Michael A Bevan

List of Publications by Year
in descending order

107 papers	3,491 citations	136950 32 h-index	168389 53 g-index
111 all docs	111 docs citations	111 times ranked	2923 citing authors

#	Article	IF	Citations
1	Hard superellipse phases: particle shape anisotropy & curvature. Soft Matter, 2022, 18, 1319-1330.	2.7	7
2	Droplet Formation and Growth Mechanisms in Reaction-Induced Spontaneous Emulsification of 3-(Trimethoxysilyl) Propyl Methacrylate. Langmuir, 2021, 37, 11625-11636.	3.5	3
3	Anisotropic colloidal interactions & assembly in AC electric fields. Soft Matter, 2021, 17, 9066-9077.	2.7	9
4	Efficient Navigation of Colloidal Robots in an Unknown Environment via Deep Reinforcement Learning. Advanced Intelligent Systems, 2020, 2, 1900106.	6.1	40
5	Surfactant-Stabilized Spontaneous 3-(Trimethoxysilyl) Propyl Methacrylate Nanoemulsions. Langmuir, 2020, 36, 284-292.	3.5	12
6	Controlling colloidal crystals via morphing energy landscapes and reinforcement learning. Science Advances, 2020, 6, .	10.3	18
7	Specific Ion Effects on Adsorbed Zwitterionic Copolymers. Macromolecules, 2020, 53, 9769-9778.	4.8	9
8	Segmentation-Dependent Dielectrophoretic Assembly of Multisegment Metal/Dielectric Particles. Journal of Physical Chemistry C, 2020, 124, 18755-18769.	3.1	3
9	Synergistic Polymerâ€“Surfactant-Complex Mediated Colloidal Interactions and Deposition. ACS Applied Materials & Interfaces, 2020, 12, 14518-14530.	8.0	12
10	Spatially varying colloidal phase behavior on multi-dimensional energy landscapes. Journal of Chemical Physics, 2020, 152, 054905.	3.0	8
11	Cargo capture and transport by colloidal swarms. Science Advances, 2020, 6, eaay7679.	10.3	28
12	Micro/Nano Motor Navigation and Localization via Deep Reinforcement Learning. Advanced Theory and Simulations, 2020, 3, 2000034.	2.8	26
13	Shape Dependent Colloidal Deposition and Detachment. Advanced Theory and Simulations, 2019, 2, 1900085.	2.8	8
14	Multifunctional Liquid Marble Compound Lenses. ACS Applied Materials & Interfaces, 2019, 11, 34478-34486.	8.0	24
15	Non-equilibrium steady-state colloidal assembly dynamics. Journal of Chemical Physics, 2019, 150, 204902.	3.0	8
16	Ionic Strength-Dependent Interactions and Dimensions of Adsorbed Zwitterionic Copolymers. Langmuir, 2019, 35, 4976-4985.	3.5	14
17	Competitive Adsorption between Nanoparticles and Surface Active Ions for the Oilâ€“Water Interface. Langmuir, 2018, 34, 4830-4842.	3.5	43
18	Measurement of Anisotropic Particle Interactions with Nonuniform ac Electric Fields. Langmuir, 2018, 34, 2497-2504.	3.5	8

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19	Energy landscapes for ellipsoids in non-uniform AC electric fields. Soft Matter, 2018, 14, 934-944.	2.7	15
20	Nanoparticle adsorption dynamics at fluid interfaces. Soft Matter, 2018, 14, 3818-3828.	2.7	32
21	kT-Scale Interactions and Stability of Colloids with Adsorbed Zwitterionic and Ethylene Oxide Copolymers. Macromolecules, 2018, 51, 9156-9164.	4.8	10
22	Optimal Navigation of Self-Propelled Colloids. ACS Nano, 2018, 12, 10712-10724.	14.6	28
23	Direct Measurements of kT-Scale Capsuleâ€“Substrate Interactions and Deposition Versus Surfactants and Polymer Additives. ACS Applied Materials & Interfaces, 2018, 10, 27444-27453.	8.0	11
24	General Potential for Anisotropic Colloidâ€“Surface Interactions. Langmuir, 2017, 33, 4356-4365.	3.5	17
25	The construction and application of Markov state models for colloidal self-assembly process control. Molecular Systems Design and Engineering, 2017, 2, 78-88.	3.4	17
26	Effective colloidal interactions in rotating magnetic fields. Journal of Chemical Physics, 2017, 147, 074903.	3.0	13
27	Opto-thermophoretic assembly of colloidal matter. Science Advances, 2017, 3, e1700458.	10.3	115
28	A comparison of open-loop and closed-loop strategies in colloidal self-assembly. Journal of Process Control, 2017, 60, 141-151.	3.3	19
29	Interfacial and Confined Colloidal Rod Diffusion. Langmuir, 2017, 33, 9034-9042.	3.5	18
30	Interfacial colloidal rod dynamics: Coefficients, simulations, and analysis. Journal of Chemical Physics, 2017, 147, 054902.	3.0	16
31	Diffusing colloidal probes of cell surfaces. Soft Matter, 2016, 12, 4731-4738.	2.7	6
32	Markov decision process based time-varying optimal control for colloidal self-assembly. IFAC-PapersOnLine, 2016, 49, 430-435.	0.9	1
33	Reversible Partitioning of Nanoparticles at an Oilâ€“Water Interface. Langmuir, 2016, 32, 11341-11352.	3.5	33
34	Optimal Feedback Controlled Assembly of Perfect Crystals. ACS Nano, 2016, 10, 6791-6798.	14.6	83
35	Rotating colloids in rotating magnetic fields: Dipolar relaxation and hydrodynamic coupling. Physical Review E, 2016, 94, 042613.	2.1	13
36	Diffusing Colloidal Probes of kT-Scale Biomaterialâ€“Cell Interactions. Langmuir, 2016, 32, 12212-12220.	3.5	4

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37	Dynamic colloidal assembly pathways via low dimensional models. Journal of Chemical Physics, 2016, 144, 204904.	3.0	14
38	Reconfigurable multi-scale colloidal assembly on excluded volume patterns. Scientific Reports, 2015, 5, 13612.	3.3	13
39	Diffusing Colloidal Probes of Cell Surfaces. Biophysical Journal, 2015, 108, 485a.	0.5	0
40	Modeling depletion mediated colloidal assembly on topographical patterns. Journal of Colloid and Interface Science, 2015, 449, 270-278.	9.4	8
41	Controlling assembly of colloidal particles into structured objects: Basic strategy and a case study. Journal of Process Control, 2015, 27, 64-75.	3.3	33
42	Direct Measurement of Macromolecule-Coated Colloidâ€“Mucus Interactions. Langmuir, 2015, 31, 9076-9085.	3.5	19
43	Computational design of nanoparticle drug delivery systems for selective targeting. Nanoscale, 2015, 7, 15332-15340.	5.6	40
44	Tunable Aggregation by Competing Biomolecular Interactions. Langmuir, 2014, 30, 15253-15260.	3.5	5
45	Optimal Design of a Colloidal Self-Assembly Process. IEEE Transactions on Control Systems Technology, 2014, 22, 1956-1963.	5.2	20
46	Label-free brain injury biomarker detection based on highly sensitive large area organic thin film transistor with hybrid coupling layer. Chemical Science, 2014, 5, 416-426.	7.4	73
47	kT-Scale interactions between supported lipid bilayers. Soft Matter, 2014, 10, 332-342.	2.7	9
48	Colloidal potentials mediated by specific biomolecular interactions. Soft Matter, 2014, 10, 8524-8532.	2.7	7
49	Fluidic-Enabled Reconfigurable Patch With Integrated Dielectric Spectrometer. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 1116-1119.	4.0	1
50	Controlling Colloidal Particles with Electric Fields. Langmuir, 2014, 30, 10793-10803.	3.5	58
51	Colloidal crystal grain boundary formation and motion. Scientific Reports, 2014, 4, 6132.	3.3	38
52	Diffusing Colloidal Probes of Proteinâ€“Carbohydrate Interactions. Langmuir, 2013, 29, 2299-2310.	3.5	28
53	Anomalous Silica Colloid Stability and Gel Layer Mediated Interactions. Langmuir, 2013, 29, 8835-8844.	3.5	33
54	Self-Consistent Colloidal Energy and Diffusivity Landscapes in Macromolecular Solutions. Langmuir, 2013, 29, 12337-12341.	3.5	23

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55	Size dependent thermodynamics and kinetics in electric field mediated colloidal crystal assembly. Soft Matter, 2013, 9, 9208.	2.7	18
56	A fluidic-enabled polarization reconfigurable antenna on a hexagonal substrate tile. , 2013, , .		1
57	Electric field mediated assembly of three dimensional equilibrium colloidal crystals. Soft Matter, 2012, 8, 94-103.	2.7	58
58	Multiple electrokinetic actuators for feedback control of colloidal crystal size. Lab on A Chip, 2012, 12, 4063.	6.0	39
59	Depletion-Mediated Potentials and Phase Behavior for Micelles, Macromolecules, Nanoparticles, and Hydrogel Particles. Langmuir, 2012, 28, 13816-13823.	3.5	52
60	Polymer Mediated Depletion Attraction and Interfacial Colloidal Phase Behavior. Macromolecules, 2012, 45, 585-594.	4.8	28
61	Colloidal cluster crystallization dynamics. Journal of Chemical Physics, 2012, 137, 134901.	3.0	22
62	Feedback Controlled Colloidal Selfâ€Assembly. Advanced Functional Materials, 2012, 22, 3833-3839.	14.9	79
63	Free energy landscapes for colloidal crystal assembly. Soft Matter, 2011, 7, 3280.	2.7	32
64	kT-Scale Colloidal Interactions in High-Frequency Inhomogeneous AC Electric Fields. II. Concentrated Ensembles. Langmuir, 2011, 27, 9219-9226.	3.5	22
65	kT-Scale Colloidal Interactions in High Frequency Inhomogeneous AC Electric Fields. I. Single Particles. Langmuir, 2011, 27, 9211-9218.	3.5	25
66	Imaging Carbon Nanotube Interactions, Diffusion, and Stability in Nanopores. ACS Nano, 2011, 5, 5909-5919.	14.6	19
67	Optical microscopy measurements of kT-scale colloidal interactions. Current Opinion in Colloid and Interface Science, 2011, 16, 149-157.	7.4	45
68	A Smoluchowski model of crystallization dynamics of small colloidal clusters. Journal of Chemical Physics, 2011, 135, 154506.	3.0	23
69	Fokkerâ€“Planck analysis of separation dependent potentials and diffusion coefficients in simulated microscopy experiments. Journal of Chemical Physics, 2010, 132, 044707.	3.0	17
70	Confocal Laser Imaging and Annealing of Quantum-Dot-Coated Silica Colloidal Crystals. Langmuir, 2010, 26, 3779-3782.	3.5	3
71	Charged Micelle Depletion Attraction and Interfacial Colloidal Phase Behavior. Langmuir, 2010, 26, 18710-18717.	3.5	36
72	Direct Measurements of Protein-Stabilized Gold Nanoparticle Interactions. Langmuir, 2010, 26, 14409-14413.	3.5	34

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73	Concentrated Diffusing Colloidal Probes of Ca²⁺-Dependent Cadherin Interactions. Langmuir, 2010, 26, 18976-18984.	3.5	14
74	Interactions and microstructures in electric field mediated colloidal assembly. Journal of Chemical Physics, 2009, 131, 134704.	3.0	60
75	Spatially controlled reversible colloidal self-assembly. Journal of Chemical Physics, 2009, 131, 134705.	3.0	45
76	Electrostatically Confined Nanoparticle Interactions and Dynamics. Langmuir, 2008, 24, 714-721.	3.5	55
77	Interfacial Colloidal Crystallization via Tunable Hydrogel Depletants. Langmuir, 2008, 24, 10776-10785.	3.5	63
78	Resonant Effects in Evanescent Wave Scattering of Polydisperse Colloids. Langmuir, 2008, 24, 13790-13795.	3.5	19
79	Interfacial colloidal sedimentation equilibrium. II. Closure-based density functional theory. Journal of Chemical Physics, 2007, 127, 164709.	3.0	11
80	Interfacial colloidal sedimentation equilibrium. I. Intensity based confocal microscopy. Journal of Chemical Physics, 2007, 127, 164708.	3.0	31
81	Imaging energy landscapes with concentrated diffusing colloidal probes. Journal of Chemical Physics, 2007, 126, 244702.	3.0	20
82	Colloidal microstructures, transport, and impedance properties within interfacial microelectrodes. Applied Physics Letters, 2007, 90, 224102.	3.3	18
83	Equivalent Temperature and Specific Ion Effects in Macromolecule-Coated Colloid Interactions. Langmuir, 2007, 23, 1500-1506.	3.5	20
84	Evanescent Wave Excited Luminescence from Levitated Quantum Dot Modified Colloids. Langmuir, 2007, 23, 8950-8956.	3.5	7
85	Closure-Based Density Functional Theory Applied to Interfacial Colloidal Fluids. Langmuir, 2007, 23, 12481-12488.	3.5	3
86	Diffusing Colloidal Probes of Protein and Synthetic Macromolecule Interactions. Biophysical Journal, 2007, 92, 1005-1013.	0.5	33
87	Mapping Patterned Potential Energy Landscapes with Diffusing Colloidal Probes. Langmuir, 2006, 22, 6826-6836.	3.5	35
88	Self-diffusion in submonolayer colloidal fluids near a wall. Journal of Chemical Physics, 2006, 125, 034906.	3.0	29
89	Anomalous potentials from inverse analyses of interfacial polydisperse attractive colloidal fluids. Journal of Chemical Physics, 2006, 124, 054712.	3.0	25
90	Role of polydispersity in anomalous interactions in electrostatically levitated colloidal systems. Journal of Chemical Physics, 2005, 123, 174904.	3.0	29

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91	Interpretation of conservative forces from Stokesian dynamic simulations of interfacial and confined colloids. Journal of Chemical Physics, 2005, 122, 034903.	3.0	37
92	Direct Measurement of Single and Ensemble Average Particleâ^'Surface Potential Energy Profiles. Langmuir, 2005, 21, 1244-1254.	3.5	70
93	Measurement and Interpretation of Particleâ^'Particle and Particleâ^'Wall Interactions in Levitated Colloidal Ensembles. Langmuir, 2005, 21, 9879-9888.	3.5	54
94	Inverse density-functional theory as an interpretive tool for measuring colloid-surface interactions in dense systems. Journal of Chemical Physics, 2005, 122, 224710.	3.0	5
95	CALCULATION OF VAN DER WAALS FORCES WITH DIFFUSE COATINGS: APPLICATIONS TO ROUGHNESS AND ADSORBED POLYMERS. Journal of Adhesion, 2004, 80, 365-394.	3.0	36
96	Nanoparticle-Mediated Epitaxial Assembly of Colloidal Crystals on Patterned Substrates. Langmuir, 2004, 20, 5262-5270.	3.5	100
97	Specific Ion-Dependent Attraction and Phase Behavior of Polymer-Coated Colloids. Langmuir, 2004, 20, 11393-11401.	3.5	10
98	Comparison of Nanoparticle Size and Electrophoretic Mobility Measurements Using a Carbon-Nanotube-Based Coulter Counter, Dynamic Light Scattering, Transmission Electron Microscopy, and Phase Analysis Light Scattering. Langmuir, 2004, 20, 6940-6945.	3.5	190
99	Structural Evolution of Colloidal Crystals with Increasing Ionic Strength. Langmuir, 2004, 20, 7045-7052.	3.5	37
100	Solvent Quality Dependent Interactions and Phase Behavior of Polystyrene Particles with Physisorbed PEOâ^'PPOâ^'PEO. Langmuir, 2002, 18, 1474-1484.	3.5	25
101	Solvent Quality Dependent Continuum van der Waals Attraction and Phase Behavior for Colloids Bearing Nonuniform Adsorbed Polymer Layers. Langmuir, 2002, 18, 7845-7852.	3.5	29
102	Light scattering characterization of polystyrene latex with and without adsorbed polymer. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2002, 202, 9-21.	4.7	48
103	Hydrodynamic and Electrokinetic Properties of Decane Droplets in Aqueous Sodium Dodecyl Sulfate Solutions. Langmuir, 2001, 17, 7210-7218.	3.5	54
104	Hindered diffusion of colloidal particles very near to a wall: Revisited. Journal of Chemical Physics, 2000, 113, 1228-1236.	3.0	200
105	Forces and Hydrodynamic Interactions between Polystyrene Surfaces with Adsorbed PEOâ^'PPOâ^'PEO. Langmuir, 2000, 16, 9274-9281.	3.5	83
106	Aggregation Dynamics for Two Particles during Electrophoretic Deposition under Steady Fields. Langmuir, 2000, 16, 9208-9216.	3.5	78
107	Direct Measurement of Retarded van der Waals Attraction. Langmuir, 1999, 15, 7925-7936.	3.5	212