

Gary Bryant

List of Publications by Year in descending order

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127
papers

4,808
citations

94269

37
h-index

110170

64
g-index

131
all docs

131
docs citations

131
times ranked

5616
citing authors

#	ARTICLE	IF	CITATIONS
1	Freezing, Drying, and/or Vitrification of Membrane-Associated Water Systems. <i>Cryobiology</i> , 1999, 39, 103-129.	0.3	356
2	Identifying Trends in Gold Nanoparticle Toxicity and Uptake: Size, Shape, Capping Ligand, and Biological Corona. <i>ACS Omega</i> , 2019, 4, 242-256.	1.6	186
3	Effects of Vitrified and Nonvitrified Sugars on Phosphatidylcholine Fluid-to-Gel Phase Transitions. <i>Biophysical Journal</i> , 2000, 78, 1932-1946.	0.2	183
4	Interactions between soluble sugars and POPC (1-palmitoyl-2-oleoylphosphatidylcholine) during dehydration: vitrification of sugars alters the phase behavior of the phospholipid. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1994, 1193, 143-150.	1.4	177
5	Differential Dynamic Microscopy of Bacterial Motility. <i>Physical Review Letters</i> , 2011, 106, 018101.	2.9	165
6	Two-Step Crystallization Kinetics in Colloidal Hard-Sphere Systems. <i>Physical Review Letters</i> , 2006, 96, 175701.	2.9	164
7	Size, shape and surface chemistry of nano-gold dictate its cellular interactions, uptake and toxicity. <i>Progress in Materials Science</i> , 2016, 83, 152-190.	16.0	135
8	Cellular cryobiology: thermodynamic and mechanical effects. <i>International Journal of Refrigeration</i> , 2001, 24, 438-450.	1.8	126
9	Electromechanical stresses produced in the plasma membranes of suspended cells by applied electric fields. <i>Journal of Membrane Biology</i> , 1987, 96, 129-139.	1.0	120
10	Membrane behaviour in seeds and other systems at low water content: the various effects of solutes. <i>Seed Science Research</i> , 2001, 11, 17-25.	0.8	108
11	Disordered Cold Regulated 15 Proteins Protect Chloroplast Membranes during Freezing through Binding and Folding, But Do Not Stabilize Chloroplast Enzymes in Vivo. <i>Plant Physiology</i> , 2014, 166, 190-201.	2.3	108
12	Antibacterial Action of Nanoparticles by Lethal Stretching of Bacterial Cell Membranes. <i>Advanced Materials</i> , 2020, 32, e2005679.	11.1	102
13	A Gallium-Based Magnetocaloric Liquid Metal Ferrofluid. <i>Nano Letters</i> , 2017, 17, 7831-7838.	4.5	101
14	How hard is a colloidal hard-sphere interaction?. <i>Physical Review E</i> , 2002, 66, 060501.	0.8	98
15	Encapsulation, Visualization and Expression of Genes with Biomimetically Mineralized Zeolitic Imidazolate Frameworks (ZIFs). <i>Small</i> , 2019, 15, e1902268.	5.2	95
16	Improved Particle Size Distribution Measurements Using Multiangle Dynamic Light Scattering. <i>Langmuir</i> , 1995, 11, 2480-2485.	1.6	92
17	Effect of polydispersity on the crystallization kinetics of suspensions of colloidal hard spheres when approaching the glass transition. <i>Journal of Chemical Physics</i> , 2007, 127, 084505.	1.2	74
18	Anodized nanoporous WO ₃ Schottky contact structures for hydrogen and ethanol sensing. <i>Journal of Materials Chemistry A</i> , 2015, 3, 7994-8001.	5.2	71

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19	Long-Range Attraction between Nucleosides with Short-Range Specificity: Direct Measurements. <i>Physical Review Letters</i> , 1994, 73, 2780-2783.	2.9	64
20	Visible-Light-Driven "On/Off" Photochromism of a Polyoxometalate Diarylethene Coordination Complex. <i>Journal of the American Chemical Society</i> , 2018, 140, 10482-10487.	6.6	60
21	Blood-Catalyzed RAFT Polymerization. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 10288-10292.	7.2	60
22	Improved Particle Size Distribution Measurements Using Multiangle Dynamic Light Scattering. 2. Refinements and Applications. <i>Langmuir</i> , 1996, 12, 6224-6228.	1.6	59
23	The need for novel cryoprotectants and cryopreservation protocols: Insights into the importance of biophysical investigation and cell permeability. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2021, 1865, 129749.	1.1	59
24	Crystallization kinetics of polydisperse colloidal hard spheres: Experimental evidence for local fractionation. <i>Physical Review E</i> , 2003, 67, 061405.	0.8	51
25	Intrinsically Disordered Stress Protein COR15A Resides at the Membrane Surface during Dehydration. <i>Biophysical Journal</i> , 2017, 113, 572-579.	0.2	51
26	Exclusion of maltodextrins from phosphatidylcholine multilayers during dehydration: effects on membrane phase behaviour. <i>European Biophysics Journal</i> , 2003, 32, 96-105.	1.2	50
27	Highly Living Stars via Core-First Photo-RAFT Polymerization: Exploitation for Ultra-High Molecular Weight Star Synthesis. <i>ACS Macro Letters</i> , 2019, 8, 1291-1295.	2.3	50
28	Velocity Autocorrelation Functions of Hard-Sphere Fluids: Long-Time Tails upon Undercooling. <i>Physical Review Letters</i> , 2006, 96, .	2.9	49
29	Freeze avoidance: a dehydrating moss gathers no ice. <i>Plant, Cell and Environment</i> , 2010, 33, 1731-1741.	2.8	48
30	DSC Measurement of Cell Suspensions during Successive Freezing Runs: Implications for the Mechanisms of Intracellular Ice Formation. <i>Cryobiology</i> , 1995, 32, 114-128.	0.3	47
31	Bulk and interfacial nanostructure and properties in deep eutectic solvents: Current perspectives and future directions. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 2430-2454.	5.0	45
32	Novel drug carriers: from grafted polymers to cross-linked vesicles. <i>Chemical Communications</i> , 2013, 49, 33-35.	2.2	43
33	Disposition and crystallization of saturated fatty acid in mixed micelles of relevance to lipid digestion. <i>Journal of Colloid and Interface Science</i> , 2015, 449, 160-166.	5.0	43
34	Photomodulation of bacterial growth and biofilm formation using carbohydrate-based surfactants. <i>Chemical Science</i> , 2016, 7, 6628-6634.	3.7	43
35	Slow Dynamics and Aging of a Colloidal Hard Sphere Glass. <i>Physical Review Letters</i> , 2008, 101, 135702.	2.9	41
36	Crystallization kinetics of polydisperse colloidal hard spheres. II. Binary mixtures. <i>Physical Review E</i> , 2005, 71, 021404.	0.8	40

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37	Effects of Sugars on Lipid Bilayers during Dehydration $\hat{\sim}$ SAXS/WAXS Measurements and Quantitative Model. <i>Journal of Physical Chemistry B</i> , 2009, 113, 2486-2491.	1.2	39
38	Localization of trehalose in partially hydrated DOPC bilayers: insights into cryoprotective mechanisms. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140069.	1.5	39
39	Low hydration phase properties of phospholipid mixtures. <i>European Biophysics Journal</i> , 1992, 21, 223.	1.2	38
40	Crystallization of Dense Binary Hard-Sphere Mixtures with Marginal Size Ratio. <i>Physical Review Letters</i> , 2008, 100, 225502.	2.9	37
41	Small changes in particle-size distribution dramatically delay and enhance nucleation in hard sphere colloidal suspensions. <i>Physical Review E</i> , 2006, 74, 060401.	0.8	35
42	Dynamic self-assembly of detonation nanodiamond in water. <i>Nanoscale</i> , 2020, 12, 5363-5367.	2.8	34
43	Can hydration forces induce lateral phase separations in lamellar phases?. <i>European Biophysics Journal</i> , 1989, 16, 369-74.	1.2	33
44	Preparation and Characterization of Particles with Small Differences in Polydispersity. <i>Langmuir</i> , 2007, 23, 11534-11539.	1.6	33
45	Easy Come, Easy Go: Capillary Forces Enable Rapid Refilling of Embolized Primary Xylem Vessels. <i>Plant Physiology</i> , 2015, 168, 1636-1647.	2.3	33
46	How much solute is needed to inhibit the fluid to gel membrane phase transition at low hydration?. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 1019-1022.	1.4	32
47	Accurate Measurement of Small Polydispersities in Colloidal Suspensions. <i>Langmuir</i> , 2003, 19, 616-621.	1.6	31
48	Modular Molecules: Site-Selective Metal Substitution, Photoreduction, and Chirality in Polyoxometalate Hybrids. <i>Chemistry - A European Journal</i> , 2014, 20, 14102-14111.	1.7	30
49	Phospholipid Membrane Protection by Sugar Molecules during Dehydration $\hat{\sim}$ Insights into Molecular Mechanisms Using Scattering Techniques. <i>International Journal of Molecular Sciences</i> , 2013, 14, 8148-8163.	1.8	29
50	Synthesis of ultra-high molecular weight polymers by controlled production of initiating radicals. <i>Journal of Polymer Science Part A</i> , 2019, 57, 1922-1930.	2.5	28
51	Analysis of Pathogenic Bacterial and Yeast Biofilms Using the Combination of Synchrotron ATR-FTIR Microspectroscopy and Chemometric Approaches. <i>Molecules</i> , 2021, 26, 3890.	1.7	28
52	Arrest of Flow and Emergence of Activated Processes at the Glass Transition of a Suspension of Particles with Hard Spherelike Interactions. <i>Physical Review Letters</i> , 2009, 102, 168301.	2.9	27
53	Nanostructure of a deep eutectic solvent at solid interfaces. <i>Journal of Colloid and Interface Science</i> , 2021, 591, 38-51.	5.0	27
54	Effect of deuteration on the phase behaviour and structure of lamellar phases of phosphatidylcholines $\hat{\sim}$ Deuterated lipids as proxies for the physical properties of native bilayers. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 177, 196-203.	2.5	27

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55	Location of sugars in multilamellar membranes at low hydration. <i>Physica B: Condensed Matter</i> , 2006, 385-386, 862-864.	1.3	26
56	Properties of hydrophobically modified polyacrylamide with low molecular weight and interaction with surfactant in aqueous solution. <i>Journal of Applied Polymer Science</i> , 2006, 100, 4348-4360.	1.3	26
57	Stabilization of Peptide-Based Vesicles via in situ Oxygen-Mediated Cross-Linking. <i>Macromolecular Bioscience</i> , 2012, 12, 1220-1231.	2.1	26
58	A Depolarized Dynamic Light Scattering Method to Calculate Translational and Rotational Diffusion Coefficients of Nanorods. <i>Particle and Particle Systems Characterization</i> , 2019, 36, 1800388.	1.2	25
59	Observation of a Smecticlike Crystalline Structure in Polydisperse Colloids. <i>Physical Review Letters</i> , 2003, 90, 255702.	2.9	24
60	Dynamics of hard sphere suspensions using dynamic light scattering and X-ray photon correlation spectroscopy: Dynamics and scaling of the intermediate scattering function. <i>Journal of Chemical Physics</i> , 2011, 134, 054505.	1.2	24
61	Characterization of the interactions within fine particle mixtures in highly concentrated suspensions for advanced particle processing. <i>Advances in Colloid and Interface Science</i> , 2015, 226, 37-43.	7.0	24
62	Direct Comparison of Disaccharide Interaction with Lipid Membranes at Reduced Hydrations. <i>Langmuir</i> , 2015, 31, 9134-9141.	1.6	23
63	Characterization of the phase behaviour of a novel polymerizable lyotropic ionic liquid crystal. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 23059-23068.	1.3	22
64	From Knock-Out Phenotype to Three-Dimensional Structure of a Promising Antibiotic Target from <i>Streptococcus pneumoniae</i> . <i>PLoS ONE</i> , 2013, 8, e83419.	1.1	22
65	Deep eutectic solvents as cryoprotective agents for mammalian cells. <i>Journal of Materials Chemistry B</i> , 2022, 10, 4546-4560.	2.9	22
66	Measurement of glucose exclusion from the fully hydrated DOPE inverse hexagonal phase. <i>Soft Matter</i> , 2010, 6, 1197.	1.2	21
67	Structure of solid lipid nanoparticles produced by a microwave-assisted microemulsion technique. <i>RSC Advances</i> , 2016, 6, 36803-36810.	1.7	21
68	Microwave assisted synthesis of a mono organoimido functionalized Anderson polyoxometalate. <i>Dalton Transactions</i> , 2015, 44, 20826-20829.	1.6	20
69	Sonication synthesis of micro-sized silver nanoparticle/oleic acid liquid marbles: A novel SERS sensing platform. <i>Sensors and Actuators B: Chemical</i> , 2016, 223, 52-58.	4.0	20
70	Impact of nanogold morphology on interactions with human serum. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 29558-29565.	1.3	20
71	Structure Analysis of Solid Lipid Nanoparticles for Drug Delivery: A Combined USANS/SANS Study. <i>Particle and Particle Systems Characterization</i> , 2019, 36, 1800359.	1.2	20
72	Change in relaxation scenario at the order-disorder transition of a colloidal fluid of hard spheres seen from the Gaussian limit of the self-intermediate scattering function. <i>Physical Review E</i> , 2005, 72, 031402.	0.8	19

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73	Interactions of cryoprotective agents with phospholipid membranes - A Langmuir monolayer study. <i>Chemistry and Physics of Lipids</i> , 2020, 231, 104949.	1.5	19
74	Optical Contrast Variation Study of Nonaqueous Suspensions of Polymer Particles. <i>Journal of Colloid and Interface Science</i> , 1999, 216, 401-408.	5.0	18
75	Interaction of Giant Unilamellar Vesicles with the Surface Nanostructures on Dragonfly Wings. <i>Langmuir</i> , 2019, 35, 2422-2430.	1.6	18
76	SPECIFIC FORCES BETWEEN DNA BASES. <i>Modern Physics Letters B</i> , 1996, 10, 81-99.	1.0	16
77	A Bragg scattering spectrometer for studying crystallization of colloidal suspensions. <i>Review of Scientific Instruments</i> , 2002, 73, 3878-3884.	0.6	16
78	The inverse hexagonal "inverse ribbon" lamellar gel phase transition sequence in low hydration DOPC:DOPE phospholipid mixtures. <i>Chemistry and Physics of Lipids</i> , 2009, 157, 56-60.	1.5	15
79	Blood-Catalyzed RAFT Polymerization. <i>Angewandte Chemie</i> , 2018, 130, 10445-10449.	1.6	15
80	A Hitchhiker's Guide to Particle Sizing Techniques. <i>Langmuir</i> , 2020, 36, 10307-10320.	1.6	15
81	Dehydration of solute-lipid systems: hydration forces analysis. <i>Colloids and Surfaces B: Biointerfaces</i> , 2004, 35, 73-79.	2.5	14
82	Mixed-Metal Hybrid Polyoxometalates with Amino Acid Ligands: Electronic Versatility and Solution Properties. <i>Inorganic Chemistry</i> , 2016, 55, 12329-12347.	1.9	14
83	Scaling of the Space-Time Correlation Function of Particle Currents in a Suspension of Hard-Sphere-Like Particles: Exposing When the Motion of Particles is Brownian. <i>Physical Review Letters</i> , 2009, 103, 258302.	2.9	13
84	Kinetics of the lamellar gel-fluid transition in phosphatidylcholine membranes in the presence of sugars. <i>Chemistry and Physics of Lipids</i> , 2010, 163, 236-242.	1.5	13
85	Aging dynamics of colloidal hard sphere glasses. <i>Journal of Chemical Physics</i> , 2010, 133, 114906.	1.2	13
86	Synthesis and self-assembly of polyimide/poly(dimethylsiloxane) brush triblock copolymers. <i>Polymer</i> , 2013, 54, 520-529.	1.8	13
87	Dynamical signatures of freezing: Stable fluids, metastable fluids, and crystals. <i>Physical Review E</i> , 2006, 74, 031204.	0.8	12
88	Dynamical heterogeneity and the freezing transition in hard-sphere suspensions: Further analysis of the mean square displacement and the velocity autocorrelation function. <i>Physical Review E</i> , 2007, 76, 021402.	0.8	12
89	Micro- to nano-scale chemical and mechanical mapping of antimicrobial-resistant fungal biofilms. <i>Nanoscale</i> , 2020, 12, 19888-19904.	2.8	12
90	Multimodal Imaging and Soft X-Ray Tomography of Fluorescent Nanodiamonds in Cancer Cells. <i>Biotechnology Journal</i> , 2021, 16, e2000289.	1.8	12

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91	Translational and rotational diffusion coefficients of gold nanorods functionalized with a high molecular weight, thermoresponsive ligand: a depolarized dynamic light scattering study. <i>Soft Matter</i> , 2021, 17, 4019-4026.	1.2	12
92	Dehydration in model membranes and protoplasts: contrasting effects at low, intermediate and high hydrations.. , 2006, , 219-234.		12
93	Water redistribution determines photosynthetic responses to warming and drying in two polar mosses. <i>Functional Plant Biology</i> , 2014, 41, 178.	1.1	11
94	The effect of salt and particle concentration on the dynamic self-assembly of detonation nanodiamonds in water. <i>Nanoscale</i> , 2021, 13, 14110-14118.	2.8	11
95	Lethal Interactions of Atomically Precise Gold Nanoclusters and <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> Bacterial Cells. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 32634-32645.	4.0	11
96	Cryopreservation of mammalian cells using protic ionic liquid solutions. <i>Journal of Colloid and Interface Science</i> , 2021, 603, 491-500.	5.0	10
97	n-Octyl (Thio)glycosides as Potential Cryoprotectants: Glass Transition Behaviour, Membrane Permeability, and Ice Recrystallization Inhibition Studies. <i>Australian Journal of Chemistry</i> , 2019, 72, 637.	0.5	10
98	Asymptotic behavior of the Mie-scattering amplitude. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1986, 3, 256.	0.8	9
99	Two-dimensional crystallization of hard sphere particles at a liquid-liquid interface. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 346, 208-212.	2.3	9
100	Illuminating the biochemical interaction of antimicrobial few-layer black phosphorus with microbial cells using synchrotron macro-ATR-FTIR. <i>Journal of Materials Chemistry B</i> , 2022, 10, 7527-7539.	2.9	8
101	Development of cryopreservation for <i>Loxocarya cinerea</i> —an endemic Australian plant species important for post-mining restoration. <i>Cryo-Letters</i> , 2013, 34, 508-19.	0.1	8
102	Motional narrowing of the 2H NMR spectra near the chain melting transition of phospholipid/D2O mixtures. <i>European Biophysics Journal</i> , 1992, 21, 363-7.	1.2	7
103	Dynamics of a model colloidal suspension from dilute to freezing. <i>Physical Review E</i> , 2016, 94, 012619.	0.8	7
104	The Impact of Water on the Lateral Nanostructure of a Deep Eutectic Solvent-Solid Interface. <i>Australian Journal of Chemistry</i> , 2022, 75, 111-125.	0.5	7
105	Probing the dynamics of turbid colloidal suspensions using differential dynamic microscopy. <i>Soft Matter</i> , 2022, 18, 1858-1867.	1.2	6
106	Gold Nanoparticle Biodistribution and Toxicity: Role of Biological Corona in Relation with Nanoparticle Characteristics. , 2017, , 419-436.		5
107	Measuring volume kinetics of human monocytes in response to cryoprotectants using microfluidic technologies. <i>Applied Physics Letters</i> , 2019, 114, 223702.	1.5	5
108	Structural aspects of a self-emulsifying multifunctional amphiphilic excipient: Part II. The case of Cremophor EL. <i>Journal of Molecular Liquids</i> , 2021, 344, 117881.	2.3	5

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109	Gene Therapy: Encapsulation, Visualization and Expression of Genes with Biomimetically Mineralized Zeolitic Imidazolate Frameworks (ZIFs) (Small 36/2019). Small, 2019, 15, 1970193.	5.2	4
110	Characterisation of sorghum starch granules using SAXS: effects of moisture on crystallinity and structure. International Journal of Food Science and Technology, 2019, 54, 744-751.	1.3	4
111	Sum rules for Mie scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 795.	0.8	3
112	Molecular dynamics simulation study of the static and dynamic properties of a model colloidal suspension with explicit solvent. Molecular Simulation, 2016, 42, 511-521.	0.9	3
113	Impact of Comonomer Chemistry on Phase Behavior of Polymerizable Lyotropic Ionic Liquid Crystals: A Pre- and Post-Polymerization Study. Macromolecular Chemistry and Physics, 2018, 219, 1800307.	1.1	3
114	What is electroelectrophoresis?. Bioelectrochemistry, 1988, 19, 347-352.	1.0	2
115	The Estimation of Multiple Light Scattering in Turbid Colloidal Suspensions using a 2-Probe Detector. Particle and Particle Systems Characterization, 1998, 15, 170-173.	1.2	2
116	Dramatic slowing of compositional relaxations in the approach to the glass transition for a bimodal colloidal suspension. Physical Review E, 2017, 96, 022609.	0.8	2
117	Compositional relaxation on the approach to the glass transition in a model trehalose solution. Physical Review E, 2019, 99, 032602.	0.8	2
118	Differential dynamic microscopy to measure the translational diffusion coefficient of nanorods. Journal of Physics Condensed Matter, 2020, 32, 115102.	0.7	2
119	Structural aspects of a self-emulsifying multifunctional amphiphilic excipient: Part I. The case of Gelucire® 44/14. Journal of Molecular Liquids, 2021, 340, 117172.	2.3	2
120	Preferred orientation and its effects on intensity-correlation measurements. IUCr, 2022, 9, 231-242.	1.0	2
121	What is electroelectrophoresis?. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1988, 253, 347-352.	0.3	0
122	Membrane damage at low hydrations: Lipid phase behaviour and the effect of solutes. , 1993, , 187-187.		0
123	Correspondence. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1329, 202.	1.4	0
124	Crystallization of hard-sphere colloids – deviations from classical nucleation theory. , 2006, , .		0
125	Distribution of Solute Molecules in Bilayer Stacks by Medium Angle Diffraction. Biophysical Journal, 2016, 110, 81a.	0.2	0
126	Incorporation of Vanadium and Molybdenum into Yttrium-Arsenotungstates Supported by Amino Acid Ligands. Australian Journal of Chemistry, 2020, 73, 137.	0.5	0

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127	Effects of cryoprotectants on phospholipid monolayers at concentration and species dependence. Australian Journal of Chemistry, 2022, , .	0.5	0