Eduardo Sanz

List of Publications by Year
in descending order

95 papers	6,210 citations	81889 39 h-index	69246 77 g-index
95 all docs	95 docs citations	95 times ranked	3923 citing authors

#	Article	IF	Citations
1	Phase diagram of the NaClâ€“water system from computer simulations. Journal of Chemical Physics, 2022, 156, 064505.	3.0	8
2	Parasitic crystallization of colloidal electrolytes: growing a metastable crystal from the nucleus of a stable phase. Soft Matter, 2021, 17, 489-505.	2.7	11
3	Fcc vs. hcp competition in colloidal hard-sphere nucleation: on their relative stability, interfacial free energy and nucleation rate. Physical Chemistry Chemical Physics, 2021, 23, 19611-19626.	2.8	18
4	Anomalous Behavior in the Nucleation of Ice at Negative Pressures. Physical Review Letters, 2021, 126, 015704.	7.8	24
5	Homogeneous nucleation of NaCl in supersaturated solutions. Physical Chemistry Chemical Physics, 2021, 23, 26843-26852.	2.8	20
6	The Youngâ€“Laplace equation for a solidâ€“liquid interface. Journal of Chemical Physics, 2020, 153, 191102.	3.0	35
7	Interfacial Free Energy and Tolman Length of Curved Liquidâ€“Solid Interfaces from Equilibrium Studies. Journal of Physical Chemistry C, 2020, 124, 8795-8805.	3.1	24
8	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><mml:mi><ensemble: The case of bubble cavitation in overstretched Lennard Jones fluids. Physical Review E, 2020, 101, 022611.	2.1	28
9	Equivalence between condensation and boiling in a Lennard-Jones fluid. Physical Review E, 2020, 102, 062609.	2.1	14
10	Ice growth rate: Temperature dependence and effect of heat dissipation. Journal of Chemical Physics, 2019, 151, 044509.	3.0	20
11	Interfacial free energy of a liquid-solid interface: Its change with curvature. Journal of Chemical Physics, 2019, 151, 144501.	3.0	28
12	Structure and fluctuations of the premelted liquid film of ice at the triple point. Molecular Physics, 2019, 117, 2846-2864.	1.7	11
13	Ice Ih vs. ice III along the homogeneous nucleation line. Physical Chemistry Chemical Physics, 2019, 21, 5655-5660.	2.8	10
14	Seeding approach to bubble nucleation in superheated Lennard-Jones fluids. Physical Review E, 2019, 100, 052609.	2.1	9
15	Heterogeneous versus homogeneous crystal nucleation of hard spheres. Soft Matter, 2019, 15, 9625-9631.	2.7	27
16	A simulation study of homogeneous ice nucleation in supercooled salty water. Journal of Chemical Physics, 2018, 148, 222811.	3.0	33
17	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.	1.8	12
18	Calculation of the water-octanol partition coefficient of cholesterol for SPC, TIP3P, and TIP4P water. Journal of Chemical Physics, 2018, 149, 224501.	3.0	12

#	Article	IF	Citations
19	Homogeneous Ice Nucleation Rate in Water Droplets. Journal of Physical Chemistry C, 2018, 122, 22892-22896.	3.1	25
20	Viscosity and self-diffusion of supercooled and stretched water from molecular dynamics simulations. Journal of Chemical Physics, 2018, 149, 094503.	3.0	62
21	NaCl nucleation from brine in seeded simulations: Sources of uncertainty in rate estimates. Journal of Chemical Physics, 2018, 148, 222838.	3.0	62
22	Mechanosensitive Gold Colloidal Membranes Mediated by Supramolecular Interfacial Self-Assembly. Journal of the American Chemical Society, 2017, 139, 1120-1128.	13.7	24
23	Brownian versus Newtonian devitrification of hard-sphere glasses. Physical Review E, 2017, 96, 020602.	2.1	4
24	Role of Salt, Pressure, and Water Activity on Homogeneous Ice Nucleation. Journal of Physical Chemistry Letters, 2017, 8, 4486-4491.	4.6	33
25	Avalanche mediated devitrification in a glass of pseudo hard-spheres. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 094005.	2.3	12
26	On the calculation of solubilities via direct coexistence simulations: Investigation of NaCl aqueous solutions and Lennard-Jones binary mixtures. Journal of Chemical Physics, 2016, 145, 154111.	3.0	80
27	New methods: general discussion. Faraday Discussions, 2016, 195, 521-556.	3.2	2
28	Application to large systems: general discussion. Faraday Discussions, 2016, 195, 671-698.	3.2	4
29	On the time required to freeze water. Journal of Chemical Physics, 2016, 145, 211922.	3.0	64
30	Seeding approach to crystal nucleation. Journal of Chemical Physics, 2016, 144, 034501.	3.0	155
31	Iceâ€“Water Interfacial Free Energy for the TIP4P, TIP4P/2005, TIP4P/Ice, and mW Models As Obtained from the Mold Integration Technique. Journal of Physical Chemistry C, 2016, 120, 8068-8075.	3.1	79
32	Interfacial Free Energy as the Key to the Pressure-Induced Deceleration of Ice Nucleation. Physical Review Letters, 2016, 117, 135702.	7.8	65
33	Premelting-Induced Smoothening of the Ice-Vapor Interface. Physical Review Letters, 2016, 117, 096101.	7.8	39
34	Lattice mold technique for the calculation of crystal nucleation rates. Faraday Discussions, 2016, 195, 569-582.	3.2	4
35	Competition between ices Ih and Ic in homogeneous water freezing. Journal of Chemical Physics, 2015, 143, 134504.	3.0	65
36	Interfacial free energy of the NaCl crystal-melt interface from capillary wave fluctuations. Journal of Chemical Physics, 2015, 142, 134706.	3.0	11

#	Article	IF	Citations
37	The crystal-fluid interfacial free energy and nucleation rate of NaCl from different simulation methods. Journal of Chemical Physics, 2015, 142, 194709.	3.0	59
38	Mediated by a liquid. Nature Materials, 2015, 14, 15-16.	27.5	11
39	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.	7.1	52
40	Field-induced sublimation in perfect two-dimensional colloidal crystals. Physical Review E, 2014, 89, 012306.	2.1	12
41	Homogeneous ice nucleation evaluated for several water models. Journal of Chemical Physics, 2014, 141, 18C529.	3.0	128
42	The mold integration method for the calculation of the crystal-fluid interfacial free energy from simulations. Journal of Chemical Physics, 2014, 141, 134709.	3.0	58
43	Computer simulation study of surface wave dynamics at the crystal-melt interface. Journal of Chemical Physics, 2014, 141, 034701.	3.0	25
44	Exposing a dynamical signature of the freezing transition through the sound propagation gap. Nature Communications, 2014, 5, 5503.	12.8	8
45	Nucleation free-energy barriers with Hybrid Monte-Carlo/Umbrella Sampling. Physical Chemistry Chemical Physics, 2014, 16, 24913-24919.	2.8	13
46	A study of the iceâ€“water interface using the TIP4P/2005 water model. Physical Chemistry Chemical Physics, 2014, 16, 22159-22166.	2.8	41
47	Disjoining Pressure, Healing Distance, and Film Height Dependent Surface Tension of Thin Wetting Films. Journal of Physical Chemistry C, 2014, 118, 22079-22089.	3.1	16
48	On fluid-solid direct coexistence simulations: The pseudo-hard sphere model. Journal of Chemical Physics, 2013, 139, 144502.	3.0	92
49	Homogeneous Ice Nucleation at Moderate Supercooling from Molecular Simulation. Journal of the American Chemical Society, 2013, 135, 15008-15017.	13.7	256
50	Calculation of the melting point of alkali halides by means of computer simulations. Journal of Chemical Physics, 2012, 137, 104507.	3.0	41
51	Solubility of NaCl in water by molecular simulation revisited. Journal of Chemical Physics, 2012, 136, 244508.	3.0	133
52	From compact to fractal crystalline clusters in concentrated systems of monodisperse hard spheres. Soft Matter, 2012, 8, 4960.	2.7	27
53	Phase diagram of trivalent and pentavalent patchy particles. Journal of Physics Condensed Matter, 2012, 24, 064113.	1.8	26
54	Sheet-like assemblies of spherical particles with point-symmetrical patches. Journal of Chemical Physics, 2012, 136, 144706.	3.0	22

#	Article	IF	Citations
55	Crystallization and aging in hard-sphere glasses. Journal of Physics Condensed Matter, 2011, 23, 194117.	1.8	18
56	Crystallization and aging in hard-sphere glasses. Journal of Physics Condensed Matter, 2011, 23, 319501.	1.8	2
57	Crystallization Mechanism of Hard Sphere Glasses. Physical Review Letters, 2011, 106, 215701.	7.8	65
58	Crystallization of tetrahedral patchy particles in silico. Journal of Chemical Physics, 2011, 134, 174502.	3.0	116
59	Monte Carlo and event-driven dynamics of Brownian particles with orientational degrees of freedom. Journal of Chemical Physics, 2011, 135, 124106.	3.0	32
60	Dynamic Monte Carlo versus Brownian dynamics: A comparison for self-diffusion and crystallization in colloidal fluids. Journal of Chemical Physics, 2010, 132, 194102.	3.0	109
61	Phase diagram of a tetrahedral patchy particle model for different interaction ranges. Journal of Chemical Physics, 2010, 132, .	3.0	116
62	Stabilization of Nanoparticle Shells by Competing Interactions. Journal of Physical Chemistry C, 2010, 114, 7780-7786.	3.1	20
63	Can the isotropic-smectic transition of colloidal hard rods occur via nucleation and growth?. Faraday Discussions, 2010, 144, 253-269.	3.2	17
64	Colloidal Gels Assembled via a Temporary Interfacial Scaffold. Physical Review Letters, 2009, 103, 255502.	7.8	60
65	Role of the Range in the Fluidâ^'Crystal Coexistence for a Patchy Particle Model. Journal of Physical Chemistry B, 2009, 113, 15133-15136.	2.6	47
66	Hard spheres: crystallization and glass formation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4993-5011.	3.4	191
67	Triple points and coexistence properties of the dense phases of water calculated using computer simulation. Physical Chemistry Chemical Physics, 2009, 11, 556-562.	2.8	26
68	Crystallization of Hard-Sphere Glasses. Physical Review Letters, 2009, 103, 135704.	7.8	174
69	Determination of phase diagrams via computer simulation: methodology and applications to water, electrolytes and proteins. Journal of Physics Condensed Matter, 2008, 20, 153101.	1.8	209
70	Gel Formation in Suspensions of Oppositely Charged Colloids: Mechanism and Relation to the Equilibrium Phase Diagram. Journal of Physical Chemistry B, 2008, 112, 10861-10872.	2.6	51
71	Irreducible Finite-Size Effects in the Surface Free Energy of NaCl Crystals from Crystal-Nucleation Data. Physical Review Letters, 2008, 100, 036103.	7.8	32
72	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.	1.8	26

#	Article	IF	Citations
73	Crystallization and gelation in colloidal systems with short-ranged attractive interactions. Physical Review E, 2008, 78, 041402.	2.1	62
74	Solubility of KF and NaCl in water by molecular simulation. Journal of Chemical Physics, 2007, 126, 014507.	3.0	107
75	Evidence for Out-of-Equilibrium Crystal Nucleation in Suspensions of Oppositely Charged Colloids. Physical Review Letters, 2007, 99, 055501.	7.8	97
76	Investigation of the Salting Out of Methane from Aqueous Electrolyte Solutions Using Computer Simulations. Journal of Physical Chemistry B, 2007, 111, 8993-9000.	2.6	36
77	Ice: A fruitful source of information about liquid water. Journal of Molecular Liquids, 2007, 136, 214-220.	4.9	15
78	A potential model for methane in water describing correctly the solubility of the gas and the properties of the methane hydrate. Journal of Chemical Physics, 2006, 125, 074510.	3.0	139
79	Non-Markovian melting: a novel procedure to generate initial liquid like phases for small molecules for use in computer simulation studies. Computer Physics Communications, 2005, 170, 137-143.	7.5	1
80	Radial distribution functions and densities for the SPC/E, TIP4P and TIP5P models for liquid water and ices Ih, Ic, II, III, IV, V, VI, VII, VIII, IX, XI and XII. Physical Chemistry Chemical Physics, 2005, 7, 1450.	2.8	111
81	Rate of homogeneous crystal nucleation in molten NaCl. Journal of Chemical Physics, 2005, 122, 194501.	3.0	145
82	Can simple models describe the phase diagram of water?. Journal of Physics Condensed Matter, 2005, 17, S3283-S3288.	1.8	72
83	The range of meta stability of ice-water melting for two simple models of water. Molecular Physics, 2005, 103, 1-5.	1.7	54
84	A potential model for the study of ices and amorphous water: TIP4P/Ice. Journal of Chemical Physics, 2005, 122, 234511.	3.0	1,041
85	The melting temperature of the most common models of water. Journal of Chemical Physics, 2005, 122, 114507.	3.0	338
86	Tracing the phase diagram of the four-site water potential (TIP4P). Journal of Chemical Physics, 2004, 121, 1165-1166.	3.0	73
87	Combinatorial entropy and phase diagram of partially ordered ice phases. Journal of Chemical Physics, 2004, 121, 10145-10158.	3.0	54
88	Formation of high density amorphous ice by decompression of ice VII and ice VIII at 135 K. Journal of Chemical Physics, 2004, 121, 11907-11911.	3.0	24
89	Molecular modeling of flexible molecules. Vaporâ€“liquid and fluidâ€“solid equilibria. Journal of Molecular Liquids, 2004, 113, 37-51.	4.9	12
90	Computer simulation study of the global phase behavior of linear rigid Lennard-Jones chain molecules: Comparison with flexible models. Journal of Chemical Physics, 2004, 120, 3957-3968.	3.0	27

#	Article	IF	Citations
91	Phase Diagram of Water from Computer Simulation. Physical Review Letters, 2004, 92, 255701.	7.8	264
92	The properties of fully flexible Lennard-Jones chains in the solid phase: Wertheim theory and simulation. Molecular Physics, 2003, 101, 2241-2255.	1.7	17
93	Fluidâ€“solid equilibria of flexible and linear rigid tangent chains from Wertheimâ€™s thermodynamic perturbation theory. Journal of Chemical Physics, 2003, 119, 10958-10971.	3.0	17
94	Equation of state of model branched alkanes: Theoretical predictions and configurational bias Monte Carlo simulations. Journal of Chemical Physics, 2001, 115, 6220-6235.	3.0	15
95	The virial coefficients of the pearl-necklace model. Journal of Chemical Physics, 2000, 113, 10398-10409.	3.0	24