Eero Kontturi

List of Publications by Year
in descending order

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129 papers	5,630 citations	71102 41 h-index	85541 71 g-index
134 all docs	134 docs citations	134 times ranked	5852 citing authors

#	Article	IF	Citations
1	Advanced Materials through Assembly of Nanocelluloses. Advanced Materials, 2018, 30, e1703779.	21.0	493
2	Healable, Stable and Stiff Hydrogels: Combining Conflicting Properties Using Dynamic and Selective Threeâ€Component Recognition with Reinforcing Cellulose Nanorods. Advanced Functional Materials, 2014, 24, 2706-2713.	14.9	227
3	Celluloseâ€"model films and the fundamental approach. Chemical Society Reviews, 2006, 35, 1287-1304.	38.1	213
4	SEM imaging of chiral nematic films cast from cellulose nanocrystal suspensions. Cellulose, 2012, 19, 1599-1605.	4.9	212
5	Nanocellulose: Recent Fundamental Advances and Emerging Biological and Biomimicking Applications. Advanced Materials, 2021, 33, e2004349.	21.0	212
6	Cellulose Model SurfacesSimplified Preparation by Spin Coating and Characterization by X-ray Photoelectron Spectroscopy, Infrared Spectroscopy, and Atomic Force Microscopy. Langmuir, 2003, 19, 5735-5741.	3.5	176
7	Thermoresponsive Nanocellulose Hydrogels with Tunable Mechanical Properties. ACS Macro Letters, 2014, 3, 266-270.	4.8	163
8	Polyelectrolyte Brushes Grafted from Cellulose Nanocrystals Using Cu-Mediated Surface-Initiated Controlled Radical Polymerization. Biomacromolecules, 2011, 12, 2997-3006.	5.4	155
9	Phase behaviour and droplet size of oil-in-water Pickering emulsions stabilised with plant-derived nanocellulosic materials. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 519, 60-70.	4.7	143
10	Degradation and Crystallization of Cellulose in Hydrogen Chloride Vapor for Highâ€Yield Isolation of Cellulose Nanocrystals. Angewandte Chemie - International Edition, 2016, 55, 14455-14458.	13.8	123
11	Generic Method for Modular Surface Modification of Cellulosic Materials in Aqueous Medium by Sequential â€œClickâ€•Reaction and Adsorption. Biomacromolecules, 2012, 13, 736-742.	5.4	116
12	Chiral Plasmonics Using Twisting along Cellulose Nanocrystals as a Template for Gold Nanoparticles. Advanced Materials, 2016, 28, 5262-5267.	21.0	105
13	Strong and Stiff: High-Performance Cellulose Nanocrystal/Poly(vinyl alcohol) Composite Fibers. ACS Applied Materials & Interfaces, 2016, 8, 31500-31504.	8.0	101
14	Transition to Reinforced State by Percolating Domains of Intercalated Brush-Modified Cellulose Nanocrystals and Poly(butadiene) in Cross-Linked Composites Based on Thiolâ€"ene Click Chemistry. Biomacromolecules, 2013, 14, 1547-1554.	5.4	96
15	Amorphous Characteristics of an Ultrathin Cellulose Film. Biomacromolecules, 2011, 12, 770-777.	5.4	92
16	Cationic polymer brush-modified cellulose nanocrystals for high-affinity virus binding. Nanoscale, 2014, 6, 11871-11881.	5.6	92
17	Chitin Nanopaper from Mushroom Extract: Natural Composite of Nanofibers and Glucan from a Single Biobased Source. ACS Sustainable Chemistry and Engineering, 2019, 7, 6492-6496.	6.7	90
18	PROPOSED NANO-SCALE COALESCENCE OF CELLULOSE IN CHEMICAL PULP FIBERS DURING TECHNICAL TREATMENTS. BioResources, 2012, 7, .	1.0	86

#	ARTICLE	IF	CITATIONS
19	Chemical Modification of Reducing Endâ€Groups in Cellulose Nanocrystals. Angewandte Chemie - International Edition, 2021, 60, 66-87.	13.8	83
20	Genotoxic and immunotoxic effects of cellulose nanocrystals in vitro. Environmental and Molecular Mutagenesis, 2015, 56, 171-182.	2.2	81
21	Novel method for preparing cellulose model surfaces by spin coating. Polymer, 2003, 44, 3621-3625.	3.8	79
22	Water Vapor Uptake of Ultrathin Films of Biologically Derived Nanocrystals: Quantitative Assessment with Quartz Crystal Microbalance and Spectroscopic Ellipsometry. Langmuir, 2015, 31, 12170-12176.	3.5	79
23	Indirect evidence of supramolecular changes within cellulose microfibrils of chemical pulp fibers upon drying. Cellulose, 2009, 16, 65-74.	4.9	77
24	Cellulose Nanocrystal Submonolayers by Spin Coating. Langmuir, 2007, 23, 9674-9680.	3.5	76
25	Simultaneous preparation of cellulose nanocrystals and micron-sized porous colloidal particles of cellulose by TEMPO-mediated oxidation. Green Chemistry, 2015, 17, 808-811.	9.0	74
26	Supracolloidal Multivalent Interactions and Wrapping of Dendronized Glycopolymers on Native Cellulose Nanocrystals. Journal of the American Chemical Society, 2014, 136, 866-869.	13.7	72
27	Distribution of lignin and its coniferyl alcohol and coniferyl aldehyde groups in Picea abies and Pinus sylvestris as observed by Raman imaging. Phytochemistry, 2011, 72, 1889-1895.	2.9	71
28	Cross-linking of cellulose and poly(ethylene glycol) with citric acid. Reactive and Functional Polymers, 2015, 90, 21-24.	4.1	70
29	Nanomaterials Derived from Fungal Sourcesâ€"Is It the New Hype?. Biomacromolecules, 2020, 21, 30-55.	5.4	68
30	Impact of Drying on Wood Ultrastructure Observed by Deuterium Exchange and Photoacoustic FT-IR Spectroscopy. Biomacromolecules, 2010, 11, 515-520.	5.4	65
31	Impact of Drying on Wood Ultrastructure: Similarities in Cell Wall Alteration between Native Wood and Isolated Wood-Based Fibers. Biomacromolecules, 2010, 11, 2161-2168.	5.4	62
32	Interfacial Mechanisms of Water Vapor Sorption into Cellulose Nanofibril Films as Revealed by Quantitative Models. Biomacromolecules, 2017, 18, 2951-2958.	5.4	55
33	Specific water uptake of thin films from nanofibrillar cellulose. Journal of Materials Chemistry A, 2013, 1, 13655.	10.3	53
34	TEMPO-mediated oxidation of microcrystalline cellulose: limiting factors for cellulose nanocrystal yield. Cellulose, 2017, 24, 1657-1667.	4.9	53
35	Cellulose nanocrystals by acid vapour: towards more effortless isolation of cellulose nanocrystals. Faraday Discussions, 2017, 202, 315-330.	3.2	51
36	Waste-Derived Low-Cost Mycelium Nanopapers with Tunable Mechanical and Surface Properties. Biomacromolecules, 2019, 20, 3513-3523.	5.4	51

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37	Molecular Engineering of Fracture Energy Dissipating Sacrificial Bonds Into Cellulose Nanocrystal Nanocomposites. Angewandte Chemie - International Edition, 2014, 53, 5049-5053.	13.8	49
38	Ultrathin Films of Cellulose: A Materials Perspective. Frontiers in Chemistry, 2019, 7, 488.	3.6	48
39	Quantitative Assessment of the Enzymatic Degradation of Amorphous Cellulose by Using a Quartz Crystal Microbalance with Dissipation Monitoring. Langmuir, 2011, 27, 8819-8828.	3.5	47
40	Direct Interfacial Modification of Nanocellulose Films for Thermoresponsive Membrane Templates. ACS Applied Materials & Interfaces, 2016, 8, 2923-2927.	8.0	47
41	A method for the heterogeneous modification of nanofibrillar cellulose in aqueous media. Carbohydrate Polymers, 2014, 100, 107-115.	10.2	43
42	Noncovalent Surface Modification of Cellulose Nanopapers by Adsorption of Polymers from Aprotic Solvents. Langmuir, 2017, 33, 5707-5712.	3.5	43
43	Mimicking the Humidity Response of the Plant Cell Wall by Using Two-Dimensional Systems: The Critical Role of Amorphous and Crystalline Polysaccharides. Langmuir, 2016, 32, 2032-2040.	3.5	42
44	Accessibility of cellulose: Structural changes and their reversibility in aqueous media. Carbohydrate Polymers, 2013, 93, 424-429.	10.2	40
45	Surface-Sensitive Approach to Interpreting Supramolecular Rearrangements in Cellulose by Synchrotron Grazing Incidence Small-Angle X-ray Scattering. ACS Macro Letters, 2015, 4, 713-716.	4.8	38
46	Following the Kinetics of a Chemical Reaction in Ultrathin Supported Polymer Films by Reliable Mass Density Determination with X-ray Reflectivity. Journal of the American Chemical Society, 2010, 132, 3678-3679.	13.7	36
47	Mushroom-derived chitosan-glucan nanopaper filters for the treatment of water. Reactive and Functional Polymers, 2020, 146, 104428.	4.1	35
48	Visualizing Degradation of Cellulose Nanofibers by Acid Hydrolysis. Biomacromolecules, 2021, 22, 1399-1405.	5.4	31
49	Introducing open films of nanosized celluloseâ€”atomic force microscopy and quantification of morphology. Polymer, 2005, 46, 3307-3317.	3.8	30
50	Processing of Citrus Nanostructured Cellulose: A Rigorous Designâ€ofâ€Experiment Study of the Hydrothermal Microwaveâ€Assisted Selective Scissoring Process. ChemSusChem, 2018, 11, 1344-1353.	6.8	28
51	Sustainable High Yield Route to Cellulose Nanocrystals from Bacterial Cellulose. ACS Sustainable Chemistry and Engineering, 2019, 7, 14384-14388.	6.7	28
52	Surface properties of chitin-glucan nanopapers from Agaricus bisporus. International Journal of Biological Macromolecules, 2020, 148, 677-687.	7.5	28
53	Bicomponent fibre mats with adhesive ultra-hydrophobicity tailored with cellulose derivatives. Journal of Materials Chemistry, 2012, 22, 12072.	6.7	27
54	Influence of adsorbed polyelectrolytes on pore size distribution of a water-swollen biomaterial. Soft Matter, 2012, 8, 4740.	2.7	27

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55	All-cellulose multilayers: long nanofibrils assembled with short nanocrystals. Cellulose, 2013, 20, 1777-1789.	4.9	27
56	Noncovalent Dispersion and Functionalization of Cellulose Nanocrystals with Proteins and Polysaccharides. Biomacromolecules, 2016, 17, 1458-1465.	5.4	27
57	Influence of biological origin on the tensile properties of cellulose nanopapers. Cellulose, 2021, 28, 6619.	4.9	27
58	Carboxymethyl cellulose on a fiber substrate: the interactions with cationic polyelectrolytes. Cellulose, 2012, 19, 2217-2231.	4.9	26
59	Plastic to elastic: Fungi-derived composite nanopapers with tunable tensile properties. Composites Science and Technology, 2020, 198, 108327.	7.8	26
60	Biowaste-derived electrode and electrolyte materials for flexible supercapacitors. Chemical Engineering Journal, 2022, 435, 135058.	12.7	25
61	Ultrathin Cellulose Films of Tunable Nanostructured Morphology with a Hydrophobic Component. Biomacromolecules, 2009, 10, 1276-1281.	5.4	24
62	Protein-assisted 2D assembly of gold nanoparticles on a polysaccharide surface. Chemical Communications, 2013, 49, 1318.	4.1	24
63	From vapour to gas: optimising cellulose degradation with gaseous HCl. Reaction Chemistry and Engineering, 2018, 3, 312-318.	3.7	24
64	Cellulose decorated cavities on ultrathin films of PMMA. Soft Matter, 2009, 5, 1786.	2.7	22
65	Optimising CMC sorption in order to improve tensile stiffness of hardwood pulp sheets. Nordic Pulp and Paper Research Journal, 2007, 22, 336-342.	0.7	20
66	Bottom-up Construction of Xylan Nanocrystals in Dimethyl Sulfoxide. Biomacromolecules, 2021, 22, 898-906.	5.4	20
67	Strongly reduced thermal conductivity in hybrid ZnO/nanocellulose thin films. Journal of Materials Science, 2017, 52, 6093-6099.	3.7	19
68	Cellulose carbamate derived cellulose thin films: preparation, characterization and blending with cellulose xanthate. Cellulose, 2019, 26, 7399-7410.	4.9	19
69	Knoevenagel Condensation for Modifying the Reducing End Groups of Cellulose Nanocrystals. ACS Macro Letters, 2019, 8, 1642-1647.	4.8	19
70	Effects of commercial cellobiohydrolase treatment on fiber strength and morphology of bleached hardwood pulp 10th EWLP, Stockholm, Sweden, August 25â€“28, 2008. Holzforschung, 2009, 63, 731-736.	1.9	18
71	Carboxymethyl Cellulose Treatment As a Method to Inhibit Vessel Picking Tendency in Printing of Eucalyptus Pulp Sheets. Industrial & Engineering Chemistry Research, 2009, 48, 1887-1892.	3.7	18
72	Entangled and colloidally stable microcrystalline cellulose matrices in controlled drug release. International Journal of Pharmaceutics, 2018, 548, 113-119.	5.2	18

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73	Recovery of Gold from Chloride Solution by TEMPO-Oxidized Cellulose Nanofiber Adsorbent. Sustainability, 2019, 11, 1406.	3.2	17
74	Trimethylsilylcellulose/Polystyrene Blends as a Means To Construct Cellulose Domains on Cellulose. Macromolecules, 2005, 38, 10712-10720.	4.8	16
75	Phase-specific pore growth in ultrathin bicomponent films from cellulose-based polysaccharides. Soft Matter, 2011, 7, 10386.	2.7	16
76	Surface-Induced Frustration in Solid State Polymorphic Transition of Native Cellulose Nanocrystals. Biomacromolecules, 2017, 18, 1975-1982.	5.4	16
77	Nanocellulose-based mechanically stable immobilization matrix for enhanced ethylene production: a framework for photosynthetic solid-state cell factories. Green Chemistry, 2021, 23, 3715-3724.	9.0	15
78	Thickness Dependence of Reflectionâˆ'Absorption Infrared Spectra of Supported Thin Polymer Films. Macromolecules, 2011, 44, 1775-1778.	4.8	14
79	Structural Order in Cellulose Thin Films Prepared from a Trimethylsilyl Precursor. Biomacromolecules, 2020, 21, 653-659.	5.4	14
80	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 2702-2717.	5.4	14
81	Morphology of poly(methyl methacrylate) and polystyrene blends upon Langmuirâ€“Schaefer deposition. Soft Matter, 2011, 7, 743-748.	2.7	12
82	Structural distinction due to deposition method in ultrathin films of cellulose nanofibres. Cellulose, 2018, 25, 1715-1724.	4.9	12
83	Cationic cellulose nanocrystals for fast, efficient and selective heparin recovery. Chemical Engineering Journal, 2021, 420, 129811.	12.7	12
84	Excellence in Excrements: Upcycling of Herbivore Manure into Nanocellulose and Biogas. ACS Sustainable Chemistry and Engineering, 2021, 9, 15506-15513.	6.7	12
85	Ultrastructural evaluation of compression wood-like properties of common juniper (Juniperus) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.9	11
86	The unusual interactions between polymer grafted cellulose nanocrystal aggregates. Soft Matter, 2013, 9, 8965.	2.7	11
87	Dissolution Control of Mg by Cellulose Acetateâ€“Polyelectrolyte Membranes. ACS Applied Materials & Interfaces, 2014, 6, 22393-22399.	8.0	11
88	Parameters affecting monolayer organisation of substituted polysaccharides on solid substrates upon Langmuirâ€“Schaefer deposition. Reactive and Functional Polymers, 2016, 99, 100-106.	4.1	11
89	Impact of hydrothermal and alkaline treatments of birch kraft pulp on the levelling-off degree of polymerization (LODP) of cellulose microfibrils. Cellulose, 2018, 25, 6811-6818.	4.9	11
90	Tuning the Porosity, Water Interaction, and Redispersion of Nanocellulose Hydrogels by Osmotic Dehydration. ACS Applied Polymer Materials, 2022, 4, 24-28.	4.4	11

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91	Arrangements of cationic starch of varying hydrophobicity on hydrophilic and hydrophobic surfaces. Journal of Colloid and Interface Science, 2009, 336, 21-29.	9.4	10
92	A Systematic Study of Noncross-linking Wet Strength Agents. Industrial & Engineering Chemistry Research, 2013, 52, 12010-12017.	3.7	10
93	Tuning the Physicochemical Properties of Cellulose Nanocrystals through an In Situ Oligosaccharide Surface Modification Method. Biomacromolecules, 2021, 22, 3284-3296.	5.4	10
94	Controlled Hydrophobic Functionalization of Natural Fibers through Selfâ€Assembly of Amphiphilic Diblock Copolymer Micelles. ChemSusChem, 2013, 6, 1203-1208.	6.8	9
95	Colorimetric Behavior and Seasonal Characteristic of Xylem Sap Obtained by Mechanical Compression from Silver Birch (Betula pendula). ACS Sustainable Chemistry and Engineering, 2013, 1, 1075-1082.	6.7	9
96	2D dendritic fractal patterns from an amphiphilic polysaccharide. Soft Matter, 2014, 10, 1801.	2.7	9
97	The Effect of Hydrothermal Treatment on the Color Stability and Chemical Properties of Birch Veneer Surfaces. BioResources, 2015, 10, 6610-6623.	1.0	9
98	Humidity Response of Cellulose Thin Films. Biomacromolecules, 2022, 23, 1148-1157.	5.4	9
99	Accessibility of Cell Wall Lignin in Solvent Extraction of Ultrathin Spruce Wood Sections. ACS Sustainable Chemistry and Engineering, 2014, 2, 804-808.	6.7	8
100	The Effect of Polymorphism on the Kinetics of Adsorption and Degradation: A Case of Hydrogen Chloride Vapor on Cellulose. Advanced Sustainable Systems, 2018, 2, 1800026.	5.3	8
101	Directed Assembly of Cellulose Nanocrystals in Their Native Solidâ€State Template of a Processed Fiber Cell Wall. Macromolecular Rapid Communications, 2021, 42, e2100092.	3.9	8
102	Chemical characteristics of squeezable sap of hydrothermally treated silver birch logs (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Wood Science and Technology, 2015, 49, 289-302.	3.2	7
103	Influence of the quality of microcrystalline cellulose on the outcome of TEMPO-mediated oxidation. Cellulose, 2017, 24, 5697-5704.	4.9	7
104	Fibre surface and strength of a fibre network. Holzforschung, 2006, 60, 691-693.	1.9	5
105	Celluloseâ€Nanokristalle in hoher Ausbeute durch Abbau und Kristallisation von Cellulose mittels gasfÃ¶rmigem Chlorwasserstoff. Angewandte Chemie, 2016, 128, 14671-14674.	2.0	5
106	Native Structure of the Plant Cell Wall Utilized for Topâ€Down Assembly of Aligned Cellulose Nanocrystals into Micrometerâ€Sized Nanoporous Particles. Macromolecular Rapid Communications, 2020, 41, 2000201.	3.9	5
107	Surface hydrophobization of pulp fibers in paper sheets via gas phase reactions. International Journal of Biological Macromolecules, 2021, 180, 80-87.	7.5	5
108	Solid-state polymer adsorption for surface modification: The role of molecular weight. Journal of Colloid and Interface Science, 2022, 605, 441-450.	9.4	5

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109	Assessing Fireâ€Damage in Historical Papers and Alleviating Damage with Soft Cellulose Nanofibers. Small, 2022, 18, e2105420.	10.0	5
110	The Impact of Surface Charges of Carboxylated Cellulose Nanofibrils on the Water Motions in Hydrated Films. Biomacromolecules, 2022, 23, 3104-3115.	5.4	5
111	Quantification method for hydrogen peroxide formation during oxygen delignification of kraft pulp. Nordic Pulp and Paper Research Journal, 2005, 20, 490-495.	0.7	4
112	Grow it yourself composites: delignification and hybridisation of lignocellulosic material using animals and fungi. Green Chemistry, 2021, 23, 7506-7514.	9.0	4
113	Creaming Layers of Nanocellulose Stabilized Water-Based Polystyrene: High-Solids Emulsions for 3D Printing. Frontiers in Chemical Engineering, 2021, 3, .	2.7	4
114	Effect of Moisture on Polymer Deconstruction in HCl Gas Hydrolysis of Wood. ACS Omega, 2022, 7, 7074-7083.	3.5	4
115	Manufacturing heat-damaged papers as model materials for evaluating conservation methods. Cellulose, 2022, 29, 6373-6391.	4.9	4
116	Utilizing Polymer Blends to Prepare Ultrathin Films with Diverse Cellulose Textures. Macromolecular Symposia, 2010, 294, 45-50.	0.7	3
117	Thermal Degradation of Cellulose Nanocrystals Deposited on Different Surfaces. Macromolecular Symposia, 2010, 294, 51-57.	0.7	3
118	The chemical characteristics of squeezable sap from silver birch (Betula pendula) logs hydrothermally treated at 70ÂÂ°C: the effect of treatment time on the concentration of water extracts. Wood Science and Technology, 2015, 49, 1295-1306.	3.2	3
119	Bio-based materials: general discussion. Faraday Discussions, 2017, 202, 121-139.	3.2	3
120	Cellulose Model Films: Challenges in Preparation. ACS Symposium Series, 2010, , 57-74.	0.5	2
121	Chemische Modifizierung der reduzierenden Enden von Cellulosenanokristallen. Angewandte Chemie, 2021, 133, 66-88.	2.0	2
122	Study of Transport Properties of Polyelectrolyte-Cellulose Acetate Membranes. ECS Transactions, 2017, 77, 663-669.	0.5	1
123	Nanocellulose-Based Materials in Supramolecular Chemistry. , 2017, , 351-364.		1
124	Differences in residual lignin properties between <i>Betula verrucosa</i> and <i>Eucalyptus urograndis</i> kraft pulps. Biopolymers, 2008, 89, 889-893.	2.4	0
125	Thin Film Deposition Techniques. Materials and Energy, 2014, , 7-18.	0.1	0
126	Conversion technologies: general discussion. Faraday Discussions, 2017, 202, 371-389.	3.2	0

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127	Time-Dependent Behavior of Cation Transport through Cellulose Acetate-Cationic Polyelectrolyte Membranes. Journal of the Electrochemical Society, 2018, 165, H39-H44.	2.9	0
128	Deposition of Ultrathin Cellulose Nanofibers Films As Bio-Implant Corrosion Coatings. ECS Meeting Abstracts, 2017, , .	0.0	0
129	Study of Transport Properties of Polyelectrolyte-Cellulose Acetate Membranes. ECS Meeting Abstracts, 2017, , .	0.0	0