Martti Toivakka

List of Publications by Year
in descending order

147 papers	3,186 citations	159585 30 h-index	197818 49 g-index
150 all docs	150 docs citations	150 times ranked	3880 citing authors

#	Article	IF	Citations
1	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.	2.5	2
2	Synthesis of galactoglucomannan-based latex via emulsion polymerization. Carbohydrate Polymers, 2022, 291, 119565.	10.2	7
3	Effect of carboxymethyl cellulose and polyvinyl alcohol on the cracking of particulate coating layers. Progress in Organic Coatings, 2022, 170, 106951.	3.9	1
4	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.	7.5	30
5	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.	6.7	22
6	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.	6.2	43
7	Thermal properties of graphite/salt hydrate phase change material stabilized by nanofibrillated cellulose. Cellulose, 2021, 28, 6845-6856.	4.9	9
8	Influence of mineral coatings on fibroblast behaviour: The importance of coating formulation and experimental design. Colloids and Surfaces B: Biointerfaces, 2021, 208, 112059.	5.0	0
9	Cellulose nanofibril/carbon nanotube composite foam-stabilized paraffin phase change material for thermal energy storage and conversion. Carbohydrate Polymers, 2021, 273, 118585.	10.2	51
10	Rheological behavior of high consistency enzymatically fibrillated cellulose suspensions. Cellulose, 2021, 28, 2087-2104.	4.9	23
11	High-speed production of antibacterial fabrics using liquid flame spray. Textile Reseach Journal, 2020, 90, 503-511.	2.2	8
12	Terahertz complex conductivity of cellulose nanocrystal based composite films controlled with PEDOT:PSS blending ratio. Cellulose, 2020, 27, 10019-10027.	4.9	5
13	Fabrication of All-Solid Organic Electrochromic Devices on Absorptive Paper Substrates Utilizing a Simplified Lateral Architecture. Materials, 2020, 13, 4839.	2.9	6
14	High-Throughput Processing of Nanographiteâ€“Nanocellulose-Based Electrodes for Flexible Energy Devices. Industrial & Engineering Chemistry Research, 2020, 59, 11232-11240.	3.7	11
15	Human Dermal Fibroblast Viability and Adhesion on Cellulose Nanomaterial Coatings: Influence of Surface Characteristics. Biomacromolecules, 2020, 21, 1560-1567.	5.4	27
16	Effect of micro- and nanofibrillated cellulose on the phase stability of sodium sulfate decahydrate based phase change material. Cellulose, 2020, 27, 5003-5016.	4.9	14
17	Influence of Substrate in Roll-to-roll Coated Nanographite Electrodes for Metal-free Supercapacitors. Scientific Reports, 2020, 10, 5282.	3.3	14
18	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.	5.8	6

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19	Stencil Printingâ€"A Novel Manufacturing Platform for Orodispersible Discs. Pharmaceutics, 2020, 12, 33.	4.5	13
20	Numerical analysis of slot die coating of nanocellulosic materials. Tappi Journal, 2020, 19, 575-582.	0.5	2
21	Discrete element method to predict the mechanical properties of pigmented coatings. Journal of Coatings Technology Research, 2019, 16, 1683-1689.	2.5	2
22	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.	12.7	9
23	Synthesis and Physicochemical Characterization of Shaped Catalysts of Î² and Y Zeolites for Cyclization of Citronellal. Industrial & Engineering Chemistry Research, 2019, 58, 18084-18096.	3.7	31
24	Stacking up: a new approach for cell culture studies. Biomaterials Science, 2019, 7, 3249-3257.	5.4	6
25	Continuous Processing of Nanocellulose and Polylactic Acid into Multilayer Barrier Coatings. ACS Applied Materials & Interfaces, 2019, 11, 11920-11927.	8.0	96
26	Antibacterial activity of silver and titania nanoparticles on glass surfaces. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2019, 10, 015012.	1.5	8
27	Characterization of flame coated nanoparticle surfaces with antibacterial properties and the heat-induced embedding in thermoplastic-coated paper. SN Applied Sciences, 2019, 1, 1.	2.9	2
28	On the limit of superhydrophobicity: defining the minimum amount of TiO₂ nanoparticle coating. Materials Research Express, 2019, 6, 035004.	1.6	6
29	Human dermal fibroblast proliferation controlled by surface roughness of two-component nanostructured latex polymer coatings. Colloids and Surfaces B: Biointerfaces, 2019, 174, 136-144.	5.0	19
30	Effect of plasma coating on antibacterial activity of silver nanoparticles. Thin Solid Films, 2019, 672, 75-82.	1.8	19
31	The influence of mineral particles on fibroblast behaviour: A comparative study. Colloids and Surfaces B: Biointerfaces, 2018, 167, 239-251.	5.0	4
32	Mechanical properties of TEMPO-oxidised bacterial cellulose-amino acid biomaterials. European Polymer Journal, 2018, 101, 29-36.	5.4	19
33	Controlled time release and leaching of silver nanoparticles using a thin immobilizing layer of aluminum oxide. Thin Solid Films, 2018, 645, 166-172.	1.8	12
34	Stiffness and swelling characteristics of nanocellulose films in cell culture media. Cellulose, 2018, 25, 4969-4978.	4.9	15
35	Continuous roll-to-roll coating of cellulose nanocrystals onto paperboard. Cellulose, 2018, 25, 6055-6069.	4.9	35
36	Slot die coating of nanocellulose on paperboard. Tappi Journal, 2018, 17, 11-19.	0.5	2

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37	Substrate role in coating of microfibrillated cellulose suspensions. Cellulose, 2017, 24, 1247-1260.	4.9	24
38	Largeâ€Scale Rollâ€toâ€Roll Patterned Oxygen Indicators for Modified Atmosphere Packages. Packaging Technology and Science, 2017, 30, 219-227.	2.8	7
39	Nanoporous kaolinâ€"cellulose nanofibril composites for printed electronics. Flexible and Printed Electronics, 2017, 2, 024004.	2.7	10
40	One-step flame synthesis of silver nanoparticles for roll-to-roll production of antibacterial paper. Applied Surface Science, 2017, 420, 558-565.	6.1	32
41	Modelling of capillary-driven flow for closed paper-based microfluidic channels. Journal of Micromechanics and Microengineering, 2017, 27, 065001.	2.6	8
42	Conductive nanographiteâ€"nanocellulose coatings on paper. Flexible and Printed Electronics, 2017, 2, 035002.	2.7	10
43	Antimicrobial characterization of silver nanoparticle-coated surfaces by “touch test” method. Nanotechnology, Science and Applications, 2017, Volume 10, 137-145.	4.6	26
44	Viability and properties of roll-to-roll coating of cellulose nanofibrils on recycled paperboard. Nordic Pulp and Paper Research Journal, 2017, 32, 179-188.	0.7	21
45	Influence of nanolatex addition on cellulose nanofiber film properties. Nordic Pulp and Paper Research Journal, 2016, 31, 333-340.	0.7	8
46	Planar fluidic channels on TiO2 nanoparticle coated paperboard. Nordic Pulp and Paper Research Journal, 2016, 31, 232-238.	0.7	4
47	Rheology of cellulose nanofibers suspensions: Boundary driven flow. Journal of Rheology, 2016, 60, 1151-1159.	2.6	84
48	Controlling capillary-driven surface flow on a paper-based microfluidic channel. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	54
49	Heat and mass transfer models to understand the drying mechanisms of a porous substrate. European Physical Journal E, 2016, 39, 25.	1.6	2
50	Enhancing Capillary-Driven Flow for Paper-Based Microfluidic Channels. ACS Applied Materials & Interfaces, 2016, 8, 30523-30530.	8.0	49
51	A Stokesian dynamics approach for simulation of magnetic particle suspensions. Minerals Engineering, 2016, 90, 70-76.	4.3	8
52	Roll-to-Roll Processed Cellulose Nanofiber Coatings. Industrial & Engineering Chemistry Research, 2016, 55, 3603-3613.	3.7	93
53	Roll-to-Roll Coating by Liquid Flame Spray Nanoparticle Deposition. Materials Research Society Symposia Proceedings, 2015, 1747, 37.	0.1	2
54	Properties of adsorbents used for bleaching of vegetable oils and animal fats. Journal of Chemical Technology and Biotechnology, 2015, 90, 1579-1591.	3.2	18

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55	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.	1.8	12
56	Lightâ€Emitting Paper. Advanced Functional Materials, 2015, 25, 3238-3245.	14.9	132
57	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.	7.6	11
58	Protein and bacterial interactions with nanostructured polymer coatings. Colloids and Surfaces B: Biointerfaces, 2015, 136, 527-535.	5.0	10
59	Transparent nanocellulose-pigment composite films. Journal of Materials Science, 2015, 50, 7343-7352.	3.7	43
60	Conductivity of PEDOT:PSS on Spin-Coated and Drop Cast Nanofibrillar Cellulose Thin Films. Nanoscale Research Letters, 2015, 10, 386.	5.7	46
61	Binary TiO2/SiO2 nanoparticle coating for controlling the wetting properties of paperboard. Materials Chemistry and Physics, 2015, 149-150, 230-237.	4.0	26
62	Understanding coating strength at the molecular and microscopic level. Tappi Journal, 2015, 14, 373-384.	0.5	6
63	Review on Liquid Flame Spray in paper converting: Multifunctional superhydrophobic nanoparticle coatings. Nordic Pulp and Paper Research Journal, 2014, 29, 747-759.	0.7	11
64	Ion-modulated transistors on paper using phase-separated semiconductor/insulator blends. MRS Communications, 2014, 4, 51-55.	1.8	12
65	Creation of superhydrophilic surfaces of paper and board. Journal of Adhesion Science and Technology, 2014, 28, 864-879.	2.6	15
66	Structure and Mechanical Properties of Starch/Styrene-Butadiene Latex Composites. Advanced Materials Research, 2014, 936, 74-81.	0.3	8
67	Electrostatic charges instigate â€˜concertina-likeâ€™ mechanisms of molecular toughening in MaSp1 (spider silk) proteins. Materials Science and Engineering C, 2014, 41, 329-334.	7.3	11
68	On the non-linear attachment characteristics of blood to bacterial cellulose/kaolin biomaterials. Colloids and Surfaces B: Biointerfaces, 2014, 116, 176-182.	5.0	17
69	Paper-Based Microfluidics: Fabrication Technique and Dynamics of Capillary-Driven Surface Flow. ACS Applied Materials & Interfaces, 2014, 6, 20060-20066.	8.0	107
70	Comparison of nano- and microfibrillated cellulose films. Cellulose, 2014, 21, 3443-3456.	4.9	151
71	Switchable water absorption of paper via liquid flame spray nanoparticle coating. Cellulose, 2014, 21, 2033-2043.	4.9	3
72	Temperature effects on dynamic water absorption into paper. Journal of Colloid and Interface Science, 2014, 418, 373-377.	9.4	31

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73	Impact of humidity on functionality of on-paper printed electronics. Nanotechnology, 2014, 25, 094003.	2.6	33
74	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.	0.7	4
75	The Effect of Flame Treatment on Surface Properties and Heat Sealability of Lowâ€Density Polyethylene Coating. Packaging Technology and Science, 2013, 26, 201-214.	2.8	6
76	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.	2.3	6
77	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.	2.1	15
78	Thermomechanical properties of CaCO3-latex pigment coatings: Impact of modified dispersing agents. Progress in Organic Coatings, 2013, 76, 439-446.	3.9	8
79	Compressibility of porous TiO2 nanoparticle coating on paperboard. Nanoscale Research Letters, 2013, 8, 444.	5.7	10
80	Impact of functionalised dispersing agents on the mechanical and viscoelastic properties of pigment coating. Progress in Organic Coatings, 2013, 76, 101-106.	3.9	15
81	Wear resistance of nanoparticle coatings on paperboard. Wear, 2013, 307, 112-118.	3.1	22
82	Printability of functional inks on multilayer curtain coated paper. Chemical Engineering and Processing: Process Intensification, 2013, 68, 13-20.	3.6	28
83	Molecular modeling studies of interactions between sodium polyacrylate polymer and calcite surface. Applied Surface Science, 2013, 276, 43-52.	6.1	36
84	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.	4.9	31
85	ToF-SIMS Analysis of UV-Switchable TiO₂-Nanoparticle-Coated Paper Surface. Langmuir, 2013, 29, 3780-3790.	3.5	36
86	Crispatotrochus-mimicking coatings improve the flexural properties of organic fibres. Journal of Materials Science, 2013, 48, 8449-8453.	3.7	5
87	Barrier properties created by dispersion coating. Tappi Journal, 2013, 12, 45-51.	0.5	18
88	Changes in solid particle fractions of coating color in low- and high-speed blade coating. Tappi Journal, 2013, 12, 31-38.	0.5	0
89	Measuring solvent barrier properties of paper. Measurement Science and Technology, 2012, 23, 015601.	2.6	13
90	Nanostructures Increase Water Droplet Adhesion on Hierarchically Rough Superhydrophobic Surfaces. Langmuir, 2012, 28, 3138-3145.	3.5	107

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91	Drying of Porous Coating: Influence of Coating Composition. Industrial & Engineering Chemistry Research, 2012, 51, 13680-13685.	3.7	7
92	Surface chemical characterization of nanoparticle coated paperboard. Applied Surface Science, 2012, 258, 3119-3125.	6.1	25
93	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.	2.6	1
94	Atmospheric synthesis of superhydrophobic TiO2 nanoparticle deposits in a single step using Liquid Flame Spray. Journal of Aerosol Science, 2012, 52, 57-68.	3.8	34
95	Surface chemical analysis of photocatalytic wettability conversion of TiO2 nanoparticle coating. Surface and Coatings Technology, 2012, 208, 73-79.	4.8	40
96	Fatigue life predictions of porous composite paper coatings. International Journal of Fatigue, 2012, 38, 181-187.	5.7	6
97	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.	9.4	15
98	DMTA investigation of solvents effects on viscoelastic properties of porous CaCO3-SBR latex composites. Mechanics of Materials, 2012, 49, 1-12.	3.2	3
99	IR-sintering of ink-jet printed metal-nanoparticles on paper. Thin Solid Films, 2012, 520, 2949-2955.	1.8	144
100	Top layer coatability on barrier coatings. Progress in Organic Coatings, 2012, 73, 26-32.	3.9	19
101	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.	0.7	2
102	The self-organization of starch on paper. Nordic Pulp and Paper Research Journal, 2012, 27, 621-630.	0.7	3
103	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.	4.7	3
104	Structure formation mechanisms in consolidating pigment coatingsâ€"Simulation and visualisation. Chemical Engineering and Processing: Process Intensification, 2011, 50, 574-582.	3.6	7
105	Adjustable wettability of paperboard by liquid flame spray nanoparticle deposition. Applied Surface Science, 2011, 257, 1911-1917.	6.1	56
106	Electrodeposition of PEDOT-Cl film on a fully printed Ag/polyaniline electrode. Thin Solid Films, 2011, 519, 2172-2175.	1.8	22
107	Fracture and Plasticity in Nano-Porous Particle-Polymer Composites. Key Engineering Materials, 2011, 462-463, 24-29.	0.4	3
108	Nanoparticle Deposition from Liquid Flame Spray onto Moving Roll-to-Roll Paperboard Material. Aerosol Science and Technology, 2011, 45, 827-837.	3.1	49

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109	Predicting the causes of operational anomalies in blade coating. WIT Transactions on Engineering Sciences, 2011, , .	0.0	1
110	Coating: Incorporation of laccase in pigment coating for bioactive paper applications. Nordic Pulp and Paper Research Journal, 2011, 26, 118-127.	0.7	5
111	Depletion of coating color components in the blade coating process circulation. Tappi Journal, 2011, 10, 17-23.	0.5	1
112	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
113	Polymer chain pinning at interfaces in CaCO3â€“SBR latex composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2363-2369.	5.6	24
114	Development of superhydrophobic coating on paperboard surface using the Liquid Flame Spray. Surface and Coatings Technology, 2010, 205, 436-445.	4.8	108
115	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.	4.7	51
116	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.	2.6	14
117	Influence of Surface Chemical Composition on UV-Varnish Absorption into Permeable Pigment-Coated Paper. Industrial & Engineering Chemistry Research, 2010, 49, 2169-2175.	3.7	1
118	Enhanced Surface Wetting of Pigment Coated Paper by UVC Irradiation. Industrial & Engineering Chemistry Research, 2010, 49, 11351-11356.	3.7	15
119	Improved Prediction of Offset Ink Setting Rates Based on Experimental Data and Filtration Equations. Industrial & Engineering Chemistry Research, 2010, 49, 4676-4681.	3.7	3
120	Influence of plasma activation on absorption of offset ink components into pigment-coated paper. Nordic Pulp and Paper Research Journal, 2010, 25, 93-99.	0.7	4
121	The influence of different roughness scales of pigment coated papers on print gloss. Nordic Pulp and Paper Research Journal, 2009, 24, 327-334.	0.7	7
122	Balancing between Fold-crack Resistance and Stiffness. Journal of Composite Materials, 2009, 43, 1265-1283.	2.4	23
123	A multilayer coated fiber-based substrate suitable for printed functionality. Organic Electronics, 2009, 10, 1020-1023.	2.6	123
124	Calculating the permeability of model paper coating structures comprising incongruent particle shapes and sizes. Microporous and Mesoporous Materials, 2009, 117, 685-688.	4.4	11
125	Influence of colloidal interactions on pigment coating layer structure formation. Journal of Colloid and Interface Science, 2009, 332, 394-401.	9.4	10
126	Effective packing of 3-dimensional voxel-based arbitrarily shaped particles. Powder Technology, 2009, 196, 139-146.	4.2	30

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127	Deflection and plasticity of soft-tip bevelled blades in paper coating operations. Materials & Design, 2009, 30, 871-877.	5.1	3
128	Plasma activation induced changes in surface chemistry of pigment coating components. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 352, 103-112.	4.7	4
129	A particle motion model for the study of consolidation phenomena. Computers and Chemical Engineering, 2009, 33, 1227-1239.	3.8	3
130	Comparison of Dynamic Print Gloss Measurement Techniques. Tappi Journal, 2009, 8, 19-28.	0.5	6
131	Effects of atmospheric plasma activation on surface properties of pigment-coated and surface-sized papers. Applied Surface Science, 2008, 255, 3217-3229.	6.1	30
132	Micro-buckling of paper during blade metering. Computers and Chemical Engineering, 2008, 32, 600-607.	3.8	2
133	Ageing effect in atmospheric plasma activation of paper substrates. Surface and Coatings Technology, 2008, 202, 3777-3786.	4.8	21
134	Visualisation of the distribution of offset ink components printed onto coated paper. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 317, 557-567.	4.7	28
135	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.	2.6	8
136	Influence of ink components on print rub. Nordic Pulp and Paper Research Journal, 2008, 23, 277-284.	0.7	1
137	Influence of drying strategy on coating layer structure formation. Nordic Pulp and Paper Research Journal, 2008, 23, 46-51.	0.7	4
138	Small particle mobility in consolidating coating layers. Nordic Pulp and Paper Research Journal, 2008, 23, 52-56.	0.7	5
139	Influence of atmospheric plasma activation on sheet-fed offset print quality. Nordic Pulp and Paper Research Journal, 2008, 23, 181-188.	0.7	8
140	Detection of local specular gloss and surface roughness from black prints. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 299, 101-108.	4.7	31
141	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.	2.6	7
142	Impact spreading and absorption of Newtonian droplets on topographically irregular porous materials. Chemical Engineering Science, 2007, 62, 3142-3158.	3.8	26
143	Calculating tortuosity in quasi-random anisotropic packings. Nordic Pulp and Paper Research Journal, 2006, 21, 670-675.	0.7	14
144	Leveling of surface defects in thin films of pigmented coatings. Nordic Pulp and Paper Research Journal, 2001, 16, 246-250.	0.7	2

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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.	0.7	0
146	Prediction of suspension viscoelasticity through particle motion modeling. Journal of Non-Newtonian Fluid Mechanics, 1995, 56, 49-64.	2.4	17
147	Particle movements during the coating process. Nordic Pulp and Paper Research Journal, 1994, 9, 143-149.	0.7	6