Volker Gaukel

List of Publications by Year
in descending order

47	675	567281 15	677142 22
papers	citations	h-index	g-index

47	47	47	618
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oil droplet breakup during pressure swirl atomization of emulsions: Influence of emulsion viscosity and viscosity ratio. Journal of Food Engineering, 2022, 321, 110941.	5.2	7
2	Ice recrystallization inhibition of commercial Î²-, Î¹-, and Î»-carrageenans. Journal of Food Engineering, 2021, 290, 110269.	5.2	11
3	Oil droplet breakup during pressure swirl atomization of food emulsions: Influence of atomization pressure and initial oil droplet size. Journal of Food Process Engineering, 2021, 44, e13598.	2.9	11
4	Breakup and Coalescence of Oil Droplets in Protein-Stabilized Emulsions During the Atomization and the Drying Step of a Spray Drying Process. Food and Bioprocess Technology, 2021, 14, 854-865.	4.7	5
5	Investigation of Oil Droplet Breakup during Atomization of Emulsions: Comparison of Pressure Swirl and Twin-Fluid Atomizers. Fluids, 2021, 6, 219.	1.7	3
6	Spray drying of emulsions: Influence of the emulsifier system on changes in oil droplet size during the drying step. Journal of Food Processing and Preservation, 2021, 45, e15753.	2.0	11
7	Detailed Analysis of the Ice Surface after Binding of an Insect Antifreeze Protein and Correlation with the Gibbsâ€“Thomson Equation. Langmuir, 2021, 37, 11716-11725.	3.5	9
8	Micro-CT visualization of structure development during freeze-drying processes. Drying Technology, 2020, 38, 376-384.	3.1	15
9	Energy efficient spray drying by increased feed dry matter content: investigations on the applicability of Air-Core-Liquid-Ring atomization on pilot scale. Drying Technology, 2020, 38, 1323-1331.	3.1	11
10	Evaluation of the usefulness of serial combination processes for drying of apples. Drying Technology, 2020, 38, 1274-1290.	3.1	9
11	Spraying of Viscous Liquids: Influence of Fluid-Mixing Mechanism on the Performance of Internal-Mixing Twin-Fluid Atomizers. Applied Sciences (Switzerland), 2020, 10, 5249.	2.5	7
12	Influence of the Emulsifier System on Breakup and Coalescence of Oil Droplets during Atomization of Oil-In-Water Emulsions. ChemEngineering, 2020, 4, 47.	2.4	9
13	Comparison of the viscosity of camel milk with model milk systems in relation to their atomization properties. Journal of Food Science, 2020, 85, 3459-3466.	3.1	3
14	Thermal Hysteresis and Bursting Rate in Sucrose Solutions with Antifreeze Proteins. Chemical Engineering and Technology, 2020, 43, 1383-1392.	1.5	6
15	Ice Crystal Growth in Sucrose Solutions Containing Kappaâ€•and Iotaâ€Carrageenans. Chemical Engineering and Technology, 2020, 43, 1040-1047.	1.5	9
16	Air-Core-Liquid-Ring (ACLR) Atomization: Influences of Gas Pressure and Atomizer Scale Up on Atomization Efficiency. Processes, 2019, 7, 139.	2.8	9
17	Visualization of crust formation during hot-air-drying via micro-CT. Drying Technology, 2019, 37, 1881-1890.	3.1	10
18	Air-Coreâ€“Liquid-Ring (ACLR) Atomization Part II: Influence of Process Parameters on the Stability of Internal Liquid Film Thickness and Resulting Spray Droplet Sizes. Processes, 2019, 7, 616.	2.8	8

#	Article	IF	Citations
19	Spray performance and steadiness of an effervescent atomizer and an air-core-liquid-ring atomizer for application in spray drying processes of highly concentrated feeds. Chemical Engineering and Processing: Process Intensification, 2018, 128, 96-102.	3.6	18
20	Serial combination drying processes: A measure to improve quality of dried carrot disks and to reduce drying time. Drying Technology, 2018, 36, 1578-1591.	3.1	22
21	Influence of gelation on ice recrystallization inhibition activity of Î²-carrageenan in sucrose solution. Food Hydrocolloids, 2018, 76, 194-203.	10.7	17
22	Pneumatic Atomization: Beam-Steering Correction in Laser Diffraction Measurements of Spray Droplet Size Distributions. Applied Sciences (Switzerland), 2018, 8, 1738.	2.5	13
23	Comparison of an Effervescent Nozzle and a Proposed <scp>A</scp>irâ€<scp>C</scp>oreâ€<scp>L</scp>iquidâ€<scp>R</scp>ing (<scp>ACLR</scp>) Nozzle for Atomization of Viscous Food Liquids at Low Air Consumption. Journal of Food Process Engineering, 2017, 40, e12268.	2.9	13
24	Performance and Efficiency of Pressureâ€Swirl and Twinâ€Fluid Nozzles Spraying Food Liquids with Varying Viscosity. Journal of Food Process Engineering, 2017, 40, e12317.	2.9	19
25	Influence of acid hydrolysis and dialysis of Î²-carrageenan on its ice recrystallization inhibition activity. Journal of Food Engineering, 2017, 209, 26-35.	5.2	17
26	Influence of heating temperature, pH and ions on recrystallization inhibition activity of Î²-carrageenan in sucrose solution. Journal of Food Engineering, 2017, 195, 14-20.	5.2	16
27	Food Freezing: Crystal Structure and Size. , 2016, , .		1
28	Benchmarking of Gasâ€Assisted Atomization Systems for Liquid Disintegration. Chemical Engineering and Technology, 2016, 39, 699-707.	1.5	5
29	On the characterization of spray unsteadiness and its influence on oil drop breakup during effervescent atomization. Chemical Engineering and Processing: Process Intensification, 2016, 104, 212-218.	3.6	14
30	Influence of heating temperature, pressure and pH on recrystallization inhibition activity of antifreeze protein type III. Journal of Food Engineering, 2016, 187, 53-61.	5.2	16
31	Influence of viscosity ratio and initial oil drop size on the oil drop breakup during effervescent atomization. Chemical Engineering and Processing: Process Intensification, 2016, 109, 149-157.	3.6	13
32	Investigation on the Usage of Effervescent Atomization for Spraying and Spray Drying of Rheological Complex Food Liquids and on the Resulting Particle and Product Properties. , 2016, , 843-902.		0
33	Investigation on the Applicability of the Effervescent Atomizer in Spray Drying of Foods: Influence of Liquid Viscosity on Nozzle Internal Twoâ€Phase Flow and Spray Characteristics. Journal of Food Process Engineering, 2015, 38, 474-487.	2.9	23
34	Investigating the dynamics of recombinant protein secretion from a microalgal host. Journal of Biotechnology, 2015, 215, 62-71.	3.8	38
35	Factors Influencing the Microwaveâ€Induced Expansion of Starchâ€Based Extruded Pellets under Vacuum. Journal of Food Process Engineering, 2014, 37, 264-272.	2.9	11
36	Influence of Degree of Gelatinization on Expansion of Extruded, Starchâ€Based Pellets during Microwave Vacuum Processing. Journal of Food Process Engineering, 2014, 37, 220-228.	2.9	13

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37	Enhancement of convective drying by application of airborne ultrasound â€“ A response surface approach. Ultrasonics Sonochemistry, 2014, 21, 2144-2150.	8.2	62
38	Synergism of different fish antifreeze proteins and hydrocolloids on recrystallization inhibition of ice in sucrose solutions. Journal of Food Engineering, 2014, 141, 44-50.	5.2	62
39	Influence of Sucrose Content on Expansion of Extruded, Starchâ€Based Pellets during Microwave Vacuum Processing. Journal of Food Process Engineering, 2014, 37, 628-634.	2.9	1
40	Drying Kinetics and Expansion of Nonâ€predried Extruded Starchâ€Based Pellets during Microwave Vacuum Processing. Journal of Food Process Engineering, 2013, 36, 763-773.	2.9	20
41	EFFERVESCENT ATOMIZATION OF POLYVINYLPYRROLIDONE SOLUTIONS: INFLUENCE OF LIQUID PROPERTIES AND ATOMIZER GEOMETRY ON LIQUID BREAKUP AND SPRAY CHARACTERISTICS. Atomization and Sprays, 2013, 23, 1-23.	0.8	19
42	Viscosity ratio: A key factor for control of oil drop size distribution in effervescent atomization of oil-in-water emulsions. Journal of Food Engineering, 2012, 111, 265-271.	5.2	29
43	Impact of effervescent atomization on oil drop size distribution of atomized oil-in-water emulsions. Procedia Food Science, 2011, 1, 138-144.	0.6	6
44	Characterization of gelatinized corn starch suspensions and resulting drop size distributions after effervescent atomization. Journal of Food Engineering, 2011, 105, 656-662.	5.2	16
45	Modular Drying Processor for Application of Combined Drying Processes. Chemie-Ingenieur-Technik, 2011, 83, 888-892.	0.8	6
46	How to Meet the Freeze Drying Standard in Combined Drying Processes: Pre and Finish Drying of Carrot Dice. Drying Technology, 2011, 29, 266-277.	3.1	12
47	Apparent Specific Heat Capacity of Chilled and Frozen Meat Products. International Journal of Food Properties, 2007, 10, 103-112.	3.0	20