

Michael A Bevan

List of Publications by Year in descending order

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107
papers

3,491
citations

156536

32
h-index

190340

53
g-index

111
all docs

111
docs citations

111
times ranked

3393
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct Measurement of Retarded van der Waals Attraction. <i>Langmuir</i> , 1999, 15, 7925-7936.	1.6	212
2	Hindered diffusion of colloidal particles very near to a wall: Revisited. <i>Journal of Chemical Physics</i> , 2000, 113, 1228-1236.	1.2	200
3	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. <i>Langmuir</i> , 2004, 20, 6940-6945.	1.6	190
4	Opto-thermophoretic assembly of colloidal matter. <i>Science Advances</i> , 2017, 3, e1700458.	4.7	115
5	Nanoparticle-Mediated Epitaxial Assembly of Colloidal Crystals on Patterned Substrates. <i>Langmuir</i> , 2004, 20, 5262-5270.	1.6	100
6	Forces and Hydrodynamic Interactions between Polystyrene Surfaces with Adsorbed PEO~PPO~PEO. <i>Langmuir</i> , 2000, 16, 9274-9281.	1.6	83
7	Optimal Feedback Controlled Assembly of Perfect Crystals. <i>ACS Nano</i> , 2016, 10, 6791-6798.	7.3	83
8	Feedback Controlled Colloidal Self-Assembly. <i>Advanced Functional Materials</i> , 2012, 22, 3833-3839.	7.8	79
9	Aggregation Dynamics for Two Particles during Electrophoretic Deposition under Steady Fields. <i>Langmuir</i> , 2000, 16, 9208-9216.	1.6	78
10	Label-free brain injury biomarker detection based on highly sensitive large area organic thin film transistor with hybrid coupling layer. <i>Chemical Science</i> , 2014, 5, 416-426.	3.7	73
11	Direct Measurement of Single and Ensemble Average Particle~Surface Potential Energy Profiles. <i>Langmuir</i> , 2005, 21, 1244-1254.	1.6	70
12	Interfacial Colloidal Crystallization via Tunable Hydrogel Depletants. <i>Langmuir</i> , 2008, 24, 10776-10785.	1.6	63
13	Interactions and microstructures in electric field mediated colloidal assembly. <i>Journal of Chemical Physics</i> , 2009, 131, 134704.	1.2	60
14	Electric field mediated assembly of three dimensional equilibrium colloidal crystals. <i>Soft Matter</i> , 2012, 8, 94-103.	1.2	58
15	Controlling Colloidal Particles with Electric Fields. <i>Langmuir</i> , 2014, 30, 10793-10803.	1.6	58
16	Electrostatically Confined Nanoparticle Interactions and Dynamics. <i>Langmuir</i> , 2008, 24, 714-721.	1.6	55
17	Hydrodynamic and Electrokinetic Properties of Decane Droplets in Aqueous Sodium Dodecyl Sulfate Solutions. <i>Langmuir</i> , 2001, 17, 7210-7218.	1.6	54
18	Measurement and Interpretation of Particle~Particle and Particle~Wall Interactions in Levitated Colloidal Ensembles. <i>Langmuir</i> , 2005, 21, 9879-9888.	1.6	54

#	ARTICLE	IF	CITATIONS
19	Depletion-Mediated Potentials and Phase Behavior for Micelles, Macromolecules, Nanoparticles, and Hydrogel Particles. <i>Langmuir</i> , 2012, 28, 13816-13823.	1.6	52
20	Light scattering characterization of polystyrene latex with and without adsorbed polymer. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2002, 202, 9-21.	2.3	48
21	Spatially controlled reversible colloidal self-assembly. <i>Journal of Chemical Physics</i> , 2009, 131, 134705.	1.2	45
22	Optical microscopy measurements of kT-scale colloidal interactions. <i>Current Opinion in Colloid and Interface Science</i> , 2011, 16, 149-157.	3.4	45
23	Competitive Adsorption between Nanoparticles and Surface Active Ions for the Oil/Water Interface. <i>Langmuir</i> , 2018, 34, 4830-4842.	1.6	43
24	Computational design of nanoparticle drug delivery systems for selective targeting. <i>Nanoscale</i> , 2015, 7, 15332-15340.	2.8	40
25	Efficient Navigation of Colloidal Robots in an Unknown Environment via Deep Reinforcement Learning. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900106.	3.3	40
26	Multiple electrokinetic actuators for feedback control of colloidal crystal size. <i>Lab on A Chip</i> , 2012, 12, 4063.	3.1	39
27	Colloidal crystal grain boundary formation and motion. <i>Scientific Reports</i> , 2014, 4, 6132.	1.6	38
28	Structural Evolution of Colloidal Crystals with Increasing Ionic Strength. <i>Langmuir</i> , 2004, 20, 7045-7052.	1.6	37
29	Interpretation of conservative forces from Stokesian dynamic simulations of interfacial and confined colloids. <i>Journal of Chemical Physics</i> , 2005, 122, 034903.	1.2	37
30	CALCULATION OF VAN DER WAALS FORCES WITH DIFFUSE COATINGS: APPLICATIONS TO ROUGHNESS AND ADSORBED POLYMERS. <i>Journal of Adhesion</i> , 2004, 80, 365-394.	1.8	36
31	Charged Micelle Depletion Attraction and Interfacial Colloidal Phase Behavior. <i>Langmuir</i> , 2010, 26, 18710-18717.	1.6	36
32	Mapping Patterned Potential Energy Landscapes with Diffusing Colloidal Probes. <i>Langmuir</i> , 2006, 22, 6826-6836.	1.6	35
33	Direct Measurements of Protein-Stabilized Gold Nanoparticle Interactions. <i>Langmuir</i> , 2010, 26, 14409-14413.	1.6	34
34	Diffusing Colloidal Probes of Protein and Synthetic Macromolecule Interactions. <i>Biophysical Journal</i> , 2007, 92, 1005-1013.	0.2	33
35	Anomalous Silica Colloid Stability and Gel Layer Mediated Interactions. <i>Langmuir</i> , 2013, 29, 8835-8844.	1.6	33
36	Controlling assembly of colloidal particles into structured objects: Basic strategy and a case study. <i>Journal of Process Control</i> , 2015, 27, 64-75.	1.7	33

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37	Reversible Partitioning of Nanoparticles at an Oil-Water Interface. <i>Langmuir</i> , 2016, 32, 11341-11352.	1.6	33
38	Free energy landscapes for colloidal crystal assembly. <i>Soft Matter</i> , 2011, 7, 3280.	1.2	32
39	Nanoparticle adsorption dynamics at fluid interfaces. <i>Soft Matter</i> , 2018, 14, 3818-3828.	1.2	32
40	Interfacial colloidal sedimentation equilibrium. I. Intensity based confocal microscopy. <i>Journal of Chemical Physics</i> , 2007, 127, 164708.	1.2	31
41	Solvent Quality Dependent Continuum van der Waals Attraction and Phase Behavior for Colloids Bearing Nonuniform Adsorbed Polymer Layers. <i>Langmuir</i> , 2002, 18, 7845-7852.	1.6	29
42	Role of polydispersity in anomalous interactions in electrostatically levitated colloidal systems. <i>Journal of Chemical Physics</i> , 2005, 123, 174904.	1.2	29
43	Self-diffusion in submonolayer colloidal fluids near a wall. <i>Journal of Chemical Physics</i> , 2006, 125, 034906.	1.2	29
44	Polymer Mediated Depletion Attraction and Interfacial Colloidal Phase Behavior. <i>Macromolecules</i> , 2012, 45, 585-594.	2.2	28
45	Diffusing Colloidal Probes of Protein-Carbohydrate Interactions. <i>Langmuir</i> , 2013, 29, 2299-2310.	1.6	28
46	Optimal Navigation of Self-Propelled Colloids. <i>ACS Nano</i> , 2018, 12, 10712-10724.	7.3	28
47	Cargo capture and transport by colloidal swarms. <i>Science Advances</i> , 2020, 6, eaay7679.	4.7	28
48	Micro/Nano Motor Navigation and Localization via Deep Reinforcement Learning. <i>Advanced Theory and Simulations</i> , 2020, 3, 2000034.	1.3	26
49	Solvent Quality Dependent Interactions and Phase Behavior of Polystyrene Particles with Physisorbed PEO-PPO-PEO. <i>Langmuir</i> , 2002, 18, 1474-1484.	1.6	25
50	Anomalous potentials from inverse analyses of interfacial polydisperse attractive colloidal fluids. <i>Journal of Chemical Physics</i> , 2006, 124, 054712.	1.2	25
51	kT-Scale Colloidal Interactions in High Frequency Inhomogeneous AC Electric Fields. I. Single Particles. <i>Langmuir</i> , 2011, 27, 9211-9218.	1.6	25
52	Multifunctional Liquid Marble Compound Lenses. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34478-34486.	4.0	24
53	A Smoluchowski model of crystallization dynamics of small colloidal clusters. <i>Journal of Chemical Physics</i> , 2011, 135, 154506.	1.2	23
54	Self-Consistent Colloidal Energy and Diffusivity Landscapes in Macromolecular Solutions. <i>Langmuir</i> , 2013, 29, 12337-12341.	1.6	23

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55	kT-Scale Colloidal Interactions in High-Frequency Inhomogeneous AC Electric Fields. II. Concentrated Ensembles. <i>Langmuir</i> , 2011, 27, 9219-9226.	1.6	22
56	Colloidal cluster crystallization dynamics. <i>Journal of Chemical Physics</i> , 2012, 137, 134901.	1.2	22
57	Imaging energy landscapes with concentrated diffusing colloidal probes. <i>Journal of Chemical Physics</i> , 2007, 126, 244702.	1.2	20
58	Equivalent Temperature and Specific Ion Effects in Macromolecule-Coated Colloid Interactions. <i>Langmuir</i> , 2007, 23, 1500-1506.	1.6	20
59	Optimal Design of a Colloidal Self-Assembly Process. <i>IEEE Transactions on Control Systems Technology</i> , 2014, 22, 1956-1963.	3.2	20
60	Resonant Effects in Evanescent Wave Scattering of Polydisperse Colloids. <i>Langmuir</i> , 2008, 24, 13790-13795.	1.6	19
61	Imaging Carbon Nanotube Interactions, Diffusion, and Stability in Nanopores. <i>ACS Nano</i> , 2011, 5, 5909-5919.	7.3	19
62	Direct Measurement of Macromolecule-Coated Colloid-Mucus Interactions. <i>Langmuir</i> , 2015, 31, 9076-9085.	1.6	19
63	A comparison of open-loop and closed-loop strategies in colloidal self-assembly. <i>Journal of Process Control</i> , 2017, 60, 141-151.	1.7	19
64	Colloidal microstructures, transport, and impedance properties within interfacial microelectrodes. <i>Applied Physics Letters</i> , 2007, 90, 224102.	1.5	18
65	Size dependent thermodynamics and kinetics in electric field mediated colloidal crystal assembly. <i>Soft Matter</i> , 2013, 9, 9208.	1.2	18
66	Interfacial and Confined Colloidal Rod Diffusion. <i>Langmuir</i> , 2017, 33, 9034-9042.	1.6	18
67	Controlling colloidal crystals via morphing energy landscapes and reinforcement learning. <i>Science Advances</i> , 2020, 6, .	4.7	18
68	Fokker-Planck analysis of separation dependent potentials and diffusion coefficients in simulated microscopy experiments. <i>Journal of Chemical Physics</i> , 2010, 132, 044707.	1.2	17
69	General Potential for Anisotropic Colloid-Surface Interactions. <i>Langmuir</i> , 2017, 33, 4356-4365.	1.6	17
70	The construction and application of Markov state models for colloidal self-assembly process control. <i>Molecular Systems Design and Engineering</i> , 2017, 2, 78-88.	1.7	17
71	Interfacial colloidal rod dynamics: Coefficients, simulations, and analysis. <i>Journal of Chemical Physics</i> , 2017, 147, 054902.	1.2	16
72	Energy landscapes for ellipsoids in non-uniform AC electric fields. <i>Soft Matter</i> , 2018, 14, 934-944.	1.2	15

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73	Concentrated Diffusing Colloidal Probes of Ca ²⁺ -Dependent Cadherin Interactions. <i>Langmuir</i> , 2010, 26, 18976-18984.	1.6	14
74	Dynamic colloidal assembly pathways via low dimensional models. <i>Journal of Chemical Physics</i> , 2016, 144, 204904.	1.2	14
75	Ionic Strength-Dependent Interactions and Dimensions of Adsorbed Zwitterionic Copolymers. <i>Langmuir</i> , 2019, 35, 4976-4985.	1.6	14
76	Reconfigurable multi-scale colloidal assembly on excluded volume patterns. <i>Scientific Reports</i> , 2015, 5, 13612.	1.6	13
77	Rotating colloids in rotating magnetic fields: Dipolar relaxation and hydrodynamic coupling. <i>Physical Review E</i> , 2016, 94, 042613.	0.8	13
78	Effective colloidal interactions in rotating magnetic fields. <i>Journal of Chemical Physics</i> , 2017, 147, 074903.	1.2	13
79	Surfactant-Stabilized Spontaneous 3-(Trimethoxysilyl) Propyl Methacrylate Nanoemulsions. <i>Langmuir</i> , 2020, 36, 284-292.	1.6	12
80	Synergistic Polymer-Surfactant-Complex Mediated Colloidal Interactions and Deposition. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14518-14530.	4.0	12
81	Interfacial colloidal sedimentation equilibrium. II. Closure-based density functional theory. <i>Journal of Chemical Physics</i> , 2007, 127, 164709.	1.2	11
82	Direct Measurements of <i>kT</i> -Scale Capsule-Substrate Interactions and Deposition Versus Surfactants and Polymer Additives. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 27444-27453.	4.0	11
83	Specific Ion-Dependent Attraction and Phase Behavior of Polymer-Coated Colloids. <i>Langmuir</i> , 2004, 20, 11393-11401.	1.6	10
84	<i>kT</i> -Scale Interactions and Stability of Colloids with Adsorbed Zwitterionic and Ethylene Oxide Copolymers. <i>Macromolecules</i> , 2018, 51, 9156-9164.	2.2	10
85	<i>kT</i> -Scale interactions between supported lipid bilayers. <i>Soft Matter</i> , 2014, 10, 332-342.	1.2	9
86	Specific Ion Effects on Adsorbed Zwitterionic Copolymers. <i>Macromolecules</i> , 2020, 53, 9769-9778.	2.2	9
87	Anisotropic colloidal interactions & assembly in AC electric fields. <i>Soft Matter</i> , 2021, 17, 9066-9077.	1.2	9
88	Modeling depletion mediated colloidal assembly on topographical patterns. <i>Journal of Colloid and Interface Science</i> , 2015, 449, 270-278.	5.0	8
89	Measurement of Anisotropic Particle Interactions with Nonuniform ac Electric Fields. <i>Langmuir</i> , 2018, 34, 2497-2504.	1.6	8
90	Shape Dependent Colloidal Deposition and Detachment. <i>Advanced Theory and Simulations</i> , 2019, 2, 1900085.	1.3	8

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91	Non-equilibrium steady-state colloidal assembly dynamics. <i>Journal of Chemical Physics</i> , 2019, 150, 204902.	1.2	8
92	Spatially varying colloidal phase behavior on multi-dimensional energy landscapes. <i>Journal of Chemical Physics</i> , 2020, 152, 054905.	1.2	8
93	Evanescent Wave Excited Luminescence from Levitated Quantum Dot Modified Colloids. <i>Langmuir</i> , 2007, 23, 8950-8956.	1.6	7
94	Colloidal potentials mediated by specific biomolecular interactions. <i>Soft Matter</i> , 2014, 10, 8524-8532.	1.2	7
95	Hard superellipse phases: particle shape anisotropy & curvature. <i>Soft Matter</i> , 2022, 18, 1319-1330.	1.2	7
96	Diffusing colloidal probes of cell surfaces. <i>Soft Matter</i> , 2016, 12, 4731-4738.	1.2	6
97	Inverse density-functional theory as an interpretive tool for measuring colloid-surface interactions in dense systems. <i>Journal of Chemical Physics</i> , 2005, 122, 224710.	1.2	5
98	Tunable Aggregation by Competing Biomolecular Interactions. <i>Langmuir</i> , 2014, 30, 15253-15260.	1.6	5
99	Diffusing Colloidal Probes of kT-Scale Biomaterial-Cell Interactions. <i>Langmuir</i> , 2016, 32, 12212-12220.	1.6	4
100	Closure-Based Density Functional Theory Applied to Interfacial Colloidal Fluids. <i>Langmuir</i> , 2007, 23, 12481-12488.	1.6	3
101	Confocal Laser Imaging and Annealing of Quantum-Dot-Coated Silica Colloidal Crystals. <i>Langmuir</i> , 2010, 26, 3779-3782.	1.6	3
102	Segmentation-Dependent Dielectrophoretic Assembly of Multisegment Metal/Dielectric Particles. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18755-18769.	1.5	3
103	Droplet Formation and Growth Mechanisms in Reaction-Induced Spontaneous Emulsification of 3-(Trimethoxysilyl) Propyl Methacrylate. <i>Langmuir</i> , 2021, 37, 11625-11636.	1.6	3
104	A fluidic-enabled polarization reconfigurable antenna on a hexagonal substrate tile. , 2013, , .		1
105	Fluidic-Enabled Reconfigurable Patch With Integrated Dielectric Spectrometer. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2014, 13, 1116-1119.	2.4	1
106	Markov decision process based time-varying optimal control for colloidal self-assembly. <i>IFAC-PapersOnLine</i> , 2016, 49, 430-435.	0.5	1
107	Diffusing Colloidal Probes of Cell Surfaces. <i>Biophysical Journal</i> , 2015, 108, 485a.	0.2	0