and neutron scattering. Cellulose, 2020, 27, 71-87.	2.4	37
11	Bundling of cellulose microfibrils in native and polyethylene glycol-containing wood cell walls revealed by small-angle neutron scattering. Scientific Reports, 2020, 10, 20844.	1.6	17
12	Production of High Solid Nanocellulose by Enzyme-Aided Fibrillation Coupled with Mild Mechanical Treatment. ACS Sustainable Chemistry and Engineering, 2020, 8, 18853-18863.	3.2	26
13	Ultrastructural X-ray scattering studies of tropical and temperate hardwoods used as tonewoods. IAWA Journal, 2020, 41, 301-319.	0.5	6
14	Lignin-fatty acid hybrid nanocapsules for scalable thermal energy storage in phase-change materials. Chemical Engineering Journal, 2020, 393, 124711.	6.6	47
15	Sustainable High Yield Route to Cellulose Nanocrystals from Bacterial Cellulose. ACS Sustainable Chemistry and Engineering, 2019, 7, 14384-14388.	3.2	28
16	Rapid and Direct Preparation of Lignin Nanoparticles from Alkaline Pulping Liquor by Mild Ultrasonication. ACS Sustainable Chemistry and Engineering, 2019, 7, 19925-19934.	3.2	71
17	Phospholipid-Based Reverse Micelle Structures in Vegetable Oil Modified by Water Content, Free Fatty Acid, and Temperature. Langmuir, 2019, 35, 8373-8382.	1.6	10
18	Observation of in vitro cellulose synthesis by bacterial cellulose synthase with time-resolved small angle X-ray scattering. International Journal of Biological Macromolecules, 2019, 130, 765-777.	3.6	9

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19	Small-angle scattering model for efficient characterization of wood nanostructure and moisture behaviour. Journal of Applied Crystallography, 2019, 52, 369-377.	1.9	34
20	Enzymatic hydrolysis of biomimetic bacterial celluloseâ€"hemicellulose composites. Carbohydrate Polymers, 2018, 190, 95-102.	5.1	25
21	Multimethod approach to understand the assembly of cellulose fibrils in the biosynthesis of bacterial cellulose. Cellulose, 2018, 25, 2771-2783.	2.4	21
22	Biomimetic composites of deuterated bacterial cellulose and hemicelluloses studied with small-angle neutron scattering. European Polymer Journal, 2018, 104, 177-183.	2.6	3
23	Fibrillar assembly of bacterial cellulose in the presence of wood-based hemicelluloses. International Journal of Biological Macromolecules, 2017, 102, 111-118.	3.6	14
24	Celluloseâ€Nanokristalle in hoher Ausbeute durch Abbau und Kristallisation von Cellulose mittels gasfÃ¶rmigem Chlorwasserstoff. Angewandte Chemie, 2016, 128, 14671-14674.	1.6	5
25	Softwood-based sponge gels. Cellulose, 2016, 23, 3221-3238.	2.4	17
26	Degradation and Crystallization of Cellulose in Hydrogen Chloride Vapor for Highâ€Yield Isolation of Cellulose Nanocrystals. Angewandte Chemie - International Edition, 2016, 55, 14455-14458.	7.2	123
27	Effects of reaction conditions on cellulose structures synthesized in vitro by bacterial cellulose synthases. Carbohydrate Polymers, 2016, 136, 656-666.	5.1	10
28	Impact of mechanical and enzymatic pretreatments on softwood pulp fiber wall structure studied with NMR spectroscopy and X-ray scattering. Cellulose, 2015, 22, 1565-1576.	2.4	15
29	The yield of cellulose precipitate from sub- and supercritical water treatment of various microcrystalline celluloses. Cellulose, 2015, 22, 1715-1728.	2.4	9
30	Significance of xylan on the stability and water interactions of cellulosic nanofibrils. Reactive and Functional Polymers, 2014, 85, 157-166.	2.0	55
31	The structure of Lactobacillus brevis surface layer reassembled on liposomes differs from native structure as revealed by SAXS. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2099-2104.	1.4	11
32	Dissolving-grade birch pulps produced under various prehydrolysis intensities: quality, structure and applications. Cellulose, 2014, 21, 2007-2021.	2.4	37
33	Cellulose degradation in alkaline media upon acidic pretreatment and stabilisation. Carbohydrate Polymers, 2014, 100, 185-194.	5.1	36
34	Effects of pressurized hot water extraction on the nanoscale structure of birch sawdust. Cellulose, 2013, 20, 2335-2347.	2.4	31
35	Enhancement of ionic liquid-aided fractionation of birchwood. Part 1: autohydrolysis pretreatment. RSC Advances, 2013, 3, 16365.	1.7	45
36	Xylan as limiting factor in enzymatic hydrolysis of nanocellulose. Bioresource Technology, 2013, 129, 135-141.	4.8	82

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37	Nanofibrillated cellulose/carboxymethyl cellulose composite with improved wet strength. Cellulose, 2013, 20, 1459-1468.	2.4	71
38	Small-angle scattering study of structural changes in the microfibril network of nanocellulose during enzymatic hydrolysis. Cellulose, 2013, 20, 1031-1040.	2.4	24
39	Use of amaranth, quinoa and kaÃ±iwa in extruded corn-based snacks. Journal of Cereal Science, 2013, 58, 59-67.	1.8	83
40	The swelling and dissolution of cellulose crystallites in subcritical and supercritical water. Cellulose, 2013, 20, 2731-2744.	2.4	35
41	Effects of process variables and addition of polydextrose and whey protein isolate on the properties of barley extrudates. International Journal of Food Science and Technology, 2012, 47, 1165-1175.	1.3	11
42	The effect of drying method on the properties and nanoscale structure of cellulose whiskers. Cellulose, 2012, 19, 901-912.	2.4	40
43	Structural Changes in Microcrystalline Cellulose in Subcritical Water Treatment. Biomacromolecules, 2011, 12, 2544-2551.	2.6	40
44	Amorphous Characteristics of an Ultrathin Cellulose Film. Biomacromolecules, 2011, 12, 770-777.	2.6	92
45	X-ray characterization of starch-based solid foams. Journal of Materials Science, 2011, 46, 3470-3479.	1.7	8
46	Effect of heatâ€treatment on the performance of gas barrier layers applied by atomic layer deposition onto polymerâ€coated paperboard. Journal of Applied Polymer Science, 2011, 122, 2221-2227.	1.3	13
47	X-ray scattering and microtomography study on the structural changes of never-dried silver birch, European aspen and hybrid aspen during drying. Holzforschung, 2011, 65, 865-873.	0.9	48
48	Changes in Submicrometer Structure of Enzymatically Hydrolyzed Microcrystalline Cellulose. Biomacromolecules, 2010, 11, 1111-1117.	2.6	51
49	Small-angle x-ray scattering study on the structure of microcrystalline and nanofibrillated cellulose. Journal of Physics: Conference Series, 2010, 247, 012030.	0.3	12