Ruud G M Van Der Sman

List of Publications by Year
in descending order

130	5,106	76294	106281
papers	citations	40 h-index	65 g-index

131	131	131	3823
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermo-mechanical processing of plant proteins using shear cell and high-moisture extrusion cooking. Critical Reviews in Food Science and Nutrition, 2022, 62, 3264-3280.	5.4	80
2	Rheological properties of artificial boluses of cereal foods enriched with legume proteins. Food Hydrocolloids, 2022, 122, 107096.	5.6	8
3	Scaling relations in rheology of concentrated starches and maltodextrins. Food Hydrocolloids, 2022, 124, 107306.	5.6	7
4	Rheological behaviour of concentrated maltodextrins describes skin formation and morphology development during droplet drying. Food Hydrocolloids, 2022, 126, 107442.	5.6	8
5	Variations of the viscous properties of a sponge cake artificial bolus with some physiological parameters. Food and Function, 2022, 13, 3198-3205.	2.1	0
6	Interaction between large deformation and moisture transport during dehydration of vegetables. Food Structure, 2022, 32, 100269.	2.3	3
7	Food texture design in sugar reduced cakes: Predicting batters rheology and physical properties of cakes from physicochemical principles. Food Hydrocolloids, 2022, 131, 107795.	5.6	10
8	MULTICUBED: Multiscale-multiphysics simulation of food processing. Food Structure, 2022, 33, 100278.	2.3	5
9	Understanding functionality of sucrose in cake for reformulation purposes. Critical Reviews in Food Science and Nutrition, 2021, 61, 2756-2772.	5.4	16
10	Enhancing the water holding capacity of model meat analogues through marinade composition. Journal of Food Engineering, 2021, 290, 110283.	2.7	60
11	Investigation of Structural Transformations During the Manufacturing of Expanded Snacks for Reformulation Purposes. Food Biophysics, 2021, 16, 119-138.	1.4	1
12	Thermodynamic description of the chemical leavening in biscuits. Current Research in Food Science, 2021, 4, 191-199.	2.7	5
13	Study on the Rehydration Quality Improvement of shiitake Mushroom by Combined Drying Methods. Foods, 2021, 10, 769.	1.9	8
14	Mechanisms controlling wheat starch gelatinization and pasting behaviour in presence of sugars and sugar replacers: Role of hydrogen bonding and plasticizer molar volume. Food Hydrocolloids, 2021, 119, 106880.	5.6	40
15	Multiscale simulations of directional ice crystal growth in sugar solutions. Food Structure, 2021, 30, 100214.	2.3	5
16	Apparent universality of leguminous proteins in swelling and fibre formation when mixed with gluten. Food Hydrocolloids, 2021, 120, 106788.	5.6	13
17	Dextrose equivalence of maltodextrins determines particle morphology development during single sessile droplet drying. Food Research International, 2020, 131, 108988.	2.9	49
18	Physical chemistry of gastric digestion of proteins gels. Current Research in Food Science, 2020, 2, 45-60.	2.7	17

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19	Water release kinetics from soy protein gels and meat analogues as studied with confined compression. Innovative Food Science and Emerging Technologies, 2020, 66, 102528.	2.7	17
20	Impact of Processing Factors on Quality of Frozen Vegetables and Fruits. Food Engineering Reviews, 2020, 12, 399-420.	3.1	39
21	The importance of swelling for in vitro gastric digestion of whey protein gels. Food Chemistry, 2020, 330, 127182.	4.2	21
22	Amino acids, polyols and soluble fibres as sugar replacers in bakery applications: Egg white proteins denaturation controlled by hydrogen bond density of solutions. Food Hydrocolloids, 2020, 108, 106034.	5.6	28
23	Sugar replacement with zwitterionic plasticizers like amino acids. Food Hydrocolloids, 2020, 109, 106113.	5.6	15
24	Effect of mechanical interaction on the hydration of mixed soy protein and gluten gels. Current Research in Food Science, 2020, 3, 134-145.	2.7	26
25	Moisture diffusivity in concentrated and dry protein-carbohydrate films. Food Hydrocolloids, 2019, 97, 105219.	5.6	3
26	Scaling of Flory-Huggins interaction parameter for polyols with chain length and number of hydroxyl groups. Food Hydrocolloids, 2019, 96, 396-401.	5.6	13
27	Starch gelatinization temperature in sugar and polyol solutions explained by hydrogen bond density. Food Hydrocolloids, 2019, 94, 371-380.	5.6	45
28	Phase separation, antiplasticization and moisture sorption in ternary systems containing polysaccharides and polyols. Food Hydrocolloids, 2019, 87, 360-370.	5.6	17
29	Understanding functionality of sucrose in biscuits for reformulation purposes. Critical Reviews in Food Science and Nutrition, 2019, 59, 2225-2239.	5.4	44
30	Theoretical investigation of the swelling of polysaccharide microgels in sugar solutions. Food and Function, 2018, 9, 2716-2724.	2.1	13
31	In-situ Single Mode Dielectric Measurements of microwaveable snack pellets. Journal of Food Engineering, 2018, 231, 109-122.	2.7	3
32	Effects of filler ingredients on the structure and texture of starchy, extruded snacks. Food Structure, 2018, 18, 1-13.	2.3	7
33	Progress in understanding of supplemented state diagrams of hydrophilic food materials. Current Opinion in Food Science, 2018, 21, 32-38.	4.1	7
34	Clumping of frozen par-fried foods: Lessons from frosting on structured surfaces. Food Structure, 2018, 17, 9-20.	2.3	7
35	Flow through a filter plate backed by a packed bed of spheres. Chemical Engineering Science, 2017, 158, 154-163.	1.9	4
36	Critical factors in microwave expansion of starchy snacks. Journal of Food Engineering, 2017, 211, 69-84.	2.7	31

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37	Model for electrical conductivity of muscle meat during Ohmic heating. Journal of Food Engineering, 2017, 208, 37-47.	2.7	24
38	Predicting the solubility of mixtures of sugars and their replacers using the Floryâ€“Huggins theory. Food and Function, 2017, 8, 360-371.	2.1	41
39	Filler functionality in edible solid foams. Advances in Colloid and Interface Science, 2016, 231, 23-35.	7.0	16
40	Analysis of improved Lattice Boltzmann phase field method for soluble surfactants. Computer Physics Communications, 2016, 199, 12-21.	3.0	21
41	Effects of cellular structure and cell wall components on water holding capacity of mushrooms. Journal of Food Engineering, 2016, 187, 106-113.	2.7	27
42	Sugar and polyol solutions as effective solvent for biopolymers. Food Hydrocolloids, 2016, 56, 144-149.	5.6	31
43	Phase field simulations of ice crystal growth in sugar solutions. International Journal of Heat and Mass Transfer, 2016, 95, 153-161.	2.5	43
44	Effects of Porosity and Thermal Treatment on Hydration of Mushrooms. Food and Bioprocess Technology, 2016, 9, 511-519.	2.6	9
45	Editorial overview: Food physics and material science. Current Opinion in Food Science, 2015, 3, vi-viii.	4.1	0
46	Comparison of first principles model of beer microfiltration to experiments via systematic parameter identification. Journal of Membrane Science, 2015, 484, 64-79.	4.1	3
47	Change in Water-Holding Capacity in Mushroom with Temperature Analyzed by Flory-Rehner Theory. Food and Bioprocess Technology, 2015, 8, 960-970.	2.6	21
48	Biopolymer gel swelling analysed with scaling laws and Floryâ€“Rehner theory. Food Hydrocolloids, 2015, 48, 94-101.	5.6	63
49	Hyperelastic models for hydration of cellular tissue. Soft Matter, 2015, 11, 7579-7591.	1.2	34
50	Optimal adaptive scheduling and control of beer membrane filtration. Control Engineering Practice, 2015, 34, 77-87.	3.2	5
51	Multiscale analysis of structure development in expanded starch snacks. Journal of Physics Condensed Matter, 2014, 26, 464103.	0.7	16
52	Rehydration kinetics of freeze-dried carrots. Innovative Food Science and Emerging Technologies, 2014, 24, 40-47.	2.7	23
53	Moisture Sorption Isotherms of Broccoli Interpreted with the Flory-Huggins Free Volume Theory. Food Biophysics, 2014, 9, 1-9.	1.4	24
54	Mesoscale models of dispersions stabilized by surfactants and colloids. Advances in Colloid and Interface Science, 2014, 211, 63-76.	7.0	20

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55	Effects of salt on the expansion of starchy snacks: a multiscale analysis. Food and Function, 2014, 5, 3076-3082.	2.1	16
56	Energy efficient drying strategies to retain nutritional components in broccoli (Brassica oleracea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	2.7	21
57	Moisture transport in swelling media modelled with a Lattice Boltzmann scheme having a deforming lattice. Journal of Food Engineering, 2014, 124, 54-63.	2.7	9
58	Measuring and modelling of diffusivities in carbohydrate-rich matrices during thin film drying. Journal of Food Engineering, 2014, 122, 38-47.	2.7	19
59	Multiphysics pore-scale model for the rehydration of porous foods. Innovative Food Science and Emerging Technologies, 2014, 24, 69-79.	2.7	20
60	Impact of different drying trajectories on degradation of nutritional compounds in broccoli (Brassica oleracea var. italica). LWT - Food Science and Technology, 2014, 59, 189-195.	2.5	40
61	Moisture sorption in mixtures of biopolymer, disaccharides and water. Food Hydrocolloids, 2013, 32, 186-194.	5.6	42
62	Investigation of Lattice Boltzmann wetting boundary conditions for capillaries with irregular polygonal cross-section. Computer Physics Communications, 2013, 184, 2751-2760.	3.0	10
63	Hydration properties of vegetable foods explained by Floryâ€“Rehner theory. Food Research International, 2013, 54, 804-811.	2.9	31
64	A Paradigm Shift in Drying of Food Materials via Free-Volume Concepts. Drying Technology, 2013, 31, 1817-1825.	1.7	7
65	Multiscale modeling in food engineering. Journal of Food Engineering, 2013, 114, 279-291.	2.7	141
66	Predictions of Glass Transition Temperature for Hydrogen Bonding Biomaterials. Journal of Physical Chemistry B, 2013, 117, 16303-16313.	1.2	79
67	Transient critical flux due to coupling of fouling mechanisms during crossflow microfiltration of beer. Journal of Membrane Science, 2013, 435, 21-37.	4.1	17
68	Modeling cooking of chicken meat in industrial tunnel ovens with the Floryâ€“Rehner theory. Meat Science, 2013, 95, 940-957.	2.7	42
69	The Effect of Structure and Imbibition Mode on the Rehydration Kinetics of Freeze-dried Carrots. Special Publication - Royal Society of Chemistry, 2013, , 112-121.	0.0	1
70	Ice crystal interspacing in frozen foods. Journal of Food Engineering, 2013, 116, 622-626.	2.7	43
71	Prediction of the time evolution of pH in meat. Food Chemistry, 2013, 141, 2363-2372.	4.2	58
72	Structuring of indirectly expanded snacks based on potato ingredients: A review. Journal of Food Engineering, 2013, 114, 413-425.	2.7	56

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73	Moisture diffusivity in food materials. Food Chemistry, 2013, 138, 1265-1274.	4.2	45
74	Effective temperature for sheared suspensions: A route towards closures for migration in bidisperse suspension. Advances in Colloid and Interface Science, 2012, 185-186, 1-13.	7.0	14
75	The impact of freeze-drying on microstructure and rehydration properties of carrot. Food Research International, 2012, 49, 687-693.	2.9	136
76	Model for particle migration in bidisperse suspensions by use of effective temperature. Faraday Discussions, 2012, 158, 89.	1.6	25
77	Anomalies in moisture transport during broccoli drying monitored by MRI?. Faraday Discussions, 2012, 158, 65.	1.6	30
78	Soft matter approaches as enablers for food macroscale simulation. Faraday Discussions, 2012, 158, 435.	1.6	27
79	Prediction of postharvest firmness of apple using biological switch model. Journal of Theoretical Biology, 2012, 310, 239-248.	0.8	8
80	Effects of confinement on hydrodynamic interactions between a suspended sphere and stationary obstacles. Computers and Fluids, 2012, 58, 63-69.	1.3	5
81	Suspension flow in microfluidic devices â€" A review of experimental techniques focussing on concentration and velocity gradients. Advances in Colloid and Interface Science, 2012, 173, 23-34.	7.0	31
82	Soft matter approaches to food structuring. Advances in Colloid and Interface Science, 2012, 176-177, 18-30.	7.0	68
83	Thermodynamics of meat proteins. Food Hydrocolloids, 2012, 27, 529-535.	5.6	65
84	Review of hypotheses for fouling during beer clarification using membranes. Journal of Membrane Science, 2012, 396, 22-31.	4.1	61
85	On the prediction of the remaining vase life of cut roses. Postharvest Biology and Technology, 2012, 70, 42-50.	2.9	23
86	Effect of morphology on water sorption in cellular solid foods. Part I: Pore scale network model. Journal of Food Engineering, 2012, 109, 301-310.	2.7	26
87	Effect of morphology on water sorption in cellular solid foods. Part II: Sorption in cereal crackers. Journal of Food Engineering, 2012, 109, 311-320.	2.7	21
88	Prediction of the state diagram of starchwater mixtures using the Floryâ€"Huggins free volume theory. Soft Matter, 2011, 7, 429-442.	1.2	134
89	Moisture distribution in broccoli: measurements by MRI hot air drying experiments. Procedia Food Science, 2011, 1, 640-646.	0.6	16
90	Analysis of mixed motion in deterministic ratchets via experiment and particle simulation. Microfluidics and Nanofluidics, 2011, 10, 843-853.	1.0	48

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91	Mixed motion in deterministic ratchets due to anisotropic permeability. Journal of Colloid and Interface Science, 2011, 354, 7-14.	5.0	41
92	Evaluation of the Free Volume Theory to Predict Moisture Transport and Quality Changes During Broccoli Drying. Drying Technology, 2011, 29, 1963-1971.	1.7	22
93	MRT Lattice Boltzmann schemes for confined suspension flows. Computer Physics Communications, 2010, 181, 1562-1569.	3.0	13
94	Drag force on spheres confined on the center line of rectangular microchannels. Journal of Colloid and Interface Science, 2010, 351, 43-49.	5.0	13
95	Suspension flow modelling in particle migration and microfiltration. Soft Matter, 2010, 6, 6052.	1.2	67
96	Lattice Boltzmann simulations of droplet formation during microchannel emulsification. Journal of Colloid and Interface Science, 2009, 335, 112-122.	5.0	24
97	Deterministic Ratchets for Particle Separation Fabricated With Si MEMS Technology. Procedia Chemistry, 2009, 1, 345-348.	0.7	1
98	Simulations of confined suspension flow at multiple length scales. Soft Matter, 2009, 5, 4376.	1.2	40
99	The science of food structuring. Soft Matter, 2009, 5, 501-510.	1.2	104
100	Scale analysis and integral approximation applied to heat and mass transfer in packed beds. Journal of Food Engineering, 2008, 85, 243-251.	2.7	21
101	Prediction of enthalpy and thermal conductivity of frozen meat and fish products from composition data. Journal of Food Engineering, 2008, 84, 400-412.	2.7	42
102	Emulsion droplet deformation and breakup with Lattice Boltzmann model. Computer Physics Communications, 2008, 178, 492-504.	3.0	77
103	Classification and evaluation of microfluidic devices for continuous suspension fractionation. Advances in Colloid and Interface Science, 2008, 142, 53-66.	7.0	66
104	Subgrid particle method for porous media and suspension flow. , 2008, , .		0
105	Moisture transport during cooking of meat: An analysis based on Floryâ€“Rehner theory. Meat Science, 2007, 76, 730-738.	2.7	98
106	Lattice Boltzmann Simulations of Droplet Formation in a T-Shaped Microchannel. Langmuir, 2006, 22, 4144-4152.	1.6	308
107	Lattice Boltzmann Simulation of Microstructures. Food Additives, 2006, , 15-39.	0.1	1
108	Lattice Boltzmann simulation of 2D and 3D non-Brownian suspensions in Couette flow. Chemical Engineering Science, 2006, 61, 858-873.	1.9	74

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109	Finite Boltzmann schemes. Computers and Fluids, 2006, 35, 849-854.	1.3	23
110	Evaluation of microsieve membrane design. Journal of Membrane Science, 2006, 278, 344-348.	4.1	38
111	Optimization of the membrane and pore design for micro-machined membranes. Journal of Membrane Science, 2006, 278, 239-250.	4.1	29
112	Diffuse interface model of surfactant adsorption onto flat and droplet interfaces. Rheologica Acta, 2006, 46, 3-11.	1.1	103
113	Galilean invariant lattice Boltzmann scheme for natural convection on square and rectangular lattices. Physical Review E, 2006, 74, 026705.	0.8	48
114	A suspension flow model for hydrodynamics and concentration polarisation in crossflow microfiltration. Journal of Membrane Science, 2005, 253, 67-79.	4.1	44
115	Droplet formation in a T-shaped microchannel junction: A model system for membrane emulsification. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 266, 106-116.	2.3	132
116	Predicting the initial freezing point and water activity of meat products from composition data. Journal of Food Engineering, 2005, 66, 469-475.	2.7	49
117	Shear-induced self-diffusion and microstructure in non-Brownian suspensions at non-zero Reynolds numbers. Journal of Fluid Mechanics, 2005, 529, 253-278.	1.4	55
118	Diffusion on unstructured triangular grids using Lattice Boltzmann. Future Generation Computer Systems, 2004, 20, 965-971.	4.9	12
119	Influence of dynamic interfacial tension on droplet formation during membrane emulsification. Journal of Colloid and Interface Science, 2004, 277, 456-463.	5.0	111
120	Membrane fractionation of milk: state of the art and challenges. Journal of Membrane Science, 2004, 243, 263-272.	4.1	351
121	Simple model for estimating heat and mass transfer in regular-shaped foods. Journal of Food Engineering, 2003, 60, 383-390.	2.7	64
122	Analysis of droplet formation and interactions during cross-flow membrane emulsification. Journal of Membrane Science, 2002, 204, 125-137.	4.1	144
123	Prediction of airflow through a vented box by the Darcyâ€“Forchheimer equation. Journal of Food Engineering, 2002, 55, 49-57.	2.7	68
124	Shear-induced diffusion model for microfiltration of polydisperse suspensions. Desalination, 2002, 146, 63-68.	4.0	38
125	Convection-Diffusion Lattice Boltzmann Scheme for Irregular Lattices. Journal of Computational Physics, 2000, 160, 766-782.	1.9	98
126	Lattice Boltzmann scheme for cooling of packed cut flowers. International Journal of Heat and Mass Transfer, 2000, 43, 577-587.	2.5	23

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127	Diffusion Lattice Boltzmann Scheme on a Orthorhombic Lattice. Journal of Statistical Physics, 1999, 94, 203-217.	0.5	29
128	Solving the Vent Hole Design Problem for Seed Potato Packagings, with the Lattice Boltzmann Scheme. International Journal of Computational Fluid Dynamics, 1999, 11, 237-248.	0.5	26
129	Lattice-Boltzmann Scheme for Natural Convection in Porous Media. International Journal of Modern Physics C, 1997, 08, 879-888.	0.8	15
130	Quality loss in packed rose flowers due to Botrytis cinerea infection as related to temperature regimes and packaging design. Postharvest Biology and Technology, 1996, 7, 341-350.	2.9	16