Volker Gaukel

List of Publications by Year
in descending order

47 papers	675 citations	567281 15 h-index	677142 22 g-index
47 all docs	47 docs citations	47 times ranked	618 citing authors

#	Article	IF	Citations
1	Enhancement of convective drying by application of airborne ultrasound â€“ A response surface approach. Ultrasonics Sonochemistry, 2014, 21, 2144-2150.	8.2	62
2	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
3	Investigating the dynamics of recombinant protein secretion from a microalgal host. Journal of Biotechnology, 2015, 215, 62-71.	3.8	38
4	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
5	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
6	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
7	Apparent Specific Heat Capacity of Chilled and Frozen Meat Products. International Journal of Food Properties, 2007, 10, 103-112.	3.0	20
8	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
9	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
10	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
11	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
12	Influence of acid hydrolysis and dialysis of Îº-carrageenan on its ice recrystallization inhibition activity. Journal of Food Engineering, 2017, 209, 26-35.	5.2	17
13	Influence of gelation on ice recrystallization inhibition activity of Îº-carrageenan in sucrose solution. Food Hydrocolloids, 2018, 76, 194-203.	10.7	17
14	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
15	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
16	Influence of heating temperature, pH and ions on recrystallization inhibition activity of Îº-carrageenan in sucrose solution. Journal of Food Engineering, 2017, 195, 14-20.	5.2	16
17	Micro-CT visualization of structure development during freeze-drying processes. Drying Technology, 2020, 38, 376-384.	3.1	15
18	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

#	Article	IF	Citations
19	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
20	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
21	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
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	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
24	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
25	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
26	Ice recrystallization inhibition of commercial Îº-, Î¹-, and Î»-carrageenans. Journal of Food Engineering, 2021, 290, 110269.	5.2	11
27	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
28	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
29	Visualization of crust formation during hot-air-drying via micro-CT. Drying Technology, 2019, 37, 1881-1890.	3.1	10
30	Air-Core-Liquid-Ring (ACLR) Atomization: Influences of Gas Pressure and Atomizer Scale Up on Atomization Efficiency. Processes, 2019, 7, 139.	2.8	9
31	Evaluation of the usefulness of serial combination processes for drying of apples. Drying Technology, 2020, 38, 1274-1290.	3.1	9
32	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
33	Ice Crystal Growth in Sucrose Solutions Containing Kappaâ€•and Iotaâ€Carrageenans. Chemical Engineering and Technology, 2020, 43, 1040-1047.	1.5	9
34	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
35	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
36	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

#	Article	IF	Citations
37	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
38	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
39	Modular Drying Processor for Application of Combined Drying Processes. Chemie-Ingenieur-Technik, 2011, 83, 888-892.	0.8	6
40	Thermal Hysteresis and Bursting Rate in Sucrose Solutions with Antifreeze Proteins. Chemical Engineering and Technology, 2020, 43, 1383-1392.	1.5	6
41	Benchmarking of Gasâ€Assisted Atomization Systems for Liquid Disintegration. Chemical Engineering and Technology, 2016, 39, 699-707.	1.5	5
42	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
43	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
44	Investigation of Oil Droplet Breakup during Atomization of Emulsions: Comparison of Pressure Swirl and Twin-Fluid Atomizers. Fluids, 2021, 6, 219.	1.7	3
45	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
46	Food Freezing: Crystal Structure and Size. , 2016, , .		1
47	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