Chantal Valeriani

List of Publications by Year
in descending order

84	4,600	81839	102432
papers	citations	39 h-index	66 g-index

86	86	86	3399
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Forward flux sampling for rare event simulations. Journal of Physics Condensed Matter, 2009, 21, 463102.	0.7	305
2	Phase separation and rotor self-assembly in active particle suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4052-4057.	3.3	258
3	Homogeneous Ice Nucleation at Moderate Supercooling from Molecular Simulation. Journal of the American Chemical Society, 2013, 135, 15008-15017.	6.6	256
4	Hard spheres: crystallization and glass formation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4993-5011.	1.6	191
5	Crystallization of Hard-Sphere Glasses. Physical Review Letters, 2009, 103, 135704.	2.9	174
6	Seeding approach to crystal nucleation. Journal of Chemical Physics, 2016, 144, 034501.	1.2	155
7	Rate of homogeneous crystal nucleation in molten NaCl. Journal of Chemical Physics, 2005, 122, 194501.	1.2	145
8	Homogeneous ice nucleation evaluated for several water models. Journal of Chemical Physics, 2014, 141, 18C529.	1.2	128
9	Living Clusters and Crystals from Low-Density Suspensions of Active Colloids. Physical Review Letters, 2013, 111, 245702.	2.9	121
10	Molecular mechanism for cavitation in water under tension. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13582-13587.	3.3	110
11	Two-structure thermodynamics for the TIP4P/2005 model of water covering supercooled and deeply stretched regions. Journal of Chemical Physics, 2017, 146, 034502.	1.2	107
12	Anomalies in bulk supercooled water at negative pressure. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7936-7941.	3.3	103
13	Computing stationary distributions in equilibrium and nonequilibrium systems with forward flux sampling. Journal of Chemical Physics, 2007, 127, 114109.	1.2	102
14	Colloids in a bacterial bath: simulations and experiments. Soft Matter, 2011, 7, 5228.	1.2	99
15	Evidence for Out-of-Equilibrium Crystal Nucleation in Suspensions of Oppositely Charged Colloids. Physical Review Letters, 2007, 99, 055501.	2.9	97
16	On fluid-solid direct coexistence simulations: The pseudo-hard sphere model. Journal of Chemical Physics, 2013, 139, 144502.	1.2	92
17	An Active Approach to Colloidal Self-Assembly. Annual Review of Physical Chemistry, 2018, 69, 59-79.	4.8	91
18	Anomalous thermomechanical properties of a self-propelled colloidal fluid. Physical Review E, 2014, 89, 052303.	0.8	90

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19	Homogeneous Bubble Nucleation Driven by Local Hot Spots: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2009, 113, 3776-3784.	1.2	86
20	A parameter-free, solid-angle based, nearest-neighbor algorithm. Journal of Chemical Physics, 2012, 136, 234107.	1.2	86
21	Activity-induced collapse and reexpansion of rigid polymers. Physical Review E, 2014, 90, 062312.	0.8	81
22	Curvature-induced activation of a passive tracer in an active bath. Physical Review E, 2014, 90, 032309.	0.8	68
23	Crystallization Mechanism of Hard Sphere Glasses. Physical Review Letters, 2011, 106, 215701.	2.9	65
24	The role of particle shape in active depletion. Journal of Chemical Physics, 2014, 141, 194901.	1.2	65
25	Competition between ices Ih and Ic in homogeneous water freezing. Journal of Chemical Physics, 2015, 143, 134504.	1.2	65
26	Interfacial Free Energy as the Key to the Pressure-Induced Deceleration of Ice Nucleation. Physical Review Letters, 2016, 117, 135702.	2.9	65
27	On the time required to freeze water. Journal of Chemical Physics, 2016, 145, 211922.	1.2	64
28	Viscosity and self-diffusion of supercooled and stretched water from molecular dynamics simulations. Journal of Chemical Physics, 2018, 149, 094503.	1.2	62
29	Homogeneous nucleation under shear in a two-dimensional Ising model: Cluster growth, coalescence, and breakup. Journal of Chemical Physics, 2008, 129, 134704.	1.2	59
30	The crystal-fluid interfacial free energy and nucleation rate of NaCl from different simulation methods. Journal of Chemical Physics, 2015, 142, 194709.	1.2	59
31	Molecular dynamics study of nanoconfined TIP4P/2005 water: how confinement and temperature affect diffusion and viscosity. Physical Chemistry Chemical Physics, 2019, 21, 13653-13667.	1.3	59
32	State-of-the-art models for the phase diagram of carbon and diamond nucleation. Molecular Physics, 2008, 106, 2011-2038.	0.8	58
33	Avalanches mediate crystallization in a hard-sphere glass. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 75-80.	3.3	52
34	A comprehensive scenario of the thermodynamic anomalies of water using the TIP4P/2005 model. Journal of Chemical Physics, 2016, 145, 054505.	1.2	48
35	Morphology of clusters of attractive dry and wet self-propelled spherical particle suspensions. Soft Matter, 2017, 13, 814-826.	1.2	47
36	Free energy calculations for molecular solids using <scp>GROMACS</scp>. Journal of Chemical Physics, 2013, 139, 034104.	1.2	46

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37	Equation of state for water and its line of density maxima down to â˜’120 MPa. Physical Chemistry Chemical Physics, 2016, 18, 5896-5900.	1.3	45
38	Local Structure of Liquid Carbon Controls Diamond Nucleation. Physical Review Letters, 2007, 99, 055702.	2.9	41
39	Calculation of the melting point of alkali halides by means of computer simulations. Journal of Chemical Physics, 2012, 137, 104507.	1.2	41
40	Note: Free energy calculations for atomic solids through the Einstein crystal/molecule methodology using GROMACS and LAMMPS. Journal of Chemical Physics, 2012, 137, 146101.	1.2	37
41	Homogeneous bubble nucleation in water at negative pressure: A Voronoi polyhedra analysis. Journal of Chemical Physics, 2013, 138, 084508.	1.2	35
42	Micro-phase separation in two dimensional suspensions of self-propelled spheres and dumbbells. Soft Matter, 2016, 12, 555-561.	1.2	34
43	Role of Salt, Pressure, and Water Activity on Homogeneous Ice Nucleation. Journal of Physical Chemistry Letters, 2017, 8, 4486-4491.	2.1	33
44	A simulation study of homogeneous ice nucleation in supercooled salty water. Journal of Chemical Physics, 2018, 148, 222811.	1.2	33
45	Irreducible Finite-Size Effects in the Surface Free Energy of NaCl Crystals from Crystal-Nucleation Data. Physical Review Letters, 2008, 100, 036103.	2.9	32
46	Ion association in low-polarity solvents: comparisons between theory, simulation, and experiment. Soft Matter, 2010, 6, 2793.	1.2	30
47	Seeding approach to nucleation in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>N</mml:mi><mml:mi>V</mml:mi><mml:mi>T</mml:mi> ensemble: The case of bubble cavitation in overstretched Lennard Jones fluids. Physical Review E, 2020, 101, 022611.	0.8	28
48	From compact to fractal crystalline clusters in concentrated systems of monodisperse hard spheres. Soft Matter, 2012, 8, 4960.	1.2	27
49	Heterogeneous versus homogeneous crystal nucleation of hard spheres. Soft Matter, 2019, 15, 9625-9631.	1.2	27
50	Out-of-equilibrium processes in suspensions of oppositely charged colloids: liquid-to-crystal nucleation and gel formation. Journal of Physics Condensed Matter, 2008, 20, 494247.	0.7	26
51	Phase behaviour and dynamical features of a two-dimensional binary mixture of active/passive spherical particles. Soft Matter, 2020, 16, 1162-1169.	1.2	23
52	Self-assembly of active amphiphilic Janus particles. New Journal of Physics, 2017, 19, 125014.	1.2	20
53	Characterization of MIPS in a suspension of repulsive active Brownian particles through dynamical features. Journal of Chemical Physics, 2021, 154, 164901.	1.2	20
54	Detecting vapour bubbles in simulations of metastable water. Journal of Chemical Physics, 2014, 141, 18C511.	1.2	19

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55	Anomalous dynamics of an elastic membrane in an active fluid. Physical Review E, 2015, 92, 012314.	0.8	19
56	Pressure control in interfacial systems: Atomistic simulations of vapor nucleation. Journal of Chemical Physics, 2018, 148, 064706.	1.2	19
57	Crystallization and aging in hard-sphere glasses. Journal of Physics Condensed Matter, 2011, 23, 194117.	0.7	18
58	Self-Adaptation of Pseudomonas fluorescens Biofilms to Hydrodynamic Stress. Frontiers in Microbiology, 2020, 11, 588884.	1.5	17
59	Chemotactic clusters in confined run-and-tumble bacteria: a numerical investigation. Soft Matter, 2014, 10, 157-165.	1.2	15
60	Bubble nucleation in simple and molecular liquids via the largest spherical cavity method. Journal of Chemical Physics, 2015, 142, 154903.	1.2	15
61	Computer simulations of the restricted primitive model at very low temperature and density. Journal of Physics Condensed Matter, 2010, 22, 104122.	0.7	13
62	Nucleation free-energy barriers with Hybrid Monte-Carlo/Umbrella Sampling. Physical Chemistry Chemical Physics, 2014, 16, 24913-24919.	1.3	13
63	Collective behavior of Vicsek particles without and with obstaclesâ‹†. European Physical Journal E, 2018, 41, 91.	0.7	13
64	Non-equilibrium dynamics of an active colloidal â€œchuckerâ€• Journal of Chemical Physics, 2010, 132, 204904.	1.2	12
65	Avalanche mediated devitrification in a glass of pseudo hard-spheres. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 094005.	0.9	12
66	Phase boundaries, nucleation rates and speed of crystal growth of the water-to-ice transition under an electric field: a simulation study. Journal of Physics Condensed Matter, 2018, 30, 174002.	0.7	12
67	Mediated by a liquid. Nature Materials, 2015, 14, 15-16.	13.3	11
68	Ice Ih vs. ice III along the homogeneous nucleation line. Physical Chemistry Chemical Physics, 2019, 21, 5655-5660.	1.3	10
69	Comparison of simple perturbation-theory estimates for the liquidâ€“solid and the liquidâ€“vapor interfacial free energies of Lennard-Jones systems. Molecular Simulation, 2007, 33, 1023-1028.	0.9	9
70	Seeding approach to bubble nucleation in superheated Lennard-Jones fluids. Physical Review E, 2019, 100, 052609.	0.8	9
71	Trapping flocking particles with asymmetric obstacles. Soft Matter, 2020, 16, 4739-4745.	1.2	9
72	Fluctuation-Dissipation Relations and Energy Landscape in an Out-of-Equilibrium Strong-Glass-Forming Liquid. Physical Review Letters, 2003, 90, 115503.	2.9	8

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73	Exposing a dynamical signature of the freezing transition through the sound propagation gap. Nature Communications, 2014, 5, 5503.	5.8	8
74	In-silico modeling of early-stage biofilm formation. Soft Materials, 2021, 19, 346-358.	0.8	6
75	Influence of water models on water movement through AQP1. Journal of Chemical Physics, 2021, 155, 154502.	1.2	6
76	Nucleation in a Sheared Ising Model: Effects of External Field. Progress of Theoretical Physics Supplement, 2008, 175, 144-153.	0.2	5
77	Lattice mold technique for the calculation of crystal nucleation rates. Faraday Discussions, 2016, 195, 569-582.	1.6	4
78	Brownian versus Newtonian devitrification of hard-sphere glasses. Physical Review E, 2017, 96, 020602.	0.8	4
79	Orientational order and morphology of clusters of self-assembled Janus swimmers. Physical Review E, 2019, 99, 062602.	0.8	4
80	Effect of dissolved salt on the anomalies of water at negative pressure. Journal of Chemical Physics, 2020, 152, 194501.	1.2	4
81	Collective motion of run-and-tumble repulsive and attractive particles in one-dimensional systems. Soft Matter, 2021, 17, 10479-10491.	1.2	4
82	Intrinsic structure perspective for MIPS interfaces in two-dimensional systems of active Brownian particles. Soft Matter, 2022, 18, 2646-2653.	1.2	4
83	Dynamical anomalies and structural features of Active Brownian Particles characterised by two repulsive length scales. Journal of Chemical Physics, 2022, 156, 164502.	1.2	4
84	Crystallization and aging in hard-sphere glasses. Journal of Physics Condensed Matter, 2011, 23, 319501.	0.7	2