Martti Toivakka

List of Publications by Year
in descending order

147 papers	3,186 citations	159358 30 h-index	197535 49 g-index
150 all docs	150 docs citations	150 times ranked	3880 citing authors

#	Article	IF	Citations
1	Comparison of nano- and microfibrillated cellulose films. Cellulose, 2014, 21, 3443-3456.	2.4	151
2	IR-sintering of ink-jet printed metal-nanoparticles on paper. Thin Solid Films, 2012, 520, 2949-2955.	0.8	144
3	Lightâ€Emitting Paper. Advanced Functional Materials, 2015, 25, 3238-3245.	7.8	132
4	A multilayer coated fiber-based substrate suitable for printed functionality. Organic Electronics, 2009, 10, 1020-1023.	1.4	123
5	Development of superhydrophobic coating on paperboard surface using the Liquid Flame Spray. Surface and Coatings Technology, 2010, 205, 436-445.	2.2	108
6	Nanostructures Increase Water Droplet Adhesion on Hierarchically Rough Superhydrophobic Surfaces. Langmuir, 2012, 28, 3138-3145.	1.6	107
7	Paper-Based Microfluidics: Fabrication Technique and Dynamics of Capillary-Driven Surface Flow. ACS Applied Materials & Interfaces, 2014, 6, 20060-20066.	4.0	107
8	Continuous Processing of Nanocellulose and Polylactic Acid into Multilayer Barrier Coatings. ACS Applied Materials & Interfaces, 2019, 11, 11920-11927.	4.0	96
9	Roll-to-Roll Processed Cellulose Nanofiber Coatings. Industrial & Engineering Chemistry Research, 2016, 55, 3603-3613.	1.8	93
10	Rheology of cellulose nanofibers suspensions: Boundary driven flow. Journal of Rheology, 2016, 60, 1151-1159.	1.3	84
11	Adjustable wettability of paperboard by liquid flame spray nanoparticle deposition. Applied Surface Science, 2011, 257, 1911-1917.	3.1	56
12	Controlling capillary-driven surface flow on a paper-based microfluidic channel. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	54
13	Wetting and print quality study of an inkjet-printed poly(3-hexylthiophene) on pigment coated papers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 367, 76-84.	2.3	51
14	Cellulose nanofibril/carbon nanotube composite foam-stabilized paraffin phase change material for thermal energy storage and conversion. Carbohydrate Polymers, 2021, 273, 118585.	5.1	51
15	Nanoparticle Deposition from Liquid Flame Spray onto Moving Roll-to-Roll Paperboard Material. Aerosol Science and Technology, 2011, 45, 827-837.	1.5	49
16	Enhancing Capillary-Driven Flow for Paper-Based Microfluidic Channels. ACS Applied Materials & Interfaces, 2016, 8, 30523-30530.	4.0	49
17	Conductivity of PEDOT:PSS on Spin-Coated and Drop Cast Nanofibrillar Cellulose Thin Films. Nanoscale Research Letters, 2015, 10, 386.	3.1	46
18	Transparent nanocellulose-pigment composite films. Journal of Materials Science, 2015, 50, 7343-7352.	1.7	43

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19	Enhanced thermal energy storage performance of salt hydrate phase change material: Effect of cellulose nanofibril and graphene nanoplatelet. Solar Energy Materials and Solar Cells, 2021, 225, 111028.	3.0	43
20	Surface chemical analysis of photocatalytic wettability conversion of TiO2 nanoparticle coating. Surface and Coatings Technology, 2012, 208, 73-79.	2.2	40
21	Molecular modeling studies of interactions between sodium polyacrylate polymer and calcite surface. Applied Surface Science, 2013, 276, 43-52.	3.1	36
22	ToF-SIMS Analysis of UV-Switchable TiO₂-Nanoparticle-Coated Paper Surface. Langmuir, 2013, 29, 3780-3790.	1.6	36
23	Continuous roll-to-roll coating of cellulose nanocrystals onto paperboard. Cellulose, 2018, 25, 6055-6069.	2.4	35
24	Atmospheric synthesis of superhydrophobic TiO2 nanoparticle deposits in a single step using Liquid Flame Spray. Journal of Aerosol Science, 2012, 52, 57-68.	1.8	34
25	Impact of humidity on functionality of on-paper printed electronics. Nanotechnology, 2014, 25, 094003.	1.3	33
26	One-step flame synthesis of silver nanoparticles for roll-to-roll production of antibacterial paper. Applied Surface Science, 2017, 420, 558-565.	3.1	32
27	Detection of local specular gloss and surface roughness from black prints. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 299, 101-108.	2.3	31
28	Wettability conversion on the liquid flame spray generated superhydrophobic TiO2 nanoparticle coating on paper and board by photocatalytic decomposition of spontaneously accumulated carbonaceous overlayer. Cellulose, 2013, 20, 391-408.	2.4	31
29	Temperature effects on dynamic water absorption into paper. Journal of Colloid and Interface Science, 2014, 418, 373-377.	5.0	31
30	Synthesis and Physicochemical Characterization of Shaped Catalysts of Î² and Y Zeolites for Cyclization of Citronellal. Industrial & Engineering Chemistry Research, 2019, 58, 18084-18096.	1.8	31
31	Effects of atmospheric plasma activation on surface properties of pigment-coated and surface-sized papers. Applied Surface Science, 2008, 255, 3217-3229.	3.1	30
32	Effective packing of 3-dimensional voxel-based arbitrarily shaped particles. Powder Technology, 2009, 196, 139-146.	2.1	30
33	Use of cellulose nanofibril (CNF)/silver nanoparticles (AgNPs) composite in salt hydrate phase change material for efficient thermal energy storage. International Journal of Biological Macromolecules, 2021, 174, 402-412.	3.6	30
34	Visualisation of the distribution of offset ink components printed onto coated paper. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 317, 557-567.	2.3	28
35	Printability of functional inks on multilayer curtain coated paper. Chemical Engineering and Processing: Process Intensification, 2013, 68, 13-20.	1.8	28
36	Human Dermal Fibroblast Viability and Adhesion on Cellulose Nanomaterial Coatings: Influence of Surface Characteristics. Biomacromolecules, 2020, 21, 1560-1567.	2.6	27

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37	Impact spreading and absorption of Newtonian droplets on topographically irregular porous materials. Chemical Engineering Science, 2007, 62, 3142-3158.	1.9	26
38	Binary TiO2/SiO2 nanoparticle coating for controlling the wetting properties of paperboard. Materials Chemistry and Physics, 2015, 149-150, 230-237.	2.0	26
39	Antimicrobial characterization of silver nanoparticle-coated surfaces by “touch test” method. Nanotechnology, Science and Applications, 2017, Volume 10, 137-145.	4.6	26
40	Surface chemical characterization of nanoparticle coated paperboard. Applied Surface Science, 2012, 258, 3119-3125.	3.1	25
41	Polymer chain pinning at interfaces in CaCO3â€“SBR latex composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2363-2369.	2.6	24
42	Substrate role in coating of microfibrillated cellulose suspensions. Cellulose, 2017, 24, 1247-1260.	2.4	24
43	Balancing between Fold-crack Resistance and Stiffness. Journal of Composite Materials, 2009, 43, 1265-1283.	1.2	23
44	Rheological behavior of high consistency enzymatically fibrillated cellulose suspensions. Cellulose, 2021, 28, 2087-2104.	2.4	23
45	Electrodeposition of PEDOT-Cl film on a fully printed Ag/polyaniline electrode. Thin Solid Films, 2011, 519, 2172-2175.	0.8	22
46	Wear resistance of nanoparticle coatings on paperboard. Wear, 2013, 307, 112-118.	1.5	22
47	On Laccase-Catalyzed Polymerization of Biorefinery Lignin Fractions and Alignment of Lignin Nanoparticles on the Nanocellulose Surface <i>via</i> One-Pot Water-Phase Synthesis. ACS Sustainable Chemistry and Engineering, 2021, 9, 8770-8782.	3.2	22
48	Ageing effect in atmospheric plasma activation of paper substrates. Surface and Coatings Technology, 2008, 202, 3777-3786.	2.2	21
49	Viability and properties of roll-to-roll coating of cellulose nanofibrils on recycled paperboard. Nordic Pulp and Paper Research Journal, 2017, 32, 179-188.	0.3	21
50	Top layer coatability on barrier coatings. Progress in Organic Coatings, 2012, 73, 26-32.	1.9	19
51	Mechanical properties of TEMPO-oxidised bacterial cellulose-amino acid biomaterials. European Polymer Journal, 2018, 101, 29-36.	2.6	19
52	Human dermal fibroblast proliferation controlled by surface roughness of two-component nanostructured latex polymer coatings. Colloids and Surfaces B: Biointerfaces, 2019, 174, 136-144.	2.5	19
53	Effect of plasma coating on antibacterial activity of silver nanoparticles. Thin Solid Films, 2019, 672, 75-82.	0.8	19
54	Properties of adsorbents used for bleaching of vegetable oils and animal fats. Journal of Chemical Technology and Biotechnology, 2015, 90, 1579-1591.	1.6	18

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55	Barrier properties created by dispersion coating. Tappi Journal, 2013, 12, 45-51.	0.2	18
56	Prediction of suspension viscoelasticity through particle motion modeling. Journal of Non-Newtonian Fluid Mechanics, 1995, 56, 49-64.	1.0	17
57	On the non-linear attachment characteristics of blood to bacterial cellulose/kaolin biomaterials. Colloids and Surfaces B: Biointerfaces, 2014, 116, 176-182.	2.5	17
58	Enhanced Surface Wetting of Pigment Coated Paper by UVC Irradiation. Industrial & Engineering Chemistry Research, 2010, 49, 11351-11356.	1.8	15
59	Short time spreading and wetting of offset printing liquids on model calcium carbonate coating structures. Journal of Colloid and Interface Science, 2012, 369, 426-434.	5.0	15
60	High- and low-adhesive superhydrophobicity on the liquid flame spray-coated board and paper: structural effects on surface wetting and transition between the low- and high-adhesive states. Colloid and Polymer Science, 2013, 291, 447-455.	1.0	15
61	Impact of functionalised dispersing agents on the mechanical and viscoelastic properties of pigment coating. Progress in Organic Coatings, 2013, 76, 101-106.	1.9	15
62	Creation of superhydrophilic surfaces of paper and board. Journal of Adhesion Science and Technology, 2014, 28, 864-879.	1.4	15
63	Stiffness and swelling characteristics of nanocellulose films in cell culture media. Cellulose, 2018, 25, 4969-4978.	2.4	15
64	Calculating tortuosity in quasi-random anisotropic packings. Nordic Pulp and Paper Research Journal, 2006, 21, 670-675.	0.3	14
65	Evaluation of Plasma-Deposited Hydrophobic Coatings on Pigment-Coated Paper for Reduced Dampening Water Absorption. Journal of Adhesion Science and Technology, 2010, 24, 511-537.	1.4	14
66	Effect of micro- and nanofibrillated cellulose on the phase stability of sodium sulfate decahydrate based phase change material. Cellulose, 2020, 27, 5003-5016.	2.4	14
67	Influence of Substrate in Roll-to-roll Coated Nanographite Electrodes for Metal-free Supercapacitors. Scientific Reports, 2020, 10, 5282.	1.6	14
68	Measuring solvent barrier properties of paper. Measurement Science and Technology, 2012, 23, 015601.	1.4	13
69	Stencil Printingâ€"A Novel Manufacturing Platform for Orodispersible Discs. Pharmaceutics, 2020, 12, 33.	2.0	13
70	Ion-modulated transistors on paper using phase-separated semiconductor/insulator blends. MRS Communications, 2014, 4, 51-55.	0.8	12
71	Influence of anionic and cationic polyelectrolytes on the conductivity and morphology of poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) films. Thin Solid Films, 2015, 590, 170-176.	0.8	12
72	Controlled time release and leaching of silver nanoparticles using a thin immobilizing layer of aluminum oxide. Thin Solid Films, 2018, 645, 166-172.	0.8	12

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73	Calculating the permeability of model paper coating structures comprising incongruent particle shapes and sizes. Microporous and Mesoporous Materials, 2009, 117, 685-688.	2.2	11
74	Review on Liquid Flame Spray in paper converting: Multifunctional superhydrophobic nanoparticle coatings. Nordic Pulp and Paper Research Journal, 2014, 29, 747-759.	0.3	11
75	Electrostatic charges instigate â€˜concertina-likeâ€™ mechanisms of molecular toughening in MaSp1 (spider silk) proteins. Materials Science and Engineering C, 2014, 41, 329-334.	3.8	11
76	l-Lysine templated CaCO3 precipitated to flax develops flowery crystal structures that improve the mechanical properties of natural fibre reinforced composites. Composites Part A: Applied Science and Manufacturing, 2015, 75, 84-88.	3.8	11
77	High-Throughput Processing of Nanographiteâ€“Nanocellulose-Based Electrodes for Flexible Energy Devices. Industrial & Engineering Chemistry Research, 2020, 59, 11232-11240.	1.8	11
78	Influence of colloidal interactions on pigment coating layer structure formation. Journal of Colloid and Interface Science, 2009, 332, 394-401.	5.0	10
79	Compressibility of porous TiO2 nanoparticle coating on paperboard. Nanoscale Research Letters, 2013, 8, 444.	3.1	10
80	Protein and bacterial interactions with nanostructured polymer coatings. Colloids and Surfaces B: Biointerfaces, 2015, 136, 527-535.	2.5	10
81	Nanoporous kaolinâ€"cellulose nanofibril composites for printed electronics. Flexible and Printed Electronics, 2017, 2, 024004.	1.5	10
82	Conductive nanographiteâ€“nanocellulose coatings on paper. Flexible and Printed Electronics, 2017, 2, 035002.	1.5	10
83	Microreactor coating with Au/Al2O3 catalyst for gas-phase partial oxidation of ethanol: Physico-chemical characterization and evaluation of catalytic properties. Chemical Engineering Journal, 2019, 378, 122179.	6.6	9
84	Thermal properties of graphite/salt hydrate phase change material stabilized by nanofibrillated cellulose. Cellulose, 2021, 28, 6845-6856.	2.4	9
85	On estimation of complex refractive index and colour of dry black and cyan offset inks by a multi-function spectrophotometer. Measurement Science and Technology, 2008, 19, 115601.	1.4	8
86	Thermomechanical properties of CaCO3-latex pigment coatings: Impact of modified dispersing agents. Progress in Organic Coatings, 2013, 76, 439-446.	1.9	8
87	Structure and Mechanical Properties of Starch/Styrene-Butadiene Latex Composites. Advanced Materials Research, 2014, 936, 74-81.	0.3	8
88	Influence of nanolatex addition on cellulose nanofiber film properties. Nordic Pulp and Paper Research Journal, 2016, 31, 333-340.	0.3	8
89	A Stokesian dynamics approach for simulation of magnetic particle suspensions. Minerals Engineering, 2016, 90, 70-76.	1.8	8
90	Modelling of capillary-driven flow for closed paper-based microfluidic channels. Journal of Micromechanics and Microengineering, 2017, 27, 065001.	1.5	8

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91	Antibacterial activity of silver and titania nanoparticles on glass surfaces. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2019, 10, 015012.	0.7	8
92	High-speed production of antibacterial fabrics using liquid flame spray. Textile Reseach Journal, 2020, 90, 503-511.	1.1	8
93	Influence of atmospheric plasma activation on sheet-fed offset print quality. Nordic Pulp and Paper Research Journal, 2008, 23, 181-188.	0.3	8
94	Assessment of the complex refractive index of an optically very dense solid layer: Case study offset magenta ink. Chemical Physics Letters, 2007, 442, 515-517.	1.2	7
95	The influence of different roughness scales of pigment coated papers on print gloss. Nordic Pulp and Paper Research Journal, 2009, 24, 327-334.	0.3	7
96	Structure formation mechanisms in consolidating pigment coatingsâ€"Simulation and visualisation. Chemical Engineering and Processing: Process Intensification, 2011, 50, 574-582.	1.8	7
97	Drying of Porous Coating: Influence of Coating Composition. Industrial & Engineering Chemistry Research, 2012, 51, 13680-13685.	1.8	7
98	Largeâ€Scale Rollâ€toâ€Roll Patterned Oxygen Indicators for Modified Atmosphere Packages. Packaging Technology and Science, 2017, 30, 219-227.	1.3	7
99	Synthesis of galactoglucomannan-based latex via emulsion polymerization. Carbohydrate Polymers, 2022, 291, 119565.	5.1	7
100	Fatigue life predictions of porous composite paper coatings. International Journal of Fatigue, 2012, 38, 181-187.	2.8	6
101	The Effect of Flame Treatment on Surface Properties and Heat Sealability of Lowâ€Density Polyethylene Coating. Packaging Technology and Science, 2013, 26, 201-214.	1.3	6
102	Effects of fibre-surface morphology on the mechanical properties of Porifera-inspired rubber-matrix composites. Applied Physics A: Materials Science and Processing, 2013, 111, 1031-1036.	1.1	6
103	Stacking up: a new approach for cell culture studies. Biomaterials Science, 2019, 7, 3249-3257.	2.6	6
104	On the limit of superhydrophobicity: defining the minimum amount of TiO₂ nanoparticle coating. Materials Research Express, 2019, 6, 035004.	0.8	6
105	Fabrication of All-Solid Organic Electrochromic Devices on Absorptive Paper Substrates Utilizing a Simplified Lateral Architecture. Materials, 2020, 13, 4839.	1.3	6
106	A low-cost paper-based platform for fast and reliable screening of cellular interactions with materials. Journal of Materials Chemistry B, 2020, 8, 1146-1156.	2.9	6
107	Particle movements during the coating process. Nordic Pulp and Paper Research Journal, 1994, 9, 143-149.	0.3	6
108	Understanding coating strength at the molecular and microscopic level. Tappi Journal, 2015, 14, 373-384.	0.2	6

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109	Comparison of Dynamic Print Gloss Measurement Techniques. Tappi Journal, 2009, 8, 19-28.	0.2	6
110	Crispatotrochus-mimicking coatings improve the flexural properties of organic fibres. Journal of Materials Science, 2013, 48, 8449-8453.	1.7	5
111	Terahertz complex conductivity of cellulose nanocrystal based composite films controlled with PEDOT:PSS blending ratio. Cellulose, 2020, 27, 10019-10027.	2.4	5
112	Small particle mobility in consolidating coating layers. Nordic Pulp and Paper Research Journal, 2008, 23, 52-56.	0.3	5
113	Coating: Incorporation of laccase in pigment coating for bioactive paper applications. Nordic Pulp and Paper Research Journal, 2011, 26, 118-127.	0.3	5
114	Plasma activation induced changes in surface chemistry of pigment coating components. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 352, 103-112.	2.3	4
115	Molecular modeling studies of interactions between styreneâ€“butadiene latex and sodium polyacrylate polymer surface. Computational and Theoretical Chemistry, 2010, 953, 123-133.	1.5	4
116	Planar fluidic channels on TiO2 nanoparticle coated paperboard. Nordic Pulp and Paper Research Journal, 2016, 31, 232-238.	0.3	4
117	The influence of mineral particles on fibroblast behaviour: A comparative study. Colloids and Surfaces B: Biointerfaces, 2018, 167, 239-251.	2.5	4
118	Influence of drying strategy on coating layer structure formation. Nordic Pulp and Paper Research Journal, 2008, 23, 46-51.	0.3	4
119	Influence of plasma activation on absorption of offset ink components into pigment-coated paper. Nordic Pulp and Paper Research Journal, 2010, 25, 93-99.	0.3	4
120	Adjustable wetting of Liquid Flame Spray (LFS) TiO₂-nanoparticle coated board: Batch-type versus roll-to-roll stimulation methods. Nordic Pulp and Paper Research Journal, 2014, 29, 271-279.	0.3	4
121	Deflection and plasticity of soft-tip bevelled blades in paper coating operations. Materials & Design, 2009, 30, 871-877.	5.1	3
122	A particle motion model for the study of consolidation phenomena. Computers and Chemical Engineering, 2009, 33, 1227-1239.	2.0	3
123	Improved Prediction of Offset Ink Setting Rates Based on Experimental Data and Filtration Equations. Industrial & Engineering Chemistry Research, 2010, 49, 4676-4681.	1.8	3
124	Temperature and moisture effects on wetting of calcite surfaces by offset ink constituents. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 390, 105-111.	2.3	3
125	Fracture and Plasticity in Nano-Porous Particle-Polymer Composites. Key Engineering Materials, 2011, 462-463, 24-29.	0.4	3
126	DMTA investigation of solvents effects on viscoelastic properties of porous CaCO3-SBR latex composites. Mechanics of Materials, 2012, 49, 1-12.	1.7	3

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127	Switchable water absorption of paper via liquid flame spray nanoparticle coating. Cellulose, 2014, 21, 2033-2043.	2.4	3
128	The self-organization of starch on paper. Nordic Pulp and Paper Research Journal, 2012, 27, 621-630.	0.3	3
129	Leveling of surface defects in thin films of pigmented coatings. Nordic Pulp and Paper Research Journal, 2001, 16, 246-250.	0.3	2
130	Micro-buckling of paper during blade metering. Computers and Chemical Engineering, 2008, 32, 600-607.	2.0	2
131	Roll-to-Roll Coating by Liquid Flame Spray Nanoparticle Deposition. Materials Research Society Symposia Proceedings, 2015, 1747, 37.	0.1	2
132	Heat and mass transfer models to understand the drying mechanisms of a porous substrate. European Physical Journal E, 2016, 39, 25.	0.7	2
133	Discrete element method to predict the mechanical properties of pigmented coatings. Journal of Coatings Technology Research, 2019, 16, 1683-1689.	1.2	2
134	Characterization of flame coated nanoparticle surfaces with antibacterial properties and the heat-induced embedding in thermoplastic-coated paper. SN Applied Sciences, 2019, 1, 1.	1.5	2
135	Simulation of slot-coating of nanocellulosic material subject to a wall-stress dependent slip-velocity at die-walls. Journal of Coatings Technology Research, 2022, 19, 111-120.	1.2	2
136	Effect of coating solids content and thickener type on the depletion of fine particle size coating color components in the blade coating process. Nordic Pulp and Paper Research Journal, 2012, 27, 590-595.	0.3	2
137	Slot die coating of nanocellulose on paperboard. Tappi Journal, 2018, 17, 11-19.	0.2	2
138	Numerical analysis of slot die coating of nanocellulosic materials. Tappi Journal, 2020, 19, 575-582.	0.2	2
139	Influence of ink components on print rub. Nordic Pulp and Paper Research Journal, 2008, 23, 277-284.	0.3	1
140	Influence of Surface Chemical Composition on UV-Varnish Absorption into Permeable Pigment-Coated Paper. Industrial & Engineering Chemistry Research, 2010, 49, 2169-2175.	1.8	1
141	Coupled spreading-fraction effects of polymer nano-binder on the network connectivity and tensile modulus of porous mineral coatings. Materials Letters, 2012, 88, 73-75.	1.3	1
142	Predicting the causes of operational anomalies in blade coating. WIT Transactions on Engineering Sciences, 2011, , .	0.0	1
143	Depletion of coating color components in the blade coating process circulation. Tappi Journal, 2011, 10, 17-23.	0.2	1
144	Effect of carboxymethyl cellulose and polyvinyl alcohol on the cracking of particulate coating layers. Progress in Organic Coatings, 2022, 170, 106951.	1.9	1

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145	A device for measuring fiber floc size in highly turbulent fiber suspensions. Nordic Pulp and Paper Research Journal, 1996, 11, 249-253.	0.3	0
146	Influence of mineral coatings on fibroblast behaviour: The importance of coating formulation and experimental design. Colloids and Surfaces B: Biointerfaces, 2021, 208, 112059.	2.5	0
147	Changes in solid particle fractions of coating color in low- and high-speed blade coating. Tappi Journal, 2013, 12, 31-38.	0.2	0