

Paavo A Penttilä

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7460633/publications.pdf>

Version: 2024-02-01

49
papers

1,476
citations

279798
23
h-index

330143
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.	3.5	4
2	Size-dependent filling effect of crystalline celluloses in structural engineering of composite oleogels. LWT - Food Science and Technology, 2022, 160, 113331.	5.2	7
3	Nanoscale Mechanism of Moisture-Induced Swelling in Wood Microfibril Bundles. Nano Letters, 2022, 22, 5143-5150.	9.1	19
4	Combining scattering analysis and atomistic simulation of wood-water interactions. Carbohydrate Polymers, 2021, 251, 117064.	10.2	11
5	Directed Assembly of Cellulose Nanocrystals in Their Native Solid-State Template of a Processed Fiber Cell Wall. Macromolecular Rapid Communications, 2021, 42, e2100092.	3.9	8
6	Green Fabrication Approaches of Lignin Nanoparticles from Different Technical Lignins: A Comparison Study. ChemSusChem, 2021, 14, 4718-4730.	6.8	32
7	Deswelling of microfibril bundles in drying wood studied by small-angle neutron scattering and molecular dynamics. Cellulose, 2021, 28, 10765-10776.	4.9	11
8	Water-accessibility of interfibrillar spaces in spruce wood cell walls. Cellulose, 2021, 28, 11231-11245.	4.9	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.	2.6	21
10	Moisture-related changes in the nanostructure of woods studied with X-ray and neutron scattering. Cellulose, 2020, 27, 71-87.	4.9	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.	3.3	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.	6.7	26
13	Ultrastructural X-ray scattering studies of tropical and temperate hardwoods used as tonewoods. IAWA Journal, 2020, 41, 301-319.	1.0	6
14	Lignin-fatty acid hybrid nanocapsules for scalable thermal energy storage in phase-change materials. Chemical Engineering Journal, 2020, 393, 124711.	12.7	47
15	Sustainable High Yield Route to Cellulose Nanocrystals from Bacterial Cellulose. ACS Sustainable Chemistry and Engineering, 2019, 7, 14384-14388.	6.7	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.	6.7	71
17	Phospholipid-Based Reverse Micelle Structures in Vegetable Oil Modified by Water Content, Free Fatty Acid, and Temperature. Langmuir, 2019, 35, 8373-8382.	3.5	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.	7.5	9

#	ARTICLE	IF	CITATIONS
19	Small-angle scattering model for efficient characterization of wood nanostructure and moisture behaviour. <i>Journal of Applied Crystallography</i> , 2019, 52, 369-377.	4.5	34
20	Enzymatic hydrolysis of biomimetic bacterial cellulose–hemicellulose composites. <i>Carbohydrate Polymers</i> , 2018, 190, 95-102.	10.2	25
21	Multimethod approach to understand the assembly of cellulose fibrils in the biosynthesis of bacterial cellulose. <i>Cellulose</i> , 2018, 25, 2771-2783.	4.9	21
22	Biomimetic composites of deuterated bacterial cellulose and hemicelluloses studied with small-angle neutron scattering. <i>European Polymer Journal</i> , 2018, 104, 177-183.	5.4	3
23	Fibrillar assembly of bacterial cellulose in the presence of wood-based hemicelluloses. <i>International Journal of Biological Macromolecules</i> , 2017, 102, 111-118.	7.5	14
24	Cellulose–Nanokristalle in hoher Ausbeute durch Abbau und Kristallisation von Cellulose mittels gasförmigem Chlorwasserstoff. <i>Angewandte Chemie</i> , 2016, 128, 14671-14674.	2.0	5
25	Softwood-based sponge gels. <i>Cellulose</i> , 2016, 23, 3221-3238.	4.9	17
26	Degradation and Crystallization of Cellulose in Hydrogen Chloride Vapor for High-Yield Isolation of Cellulose Nanocrystals. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 14455-14458.	13.8	123
27	Effects of reaction conditions on cellulose structures synthesized in vitro by bacterial cellulose synthases. <i>Carbohydrate Polymers</i> , 2016, 136, 656-666.	10.2	10
28	Impact of mechanical and enzymatic pretreatments on softwood pulp fiber wall structure studied with NMR spectroscopy and X-ray scattering. <i>Cellulose</i> , 2015, 22, 1565-1576.	4.9	15
29	The yield of cellulose precipitate from sub- and supercritical water treatment of various microcrystalline celluloses. <i>Cellulose</i> , 2015, 22, 1715-1728.	4.9	9
30	Significance of xylan on the stability and water interactions of cellulosic nanofibrils. <i>Reactive and Functional Polymers</i> , 2014, 85, 157-166.	4.1	55
31	The structure of <i>Lactobacillus brevis</i> surface layer reassembled on liposomes differs from native structure as revealed by SAXS. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 2099-2104.	2.6	11
32	Dissolving-grade birch pulps produced under various prehydrolysis intensities: quality, structure and applications. <i>Cellulose</i> , 2014, 21, 2007-2021.	4.9	37
33	Cellulose degradation in alkaline media upon acidic pretreatment and stabilisation. <i>Carbohydrate Polymers</i> , 2014, 100, 185-194.	10.2	36
34	Effects of pressurized hot water extraction on the nanoscale structure of birch sawdust. <i>Cellulose</i> , 2013, 20, 2335-2347.	4.9	31
35	Enhancement of ionic liquid-aided fractionation of birchwood. Part 1: autohydrolysis pretreatment. <i>RSC Advances</i> , 2013, 3, 16365.	3.6	45
36	Xylan as limiting factor in enzymatic hydrolysis of nanocellulose. <i>Bioresource Technology</i> , 2013, 129, 135-141.	9.6	82

#	ARTICLE	IF	CITATIONS
37	Nanofibrillated cellulose/carboxymethyl cellulose composite with improved wet strength. Cellulose, 2013, 20, 1459-1468.	4.9	71
38	Small-angle scattering study of structural changes in the microfibril network of nanocellulose during enzymatic hydrolysis. Cellulose, 2013, 20, 1031-1040.	4.9	24
39	Use of amaranth, quinoa and kañiwa in extruded corn-based snacks. Journal of Cereal Science, 2013, 58, 59-67.	3.7	83
40	The swelling and dissolution of cellulose crystallites in subcritical and supercritical water. Cellulose, 2013, 20, 2731-2744.	4.9	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.	2.7	11
42	The effect of drying method on the properties and nanoscale structure of cellulose whiskers. Cellulose, 2012, 19, 901-912.	4.9	40
43	Structural Changes in Microcrystalline Cellulose in Subcritical Water Treatment. Biomacromolecules, 2011, 12, 2544-2551.	5.4	40
44	Amorphous Characteristics of an Ultrathin Cellulose Film. Biomacromolecules, 2011, 12, 770-777.	5.4	92
45	X-ray characterization of starch-based solid foams. Journal of Materials Science, 2011, 46, 3470-3479.	3.7	8
46	Effect of heat treatment on the performance of gas barrier layers applied by atomic layer deposition onto polymer-coated paperboard. Journal of Applied Polymer Science, 2011, 122, 2221-2227.	2.6	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.	1.9	48
48	Changes in Submicrometer Structure of Enzymatically Hydrolyzed Microcrystalline Cellulose. Biomacromolecules, 2010, 11, 1111-1117.	5.4	51
49	Small-angle x-ray scattering study on the structure of microcrystalline and nanofibrillated cellulose. Journal of Physics: Conference Series, 2010, 247, 012030.	0.4	12