Dusan Bratko

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4155733/publications.pdf

Version: 2024-02-01

130 papers	4,542 citations	76294 40 h-index	123376 61 g-index
135 all docs	135 docs citations	135 times ranked	2611 citing authors

#	Article	IF	Citations
1	Effect of Field Direction on Electrowetting in a Nanopore. Journal of the American Chemical Society, 2007, 129, 2504-2510.	6.6	175
2	Interaction between like-charged colloidal spheres in electrolyte solutions. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 15169-15172.	3.3	154
3	Ion-Specific Effects in the Colloidâ^'Colloid or Proteinâ^'Protein Potential of Mean Force:Â Role of Saltâ^'Macroion van der Waals Interactions. Journal of Physical Chemistry B, 2004, 108, 9228-9235.	1.2	142
4	Dynamics of Capillary Drying in Water. Physical Review Letters, 2003, 90, 065502.	2.9	140
5	Electrowetting at the Nanoscale. Journal of Physical Chemistry C, 2007, 111, 505-509.	1.5	137
6	Electrical double layer interactions with image charges. Chemical Physics Letters, 1986, 128, 449-454.	1.2	135
7	Monte Carlo simulation for the potential of mean force between ionic colloids in solutions of asymmetric salts. Journal of Chemical Physics, 1999, 111, 7084-7094.	1.2	133
8	Interaction between hydrophobic surfaces with metastable intervening liquid. Journal of Chemical Physics, 2001, 115, 3873-3877.	1.2	114
9	Monte Carlo simulation of hydrophobic interaction. Journal of Chemical Physics, 1987, 86, 2955-2959.	1.2	102
10	Distribution of counterions in the double layer around a cylindrical polyion. Chemical Physics Letters, 1982, 90, 434-438.	1.2	97
11	Effect of alcohols on aqueous lysozymeâ€“lysozyme interactions from static light-scattering measurements. Biophysical Chemistry, 2004, 107, 289-298.	1.5	76
12	The influence of molecular-scale roughness on the surface spreading of an aqueous nanodrop. Faraday Discussions, 2010, 146, 67.	1.6	76
13	Probing surface tension additivity on chemically heterogeneous surfaces by a molecular approach. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6374-6379.	3.3	74
14	Polyelectrolyte solutions containing mixed valency ions in the cell model: A simulation and modified Poissonâ€“Boltzmann study. Journal of Chemical Physics, 1997, 107, 9197-9207.	1.2	72
15	Gas Solubility in Hydrophobic Confinement. Journal of Physical Chemistry B, 2005, 109, 22545-22552.	1.2	70
16	An integral equation approach to structure and dynamics of ionic colloidal solutions. Journal of Chemical Physics, 1986, 85, 377-384.	1.2	68
17	Modified Poisson-Boltzmann Theory Applied to Linear Polyelectrolyte Solutions. The Journal of Physical Chemistry, 1995, 99, 410-418.	2.9	67
18	Electrostatic model for protein/reverse micelle complexation. Journal of Chemical Physics, 1988, 89, 545-550.	1.2	62

#	Article	IF	Citations
19	Protein aggregation in silico. Trends in Biotechnology, 2007, 25, 254-261.	4.9	62
20	Electric Control of Wetting by Salty Nanodrops: Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2011, 115, 22393-22399.	1.5	59
21	A simple model for the intermolecular potential of water. Journal of Chemical Physics, 1985, 83, 6367-6370.	1.2	58
22	Wetting transparency of graphene in water. Journal of Chemical Physics, 2014, 141, 18C517.	1.2	58
23	Attractive Surface Force in the Presence of Dissolved Gas:â€‰ A Molecular Approach. Langmuir, 2008, 24, 1247-1253.	1.6	56
24	Water-mediated ordering of nanoparticles in an electric field. Faraday Discussions, 2009, 141, 55-66.	1.6	54
25	Specific Ion Effects in Solutions of Globular Proteins:Â Comparison between Analytical Models and Simulation. Journal of Physical Chemistry B, 2005, 109, 24489-24494.	1.2	52
26	Liophobic interaction in Baxterâ€™s adhesive fluid. Journal of Chemical Physics, 1991, 94, 8210-8215.	1.2	51
27	Forces between aqueous nonuniformly charged colloids from molecular simulation. Journal of Chemical Physics, 2002, 116, 7733-7743.	1.2	50
28	Wettability of pristine and alkyl-functionalized graphane. Journal of Chemical Physics, 2012, 137, 034707.	1.2	50
29	Recognition between random heteropolymers and multifunctional disordered surfaces. Chemical Physics Letters, 1997, 280, 46-52.	1.2	49
30	Competition between protein folding and aggregation: A three-dimensional lattice-model simulation. Journal of Chemical Physics, 2001, 114, 561.	1.2	47
31	Electrolyte surface tension in the modified Poisson-Boltzmann approximation. The Journal of Physical Chemistry, 1991, 95, 336-340.	2.9	46
32	A simple theory and Monte Carlo simulations for recognition between random heteropolymers and disordered surfaces. Journal of Chemical Physics, 1998, 108, 1676-1682.	1.2	46
33	Protein-folding landscapes in multichain systems. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11692-11697.	3.3	46
34	Metastable Sessile Nanodroplets on Nanopatterned Surfaces. Journal of Physical Chemistry C, 2012, 116, 8634-8641.	1.5	46
35	Orientation-Averaged Pair Potentials between Dipolar Proteins or Colloids. Journal of Physical Chemistry B, 2002, 106, 2714-2720.	1.2	45
36	Effect of three-body forces on the phase behavior of charged colloids. Journal of Chemical Physics, 2000, 113, 3360-3365.	1.2	44

#	Article	IF	Citations
37	Field-exposed water in a nanopore: liquid or vapour?. Physical Chemistry Chemical Physics, 2008, 10, 6807.	1.3	44
38	A mean field approach to the structure of polyelectrolytes. Journal of Chemical Physics, 1993, 99, 5352-5361.	1.2	43
39	Multivalent ionâ€“DNA interaction: Neutron scattering estimates of polyamine distribution. Journal of Chemical Physics, 1999, 111, 10706-10716.	1.2	43
40	Diffusion of ionic penetrants in charged disordered media. Journal of Chemical Physics, 1994, 100, 1528-1541.	1.2	41
41	Interaction between oppositely charged micelles or globular proteins. Physical Review E, 2000, 62, 5273-5280.	0.8	41
42	Charge fluctuation in reverse micelles. Journal of Chemical Physics, 1991, 95, 5318-5326.	1.2	38
43	Frozen Phases of Random Heteropolymers in Disordered Media. Physical Review Letters, 1996, 76, 1844-1847.	2.9	38
44	Structure of confined adhesive fluids: A Monte Carlo study. Physical Review E, 1994, 50, 1151-1161.	0.8	37
45	Structure of hard sphere fluids in narrow cylindrical pores. Journal of Chemical Physics, 1989, 90, 2752-2757.	1.2	35
46	Ionâ€“ion correlations in quenched disordered media. Journal of Chemical Physics, 1996, 104, 7700-7712.	1.2	35
47	A Numerical Study of Polyampholyte Configurationâ€. The Journal of Physical Chemistry, 1996, 100, 1164-1173.	2.9	35
48	Interpretation of the intermicellar structure factors in the hypernetted-chain Percus-Yevick approximation. Physical Review A, 1986, 34, 2215-2219.	1.0	34
49	Adsorption of random copolymers on disordered surfaces. Computational and Theoretical Polymer Science, 1998, 8, 113-126.	1.1	34
50	Anisotropic structure and dynamics of water under static electric fields. Journal of Chemical Physics, 2019, 150, 074505.	1.2	34
51	Ellipsoidal model of polyelectrolyte solutions. Journal of Chemical Physics, 1984, 80, 5782-5789.	1.2	33
52	Electric double layer interactions in reverse micellar systems: A Monte Carlo simulation study. Journal of Chemical Physics, 1990, 92, 642-648.	1.2	33
53	Phase behavior of aqueous solutions containing dipolar proteins from second-order perturbation theory. Journal of Chemical Physics, 2004, 120, 9859-9869.	1.2	33
54	Monte Carlo studies of polyelectrolyte solutions. Effect of polyelectrolyte charge density. Chemical Physics Letters, 1985, 115, 294-298.	1.2	32

#	Article	IF	Citations
55	The structure of a random heteropolymer in a disordered medium: Ensemble growth simulation. Journal of Chemical Physics, 1997, 106, 1264-1279.	1.2	32
56	Microscopic Dynamics of the Orientation of a Hydrated Nanoparticle in an Electric Field. Physical Review Letters, 2009, 103, 207801.	2.9	32
57	A general solution of the molecular Ornsteinâ€“Zernike equation for spheres with anisotropic adhesion and electric multipoles. Journal of Chemical Physics, 1990, 92, 3741-3747.	1.2	30
58	Towards an analytical model of water: The octupolar model. Journal of Chemical Physics, 1995, 102, 1461-1462.	1.2	30
59	Effect of secondary structure on protein aggregation: A replica exchange simulation study. Journal of Chemical Physics, 2003, 118, 5185-5194.	1.2	29
60	Dynamic Response in Nanoelectrowetting on a Dielectric. ACS Nano, 2016, 10, 8536-8544.	7.3	29
61	Structure of Baxter's adhesive fluid in a planar gap. Chemical Physics Letters, 1993, 203, 465-471.	1.2	28
62	The role of saltâ€“macroion van der Waals interactions in the colloidâ€“colloid potential of mean force. Current Opinion in Colloid and Interface Science, 2004, 9, 81-86.	3.4	27
63	The competition between protein folding and aggregation: Off-lattice minimalist model studies. Biotechnology and Bioengineering, 2005, 89, 78-87.	1.7	27
64	Nanoscale Wetting Under Electric Field from Molecular Simulations. Topics in Current Chemistry, 2011, 307, 155-179.	4.0	27
65	Nanoconfined water under electric field at constant chemical potential undergoes electrostriction. Journal of Chemical Physics, 2014, 140, 074710.	1.2	26
66	Dynamic Control of Nanopore Wetting in Water and Saline Solutions under an Electric Field. Journal of Physical Chemistry B, 2015, 119, 8890-8899.	1.2	26
67	Structure and thermodynamics of micellar solutions in the modified Poissonâ€”Boltzmann theory. Chemical Physics Letters, 1992, 193, 203-210.	1.2	25
68	Solventâ€“Solvent Correlations across Graphene: The Effect of Image Charges. ACS Nano, 2020, 14, 7987-7998.	7.3	25
69	On counterion self-diffusion in micellar solutions. The Journal of Physical Chemistry, 1985, 89, 1437-1440.	2.9	24
70	Molecular simulation of protein aggregation. Biotechnology and Bioengineering, 2007, 96, 1-8.	1.7	24
71	Dynamical insights into the mechanism of a droplet detachment from a fiber. Soft Matter, 2018, 14, 8924-8934.	1.2	24
72	Electrical transport in polystyrenesulfonate solutions. Polymer Bulletin, 1983, 9, 33-39.	1.7	21

#	Article	IF	Citations
73	Analysis of intermicellar structure factors with the mean spherical and hypernetted-chain approximations. Physical Review A, 1987, 35, 4359-4363.	1.0	20
74	Random heteropolymer adsorption on disordered multifunctional surfaces: Effect of specific intersegment interactions. Journal of Chemical Physics, 1998, 109, 6415-6419.	1.2	20
75	Dynamics at a Janus Interface. Journal of Physical Chemistry C, 2013, 117, 4561-4567.	1.5	20
76	Hypernetted chain approximation for ion distribution in reverse micelles. Chemical Physics Letters, 1990, 169, 555-560.	1.2	19
77	Electrolyte pore/solution partitioning by expanded grand canonical ensemble Monte Carlo simulation. Journal of Chemical Physics, 2015, 142, 124705.	1.2	19
78	Limiting law for ion adsorption in narrow planar pores. Physical Review A, 1991, 44, 8235-8241.	1.0	18
79	Specific ion effects: Interaction between nanoparticles in electrolyte solutions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 319, 98-102.	2.3	18
80	Electrokinetic flow of an aqueous electrolyte in amorphous silica nanotubes. Physical Chemistry Chemical Physics, 2018, 20, 27838-27848.	1.3	18
81	An application of the modified Poisson- Boltzmann equation in studies of osmotic properties of micellar solutions. Colloid and Polymer Science, 1985, 263, 417-419.	1.0	17
82	The influence of the ionic strength on enzyme solubilization in water-in-oil microemulsions. Bioelectrochemistry, 1988, 20, 291-296.	1.0	17
83	Polyelectrolyte configuration in a disordered medium. Physical Review E, 1995, 51, 5805-5817.	0.8	17
84	Effect of Single-Point Sequence Alterations on the Aggregation Propensity of a Model Protein. Journal of the American Chemical Society, 2006, 128, 1683-1691.	6.6	16
85	Osmotic interactions between neutral surfaces in an electrolyte solution. Physical Review E, 1994, 49, 4140-4144.	0.8	15
86	Molecular thermodynamics and bioprocessing: from intracellular events to bioseparations. Fluid Phase Equilibria, 2002, 194-197, 31-41.	1.4	15
87	Analytic calculation of phase diagrams for charged dipolar colloids with orientation-averaged pair potentials. Physical Chemistry Chemical Physics, 2003, 5, 4851.	1.3	15
88	Thermodynamics of folding and association of lattice-model proteins. Journal of Chemical Physics, 2005, 122, 174908.	1.2	14
89	Tunable Wetting of Surfaces with Ionic Functionalities. Journal of Physical Chemistry C, 2012, 116, 15467-15473.	1.5	14
90	Salt and Water Uptake in Nanoconfinement under Applied Electric Field: An Open Ensemble Monte Carlo Study. Journal of Physical Chemistry C, 2015, 119, 20416-20425.	1.5	14

#	Article	IF	Citations
91	Modulation of structure and dynamics of water under alternating electric field and the role of hydrogen bonding. Molecular Physics, 2019, 117, 3282-3296.	0.8	14
92	Conductivity of polyelectrolyte solutions containing mono-and divalent counterions. Die Makromolekulare Chemie Rapid Communications, 1983, 4, 783-788.	1.1	13
93	Interpretation of Counterion Spin Relaxation in Polyelectrolyte Solutions. II. Effects of Finite Polyion Length. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1985, 89, 1254-1260.	0.9	13
94	Effect of temperature on electrical transport and ion binding in poly(styrenesulphonate) solutions. European Polymer Journal, 1991, 27, 1195-1200.	2.6	12
95	Enthalpies of dilution of salt-containing polyelectrolyte solutions. The Journal of Physical Chemistry, 1982, 86, 2469-2471.	2.9	11
96	Electrical transport in poly(styrenesulfonate) solutions with divalent counterions. Die Makromolekulare Chemie Rapid Communications, 1983, 4, 697-701.	1.1	11
97	Spatial correlations in aqueous protein solutions. Chemical Physics Letters, 1990, 167, 239-245.	1.2	11
98	Counterion binding in the solvation shell of ionic colloids in aqueous solution. Electrochimica Acta, 1991, 36, 1761-1765.	2.6	11
99	Molecular polarizability in open ensemble simulations of aqueous nanoconfinements under electric field. Journal of Chemical Physics, 2019, 150, 164702.	1.2	11
100	640â€”Thermal motion of counterions in micellar solutions. Bioelectrochemistry, 1984, 13, 459-471.	1.0	10
101	Counterion self diffusion in polystyrenesulfonate solutions. Die Makromolekulare Chemie Rapid Communications, 1985, 6, 163-168.	1.1	10
102	Temperature dependence of the electrolytic conductivity of poly(styrene sulfonate) solutions. Macromolecules, 1986, 19, 2083-2085.	2.2	10
103	Electrostatic Interactions between Peptides and the Molecular Chaperone DnaK. Journal of Physical Chemistry B, 2003, 107, 11563-11569.	1.2	10
104	Comment on â€œexact statistical mechanical relations for the cell model of polyelectrolyte solutionsâ€• Chemical Physics Letters, 1983, 96, 263-265.	1.2	9
105	Computational probe of cavitation events in protein systems. Physical Chemistry Chemical Physics, 2011, 13, 19902.	1.3	9
106	An alternative approach to the osmotic coefficient of polyelectrolyte solutions. Journal of Chemical Physics, 1981, 75, 4612-4614.	1.2	8
107	The structure of a model ionic melt in a planar slit. Journal of Chemical Physics, 1991, 94, 586-589.	1.2	8
108	Universal Repulsive Contribution to the Solvent-Induced Interaction Between Sizable, Curved Hydrophobes. Journal of Physical Chemistry Letters, 2016, 7, 3158-3163.	2.1	8

#	Article	IF	Citations
109	Curvature dependence of the effect of ionic functionalization on the attraction among nanoparticles in dispersion. Journal of Chemical Physics, 2018, 148, 222815.	1.2	8
110	Reversible electrowetting transitions on superhydrophobic surfaces. Physical Chemistry Chemical Physics, 2021, 23, 27005-27013.	1.3	8
111	Thermodynamic consistency of the modified Poisson-Boltzmann equation in the electric double layer. The Journal of Physical Chemistry, 1986, 90, 6248-6251.	2.9	7
112	Electrostatic interactions of charged dipolar proteins in reverse micelles. Journal of Chemical Physics, 2004, 120, 11941-11947.	1.2	7
113	Length-Scale Dependence of Hydration Free Energy: Effect of Solute Charge. Journal of Statistical Physics, 2011, 145, 253-264.	0.5	7
114	Influence of polymer structure upon active-ingredient loading: a Monte Carlo simulation study for design of drug-delivery devices. Fluid Phase Equilibria, 2001, 183-184, 341-350.	1.4	6
115	Title is missing!. Die Makromolekulare Chemie, 1977, 178, 1773-1778.	1.1	5
116	Multifaceted Water Dynamics in Spherical Nanocages. Journal of Physical Chemistry C, 2019, 123, 5989-5998.	1.5	5
117	Determination of the reduced viscosity of dilute aqueous Polyelectrolyte Solutions. Die Makromolekulare Chemie Rapid Communications, 1980, 1, 269-273.	1.1	4
118	Generalized osmotic pressure equation for polyelectrolyte solutions. Die Makromolekulare Chemie Rapid Communications, 1980, 1, 663-666.	1.1	4
119	Metastable Vapor in a Janus Nanoconfinement. Journal of Physical Chemistry C, 2017, 121, 13144-13150.	1.5	4
120	A mean field theory for the swelling of a gaussian polyion. Macromolecular Theory and Simulations, 1994, 3, 79-90.	0.6	3
121	Pair-wise additivity for potentials of mean force in dilute polymer solutions. Polymer, 2002, 43, 591-597.	1.8	3
122	High-Pressure Infiltrationâ€“Expulsion of Aqueous NaCl in Planar Hydrophobic Nanopores. Journal of Physical Chemistry C, 2020, 124, 23433-23445.	1.5	3
123	Pressure-sensitive conversions between Cassie and Wenzel wetting states on a nanocorrugated surface. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	1.1	3
124	A Model of Ion Hydration. , 1987, , 27-31.		2
125	Ion Specific Interactions Between Pairs of Nanometer Sized Particles in Aqueous Solutions. , 2006, , 74-77.		1
126	The influence of the ionic strength on enzyme solubilization in water-in-oil microemulsions. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1988, 254, 291-296.	0.3	0

#	Article	IF	Citations
127	A Perturbative Approach to Polyelectrolyte Configuration. ACS Symposium Series, 1993, , 34-44.	0.5	0
128	Extent of Surface Force Additivity on Chemically Heterogeneous Substrates at Varied Orientations. Journal of Physical Chemistry B, 2018, 122, 3596-3603.	1.2	0
129	A Molecular Model for Aqueous Solutions. , 1991, , 185-196.		0
130	Elasticity of a Self-Avoiding Polymer. , 1993, , 507-515.		0