Antti Ilmari Koponen

List of Publications by Year
in descending order

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60 papers	2,282 citations	331670 21 h-index	214800 47 g-index
61 all docs	61 docs citations	61 times ranked	2076 citing authors

#	Article	IF	Citations
1	Foam forming of fiber products: a review. Journal of Dispersion Science and Technology, 2022, 43, 1462-1497.	2.4	25
2	Online measurement of floc size, viscosity, and consistency of cellulose microfibril suspensions with optical coherence tomography. Cellulose, 2021, 28, 3373-3387.	4.9	6
3	Generation of aqueous foams and fiber foams in a stirred tank. Chemical Engineering Research and Design, 2021, 167, 15-24.	5.6	3
4	Process simulation-based evaluation of design and operational implications of water-laid paper machine conversion to foam technology. BioResources, 2021, 16, 5148-5186.	1.0	1
5	Dynamic generation of aqueous foams and fiber foams in a mixing tank. SN Applied Sciences, 2021, 3, 1.	2.9	1
6	Analysis of Industry-Related Flows by Optical Coherence Tomographyâ€"A Review. KONA Powder and Particle Journal, 2020, 37, 42-63.	1.7	8
7	Pipe rheology of microfibrillated cellulose suspensions. Cellulose, 2020, 27, 141-156.	4.9	17
8	Dewatering of foam-laid and water-laid structures and the formed web properties. Cellulose, 2020, 27, 1127-1146.	4.9	14
9	Drainage of high-consistency fiber-laden aqueous foams. Cellulose, 2020, 27, 9637-9652.	4.9	9
10	Dispersion of 24-mm staple fibers with foam. Journal of Engineered Fibers and Fabrics, 2020, 15, 155892502094644.	1.0	2
11	The effect of consistency on the shear rheology of aqueous suspensions of cellulose micro- and nanofibrils: a review. Cellulose, 2020, 27, 1879-1897.	4.9	32
12	Rate-limiting mechanisms of water removal during the formation, vacuum dewatering, and wet-pressing of paper webs: A review. BioResources, 2020, 15, 9672-9755.	1.0	8
13	Use of mechanically ground lignocellulosic native fines (LF) in the all-cellulosic composite filaments: fines properties and plasticizers. Cellulose, 2019, 26, 1041-1054.	4.9	0
14	Real-time monitoring of bubble size distribution in a foam forming process. Tappi Journal, 2019, 18, 487-494.	0.5	7
15	The effect of in-line foam generation on foam quality and sheet formation in foam forming. Nordic Pulp and Paper Research Journal, 2018, 33, 482-495.	0.7	16
16	Rheological and Flocculation Analysis of Microfibrillated Cellulose Suspension Using Optical Coherence Tomography. Applied Sciences (Switzerland), 2018, 8, 755.	2.5	10
17	The Effect of Void Structure on the Permeability of Fibrous Networks. Transport in Porous Media, 2017, 117, 247-259.	2.6	14
18	Experimental investigation of the flow dynamics and rheology of complex fluids in pipe flow by hybrid multi-scale velocimetry. Experiments in Fluids, 2017, 58, 1.	2.4	16

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19	Analysis of rheology and wall depletion of microfibrillated cellulose suspension using optical coherence tomography. Cellulose, 2017, 24, 4715-4728.	4.9	19
20	Mechanically ground softwood fines as a raw material for cellulosic applications. Cellulose, 2017, 24, 3869-3882.	4.9	6
21	Characterization of micro-fibrillated cellulose fiber suspension flow using multi scale velocity profile measurements. Nordic Pulp and Paper Research Journal, 2017, 32, 473-482.	0.7	10
22	Foam forming of long fibers. Nordic Pulp and Paper Research Journal, 2016, 31, 239-247.	0.7	21
23	Shear localisation in interfacial particle layers and its influence on Lissajous-plots. Rheologica Acta, 2016, 55, 267-278.	2.4	10
24	The flow resistance of fiber sheet during initial dewatering. Drying Technology, 2016, 34, 1521-1533.	3.1	6
25	A unique microstructure of the fiber networks deposited from foamâ€“fiber suspensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 482, 544-553.	4.7	40
26	Accurate velocity measurements of boundary-layer flows using Doppler optical coherence tomography. Experiments in Fluids, 2015, 56, 1.	2.4	10
27	Response of wet foam to fibre mixing. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 467, 97-106.	4.7	18
28	Experimental results on the flow rheology of fiber-laden aqueous foams. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 473, 147-155.	4.7	25
29	Rheological characterization of microfibrillated cellulose suspension using optical coherence tomography. Tappi Journal, 2015, 14, 291-302.	0.5	19
30	Analysis of the effects of pressure profile, furnish, and microfibrillated cellulose on the dewatering of papermaking furnishes. Tappi Journal, 2015, 14, 325-337.	0.5	4
31	Application of pulsed ultrasound velocity profiling for measuring flow of black liquor in recovery boiler spraying nozzles. Tappi Journal, 2015, 14, 221-226.	0.5	0
32	New insight into rheology and flow properties of complex fluids with Doppler optical coherence tomography. Frontiers in Chemistry, 2014, 2, 27.	3.6	19
33	Bubble size and air content of wet fibre foams in axial mixing with macro-instabilities. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 436, 1130-1139.	4.7	40
34	Pressure Drop for Low Reynolds-Number Flows Through Regular and Random Screens. Transport in Porous Media, 2009, 80, 193-208.	2.6	17
35	UDV measurements and CFD simulation of two-phase flow in a stirred vessel. Progress in Computational Fluid Dynamics, 2009, 9, 375.	0.2	3
36	Intrusion of nonwetting liquid in paper. Physical Review E, 2007, 75, 036301.	2.1	12

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37	Droplets on inclined rough surfaces. European Physical Journal E, 2007, 23, 289-293.	1.6	48
38	Publisherâ€™s Note: Strain hardening in liquid-particle suspensions [Phys. Rev. E72, 061402 (2005)]. Physical Review E, 2006, 73, .	2.1	1
39	Simulation of liquid penetration in paper. Physical Review E, 2006, 73, 036705.	2.1	89
40	Lattice-Boltzmann Simulation of Particle Suspensions in Shear Flow. Journal of Statistical Physics, 2005, 121, 149-161.	1.2	9
41	Comparison of 3D structural characteristics of high and low resolution X-ray microtomographic images of paper. Nordic Pulp and Paper Research Journal, 2005, 20, 283-288.	0.7	10
42	Strain hardening in liquid-particle suspensions. Physical Review E, 2005, 72, 061402.	2.1	8
43	Evaluation of a lattice-Boltzmann method for mercury intrusion porosimetry simulations. Future Generation Computer Systems, 2004, 20, 1003-1011.	7.5	30
44	The 3D structure of fabric and its relationship to liquid and vapor transport. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 241, 323-333.	4.7	28
45	Clustering and viscosity in a shear flow of a particulate suspension. Physical Review E, 2003, 68, 061403.	2.1	23
46	Lattice-Boltzmann and finite-difference simulations for the permeability for three-dimensional porous media. Physical Review E, 2002, 66, 016702.	2.1	196
47	Lattice-Boltzmann Simulation of Capillary Rise Dynamics. Journal of Statistical Physics, 2002, 107, 143-158.	1.2	90
48	Simulations of Water Flow Through Bordered Pits of Conifer Xylem. Journal of Statistical Physics, 2002, 107, 121-142.	1.2	23
49	Shear Stress in a Couette Flow of Liquid-Particle Suspensions. Journal of Statistical Physics, 2002, 107, 67-84.	1.2	28
50	Fouling dynamics in suspension flows. European Physical Journal E, 2002, 9, 97-102.	1.6	3
51	Iterative momentum relaxation for fast lattice-Boltzmann simulations. Future Generation Computer Systems, 2001, 18, 89-96.	7.5	8
52	Simulations of non-spherical particles suspended in a shear flow. Computer Physics Communications, 2000, 129, 185-195.	7.5	23
53	Hydrodynamical forces acting on particles in a two-dimensional flow near a solid wall. Computer Physics Communications, 2000, 129, 196-206.	7.5	12
54	Spreading dynamics of three-dimensional droplets by the lattice-Boltzmann method. Computational Materials Science, 2000, 18, 7-12.	3.0	77

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55	Implementation Aspects of 3D Lattice-BGK: Boundaries, Accuracy, and a New Fast Relaxation Method. Journal of Computational Physics, 1999, 150, 482-501.	3.8	82
56	Lattice-Boltzmann hydrodynamics on parallel systems. Computer Physics Communications, 1998, 111, 14-26.	7.5	104
57	Permeability of Three-Dimensional Random Fiber Webs. Physical Review Letters, 1998, 80, 716-719.	7.8	224
58	Simulations of Single-Fluid Flow in Porous Media. International Journal of Modern Physics C, 1998, 09, 1505-1521.	1.7	39
59	Permeability and effective porosity of porous media. Physical Review E, 1997, 56, 3319-3325.	2.1	348
60	Tortuous flow in porous media. Physical Review E, 1996, 54, 406-410.	2.1	310