Peter Atanassov Kralchevsky

List of Publications by Citations

138 papers	5,493 citations	38 h-index	69 g-index
145 ext. papers	5,966 ext. citations	7 avg, IF	5.76 L-index

#	Paper	IF	Citations
138	Capillary interactions between particles bound to interfaces, liquid films and biomembranes. *Advances in Colloid and Interface Science*, **2000**, 85, 145-92	14.3	555
137	Capillary forces between colloidal particles. *Langmuir*, **1994**, 10, 23-36	4	473
136	Capillary forces and structuring in layers of colloid particles. *Current Opinion in Colloid and Interface Science*, **2001**, 6, 383-401	7.6	436
135	On the thermodynamics of particle-stabilized emulsions: curvature effects and catastrophic phase inversion. *Langmuir*, **2005**, 21, 50-63	4	203
134	Stability of emulsions under equilibrium and dynamic conditions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1997**, 128, 155-175	5.1	170
133	Interactions between particles with an undulated contact line at a fluid interface: capillary multipoles of arbitrary order. *Journal of Colloid and Interface Science*, **2005**, 287, 121-34	9.3	145
132	Capillary forces between particles at a liquid interface: general theoretical approach and interactions between capillary multipoles. *Advances in Colloid and Interface Science*, **2010**, 154, 91-103	14.3	110
131	Flocculation and coalescence of micron-size emulsion droplets. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1999**, 152, 161-182	5.1	110
130	Particles with an Undulated Contact Line at a Fluid Interface: Interaction between Capillary Quadrupoles and Rheology of Particulate Monolayers. *Langmuir*, **2001**, 17, 7694-7705	4	95
129	Analytical expression for the oscillatory structural surface force. *Chemical Physics Letters*, **1995**, 240, 385-392	2.5	90
128	Film and line tension effects on the attachment of particles to an interface: I. Conditions for mechanical equilibrium of fluid and solid particles at a fluid interface. *Journal of Colloid and Interface Science*, **1986**, 112, 97-107	9.3	89
127	Electrodipping force acting on solid particles at a fluid interface. *Langmuir*, **2004**, 20, 6139-51	4	86
126	Determination of the aggregation number and charge of ionic surfactant micelles from the stepwise thinning of foam films. *Advances in Colloid and Interface Science*, **2012**, 183-184, 55-67	14.3	82
125	Direct measurement of lateral capillary forces. *Langmuir*, **1993**, 9, 3702-3709	4	82
124	Formation of two-dimensional structures from colloidal particles on fluorinated oil substrate. *Journal of the Chemical Society, Faraday Transactions*, **1994**, 90, 2077		77
123	Unique properties of bubbles and foam films stabilized by HFBII hydrophobin. *Langmuir*, **2011**, 27, 2382-92	4	71
122	Micelle-monomer equilibria in solutions of ionic surfactants and in ionic-nonionic mixtures: a generalized phase separation model. *Advances in Colloid and Interface Science*, **2014**, 206, 17-45	14.3	63

121	Interfacial layers from the protein HFBII hydrophobin: dynamic surface tension, dilatational elasticity and relaxation times. *Journal of Colloid and Interface Science*, **2012**, 376, 296-306	9.3	63
120	Spontaneous detachment of oil drops from solid substrates: governing factors. *Journal of Colloid and Interface Science*, **2003**, 257, 357-63	9.3	61
119	Flocculation of Deformable Emulsion Droplets. *Journal of Colloid and Interface Science*, **1995**, 176, 201-213	9.3	59
118	The colloid structural forces as a tool for particle characterization and control of dispersion stability. *Physical Chemistry Chemical Physics*, **2007**, 9, 5183-98	3.6	56
117	Maximum bubble pressure method: Universal surface age and transport mechanisms in surfactant solutions. *Langmuir*, **2006**, 22, 7528-42	4	53
116	Growth of wormlike micelles in nonionic surfactant solutions: Quantitative theory vs. experiment. *Advances in Colloid and Interface Science*, **2018**, 256, 1-22	14.3	53
115	Solubility limits and phase diagrams for fatty acids in anionic (SLES) and zwitterionic (CAPB) micellar surfactant solutions. *Journal of Colloid and Interface Science*, **2012**, 369, 274-86	9.3	50
114	Effect of the precipitation of neutral-soap, acid-soap, and alkanoic acid crystallites on the bulk pH and surface tension of soap solutions. *Langmuir*, **2007**, 23, 3538-53	4	49
113	The standard free energy of surfactant adsorption at air/water and oil/water interfaces: Theoretical vs. empirical approaches. *Colloid Journal*, **2012**, 74, 172-185	1.1	48
112	Oscillatory structural forces due to nonionic surfactant micelles: data by colloidal-probe AFM vs theory. *Langmuir*, **2010**, 26, 915-23	4	47
111	Stresses in lipid membranes and interactions between inclusions. *Journal of the Chemical Society, Faraday Transactions*, **1995**, 91, 3415		47
110	Capillary Forces between Colloidal Particles Confined in a Liquid Film: The Finite-Meniscus Problem. *Langmuir*, **2001**, 17, 6599-6609	4	45
109	Capillary Image Forces. *Journal of Colloid and Interface Science*, **1994**, 167, 47-65	9.3	45
108	Detachment of Oil Drops from Solid Surfaces in Surfactant Solutions: Molecular Mechanisms at a Moving Contact Line*Industrial & Engineering Chemistry Research*, **2005**, 44, 1309-1321	3.9	44
107	Film and line tension effects on the attachment of particles to an interface: IV. Experimental studies with bubbles in solutions of dodecyl sodium sulfate. *Journal of Colloid and Interface Science*, **1986**, 112, 132-143	9.3	44
106	Electric forces induced by a charged colloid particle attached to the water-nonpolar fluid interface. *Journal of Colloid and Interface Science*, **2006**, 298, 213-31	9.3	43
105	Torsion Balance for Measurement of Capillary Immersion Forces. *Langmuir*, **1996**, 12, 641-651	4	43
104	The metastable states of foam films containing electrically charged micelles or particles: experiment and quantitative interpretation. *Advances in Colloid and Interface Science*, **2011**, 168, 50-70	14.3	42

103	Self-assembled bilayers from the protein HFBII hydrophobin: nature of the adhesion energy. *Langmuir*, **2011**, 27, 4481-8	4	42
102	On the mechanism of stomatocyte-echinocyte transformations of red blood cells: experiment and theoretical model. *Colloids and Surfaces B: Biointerfaces*, **2004**, 34, 123-40	6	40
101	Micromechanical description of curved interfaces, thin films, and membranes. *Journal of Colloid and Interface Science*, **1990**, 137, 217-233	9.3	39
100	Synergistic Growth of Giant Wormlike Micelles in Ternary Mixed Surfactant Solutions: Effect of Octanoic Acid. *Langmuir*, **2016**, 32, 12885-12893	4	38
99	Effect of electric-field-induced capillary attraction on the motion of particles at an oil-water interface. *Physical Chemistry Chemical Physics*, **2007**, 9, 6371-84	3.6	38
98	Attraction between particles at a liquid interface due to the interplay of gravity- and electric-field-induced interfacial deformations. *Langmuir*, **2009**, 25, 9129-39	4	37
97	Mass transport in micellar surfactant solutions: 1. Relaxation of micelle concentration, aggregation number and polydispersity. *Advances in Colloid and Interface Science*, **2006**, 119, 1-16	14.3	37
96	Capillary Image Forces. *Journal of Colloid and Interface Science*, **1994**, 167, 66-73	9.3	37
95	Minimization of the Free Energy of Arbitrarily Curved Interfaces. *Journal of Colloid and Interface Science*, **1997**, 191, 424-41	9.3	36
94	Adsorption relaxation for nonionic surfactants under mixed barrier-diffusion and micellization-diffusion control. *Journal of Colloid and Interface Science*, **2002**, 251, 18-25	9.3	36
93	Particle detachment from fluid interfaces: theory vs. experiments. *Soft Matter*, **2016**, 12, 7632-43	3.6	35
92	Capillary meniscus dynamometry□method for determining the surface tension of drops and bubbles with isotropic and anisotropic surface stress distributions. *Journal of Colloid and Interface Science*, **2015**, 440, 168-78	9.3	32
91	Surface pressure and elasticity of hydrophobin HFBII layers on the air-water interface: rheology versus structure detected by AFM imaging. *Langmuir*, **2013**, 29, 6053-67	4	32
90	Elastic Langmuir layers and membranes subjected to unidirectional compression: wrinkling and collapse. *Langmuir*, **2010**, 26, 143-55	4	32
89	Sulfonated methyl esters of fatty acids in aqueous solutions: Interfacial and micellar properties. *Journal of Colloid and Interface Science*, **2015**, 457, 307-18	9.3	31
88	Shape of the capillary meniscus around an electrically charged particle at a fluid interface: comparison of theory and experiment. *Langmuir*, **2006**, 22, 2653-67	4	31
87	Film and line tension effects on the attachment of particles to an interface: II. Shapes of the bubble (drop) and the external meniscus. *Journal of Colloid and Interface Science*, **1986**, 112, 108-121	9.3	31
86	Film and line tension effects on the attachment of particles to an interface: III. A differential interferometric method for determination of the shapes of fluid surfaces. *Journal of Colloid and Interface Science*, **1986**, 112, 122-131	9.3	31

85	Viscosity Peak due to Shape Transition from Wormlike to Disklike Micelles: Effect of Dodecanoic Acid. *Langmuir*, **2018**, 34, 4897-4907	4	29
84	Monolayers of charged particles in a Langmuir trough: Could particle aggregation increase the surface pressure?. *Journal of Colloid and Interface Science*, **2016**, 462, 223-34	9.3	29
83	The drop size in membrane emulsification determined from the balance of capillary and hydrodynamic forces. *Langmuir*, **2008**, 24, 1397-410	4	28
82	Mass transport in micellar surfactant solutions: 2. Theoretical modeling of adsorption at a quiescent interface. *Advances in Colloid and Interface Science*, **2006**, 119, 17-33	14.3	28
81	Micromechanical description of curved interfaces, thin films, and membranes. *Journal of Colloid and Interface Science*, **1990**, 137, 234-252	9.3	28
80	Surface pressure isotherm for a monolayer of charged colloidal particles at a water/nonpolar-fluid interface: experiment and theoretical model. *Langmuir*, **2014**, 30, 2768-78	4	27
79	Surface shear rheology of adsorption layers from the protein HFBII hydrophobin: effect of added ß-casein. *Langmuir*, **2012**, 28, 4168-77	4	26
78	Hydration force due to the reduced screening of the electrostatic repulsion in few-nanometer-thick films. *Current Opinion in Colloid and Interface Science*, **2011**, 16, 517-524	7.6	26
77	Interaction between like-charged particles at a liquid interface: electrostatic repulsion vs. electrocapillary attraction. *Journal of Colloid and Interface Science*, **2010**, 345, 505-14	9.3	25
76	The transition region between a thin film and the capillary meniscus. *Chemical Physics Letters*, **1985**, 121, 116-120	2.5	25
75	Surface shear rheology of hydrophobin adsorption layers: laws of viscoelastic behaviour with applications to long-term foam stability. *Faraday Discussions*, **2012**, 158, 195-221; discussion 239-66	3.6	24
74	Analytical modeling of micelle growth. 1. Chain-conformation free energy of binary mixed spherical, wormlike and lamellar micelles. *Journal of Colloid and Interface Science*, **2019**, 547, 245-255	9.3	23
73	Soft electrostatic repulsion in particle monolayers at liquid interfaces: surface pressure and effect of aggregation. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	22
72	Disclike vs. cylindrical micelles: generalized model of micelle growth and data interpretation. *Journal of Colloid and Interface Science*, **2014**, 416, 258-73	9.3	21
71	Depletion forces in thin liquid films due to nonionic and ionic surfactant micelles. *Current Opinion in Colloid and Interface Science*, **2015**, 20, 11-18	7.6	21
70	Effect of droplet deformation on the interactions in microemulsions. *Journal of Colloid and Interface Science*, **1991**, 143, 157-173	9.3	21
69	Accuracy of the Differential-interferometric Measurements of Curvature. *Optica Acta*, **1986**, 33, 1359-1368		20
68	Sulfonated methyl esters, linear alkylbenzene sulfonates and their mixed solutions: Micellization and effect of Ca2+ ions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2017**, 519, 87-97	5.1	19

67	Contribution of ionic correlations to excess free energy and disjoining pressure of thin liquid films 1. Electric double layer inside the film. *Colloids and Surfaces*, **1992**, 64, 245-264		19
66	On the mechanical equilibrium between a film of finite thickness and the external meniscus. *Chemical Physics Letters*, **1985**, 121, 111-115	2.5	19
65	Hardening of particle/oil/water suspensions due to capillary bridges: Experimental yield stress and theoretical interpretation. *Advances in Colloid and Interface Science*, **2018**, 251, 80-96	14.3	18
64	Shear rheology of mixed protein adsorption layers vs their structure studied by surface force measurements. *Advances in Colloid and Interface Science*, **2015**, 222, 148-61	14.3	17
63	Conditions for Stable Attachment of Fluid Particles to Solid Surfaces. *Langmuir*, **1996**, 12, 5951-5955	4	17
62	Adsorption from Surfactant Solutions under Diffusion Control. *Journal of Colloid and Interface Science*, **1993**, 161, 361-365	9.3	17
61	Analytical modeling of micelle growth. 2. Molecular thermodynamics of mixed aggregates and scission energy in wormlike micelles. *Journal of Colloid and Interface Science*, **2019**, 551, 227-241	9.3	16
60	Competitive adsorption of the protein hydrophobin and an ionic surfactant: Parallel vs sequential adsorption and dilatational rheology. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2014**, 457, 307-317	5.1	16
59	Hydrodynamic instability and coalescence in trains of emulsion drops or gas bubbles moving through a narrow capillary. *Journal of Colloid and Interface Science*, **2003**, 267, 243-58	9.3	16
58	The interfacial bending moment: Thermodynamics and contributions of the electrostatic interactions. *Colloids and Surfaces*, **1991**, 56, 149-176		16
57	Adhesion of bubbles and drops to solid surfaces, and anisotropic surface tensions studied by capillary meniscus dynamometry. *Advances in Colloid and Interface Science*, **2016**, 233, 223-239	14.3	15
56	Solubility limits and phase diagrams for fatty alcohols in anionic (SLES) and zwitterionic (CAPB) micellar surfactant solutions. *Journal of Colloid and Interface Science*, **2015**, 449, 46-61	9.3	15
55	Limited coalescence and Ostwald ripening in emulsions stabilized by hydrophobin HFBII and milk proteins. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2016**, 509, 521-538	5.1	15
54	Chemical Physics of Colloid Systems and Interfaces **2008**, 197-377		15
53	Energy of adhesion of human T cells to adsorption layers of monoclonal antibodies measured by a film trapping technique. *Biophysical Journal*, **1998**, 75, 545-56	2.9	15
52	Rheology of mixed solutions of sulfonated methyl esters and betaine in relation to the growth of giant micelles and shampoo applications. *Advances in Colloid and Interface Science*, **2020**, 275, 102062	14.3	15
51	Method for analysis of the composition of acid soaps by electrolytic conductivity measurements. *Journal of Colloid and Interface Science*, **2008**, 327, 169-79	9.3	14
50	The van der Waals component of interfacial bending moment 2. Model development and numerical results. *Colloids and Surfaces*, **1991**, 56, 119-148		14

49	Tracing the Connection between Different Expressions for the Laplace Pressure of a General Curved Interface. *Journal of Colloid and Interface Science*, **1993**, 161, 133-137	9.3	14
48	Forces acting on dielectric colloidal spheres at a water/nonpolar fluid interface in an external electric field. 2. Charged particles. *Journal of Colloid and Interface Science*, **2013**, 405, 269-77	9.3	13
47	Coexistence of micelles and crystallites in solutions of potassium myristate: Soft matter vs. solid matter. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2010**, 354, 172-187	5.1	13
46	Encapsulation of oils and fragrances by core-in-shell structures from silica particles, polymers and surfactants: The brick-and-mortar concept. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2018**, 559, 351-364	5.1	13
45	Lateral forces acting between particles in liquid films or lipid membranes. *Advances in Biophysics*, **1997**, 34, 25-39		12
44	Shear rheology of hydrophobin adsorption layers at oil/water interfaces and data interpretation in terms of a viscoelastic thixotropic model. *Soft Matter*, **2014**, 10, 5777-86	3.6	11
43	Extension of the ladder model of self-assembly from cylindrical to disclike surfactant micelles. *Current Opinion in Colloid and Interface Science*, **2013**, 18, 524-531	7.6	11
42	Hydrodynamic forces acting on a microscopic emulsion drop growing at a capillary tip in relation to the process of membrane emulsification. *Journal of Colloid and Interface Science*, **2007**, 316, 844-57	9.3	11
41	Reply to Comment on Electrodipping Force Acting on Solid Particles at a Fluid Interface. *Langmuir*, **2006**, 22, 848-849	4	11
40	Equilibrium and Dynamics of Surfactant Adsorption Monolayers and Thin Liquid Films. *Surfactant Science*, **1999**, 303-418		11
39	Effect of Ionic Correlations on the Surface Forces in Thin Liquid Films: Influence of Multivalent Coions and Extended Theory. *Materials*, **2016**, 9,	3.5	10
38	Capillary Bridges and Capillary-Bridge Forces. *Studies in Interface Science*, **2001**, 469-502		9
37	Analytical modeling of micelle growth. 3. Electrostatic free energy of ionic wormlike micelles - Effects of activity coefficients and spatially confined electric double layers. *Journal of Colloid and Interface Science*, **2021**, 581, 262-275	9.3	9
36	Analytical modeling of micelle growth. 4. Molecular thermodynamics of wormlike micelles from ionic surfactants: Theory vs. experiment. *Journal of Colloid and Interface Science*, **2021**, 584, 561-581	9.3	9
35	Oil drop deposition on solid surfaces in mixed polymer-surfactant solutions in relation to hair- and skin-care applications. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2019**, 577, 53-61	5.1	8
34	Production and characterization of stable foams with fine bubbles from solutions of hydrophobin HFBII and its mixtures with other proteins. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2017**, 521, 92-104	5.1	8
33	Influence of electrolytes on the dynamic surface tension of ionic surfactant solutions: expanding and immobile interfaces. *Journal of Colloid and Interface Science*, **2006**, 303, 56-68	9.3	8
32	The van der Waals component of the interfacial bending moment 1. Contribution of the pressure tensor tails. *Colloids and Surfaces*, **1991**, 56, 101-118		8

31	Properties of the micelles of sulfonated methyl esters determined from the stepwise thinning of foam films and by rheological measurements. *Journal of Colloid and Interface Science*, **2019**, 538, 660-670	9.3	8
30	Micellar solutions of ionic surfactants and their mixtures with nonionic surfactants: Theoretical modeling vs. Experiment. *Colloid Journal*, **2014**, 76, 255-270	1.1	7
29	Forces acting on dielectric colloidal spheres at a water/nonpolar-fluid interface in an external electric field. 1. Uncharged particles. *Journal of Colloid and Interface Science*, **2013**, 405, 278-90	9.3	7
28	Micellar surfactant solutions: Dynamics of adsorption at fluid interfaces subjected to stationary expansion. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2006**, 282-283, 143-161	5.1	7
27	Rheology of particle/water/oil three-phase dispersions: Electrostatic vs. capillary bridge forces. *Journal of Colloid and Interface Science*, **2018**, 513, 515-526	9.3	6
26	MECHANICS AND THERMODYNAMICS OF INTERFACES, THIN LIQUID FILMS AND MEMBRANE. *Journal of Dispersion Science and Technology*, **1997**, 18, 609-623	1.5	5
25	Reply to comment on "hydrophobic forces in the foam films stabilized by sodium dodecyl sulfate: effect of electrolyte" and subsequent criticism. *Langmuir*, **2008**, 24, 2953	4	5
24	Vortex in liquid films from concentrated surfactant solutions containing micelles and colloidal particles. *Journal of Colloid and Interface Science*, **2020**, 576, 345-355	9.3	4
23	Contribution of ionic correlations to excess free energy and disjoining pressure of thin liquid films 2. Electric double layers outside the film. *Colloids and Surfaces*, **1992**, 64, 265-274		4
22	Dynamic Processes in Surfactant-stabilized Emulsions **2001**, 621-659		4
21	Planar Fluid Interfaces. *Studies in Interface Science*, **2001**, 1-63		3
20	Chemical Physics of Colloid Systems and Interfaces **2002**,		3
19	Interactions between Particles at a Fluid Interface. *Surfactant Science*, **2010**, 397-435		3
18	Cleaning Ability of Mixed Solutions of Sulfonated Fatty Acid Methyl Esters. *Journal of Surfactants and Detergents*, **2020**, 23, 617-627	1.9	2
17	Two-Dimensional Crystallization of Particulates and Proteins. *Studies in Interface Science*, **2001**, 517-590		2
16	Lateral Capillary Forces between Partially Immersed Bodies. *Studies in Interface Science*, **2001**, 10, 287-350		2
15	Encapsulation of fragrances and oils by core-shell structures from silica nanoparticles, surfactant and polymer: Effect of particle size. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* , **2020**, 606, 125558	5.1	2
14	Phase separation of saturated micellar network and its potential applications for nanoemulsification. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2020**, 607, 125487	5.1	2

13	Capillary Forces Between Particles of Irregular Contact Line. *Studies in Interface Science*, **2001**, 10, 503-516		1
12	Effect of Oil Drops and Particulates on the Stability of Foams. *Studies in Interface Science*, **2001**, 591-632		1
11	Reply to the letter by Derjaguin and Churaev. *Journal of Colloid and Interface Science*, **1990**, 134, 294-296	9.3	1
10	Solubility of ionic surfactants below their Krafft point in mixed micellar solutions: Phase diagrams for methyl ester sulfonates and nonionic cosurfactants. *Journal of Colloid and Interface Science*, **2021**, 601, 474-485	9.3	1
9	Universal Two-dimensional Forces that Act on Particles at Interfaces. *Current Opinion in Colloid and Interface Science*, **2022**, 101578	7.6	0
8	Surface Bending Moment and Curvature Elastic Moduli. *Studies in Interface Science*, **2001**, 105-136		
7	General Curved Interfaces and Biomembranes. *Studies in Interface Science*, **2001**, 10, 137-182		
6	Liquid Films and Interactions between Particle and Surface. *Studies in Interface Science*, **2001**, 10, 183-247		
5	Particles at Interfaces: Deformations and Hydrodynamic Interactions. *Studies in Interface Science*, **2001**, 10, 248-286		
4	Lateral Capillary Forces Between Floating Particles. *Studies in Interface Science*, **2001**, 351-395		
3	Capillary Forces Between Particles Bound to a Spherical Interface. *Studies in Interface Science*, **2001**, 10, 396-425		
2	Mechanics of Lipid Membranes and Interaction Between Inclusions. *Studies in Interface Science*, **2001**, 10, 426-468		
1	Interfaces of Moderate Curvature: Theory of Capillarity. *Studies in Interface Science*, **2001**, 10, 64-104		