Mika H Sipponen

List of Publications by Citations

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56 papers	1,762 citations	25 h-index	41 g-index
64 ext. papers	2,401 ext. citations	8.1 avg, IF	5.8 L-index

#	Paper	IF	Citations
56	Lignin for Nano- and Microscaled Carrier Systems: Applications, Trends, and Challenges. *ChemSusChem*, **2019**, 12, 2039-2054	8.3	117
55	Spherical lignin particles: a review on their sustainability and applications. *Green Chemistry*, **2020**, 22, 2712-2733	10	114
54	Strong, Ductile, and Waterproof Cellulose Nanofibril Composite Films with Colloidal Lignin Particles. *Biomacromolecules*, **2019**, 20, 693-704	6.9	114
53	Understanding Lignin Aggregation Processes. A Case Study: Budesonide Entrapment and Stimuli Controlled Release from Lignin Nanoparticles. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 9342-9351	8.3	98
52	Weighing the factors behind enzymatic hydrolyzability of pretreated lignocellulose. *Green Chemistry*, **2016**, 18, 1295-1305	10	97
51	All-lignin approach to prepare cationic colloidal lignin particles: stabilization of durable Pickering emulsions. *Green Chemistry*, **2017**, 19, 5831-5840	10	79
50	Spatially confined lignin nanospheres for biocatalytic ester synthesis in aqueous media. *Nature Communications*, **2018**, 9, 2300	17.4	78
49	Lignin-based smart materials: a roadmap to processing and synthesis for current and future applications. *Materials Horizons*, **2020**, 7, 2237-2257	14.4	70
48	Eco-friendly Flame-Retardant Cellulose Nanofibril Aerogels by Incorporating Sodium Bicarbonate. *ACS Applied Materials & Interfaces*, **2018**, 10, 27407-27415	9.5	60
47	Closed cycle production of concentrated and dry redispersible colloidal lignin particles with a three solvent polarity exchange method. *Green Chemistry*, **2018**, 20, 843-850	10	53
46	Sustainable Li-Ion Batteries: Chemistry and Recycling. *Advanced Energy Materials*, **2020**, 2003456	21.8	48
45	Enzymatically and chemically oxidized lignin nanoparticles for biomaterial applications. *Enzyme and Microbial Technology*, **2018**, 111, 48-56	3.8	45
44	Preparation and Characterization of Dentin Phosphophoryn-Derived Peptide-Functionalized Lignin Nanoparticles for Enhanced Cellular Uptake. *Small*, **2019**, 15, e1901427	11	41
43	Natural Shape-Retaining Microcapsules With Shells Made of Chitosan-Coated Colloidal Lignin Particles. *Frontiers in Chemistry*, **2019**, 7, 370	5	39
42	Three-Dimensional Printed Cell Culture Model Based on Spherical Colloidal Lignin Particles and Cellulose Nanofibril-Alginate Hydrogel. *Biomacromolecules*, **2020**, 21, 1875-1885	6.9	38
41	Lignin-Inorganic Interfaces: Chemistry and Applications from Adsorbents to Catalysts and Energy Storage Materials. *ChemSusChem*, **2020**, 13, 4344-4355	8.3	37
40	Agglomeration of Viruses by Cationic Lignin Particles for Facilitated Water Purification. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 4167-4177	8.3	35

39	Calcium Chelation of Lignin from Pulping Spent Liquor for Water-Resistant Slow-Release Urea Fertilizer Systems. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 1054-1061	8.3	35
38	Lignin-fatty acid hybrid nanocapsules for scalable thermal energy storage in phase-change materials. *Chemical Engineering Journal*, **2020**, 393, 124711	14.7	33
37	Determination of surface-accessible acidic hydroxyls and surface area of lignin by cationic dye adsorption. *Bioresource Technology*, **2014**, 169, 80-87	11	33
36	Structural diversity in metal–organic nanoparticles based on iron isopropoxide treated lignin. *RSC Advances*, **2016**, 6, 31790-31796	3.7	31
35	Elucidating enzymatic polymerisations: Chain-length selectivity of Candida antarctica lipase B towards various aliphatic diols and dicarboxylic acid diesters. *European Polymer Journal*, **2018**, 106, 79-84	5.2	30
34	Solvent-Resistant Lignin-Epoxy Hybrid Nanoparticles for Covalent Surface Modification and High-Strength Particulate Adhesives. *ACS Nano*, **2021**, 15, 4811-4823	16.7	30
33	Structural changes of lignin in biorefinery pretreatments and consequences to enzyme-lignin interactions - OPEN ACCESS. *Nordic Pulp and Paper Research Journal*, **2017**, 32, 550-571	1.1	29
32	Multifunctional lignin-based nanocomposites and nanohybrids. *Green Chemistry*, **2021**, 23, 6698-6760	10	25
31	Enzymatic saccharification of pretreated wheat straw: comparison of solids-recycling, sequential hydrolysis and batch hydrolysis. *Bioresource Technology*, **2014**, 153, 15-22	11	23
30	Autohydrolysis and aqueous ammonia extraction of wheat straw: effect of treatment severity on yield and structure of hemicellulose and lignin. *RSC Advances*, **2014**, 4, 23177-23184	3.7	23
29	Biocatalytic nanoparticles for the stabilization of degassed single electron transfer-living radical pickering emulsion polymerizations. *Nature Communications*, **2020**, 11, 5599	17.4	23
28	Yield optimization and rational function modelling of enzymatic hydrolysis of wheat straw pretreated by NaOH-delignification, autohydrolysis and their combination. *Green Chemistry*, **2015**, 17, 1683-1691	10	21
27	Isolation of structurally distinct lignin-carbohydrate fractions from maize stem by sequential alkaline extractions and endoglucanase treatment. *Bioresource Technology*, **2013**, 133, 522-8	11	20
26	Access to tough and transparent nanocomposites via Pickering emulsion polymerization using biocatalytic hybrid lignin nanoparticles as functional surfactants. *Green Chemistry*, **2021**, 23, 3001-3014	10	20
25	Biochemical and sensory characteristics of the cricket and mealworm fractions from supercritical carbon dioxide extraction and air classification. *European Food Research and Technology*, **2018**, 244, 19-29	3.4	17
24	Rate-constraining changes in surface properties, porosity and hydrolysis kinetics of lignocellulose in the course of enzymatic saccharification. *Biotechnology for Biofuels*, **2016**, 9, 18	7.8	17
23	Impact of ball milling on maize (Zea mays L.) stem structural components and on enzymatic hydrolysis of carbohydrates. *Industrial Crops and Products*, **2014**, 61, 130-136	5.9	17
22	Use of air classification technology to produce protein-enriched barley ingredients. *Journal of Food Engineering*, **2018**, 222, 169-177	6	16

21	Lignin-Based Porous Supraparticles for Carbon Capture. *ACS Nano*, **2021**, 15, 6774-6786	16.7	13
20	Unravelling the Hydration Barrier of Lignin Oleate Nanoparticles for Acid- and Base-Catalyzed Functionalization in Dispersion State. *Angewandte Chemie - International Edition*, **2021**, 60, 20897-20905	16.4	13
19	Hydrothermal Liquefaction of Softwood: Selective Chemical Production Under Oxidative Conditions. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 3978-3984	8.3	12
18	Well-Defined Lignin Model Films from Colloidal Lignin Particles. *Langmuir*, **2020**, 36, 15592-15602	4	12
17	Reduction of surface area of lignin improves enzymatic hydrolysis of cellulose from hydrothermally pretreated wheat straw. *RSC Advances*, **2014**, 4, 36591-36596	3.7	11
16	Increased water resistance of CTMP fibers by oat (Avena sativa L.) husk lignin. *Biomacromolecules*, **2010**, 11, 3511-8	6.9	10
15	Identifying the primary reactions and products of fast pyrolysis of alkali lignin. *Journal of Analytical and Applied Pyrolysis*, **2020**, 151, 104917	6	10
14	Fractionation process for the protective isolation of ergosterol and trehalose from microbial biomass. *Process Biochemistry*, **2017**, 58, 217-223	4.8	9
13	Effects of Catalysts and pH on Lignin in Partial Wet Oxidation of Wood and Straw Black Liquors. *Industrial & Engineering Chemistry Research*, **2015**, 54, 7833-7840	3.9	9
12	Lignin for Nano- and Microscaled Carrier Systems: Applications, Trends, and Challenges. *ChemSusChem*, **2019**, 12, 2038-2038	8.3	8
11	Aqueous Ammonia Pre-treatment of Wheat Straw: Process Optimization and Broad Spectrum Dye Adsorption on Nitrogen-Containing Lignin. *Frontiers in Chemistry*, **2019**, 7, 545	5	8
10	Self-Standing Lignin-Containing Willow Bark Nanocellulose Films for Oxygen Blocking and UV Shielding. *ACS Applied Nano Materials*, **2021**, 4, 2921-2929	5.6	7
9	Effect of xylan structure on reactivity in graft copolymerization and subsequent binding to cellulose. *Biomacromolecules*, **2015**, 16, 1102-11	6.9	6
8	Catalyst-Free Synthesis of Lignin Vitrimers with Tunable Mechanical Properties: Circular Polymers and Recoverable Adhesives. *ACS Applied Materials & Interfaces*, **2021**, 13, 57952-57961	9.5	6
7	Toward waste valorization by converting bioethanol production residues into nanoparticles and nanocomposite films. *Sustainable Materials and Technologies*, **2021**, 28, e00269	5.3	4
6	Primary interactions of biomass components during fast pyrolysis. *Journal of Analytical and Applied Pyrolysis*, **2021**, 159, 105297	6	4
5	The effect of direct and counter-current flow-through delignification on enzymatic hydrolysis of wheat straw, and flow limits due to compressibility. *Biotechnology and Bioengineering*, **2016**, 113, 2605-2613	4.9	3
4	Integrating the opposites of biofuel production: absorption of short-chain alcohols into oleaginous yeast cells for butanol recovery and wet-extraction of microbial oil. *Green Chemistry*, **2016**, 18, 2775-2781	10	2

3	Modeling and optimization of polyethylene glycol (PEG) addition for cost-efficient enzymatic hydrolysis of lignocellulose. *Biochemical Engineering Journal*, **2021**, 167, 107894	4.2	2
2	Chemical modification and functionalization of lignin nanoparticles **2022**, 385-431		1
1	Unravelling the Hydration Barrier of Lignin Oleate Nanoparticles for Acid- and Base-Catalyzed Functionalization in Dispersion State. *Angewandte Chemie*, **2021**, 133, 21065-21073	3.6	