

Malcolm J W Povey

List of Publications by Year in descending order

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137
papers

7,904
citations

66343

42
h-index

51608

86
g-index

139
all docs

139
docs citations

139
times ranked

7611
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation into the antibacterial behaviour of suspensions of ZnO nanoparticles (ZnO nanofluids). Journal of Nanoparticle Research, 2007, 9, 479-489.	1.9	1,229
2	Variables selection methods in near-infrared spectroscopy. Analytica Chimica Acta, 2010, 667, 14-32.	5.4	853
3	ZnO nanofluids – A potential antibacterial agent. Progress in Natural Science: Materials International, 2008, 18, 939-944.	4.4	396
4	Mechanistic investigation into antibacterial behaviour of suspensions of ZnO nanoparticles against E. coli. Journal of Nanoparticle Research, 2010, 12, 1625-1636.	1.9	393
5	Ultrasound techniques for characterizing colloidal dispersions. Reports on Progress in Physics, 2005, 68, 1541-1637.	20.1	236
6	Creaming and Flocculation of Oil-in-Water Emulsions Containing Sodium Caseinate. Journal of Colloid and Interface Science, 1997, 185, 515-529.	9.4	228
7	A study on the primary and secondary nucleation of ice by power ultrasound. Ultrasonics, 2005, 43, 227-230.	3.9	227
8	The sonocrystallisation of ice in sucrose solutions: primary and secondary nucleation. Ultrasonics, 2003, 41, 595-604.	3.9	188
9	Scattering of ultrasound by emulsions. Journal Physics D: Applied Physics, 1989, 22, 38-47.	2.8	158
10	A colorimetric hydrogen sulfide sensor based on gellan gum-silver nanoparticles bionanocomposite for monitoring of meat spoilage in intelligent packaging. Food Chemistry, 2019, 290, 135-143.	8.2	153
11	Particle-Stabilizing Effects of Flavonoids at the Oil-Water Interface. Journal of Agricultural and Food Chemistry, 2011, 59, 2636-2645.	5.2	140
12	ACOUSTIC ENVELOPE DETECTOR FOR CRISPNESS ASSESSMENT OF BISCUITS. Journal of Texture Studies, 2005, 36, 139-156.	2.5	133
13	Ultrasonics in food engineering. Part I: Introduction and experimental methods. Journal of Food Engineering, 1988, 8, 217-245.	5.2	128
14	Natural Biomaterial-Based Edible and pH-Sensitive Films Combined with Electrochemical Writing for Intelligent Food Packaging. Journal of Agricultural and Food Chemistry, 2018, 66, 12836-12846.	5.2	123
15	Effects of pH on the ability of flavonoids to act as Pickering emulsion stabilizers. Colloids and Surfaces B: Biointerfaces, 2012, 92, 84-90.	5.0	114
16	Crispness assessment of roasted almonds by an integrated approach to texture description: texture, acoustics, sensory and structure. Journal of Chemometrics, 2006, 20, 311-320.	1.3	112
17	Ultrasonic inactivation of Bacillus α -amylase. I. effect of gas content and emitting face of probe. Ultrasonics Sonochemistry, 2008, 15, 133-142.	8.2	109
18	Effect of Emulsifier Type on the Crystallization Kinetics of Oil-in-Water Emulsions Containing a Mixture of Solid and Liquid Droplets. Journal of Colloid and Interface Science, 1993, 160, 293-297.	9.4	89

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19	Stability of Emulsions Containing Both Sodium Caseinate and Tween 20. <i>Journal of Colloid and Interface Science</i> , 1999, 212, 466-473.	9.4	88
20	Ultrasonics in food engineering Part II: Applications. <i>Journal of Food Engineering</i> , 1989, 9, 1-20.	5.2	85
21	Ultrasonic analysis of edible fats and oils. <i>Ultrasonics</i> , 1992, 30, 383-388.	3.9	85
22	Creaming of concentrated oil-in-water emulsions containing xanthan. <i>Food Hydrocolloids</i> , 1994, 8, 481-497.	10.7	81
23	Ultrasonic investigation of the particle size dependence of crystallization in n-hexadecane-in-water emulsions. <i>Journal of Colloid and Interface Science</i> , 1991, 142, 103-110.	9.4	79
24	Ultrasonic study of the gelation of gelatin: Phase diagram, hysteresis and kinetics. <i>Food Hydrocolloids</i> , 2012, 26, 99-107.	10.7	73
25	Neutron diffraction studies of liquid and crystalline trilaurin. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1992, 69, 130-136.	1.9	72
26	Amine-responsive bilayer films with improved illumination stability and electrochemical writing property for visual monitoring of meat spoilage. <i>Sensors and Actuators B: Chemical</i> , 2020, 302, 127130.	7.8	68
27	Analysis of the sugar content of fruit juices and drinks using ultrasonic velocity measurements. <i>International Journal of Food Science and Technology</i> , 1992, 27, 515-529.	2.7	67
28	Extruded low density polyethylene-curcumin film: A hydrophobic ammonia sensor for intelligent food packaging. <i>Food Packaging and Shelf Life</i> , 2020, 26, 100595.	7.5	64
29	Development of a simple model device for in vitro gastric digestion investigation. <i>Food and Function</i> , 2011, 2, 174.	4.6	61
30	Ultrasound particle sizing: A review. <i>Particuology</i> , 2013, 11, 135-147.	3.6	59
31	Kinetics of Crystallization in n-Hexadecane and Cocoa Butter Oil-in-Water Emulsions Accounting for Droplet Collision-Mediated Nucleation. <i>Journal of Colloid and Interface Science</i> , 2000, 232, 370-380.	9.4	58
32	Bilayer pH-sensitive colorimetric films with light-blocking ability and electrochemical writing property: Application in monitoring crucian spoilage in smart packaging. <i>Food Chemistry</i> , 2021, 336, 127634.	8.2	58
33	Ultrasonic velocity as a probe of emulsions and suspensions. <i>Advances in Colloid and Interface Science</i> , 1987, 27, 285-316.	14.7	55
34	Ultrasonic characterization of a food emulsion. <i>Ultrasonics</i> , 1990, 28, 266-272.	3.9	55
35	Crystallization in hydrocarbon-in-water emulsions containing a mixture of solid and liquid droplets. <i>Chemical Physics Letters</i> , 1990, 172, 449-452.	2.6	53
36	Agar/TiO ₂ /radish anthocyanin/neem essential oil bionanocomposite bilayer films with improved bioactive capability and electrochemical writing property for banana preservation. <i>Food Hydrocolloids</i> , 2022, 123, 107187.	10.7	50

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37	Absorption and velocity dispersion due to crystallization and melting of emulsion droplets. <i>Ultrasonics</i> , 1993, 31, 433-437.	3.9	49
38	The effect of partial glycerides on trilaurin crystallization. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1997, 74, 169-171.	1.9	49
39	The molecular basis for sound velocity in n-alkanes, 1-alcohols and dimethylsiloxanes. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 73-78.	2.8	47
40	A comparative study of ultrasound and laser light diffraction techniques for particle size determination in dairy beverages. <i>Measurement Science and Technology</i> , 2006, 17, 289-297.	2.6	47
41	A visual indicator based on curcumin with high stability for monitoring the freshness of freshwater shrimp, <i>Macrobrachium rosenbergii</i> . <i>Journal of Food Engineering</i> , 2021, 292, 110290.	5.2	47
42	Ultrasonics of food. <i>Contemporary Physics</i> , 1998, 39, 467-478.	1.8	46
43	Crystallization in oil-in-water emulsions containing liquid and solid droplets. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1993, 81, 273-279.	4.7	44
44	The effect of lauric-based molecules on trilaurin crystallization. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1994, 71, 1367-1372.	1.9	43
45	Longitudinal acoustic properties of poly(lactic acid) and poly(lactic- <i>co</i> -glycolic acid). <i>Biomedical Materials (Bristol)</i> , 2010, 5, 055004.	3.3	43
46	The properties of ZnO nanofluids and the role of H ₂ O ₂ in the disinfection activity against <i>Escherichia coli</i> . <i>Water Research</i> , 2013, 47, 4013-4021.	11.3	41
47	Ultrasonic investigation of aqueous solutions of a globular protein. <i>Food Hydrocolloids</i> , 1992, 6, 253-262.	10.7	39
48	Faraday communications. Ultrasonic monitoring of crystallization in an oil-in-water emulsion. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1990, 86, 1147.	1.7	37
49	The application of modified forms of the Urick equation to the interpretation of ultrasound velocity in scattering systems. <i>Ultrasonics</i> , 1995, 33, 243-251.	3.9	37
50	Non-invasive sensing for food reassurance. <i>Analyst, The</i> , 2016, 141, 1587-1610.	3.5	37
51	Crystal nucleation in food colloids. <i>Food Hydrocolloids</i> , 2014, 42, 118-129.	10.7	36
52	Ultrasonic velocity measurements in some liquid triglycerides and vegetable oils. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1988, 65, 1787-1790.	1.9	34
53	Applications of ultrasonics in food science - novel control of fat crystallization and structuring. <i>Current Opinion in Colloid and Interface Science</i> , 2017, 28, 1-6.	7.4	32
54	Small angle neutron scattering from voids in crystalline trilaurin. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1990, 67, 76-78.	1.9	31

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55	Modeling of Concentration Profiles and Ultrasound Velocity Profiles in a Creaming Emulsion: Importance of Scattering Effects. <i>Journal of Colloid and Interface Science</i> , 1994, 166, 363-374.	9.4	31
56	Modeling of Combined Creaming and Flocculation in Emulsions. <i>Journal of Colloid and Interface Science</i> , 1997, 186, 80-89.	9.4	30
57	Advances in the ultrasound characterization of dry-cured meat products. <i>Journal of Food Engineering</i> , 2013, 119, 464-470.	5.2	29
58	Application of ultrasonic pulse-echo techniques to egg albumen quality testing: A preliminary report. <i>British Poultry Science</i> , 1980, 21, 489-495.	1.7	28
59	Thermal Scattering Must Be Accounted for in the Determination of Adiabatic Compressibility. <i>Journal of Physical Chemistry B</i> , 1997, 101, 1110-1112.	2.6	28
60	An application of the ultrasonic pulse echo technique to the measurement of crispness of biscuits. <i>International Journal of Food Science and Technology</i> , 1981, 16, 167-175.	2.7	28
61	Super-resolution microscopy and empirically validated autocorrelation image analysis discriminates microstructures of dairy derived gels. <i>Food Hydrocolloids</i> , 2019, 90, 62-71.	10.7	27
62	Melting Point Depression of the Surface Layer in n-Alkane Emulsions and Its Implications for Fat Destabilization in Ice Cream. <i>Crystal Growth and Design</i> , 2006, 6, 297-301.	3.0	26
63	Characterizing cocoa butter seed crystals by the oil-in-water emulsion crystallization method. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 2002, 79, 993-1002.	1.9	25
64	Pulse echo comparison method with FSUPER to measure velocity dispersion in n-tetradecane in water emulsions. <i>Ultrasonics</i> , 2002, 40, 37-41.	3.9	25
65	Investigation of bovine serum albumin denaturation using ultrasonic spectroscopy. <i>Food Hydrocolloids</i> , 2011, 25, 1233-1241.	10.7	23
66	Investigation of phase transitions in glyceride/paraffin oil mixtures using ultrasonic velocity measurements. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1988, 65, 1791-1795.	1.9	22
67	Ultrasonic spectroscopy studies of casein in water. <i>International Dairy Journal</i> , 1999, 9, 299-303.	3.0	22
68	Latest advances in imaging techniques for characterizing soft, multiphasic food materials. <i>Advances in Colloid and Interface Science</i> , 2020, 279, 102154.	14.7	22
69	A study of dilatation and acoustic propagation in solidifying fats and oils: II. Experimental. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1984, 61, 560-564.	1.9	21
70	CHARACTERIZATION OF RECONSTITUTED MILK POWDER BY ULTRASOUND SPECTROSCOPY. <i>Journal of Food Quality</i> , 2006, 29, 405-418.	2.6	21
71	Shear stiffness and density in potato parenchyma. <i>International Journal of Food Science and Technology</i> , 1998, 33, 461-464.	2.7	20
72	Crystallization kinetics in oil-in-water emulsions containing a mixture of solid and liquid droplets. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1996, 92, 1213.	1.7	18

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73	Determination of the adiabatic compressibility of bovine serum albumen in concentrated solution by a new ultrasonic method. <i>Food Hydrocolloids</i> , 2000, 14, 83-91.	10.7	18
74	An ultrasound velocity and attenuation scanner for viewing the temporal evolution of a dispersed phase in fluids. <i>Review of Scientific Instruments</i> , 2001, 72, 4234-4241.	1.3	18
75	Post-processing of polymer foam tissue scaffolds with high power ultrasound: A route to increased pore interconnectivity, pore size and fluid transport. <i>Materials Science and Engineering C</i> , 2013, 33, 4825-4832.	7.3	18
76	Global Small-Angle X-ray Scattering Data Analysis of Triacylglycerols in the Molten State (Part I). <i>Journal of Physical Chemistry B</i> , 2018, 122, 10320-10329.	2.6	18
77	Ultrasonic evaluation of ripening avocado flesh. <i>Postharvest Biology and Technology</i> , 1994, 4, 111-116.	6.0	17
78	Interpretation of ultrasound velocity creaming profiles. <i>Ultrasonics</i> , 1996, 34, 695-698.	3.9	16
79	A simple and rapid method for the determination of particle size in emulsions from ultrasound data. <i>Colloids and Surfaces B: Biointerfaces</i> , 1999, 12, 417-427.	5.0	16
80	A Low Frequency Potential Scattering Description of Acoustic Propagation in Dispersions. <i>SIAM Journal on Applied Mathematics</i> , 2001, 61, 1906-1931.	1.8	16
81	Cross-correlation analysis to quantify relative spatial distributions of fat and protein in super-resolution microscopy images of dairy gels. <i>Food Hydrocolloids</i> , 2019, 97, 105225.	10.7	16
82	A microprocessor control system for thermal sterilisation operations. <i>Journal of Food Engineering</i> , 1986, 5, 31-53.	5.2	15
83	A versatile scanning acoustic platform. <i>Measurement Science and Technology</i> , 2010, 21, 045901.	2.6	15
84	Bacteria counting method based on polyaniline/bacteria thin film. <i>Biosensors and Bioelectronics</i> , 2016, 81, 75-79.	10.1	15
85	Determination of Asphaltene Critical Nanoaggregate Concentration Region Using Ultrasound Velocity Measurements. <i>Scientific Reports</i> , 2017, 7, 16125.	3.3	15
86	Acoustic Methods for Particle Characterisation. <i>KONA Powder and Particle Journal</i> , 2006, 24, 126-133.	1.7	14
87	Quasi-isothermal crystallisation kinetics, non-classical nucleation and surfactant-dependent crystallisation of emulsions. <i>European Journal of Lipid Science and Technology</i> , 2009, 111, 236-242.	1.5	14
88	Acoustic characterisation of pH dependant reversible micellar casein aggregation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2019, 568, 259-265.	4.7	14
89	Ultrasonic temperature measurement and its potential for food processing systems. <i>Food Control</i> , 1990, 1, 54-57.	5.5	12
90	Dynamic moisture loss explored through quantitative super-resolution microscopy, spatial micro-viscosity and macroscopic analyses in acid milk gels. <i>Food Hydrocolloids</i> , 2020, 101, 105501.	10.7	12

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91	Comparison of effective medium and multiple scattering theories of predicting the ultrasonic properties of dispersions. <i>Journal of the Acoustical Society of America</i> , 1990, 87, 2244-2246.	1.1	11
92	Acoustic Propagation in Dispersions and the Geometric Theory of Diffraction. <i>SIAM Journal on Applied Mathematics</i> , 2003, 63, 834-849.	1.8	10
93	Global Small-Angle X-ray Scattering Data Analysis of Triacylglycerols in the β' -Phase (Part II). <i>Journal of Physical Chemistry B</i> , 2018, 122, 10330-10336.	2.6	10
94	Early stages of fat crystallisation evaluated by low field NMR and small angle X-ray scattering. <i>Magnetic Resonance in Chemistry</i> , 2019, 57, 686-694.	1.9	10
95	Particulate characterization by ultrasound. <i>Pharmaceutical Science & Technology Today</i> , 2000, 3, 373-380.	0.7	9
96	Acoustic Propagation in Dispersions in the Long Wavelength Limit. <i>SIAM Journal on Applied Mathematics</i> , 2005, 66, 489-509.	1.8	9
97	Identification of important mechanical and acoustic parameters for the sensory quality of cocoa butter alternatives. <i>Food Research International</i> , 2015, 76, 637-644.	6.2	8
98	Fast field cycling NMR relaxometry studies of molten and cooled cocoa butter. <i>Molecular Physics</i> , 2019, 117, 1020-1027.	1.7	8
99	A study of dilatation and acoustic propagation in solidifying fats and oils: I. Theoretical. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 1984, 61, 558-559.	1.9	7
100	Nucleation in food colloids. <i>Journal of Chemical Physics</i> , 2016, 145, 211906.	3.0	7
101	Monitoring Crystallization in Simple and Mixed Oil-in-Water Emulsions using Ultrasonic Velocity Measurement. , 1991, , 171-179.		7
102	Ferromagnetic acoustic resonance in metals. <i>Journal of Physics F: Metal Physics</i> , 1973, 3, L234-L237.	1.6	6
103	A calculation of the pressure dependence of the low-temperature transport properties of dilute KRb alloys. <i>Journal of Physics F: Metal Physics</i> , 1978, 8, 231-238.	1.6	6
104	Electromagnetic generation and attenuation of ultrasound in ferromagnetic metals. I. <i>Journal of Physics F: Metal Physics</i> , 1980, 10, 2041-2053.	1.6	6
105	Ultrasonic absorption in a polystyrene latex. <i>Journal of Colloid and Interface Science</i> , 1983, 93, 565-567.	9.4	6
106	Structure and transformation of low-temperature phases of 1,3-distearoyl-2-oleoyl glycerol. <i>European Journal of Lipid Science and Technology</i> , 2004, 106, 319-324.	1.5	6
107	Acoustic emission monitoring from a lab scale high shear granulator – A novel approach. <i>International Journal of Pharmaceutics</i> , 2014, 465, 262-274.	5.2	6
108	Application of a maximum likelihood algorithm to ultrasound modulated optical tomography. <i>Journal of Biomedical Optics</i> , 2012, 17, 026014.	2.6	5

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109	Multiple scattering in dispersions, for long wavelength thermoacoustic solutions. Journal of Physics: Conference Series, 2014, 498, 012005.	0.4	5
110	COMSOL modelling of the acoustoelastic effect. Journal of Physics: Conference Series, 2015, 581, 012008.	0.4	5
111	Acoustic properties of crystallized fat: Relation between polymorphic form, microstructure, fracturing behavior, and sound intensity. European Journal of Lipid Science and Technology, 2016, 118, 1257-1270.	1.5	5
112	ULTRASONIC MONITORING OF MELTING/CRYSTALLIZATION IN EMULSIONS. , 1991, , 107-110.		5
113	Acoustic attenuation spectroscopy and helium ion microscopy study of rehydration of dairy powder. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 600, 124795.	4.7	5
114	A perturbation solution for long wavelength thermoacoustic propagation in dispersions. Journal of Computational and Applied Mathematics, 2010, 234, 1996-2002.	2.0	4
115	Ultrasonic and acoustic microscopy: principles and applications to food microstructures. , 2013, , 192-222.		4
116	Estimating the asphaltene critical nanoaggregation concentration region using ultrasonic measurements and Bayesian inference. Scientific Reports, 2021, 11, 6698.	3.3	4
117	Dynamic monitoring of glycine crystallisation with low power ultrasound reflection spectroscopy. Chemical Engineering Research and Design, 2021, 170, 213-223.	5.6	4
118	Chapter 27. Crystallization in Monodisperse Emulsions with Particles in Size Range 20â€“200 nm. , 0, , 399-412.		4
119	Evidence for the osmotic dehydration theory of freeze damage. Journal of the Science of Food and Agriculture, 1981, 32, 96-98.	3.5	3
120	Reply to Comment on "Distribution of Temperature in Globular Molecules, Cells, or Droplets in Temperature-Jump, Sound Velocity, and Pulsed LASER Experiments" Journal of Physical Chemistry B, 1998, 102, 7510-7510.	2.6	3
121	A perturbation approach to acoustic scattering in dispersions. Journal of the Acoustical Society of America, 2006, 120, 719-732.	1.1	3
122	Acoustic techniques to characterize food microstructure. , 2007, , 311-333.		3
123	Characterization of tissue scaffolds using optics and ultrasound. Proceedings of SPIE, 2011, , .	0.8	3
124	The acoustic spectroscopy of asphaltene aggregation in petroleum. IOP Conference Series: Materials Science and Engineering, 2012, 42, 012022.	0.6	3
125	Electromagnetic generation and attenuation of ultrasound in ferromagnetic metals. II. Journal of Physics F: Metal Physics, 1980, 10, 2555-2572.	1.6	2
126	Estimating organic chain length through sound velocity measurements. Ultrasonics, 2005, 43, 219-226.	3.9	2

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127	Enzyme activity determination using ultrasound. Journal of Physics: Conference Series, 2014, 498, 012003.	0.4	2
128	Can airborne ultrasound monitor bubble size in chocolate?. Journal of Physics: Conference Series, 2014, 498, 012001.	0.4	2
129	Application of a maximum likelihood algorithm to ultrasound modulated optical tomography. , 2011, , .		1
130	Development of a discrete element model with moving realistic geometry to simulate particle motion in a Mi-Pro granulator. Computers and Chemical Engineering, 2016, 93, 234-247.	3.8	1
131	Ultrasonic wave propagation in powders. Journal of Physics: Conference Series, 2018, 1017, 012001.	0.4	1
132	Ultrasonic studies of the development of flocculation in mixed sodium caseinate and Tween 20 emulsions. , 2001, , 132-135.		1
133	Crystallization in food emulsions. , 0, , 152-162.		1
134	Acoustics and ultrasonics in emulsions and dispersions. Ultrasonics, 1987, 25, 119.	3.9	0
135	Apparatus for determining particle size. Journal of the Acoustical Society of America, 2005, 117, 1689.	1.1	0
136	DEM Simulation of Particle Motion in a MiPro Granulator. , 2009, , .		0
137	Acoustic microscopy in the food industry. IOP Conference Series: Materials Science and Engineering, 2012, 42, 012006.	0.6	0