Frank Van Swol

List of Publications by Year
in descending order

79 papers	5,114 citations	94269 37 h-index	85405 71 g-index
79 all docs	79 docs citations	79 times ranked	3896 citing authors

#	Article	IF	Citations
1	Controlled Synthesis of 2-D and 3-D Dendritic Platinum Nanostructures. Journal of the American Chemical Society, 2004, 126, 635-645.	6.6	381
2	Diffusion in Lennardâ€Jones fluids using dual control volume grand canonical molecular dynamics simulation (DCVâ€GCMD). Journal of Chemical Physics, 1994, 100, 7548-7552.	1.2	298
3	Dynamic simulation of electrorheological suspensions. Journal of Chemical Physics, 1989, 91, 7888-7895.	1.2	268
4	On the interface between a fluid and a planar wall. Molecular Physics, 1984, 51, 991-1010.	0.8	235
5	Lennardâ€Jones fluids in cylindrical pores: Nonlocal theory and computer simulation. Journal of Chemical Physics, 1988, 88, 6487-6500.	1.2	224
6	The small shear rate response of electrorheological suspensions. I. Simulation in the pointâ€“dipole limit. Journal of Chemical Physics, 1991, 94, 6160-6169.	1.2	224
7	Synthesis of peptide-nanotube platinum-nanoparticle composites. Chemical Communications, 2004, , 1044-1045.	2.2	208
8	The small shear rate response of electrorheological suspensions. II. Extension beyond the pointâ€“dipole limit. Journal of Chemical Physics, 1991, 94, 6170-6178.	1.2	196
9	Structure of random monodisperse foam. Physical Review E, 2003, 67, 031403.	0.8	176
10	Structure of Random Foam. Physical Review Letters, 2004, 93, 208301.	2.9	153
11	Functional Nanocomposites Prepared by Self-Assembly and Polymerization of Diacetylene Surfactants and Silicic Acid. Journal of the American Chemical Society, 2003, 125, 1269-1277.	6.6	135
12	Location of the isotropic-nematic transition in the Gay-Berne model. Molecular Physics, 1991, 72, 593-605.	0.8	131
13	Drying transition of confined water. Nature, 2006, 442, 526-526.	13.7	123
14	New directions in mechanics. Mechanics of Materials, 2005, 37, 231-259.	1.7	118
15	Ultrathin films under shear. Journal of Chemical Physics, 1991, 95, 1995-1998.	1.2	98
16	Liquid-vapour coexistence in a cylindrical pore. Molecular Physics, 1987, 61, 1381-1390.	0.8	95
17	Wetting and drying transitions at a fluid-wall interface: Density-functional theory versus computer simulation. Physical Review A, 1989, 40, 2567-2578.	1.0	92
18	Synthesis of Platinum Nanowheels Using a Bicellar Template. Journal of the American Chemical Society, 2008, 130, 12602-12603.	6.6	92

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19	Adsorption hysteresis in narrow pores. Journal of Chemical Physics, 1988, 89, 5202-5205.	1.2	88
20	Hardâ€sphere mixtures near a hard wall. Journal of Chemical Physics, 1989, 90, 3704-3712.	1.2	86
21	Molecular dynamics and Monte Carlo simulations in the grand canonical ensemble: Local versus global control. Journal of Chemical Physics, 1993, 98, 4897-4908.	1.2	82
22	Poreâ€end effects on adsorption hysteresis in cylindrical and slitlike pores. Journal of Chemical Physics, 1992, 97, 6942-6952.	1.2	77
23	Wetting and drying transitions at a fluid-wall interface. Density-functional theory versus computer simulation. II. Physical Review A, 1991, 43, 2932-2942.	1.0	76
24	Solvation forces between rough surfaces. Journal of Chemical Physics, 1998, 108, 5588-5598.	1.2	74
25	On the approach to complete wetting by gas at a liquid-wall interface. Molecular Physics, 1985, 56, 1313-1356.	0.8	72
26	Layering transitions in cylindrical pores. Journal of Chemical Physics, 1990, 93, 679-685.	1.2	71
27	Computer simulation of fluids interacting with fluctuating walls. Journal of Chemical Physics, 1990, 93, 737-745.	1.2	70
28	Investigating the Interface of Superhydrophobic Surfaces in Contact with Water. Langmuir, 2005, 21, 7805-7811.	1.6	65
29	The electrostatic potential and field in the surface region of lamina and semiâ€infinite point charge lattices. Journal of Chemical Physics, 1981, 75, 5051-5058.	1.2	63
30	Wetting state of a crystal-fluid system of hard spheres. Physical Review Letters, 1992, 69, 2078-2081.	2.9	62
31	Lennard-Jones Mixtures in a Cylindrical Pore. A Comparison of Simulation and Density Functional Theory. Molecular Simulation, 1989, 2, 393-411.	0.9	53
32	Simulation of surfactant solutions. Molecular Physics, 1994, 82, 1009-1031.	0.8	50
33	Binary ionic porphyrin nanosheets: electronic and light-harvesting properties regulated by crystal structure. Nanoscale, 2012, 4, 1695.	2.8	49
34	In-Situ X-ray Scattering Study of Continuous Silicaâ^'Surfactant Self-Assembly during Steady-State Dip Coating. Journal of Physical Chemistry B, 2003, 107, 7683-7688.	1.2	48
35	Wetting at a fluidâ€“wall interface. Computer simulation and exact statistical sum rules. Journal of the Chemical Society, Faraday Transactions 2, 1986, 82, 1685-1699.	1.1	46
36	A molecular dynamics study of prefreezing. Molecular Physics, 1993, 80, 861-875.	0.8	45

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37	Lennard-Jones mixtures in cylindrical pores. Molecular Physics, 1987, 62, 1213-1224.	0.8	39
38	Evolution of Dendritic Platinum Nanosheets into Ripening-Resistant Holey Sheets. Nano Letters, 2009, 9, 1534-1539.	4.5	37
39	Templated growth of platinum nanowheels using the inhomogeneous reaction environment of bicelles. Physical Chemistry Chemical Physics, 2011, 13, 4846-4852.	1.3	37
40	Structure of random bidisperse foam. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 11-17.	2.3	31
41	Grand potential densities of wallâ€“liquid interfaces approaching complete drying. Journal of Chemical Physics, 1988, 89, 5010-5014.	1.2	30
42	Solvation forces and colloidal stability: A combined Monte Carlo and density functional theory approach. Journal of Chemical Physics, 1994, 100, 9106-9116.	1.2	30
43	Density functional theory of simple polymers in a slit pore. III. Surface tension. Journal of Chemical Physics, 2000, 113, 2021-2024.	1.2	30
44	Hierarchical cooperative binary ionic porphyrin nanocomposites. Chemical Communications, 2012, 48, 4863.	2.2	30
45	A molecular theory for surface forces adhesion measurements. Journal of Chemical Physics, 1997, 106, 3782-3791.	1.2	25
46	Complete Wetting in a System with Short-Range Forces. Physical Review Letters, 1984, 53, 1376-1378.	2.9	23
47	Charge Effects on the Structure and Composition of Porphyrin Binary Ionic Solids: ZnTPPS/SnTMePyP Nanomaterials. Chemistry of Materials, 2013, 25, 441-447.	3.2	22
48	Direct Measurement of Solvation Forces in Complex Microporous Media:Â A New Characterization Tool. Langmuir, 1998, 14, 2602-2605.	1.6	21
49	Light-driven synthesis of hollow platinum nanospheres. Chemical Communications, 2008, , 2535.	2.2	20
50	Numerical Simulation of Ethanolâ^'Waterâ^'NaCl Droplet Evaporation. Industrial & Engineering Chemistry Research, 2010, 49, 5631-5643.	1.8	20
51	Structure effects and phase equilibria of Lennard-Jones mixtures in a cylindrical pore.. Molecular Physics, 1991, 72, 1081-1097.	0.8	19
52	Perturbation theory of a model hcp solid. Molecular Physics, 1988, 65, 161-173.	0.8	18
53	Lattice density functional theory investigation of pore shape effects. II. Adsorption in collections of noninterconnected pores. Physical Review E, 2002, 66, 041603.	0.8	18
54	Percolation Transition in the Parallel Hard-cube Model Fluid. Molecular Simulation, 1987, 1, 95-108.	0.9	17

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55	Lattice density functional theory investigation of pore shape effects. I. Adsorption in single nonperiodic pores. Physical Review E, 2002, 66, 041602.	0.8	17
56	Oscillatory surface forces: A test of the superposition approximation. Journal of Chemical Physics, 1996, 105, 2884-2890.	1.2	15
57	Monte Carlo Simulation of Amphiphile Self-Assembly during Dip Coating. Materials Research Society Symposia Proceedings, 2000, 636, 121.	0.1	15
58	Solvent Role in the Formation of Electric Double Layers with Surface Charge Regulation: A Bystander or a Key Participant?. Physical Review Letters, 2016, 116, 048301.	2.9	15
59	On the role of solvation forces in colloidal phase transitions. Langmuir, 1993, 9, 1442-1445.	1.6	14
60	Stress Isotherms of Porous Thin Materials:Â Theoretical Predictions from a Nonlocal Density Functional Theory. Langmuir, 1999, 15, 3296-3301.	1.6	14
61	Molecular simulations of lubrication and solvation forces. Physical Review E, 2006, 73, 016306.	0.8	14
62	Statistical mechanics of two-dimensional shuffled foams: Geometry-topology correlation in small or large disorder limits. Physical Review E, 2014, 89, 062309.	0.8	14
63	Studies of a Lattice Model of Water Confined in a Slit Pore. Journal of Physical Chemistry C, 2007, 111, 15976-15981.	1.5	13
64	Comment on "Molecular-Dynamics Simulation of Wetting and Drying at Solid-Fluid Interfaces". Physical Review Letters, 1988, 60, 239-239.	2.9	12
65	Note: Position-dependent and pair diffusivity profiles from steady-state solutions of color reaction-counterdiffusion problems. Journal of Chemical Physics, 2014, 141, 046101.	1.2	11
66	A common theoretical basis for surface forces apparatus, osmotic stress, and beam bending measurements of surface forces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2000, 162, 25-36.	2.3	10
67	Manipulating Semiconductor Colloidal Stability Through Doping. Physical Review Letters, 2014, 113, 158302.	2.9	10
68	The effect of surface charge regulation on conductivity in fluidic nanochannels. Journal of Colloid and Interface Science, 2014, 416, 105-111.	5.0	9
69	Electric Double Layers with Surface Charge Regulation Using Density Functional Theory. Entropy, 2020, 22, 132.	1.1	9
70	Charge regulation at semiconductor-electrolyte interfaces. Journal of Colloid and Interface Science, 2015, 449, 409-415.	5.0	8
71	Tuning structure and mobility of solvation shells surrounding tracer additives. Journal of Chemical Physics, 2015, 142, 124501.	1.2	6
72	Gradient-Driven Diffusion Using Dual Control Volume Grand Canonical Molecular Dynamics (DCV-GCMD). Materials Research Society Symposia Proceedings, 1995, 408, 299.	0.1	5

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73	Swelling of colloidal systems. Journal of Chemical Physics, 1998, 108, 4675-4682.	1.2	5
74	Evolution of dendritic nanosheets into durable holey sheets: a lattice gas simulation study. Journal of Porphyrins and Phthalocyanines, 2011, 15, 449-458.	0.4	4
75	Thermodynamic properties of model CdTe/CdSe mixtures. Molecular Simulation, 2016, 42, 14-24.	0.9	2
76	A thermodynamic perspective of the metastability of holey sheets: the role of curvature. Physical Chemistry Chemical Physics, 2012, 14, 13309.	1.3	1
77	Wetting of a Smooth Substrate by Crystal. Materials Research Society Symposia Proceedings, 1991, 237, 73.	0.1	0
78	Revisiting Experimental tests of the Laplace-Kelvin Equation. Materials Research Society Symposia Proceedings, 1996, 464, 159.	0.1	0
79	Shear Flow on Super-Hydrophobic Surfaces. AIP Conference Proceedings, 2008, , .	0.3	0