## Pablo Debenedetti

List of Publications by Year in descending order

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326 papers

28,978 citations

4658 85 h-index <sup>5988</sup> 160 g-index

344 all docs

344 docs citations

times ranked

344

15270 citing authors

| #  | Article  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Supercooled liquids and the glass transition. Nature, 2001, 410, 259-267.  | 27.8 | 3,877     |
| 2  | Relationship between structural order and the anomalies of liquid water. Nature, 2001, 409, 318-321.   | 27.8 | 1,320     |
| 3  | Is Random Close Packing of Spheres Well Defined?. Physical Review Letters, 2000, 84, 2064-2067.  | 7.8  | 1,173     |
| 4  | Supercooled and glassy water. Journal of Physics Condensed Matter, 2003, 15, R1669-R1726.  | 1.8  | 956       |
| 5  | Supercritical fluids as solvents for chemical and materials processing. Nature, 1996, 383, 313-318.  | 27.8 | 849       |
| 6  | Signatures of distinct dynamical regimes in the energy landscape of a glass-forming liquid. Nature, 1998, 393, 554-557.  | 27.8 | 676       |
| 7  | Singularity-free interpretation of the thermodynamics of supercooled water. Physical Review E, 1996, 53, 6144-6154.  | 2.1  | 499       |
| 8  | Supercooled and Glassy Water. Physics Today, 2003, 56, 40-46.  | 0.3  | 470       |
| 9  | Metastable liquid–liquid transition in a molecular model of water. Nature, 2014, 510, 385-388.   | 27.8 | 431       |
| 10 | Effect of Surface Polarity on Water Contact Angle and Interfacial Hydration Structure. Journal of Physical Chemistry B, 2007, 111, 9581-9587.                                  | 2.6  | 416       |
| 11 | Particle formation with supercritical fluidsâ€"a review. Journal of Aerosol Science, 1991, 22, 555-584.  | 3.8  | 330       |
| 12 | Effect of pressure on the phase behavior and structure of water confined between nanoscale hydrophobic and hydrophilic plates. Physical Review E, 2006, 73, 041604.            | 2.1  | 319       |
| 13 | Formation of microparticulate protein powder using a supercritical fluid antisolvent. Biotechnology and Bioengineering, 1993, 41, 341-346.                                     | 3.3  | 286       |
| 14 | Towards a quantification of disorder in materials: Distinguishing equilibrium and glassy sphere packings. Physical Review E, 2000, 62, 993-1001.                               | 2.1  | 258       |
| 15 | The evaporation rate, free energy, and entropy of amorphous water at 150 K. Journal of Chemical Physics, 1996, 105, 240-244.   | 3.0  | 251       |
| 16 | Hydrophobicity of protein surfaces: Separating geometry from chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2274-2279. | 7.1  | 242       |
| 17 | Hydration Behavior under Confinement by Nanoscale Surfaces with Patterned Hydrophobicity and Hydrophilicity. Journal of Physical Chemistry C, 2007, 111, 1323-1332.            | 3.1  | 224       |
| 18 | Glass Transition Thermodynamics and Kinetics. Annual Review of Condensed Matter Physics, 2013, 4, 263-285.   | 14.5 | 217       |

| #  | Article  | ΙF   | Citations |
|----|--|------|-----------|
| 19 | Molecular structural order and anomalies in liquid silica. Physical Review E, 2002, 66, 011202.  | 2.1  | 215       |
| 20 | Generalization of the Wang-Landau method for off-lattice simulations. Physical Review E, 2002, 66, 056703.   | 2.1  | 209       |
| 21 | Phase Transitions Induced by Nanoconfinement in Liquid Water. Physical Review Letters, 2009, 102, 050603.  | 7.8  | 208       |
| 22 | Solute–solvent interactions in infinitely dilute supercritical mixtures: A molecular dynamics investigation. Journal of Chemical Physics, 1989, 91, 7075-7084.                                   | 3.0  | 201       |
| 23 | Direct calculation of ice homogeneous nucleation rate for a molecular model of water. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10582-10588.   | 7.1  | 199       |
| 24 | Precipitation of Proteins in Supercritical Carbon Dioxide. Journal of Pharmaceutical Sciences, 1996, 85, 586-594.  | 3.3  | 185       |
| 25 | Formation of bioerodible polymeric microspheres and microparticles by rapid expansion of supercritical solutions. Biotechnology Progress, 1991, 7, 403-411.                                      | 2.6  | 182       |
| 26 | Second critical point in two realistic models of water. Science, 2020, 369, 289-292.   | 12.6 | 176       |
| 27 | Atomistic Simulation of Aging and Rejuvenation in Glasses. Physical Review Letters, 2000, 84, 1471-1474.   | 7.8  | 175       |
| 28 | Clustering in dilute, binary supercritical mixtures: A fluctuation analysis. Chemical Engineering Science, 1987, 42, 2203-2212.  | 3.8  | 166       |
| 29 | A computational study of hydration, solution structure, and dynamics in dilute carbohydrate solutions. Journal of Chemical Physics, 2005, 122, 204511.   | 3.0  | 166       |
| 30 | Rapid expansion of supercritical solutions (ress ): fundamentals and applications. Fluid Phase Equilibria, 1993, 82, 311-321.  | 2.5  | 162       |
| 31 | A single-bond approach to orientation-dependent interactions and its implications for liquid water.<br>Journal of Chemical Physics, 1999, 111, 2647-2656.  | 3.0  | 157       |
| 32 | Homogeneous Nucleation of Methane Hydrate in Microsecond Molecular Dynamics Simulations. Journal of Physical Chemistry Letters, 2012, 3, 2942-2947.  | 4.6  | 156       |
| 33 | Effect of Temperature on the Structure and Phase Behavior of Water Confined by Hydrophobic,<br>Hydrophilic, and Heterogeneous Surfaces. Journal of Physical Chemistry B, 2009, 113, 13723-13734. | 2.6  | 155       |
| 34 | Advances in Computational Studies of the Liquid–Liquid Transition in Water and Water-Like Models.<br>Chemical Reviews, 2018, 118, 9129-9151.   | 47.7 | 152       |
| 35 | Evaporation rate of water in hydrophobic confinement. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4365-4370.                                     | 7.1  | 150       |
| 36 | Attractive, weakly attractive, and repulsive nearâ€critical systems. Journal of Chemical Physics, 1989, 90, 4528-4536.   | 3.0  | 148       |

| #  | Article  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | Structural precursor to freezing in the hard-disk and hard-sphere systems. Physical Review E, 1998, 58, 3083-3088.   | 2.1 | 147       |
| 38 | Statistical geometry of particle packings.â€fl.â€fAlgorithm for exact determination of connectivity, volume, and surface areas of void space in monodisperse and polydisperse sphere packings. Physical Review E, 1997, 56, 5524-5532. | 2.1 | 145       |
| 39 | Two-state thermodynamics and the possibility of a liquid-liquid phase transition in supercooled TIP4P/2005 water. Journal of Chemical Physics, 2016, 144, 144504.  | 3.0 | 145       |
| 40 | Liquid-liquid transition in ST2 water. Journal of Chemical Physics, 2012, 137, 214505.   | 3.0 | 144       |
| 41 | Diffusion and mass transfer in supercritical fluids. AICHE Journal, 1986, 32, 2034-2046.   | 3.6 | 143       |
| 42 | Homogeneous nucleation in supercritical fluids. AICHE Journal, 1990, 36, 1289-1298.  | 3.6 | 143       |
| 43 | Thermodynamic implications of confinement for a waterlike fluid. Journal of Chemical Physics, 2001, 114, 2401-2418.  | 3.0 | 143       |
| 44 | Effect of Surface Polarity on the Structure and Dynamics of Water in Nanoscale Confinement. Journal of Physical Chemistry B, 2009, 113, 1438-1446.   | 2.6 | 143       |
| 45 | Systematic determination of order parameters for chain dynamics using diffusion maps. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13597-13602.   | 7.1 | 142       |
| 46 | Nonlinear dimensionality reduction in molecular simulation: The diffusion map approach. Chemical Physics Letters, 2011, 509, 1-11.   | 2.6 | 141       |
| 47 | Low-temperature fluid-phase behavior of ST2 water. Journal of Chemical Physics, 2009, 131, 104508.   | 3.0 | 139       |
| 48 | Precipitation of poly(l-lactic acid) and composite poly(l-lactic acid)-pyrene particles by rapid expansion of supercritical solutions. Journal of Supercritical Fluids, 1994, 7, 9-29.   | 3.2 | 136       |
| 49 | A computational investigation of thermodynamics, structure, dynamics and solvation behavior in modified water models. Journal of Chemical Physics, 2008, 128, 124511.  | 3.0 | 134       |
| 50 | The Kauzmann Paradox Revisitedâ€. Journal of Physical Chemistry B, 2001, 105, 11809-11816.   | 2.6 | 131       |
| 51 | Solubility and Molecular Conformations of <i>n</i> -Alkane Chains in Water. Journal of Physical Chemistry B, 2009, 113, 6405-6414.   | 2.6 | 131       |
| 52 | Application of supercritical fluids for the production of sustained delivery devices. Journal of Controlled Release, 1993, 24, 27-44.  | 9.9 | 128       |
| 53 | Structure and Dynamics in Concentrated, Amorphous Carbohydrateâ^'Water Systems by Molecular Dynamics Simulation. Journal of Physical Chemistry B, 1999, 103, 7308-7318.  | 2.6 | 128       |
| 54 | An improved Monte Carlo method for direct calculation of the density of states. Journal of Chemical Physics, 2003, 119, 9406-9411.   | 3.0 | 128       |

| #  | Article  | IF   | Citations |
|----|--|------|-----------|
| 55 | Quantification of order in the Lennard-Jones system. Journal of Chemical Physics, 2003, 118, 2256-2263.  | 3.0  | 124       |
| 56 | Polyamorphism and density anomalies in networkâ€forming fluids: Zeroth―and firstâ€order approximations. Journal of Chemical Physics, 1996, 105, 658-672.   | 3.0  | 122       |
| 57 | Computational Studies of Pressure, Temperature, and Surface Effects on the Structure and Thermodynamics of Confined Water. Annual Review of Physical Chemistry, 2012, 63, 179-200.                           | 10.8 | 120       |
| 58 | Singularity-free interpretation of the thermodynamics of supercooled water. II. Thermal and volumetric behavior. Journal of Chemical Physics, 1998, 109, 626-633.  | 3.0  | 119       |
| 59 | A simple molecular thermodynamic theory of hydrophobic hydration. Journal of Chemical Physics, 2002, 116, 2907-2921.   | 3.0  | 118       |
| 60 | Liquid-Liquid Immiscibility in Pure Fluids: Polyamorphism in Simulations of a Network-Forming Fluid. Physical Review Letters, 1996, 77, 4386-4389.   | 7.8  | 117       |
| 61 | Numerical modeling of mass transfer in the supercritical antisolvent process: miscible conditions. Journal of Supercritical Fluids, 2000, 18, 11-24.   | 3.2  | 114       |
| 62 | Free volume in the hard sphere liquid. Molecular Physics, 1998, 95, 289-297.   | 1.7  | 112       |
| 63 | Signatures of a liquid–liquid transition in an ab initio deep neural network model for water.<br>Proceedings of the National Academy of Sciences of the United States of America, 2020, 117,<br>26040-26046. | 7.1  | 112       |
| 64 | Numerical modeling of mass transfer in the supercritical antisolvent process. Journal of Supercritical Fluids, 1999, 16, 167-181.  | 3.2  | 111       |
| 65 | Structure of the first- and second-neighbor shells of simulated water: Quantitative relation to translational and orientational order. Physical Review E, 2007, 76, 051201.                                  | 2.1  | 109       |
| 66 | Molecular Dynamics Study of Carbon Dioxide Hydrate Dissociation. Journal of Physical Chemistry A, 2011, 115, 6102-6111.  | 2.5  | 107       |
| 67 | Two-structure thermodynamics for the TIP4P/2005 model of water covering supercooled and deeply stretched regions. Journal of Chemical Physics, 2017, 146, 034502.  | 3.0  | 107       |
| 68 | Family of tunable spherically symmetric potentials that span the range from hard spheres to waterlike behavior. Physical Review E, 2006, 73, 051204.   | 2.1  | 106       |
| 69 | Enhanced surface hydrophobicity by coupling of surface polarity and topography. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15181-15185.                     | 7.1  | 106       |
| 70 | Effects of process conditions on crystals obtained from supercritical mixtures. AICHE Journal, 1989, 35, 325-328.  | 3.6  | 104       |
| 71 | The Equation of State of an Energy Landscape. Journal of Physical Chemistry B, 1999, 103, 7390-7397.   | 2.6  | 103       |
| 72 | Cooperative Origin of Low-Density Domains in Liquid Water. Physical Review Letters, 2002, 89, 215503.  | 7.8  | 103       |

| #  | Article   | IF  | Citations |
|----|---|-----|-----------|
| 73 | Differential Scanning Calorimetry Studies of Clathrate Hydrate Formation. Journal of Physical Chemistry B, 2004, 108, 16717-16722.  | 2.6 | 102       |
| 74 | Spinodal curve of some supercooled liquids. The Journal of Physical Chemistry, 1991, 95, 4540-4551.   | 2.9 | 101       |
| 75 | Influence of solute-solvent asymmetry upon the behavior of dilute supercritical mixtures. The Journal of Physical Chemistry, 1991, 95, 386-399.   | 2.9 | 98        |
| 76 | A Lattice Model of Network-Forming Fluids with Orientation-Dependent Bonding: Equilibrium, Stability, and Implications for the Phase Behavior of Supercooled Water. The Journal of Physical Chemistry, 1995, 99, 3781-3792. | 2.9 | 98        |
| 77 | Mathematical modeling of aerosol formation by rapid expansion of supercritical solutions in a converging nozzle. Journal of Aerosol Science, 1993, 24, 445-469.   | 3.8 | 97        |
| 78 | Evolution from Surface-Influenced to Bulk-Like Dynamics in Nanoscopically Confined Water. Journal of Physical Chemistry B, 2009, 113, 7973-7976.  | 2.6 | 97        |
| 79 | Mathematical modeling of nucleation and growth of particles formed by the rapid expansion of a supercritical solution under subsonic conditions. Journal of Supercritical Fluids, 2002, 23, 65-80.                          | 3.2 | 96        |
| 80 | Two-state thermodynamics of the ST2 model for supercooled water. Journal of Chemical Physics, 2014, 140, 104502.  | 3.0 | 96        |
| 81 | Pathways to dewetting in hydrophobic confinement. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8181-8186.  | 7.1 | 95        |
| 82 | Constraints, metastability, and inherent structures in liquids. Physical Review E, 1997, 55, 5522-5534.   | 2.1 | 94        |
| 83 | Water-like solvation thermodynamics in a spherically symmetric solvent model with two characteristic lengths. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20177-20182.      | 7.1 | 93        |
| 84 | Computational Investigation of Order, Structure, and Dynamics in Modified Water Modelsâ€. Journal of Physical Chemistry B, 2005, 109, 6527-6534.  | 2.6 | 88        |
| 85 | The liquid–liquid transition in supercooled ST2 water: a comparison between umbrella sampling and well-tempered metadynamics. Faraday Discussions, 2013, 167, 77.   | 3.2 | 85        |
| 86 | Statistical geometry of particle packings. II. "Weak spots―in liquids. Physical Review E, 1997, 56, 5533-5543.  | 2.1 | 83        |
| 87 | Lindemann measures for the solid-liquid phase transition. Journal of Chemical Physics, 2007, 126, 204508.   | 3.0 | 83        |
| 88 | Relaxation processes in liquids: Variations on a theme by Stokes and Einstein. Journal of Chemical Physics, 2013, 138, 12A526.  | 3.0 | 83        |
| 89 | Engineering pharmaceutical stability with amorphous solids. AICHE Journal, 2002, 48, 1140-1144.   | 3.6 | 82        |
| 90 | Supercritical antisolvent process for substituted para-linked aromatic polyamides: phase equilibrium and morphology study. Macromolecules, 1993, 26, 6207-6210.   | 4.8 | 81        |

| #   | Article  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 91  | A computational study of homogeneous liquid–vapor nucleation in the Lennard-Jones fluid. Journal of Chemical Physics, 1999, 111, 3581-3589.  | 3.0 | 81        |
| 92  | 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        |
| 93  | The molecular basis of temperature effects in supercritical extraction. AICHE Journal, 1988, 34, 645-657.  | 3.6 | 77        |
| 94  | Density-functional study of homogeneous bubble nucleation in the stretched Lennard-Jones fluid. Journal of Chemical Physics, 2001, 114, 4149-4159.   | 3.0 | 75        |
| 95  | Reversible work of formation of an embryo of a new phase within a uniform macroscopic mother phase. Journal of Chemical Physics, 1998, 108, 5498-5505.   | 3.0 | 70        |
| 96  | Energy landscape diversity and supercooled liquid properties. Journal of Chemical Physics, 2002, 116, 3353-3361.   | 3.0 | 70        |
| 97  | Nucleation in aqueous NaCl solutions shifts from 1-step to 2-step mechanism on crossing the spinodal. Journal of Chemical Physics, 2019, 150, 124502.  | 3.0 | 70        |
| 98  | Anomalous Capacitance Maximum of the Glassy Carbon–lonic Liquid Interface through Dilution with Organic Solvents. Journal of Physical Chemistry Letters, 2015, 6, 2644-2648.                                       | 4.6 | 69        |
| 99  | Secondary Structure Characterization of Microparticulate Insulin Powdersâ€. Journal of Pharmaceutical Sciences, 1994, 83, 1651-1656.   | 3.3 | 67        |
| 100 | Suppression of sub-surface freezing in free-standing thin films of a coarse-grained model of water. Physical Chemistry Chemical Physics, 2014, 16, 25916-25927.  | 2.8 | 65        |
| 101 | Integrating diffusion maps with umbrella sampling: Application to alanine dipeptide. Journal of Chemical Physics, 2011, 134, 135103.   | 3.0 | 64        |
| 102 | Free Energy Barriers to Evaporation of Water in Hydrophobic Confinement. Journal of Physical Chemistry B, 2012, 116, 13282-13289.  | 2.6 | 62        |
| 103 | Formation of cyclopentane methane binary clathrate hydrate in brine solutions. Chemical Engineering Science, 2016, 141, 125-132.   | 3.8 | 61        |
| 104 | Estimation of the Characteristic Time Scales in the Supercritical Antisolvent Process. Industrial & Engineering Chemistry Research, 2003, 42, 3156-3162.   | 3.7 | 60        |
| 105 | Non-monotonic dependence of water reorientation dynamics on surface hydrophilicity: competing effects of the hydration structure and hydrogen-bond strength. Physical Chemistry Chemical Physics, 2011, 13, 19911. | 2.8 | 60        |
| 106 | Concentration Fluctuations and Capacitive Response in Dense Ionic Solutions. Journal of Physical Chemistry Letters, 2016, 7, 2333-2338.  | 4.6 | 60        |
| 107 | Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 1. Cohesive Energy Density and Internal Pressure. Macromolecules, 1998, 31, 6991-6997.                                    | 4.8 | 59        |
| 108 | Theory of supercooled liquids and glasses: Energy landscape and statistical geometry perspectives. Advances in Chemical Engineering, 2001, 28, 21-79.  | 0.9 | 58        |

| #   | Article   | IF   | CITATIONS |
|-----|---|------|-----------|
| 109 | An Experimental and Computational Investigation of Spontaneous Lasso Formation in Microcin J25. Biophysical Journal, 2010, 99, 3056-3065.   | 0.5  | 58        |
| 110 | Computational investigation of surface freezing in a molecular model of water. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3316-3321.   | 7.1  | 58        |
| 111 | Comment on "The putative liquid-liquid transition is a liquid-solid transition in atomistic models of water―[I and II: J. Chem. Phys. 135, 134503 (2011); J. Chem. Phys. 138, 214504 (2013)]. Journal of Chemical Physics, 2018, 148, 137101. | 3.0  | 58        |
| 112 | Applications of Supercritical Fluids in the Controlled Release of Drugs. ACS Symposium Series, 1992, , 238-257.   | 0.5  | 57        |
| 113 | A kinetic theory of homogeneous bubble nucleation. Journal of Chemical Physics, 2003, 118, 768-783.   | 3.0  | 57        |
| 114 | The distribution of tetravalent network glasses. Molecular Physics, 1996, 88, 1293-1316.  | 1.7  | 56        |
| 115 | Effect of material flexibility on the thermodynamics and kinetics of hydrophobically induced evaporation of water. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2548-E2555.                   | 7.1  | 56        |
| 116 | Fluid-phase behavior of binary mixtures in which one component can have two critical points. Journal of Chemical Physics, 2006, 124, 154503.  | 3.0  | 55        |
| 117 | Computational probes of molecular motion in the Lewis-Wahnström model for ortho-terphenyl. Journal of Chemical Physics, 2006, 125, 174507.  | 3.0  | 55        |
| 118 | Molecular dynamics study of solute-solute microstructure in attractive and repulsive supercritical mixtures. Industrial & Engineering Chemistry Research, 1992, 31, 1391-1397.  | 3.7  | 54        |
| 119 | One substance, two liquids?. Nature, 1998, 392, 127-128.  | 27.8 | 54        |
| 120 | Dynamic heterogeneity and non-Gaussian behaviour in a model supercooled liquid. Journal of Physics Condensed Matter, 2005, 17, S4035-S4046.   | 1.8  | 54        |
| 121 | Energy landscapes, ideal glasses, and their equation of state. Journal of Chemical Physics, 2003, 118, 8821-8830.   | 3.0  | 53        |
| 122 | Recent advances in molecular simulation: A chemical engineering perspective. AICHE Journal, 2015, 61, 370-383.  | 3.6  | 53        |
| 123 | Systematic characterization of protein folding pathways using diffusion maps: Application to Trp-cage miniprotein. Journal of Chemical Physics, 2015, 142, 085101.  | 3.0  | 53        |
| 124 | Cross-flow, solid-state electrochemical reactors: a steady state analysis. Industrial & Engineering Chemistry Fundamentals, 1985, 24, 316-324.  | 0.7  | 52        |
| 125 | Role of Hydrophobic Hydration in Protein Stability: A 3D Water-Explicit Protein Model Exhibiting Cold and Heat Denaturation. Journal of Physical Chemistry B, 2012, 116, 8095-8104.   | 2.6  | 52        |
| 126 | Potential energy landscape signatures of slow dynamics in glass forming liquids. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 301-308.   | 2.6  | 50        |

| #   | Article  | IF  | Citations |
|-----|--|-----|-----------|
| 127 | A Calorimetric and Spectroscopic Study of DNA at Low Hydration. Journal of Physical Chemistry B, 2004, 108, 3098-3106.   | 2.6 | 50        |
| 128 | Structural and mechanical properties of glassy water in nanoscale confinement. Faraday Discussions, 2009, 141, 359-376.  | 3.2 | 49        |
| 129 | A computational study of metastability in vaporâ€"liquid equilibrium. Chemical Engineering Science, 1994, 49, 2717-2734.   | 3.8 | 48        |
| 130 | Structural order in glassy water. Physical Review E, 2005, 71, 061505.   | 2.1 | 48        |
| 131 | Evaporation Length Scales of Confined Water and Some Common Organic Liquids. Journal of Physical Chemistry Letters, 2011, 2, 1000-1003.  | 4.6 | 48        |
| 132 | Computational investigation of cold denaturation in the Trp-cage miniprotein. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8991-8996. | 7.1 | 48        |
| 133 | Infinite dilution fugacity coefficients and the general behavior of dilute binary systems. AICHE Journal, 1986, 32, 1253-1262.   | 3.6 | 47        |
| 134 | On the nature of the tensile instability in metastable liquids and its relationship to density anomalies. Journal of Chemical Physics, 1986, 84, 3339-3345.                          | 3.0 | 47        |
| 135 | Disproportionation of toluene over ZSM–5 under near-critical conditions. AICHE Journal, 1988, 34, 1211-1214.   | 3.6 | 47        |
| 136 | Phase transitions, Kauzmann curves, and inverse melting. Biophysical Chemistry, 2003, 105, 211-220.  | 2.8 | 47        |
| 137 | Forward flux sampling calculation of homogeneous nucleation rates from aqueous NaCl solutions. Journal of Chemical Physics, 2018, 148, 044505.                                       | 3.0 | 47        |
| 138 | On the use of the Verlet neighbor list in molecular dynamics. Computer Physics Communications, 1990, 60, 215-224.  | 7.5 | 46        |
| 139 | Waterlike glass polyamorphism in a monoatomic isotropic Jagla model. Journal of Chemical Physics, 2011, 134, 064507.   | 3.0 | 46        |
| 140 | Monte Carlo Simulations of High-Pressure Phase Equilibria of CO <sub>2</sub> –H <sub>2</sub> O Mixtures. Journal of Physical Chemistry B, 2011, 115, 6629-6635.                      | 2.6 | 45        |
| 141 | Supercritical Fluids: Fundamentals and Applications. , 1994, , 30-35.  |     | 45        |
| 142 | Protein purification with vapor-phase carbon dioxide., 1999, 62, 247-258.  |     | 44        |
| 143 | Local Density Augmentation in Supercritical Solutions. ACS Symposium Series, 1992, , 60-72.  | 0.5 | 43        |
| 144 | Simulations of vapor–liquid phase equilibrium and interfacial tension in the CO <sub>2</sub> –H <sub>2</sub> O–NaCl system. AICHE Journal, 2013, 59, 3514-3522.                      | 3.6 | 43        |

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|-----|---|-------------|-----------|
| 145 | A Water-Explicit Lattice Model of Heat-, Cold-, and Pressure-Induced Protein Unfolding. Biophysical Journal, 2007, 93, 4116-4127.   | 0.5         | 42        |
| 146 | Loss of tensile strength in liquids without property discontinuities: A thermodynamic analysis. Journal of Chemical Physics, 1987, 86, 2229-2235.   | 3.0         | 41        |
| 147 | Integral equation study of microstructure and solvation in model attractive and repulsive supercritical mixtures. Industrial & Engineering Chemistry Research, 1993, 32, 2118-2128.                         | 3.7         | 41        |
| 148 | Model Energy Landscapes. Journal of Physical Chemistry B, 2003, 107, 14434-14442.   | 2.6         | 40        |
| 149 | A computational investigation of the phase behavior and capillary sublimation of water confined between nanoscale hydrophobic plates. Journal of Chemical Physics, 2012, 137, 144501.                       | 3.0         | 40        |
| 150 | Molecular Dynamics Simulations of Water Sorption in a Perfluorosulfonic Acid Membrane. Journal of Physical Chemistry B, 2013, 117, 12649-12660.   | 2.6         | 40        |
| 151 | Combined molecular dynamics and neural network method for predicting protein antifreeze activity.  Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 13252-13257. | 7.1         | 40        |
| 152 | Steady-state analysis of high temperature fuel cells. Chemical Engineering Science, 1983, 38, 1817-1829.  | 3.8         | 39        |
| 153 | Stability and tensile strength of liquids exhibiting density maxima. AICHE Journal, 1988, 34, 447-455.  | 3.6         | 38        |
| 154 | Clustering in supercritical mixtures: Theory, applications and simulations. Fluid Phase Equilibria, 1989, 52, 347-356.  | 2.5         | 38        |
| 155 | Solids Formation After the Expansion of Supercritical Mixtures. ACS Symposium Series, 1989, , 355-378.  | 0.5         | 38        |
| 156 | Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 2. Pair Distribution Functions and the Regularity of Mixing. Macromolecules, 1998, 31, 6998-7002.                  | 4.8         | 38        |
| 157 | Properties of model atomic free-standing thin films. Journal of Chemical Physics, 2011, 134, 114524.  | 3.0         | 38        |
| 158 | Formation kinetics of cyclopentane–methane binary clathrate hydrate. Chemical Engineering Science, 2014, 119, 147-157.  | 3.8         | 37        |
| 159 | Computational Study of the Stability of the Miniprotein Trp-Cage, the GB1 $\hat{I}^2$ -Hairpin, and the AK16 Peptide, under Negative Pressure. Journal of Physical Chemistry B, 2014, 118, 7761-7769.       | 2.6         | 37        |
| 160 | Phase Equilibrium of Water with Hexagonal and Cubic Ice Using the SCAN Functional. Journal of Chemical Theory and Computation, 2021, 17, 3065-3077.   | <b>5.</b> 3 | 37        |
| 161 | Statistical geometry of cavities in a metastable confined fluid. Physical Review E, 2000, 62, 538-544.  | 2.1         | 36        |
| 162 | A statistical mechanical model for inverse melting. Journal of Chemical Physics, 2003, 119, 4582-4591.  | 3.0         | 36        |

| #   | Article  | IF   | CITATIONS |
|-----|--|------|-----------|
| 163 | When a phase is born. Nature, 2006, 441, 168-169.  | 27.8 | 36        |
| 164 | Distinguishing Vibrational and Structural Equilibration Contributions to Thermal Expansion. Journal of Physical Chemistry B, 1999, 103, 4052-4059.   | 2.6  | 35        |
| 165 | Resolving vibrational and structural contributions to isothermal compressibility. Journal of Chemical Physics, 1998, 109, 3983-3988.   | 3.0  | 34        |
| 166 | Flat-Histogram Dynamics and Optimization in Density of States Simulations of Fluidsâ€. Journal of Physical Chemistry B, 2004, 108, 19748-19755.  | 2.6  | 34        |
| 167 | Dissecting the Energetics of Hydrophobic Hydration of Polypeptides. Journal of Physical Chemistry B, 2011, 115, 14859-14865.   | 2.6  | 34        |
| 168 | Structure, dynamics, and thermodynamics of a family of potentials with tunable softness. Journal of Chemical Physics, 2011, 135, 084513.   | 3.0  | 34        |
| 169 | The effect of substrate on thermodynamic and kinetic anisotropies in atomic thin films. Journal of Chemical Physics, 2014, 141, 024506.  | 3.0  | 34        |
| 170 | Long-term and high-temperature storage of supercritically-processed microparticulate protein powders. Pharmaceutical Research, 1997, 14, 1370-1378.  | 3.5  | 33        |
| 171 | Structure and Energetics of Thin Film Water. Journal of Physical Chemistry C, 2011, 115, 4624-4635.  | 3.1  | 33        |
| 172 | Supercritical antisolvent process for a series of substituted para-linked aromatic polyamides. Macromolecules, 1995, 28, 1316-1317.  | 4.8  | 32        |
| 173 | Molecular dynamics simulation of infinitely dilute solutions of benzene in supercritical CO2. Fluid Phase Equilibria, 1996, 116, 282-288.  | 2.5  | 32        |
| 174 | Solid-State Stabilization of α-Chymotrypsin and Catalase with Carbohydrates. Industrial & Engineering Chemistry Research, 2006, 45, 5134-5147.   | 3.7  | 32        |
| 175 | Stability of proteins in the presence of carbohydrates; experiments and modeling using scaled particle theory. Biophysical Chemistry, 2007, 127, 51-63.  | 2.8  | 32        |
| 176 | Simultaneous Determination of Structural and Thermodynamic Effects of Carbohydrate Solutes on the Thermal Stability of Ribonuclease A. Journal of the American Chemical Society, 2004, 126, 11794-11795. | 13.7 | 31        |
| 177 | Density fluctuations in many-body systems. Physical Review E, 1998, 58, 7369-7380.   | 2.1  | 30        |
| 178 | Solute–solute correlations in infinitely dilute supercritical mixtures. Journal of Chemical Physics, 1992, 97, 504-507.  | 3.0  | 29        |
| 179 | Finite-size scaling study of the vapor-liquid critical properties of confined fluids: Crossover from three dimensions to two dimensions. Journal of Chemical Physics, 2010, 132, 144107.                 | 3.0  | 29        |
| 180 | On the relationship between principal fluctuations and stability coefficients in multicomponent systems. Journal of Chemical Physics, 1986, 84, 1778-1787.   | 3.0  | 28        |

| #   | Article  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 181 | On the entropy changes and fluctuations occurring near a tensile instability. Journal of Chemical Physics, 1986, 85, 4005-4010.  | 3.0 | 28        |
| 182 | Fluctuationâ€based computer calculation of partial molar properties. I. Molecular dynamics simulation of constant volume fluctuations. Journal of Chemical Physics, 1987, 86, 7126-7137.   | 3.0 | 28        |
| 183 | From molecular dynamics to coarse self-similar solutions: a simple example using equation-free computation. Journal of Non-Newtonian Fluid Mechanics, 2004, 120, 215-223.  | 2.4 | 28        |
| 184 | Effects of nonpolar solutes on the thermodynamic response functions of aqueous mixtures. Journal of Chemical Physics, 2005, 123, 164503.   | 3.0 | 28        |
| 185 | Thermodynamic mechanism for solution phase chiral amplification via a lattice model. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15131-15135.                                    | 7.1 | 28        |
| 186 | Hydrogen bond strength and network structure effects on hydration of non-polar molecules. Physical Chemistry Chemical Physics, 2011, 13, 2748-2757.  | 2.8 | 28        |
| 187 | Computational investigation of structure, dynamics and nucleation kinetics of a family of modified Stillinger–Weber model fluids in bulk and free-standing thin films. Physical Chemistry Chemical Physics, 2016, 18, 4102-4111. | 2.8 | 28        |
| 188 | The entropy of a network crystal, fluid and glass. Molecular Physics, 1994, 81, 237-249.   | 1.7 | 27        |
| 189 | A computational investigation of attrition-enhanced chiral symmetry breaking in conglomerate crystals. Journal of Chemical Physics, 2013, 139, 174503.   | 3.0 | 27        |
| 190 | A Comparison of the Predictive Capabilities of the Embedded-Atom Method and Modified Embedded-Atom Method Potentials for Lithium. Journal of Physical Chemistry B, 2015, 119, 8960-8968.   | 2.6 | 27        |
| 191 | Thermodynamic Anomalies in Stretched Water. Langmuir, 2017, 33, 11771-11778.   | 3.5 | 27        |
| 192 | Statistical mechanics of fluids under internal constraints: Rigorous results for the one-dimensional hard rod fluid. Physical Review E, 1998, 57, 4211-4226.   | 2.1 | 26        |
| 193 | Equation of State of the Energy Landscape of SPC/E Water. Journal of Physical Chemistry B, 1999, 103, 10258-10265.   | 2.6 | 26        |
| 194 | Molecular Dynamics Simulations of Water Permeation across Nafion Membrane Interfaces. Journal of Physical Chemistry B, 2014, 118, 8798-8807.   | 2.6 | 26        |
| 195 | Equilibrium, stability, and density anomalies in a lattice model with core-softening and directional bonding. The Journal of Physical Chemistry, 1993, 97, 6292-6303.  | 2.9 | 25        |
| 196 | Saddles in the Energy Landscape: Extensivity and Thermodynamic Formalism. Physical Review Letters, 2004, 92, 035506.   | 7.8 | 25        |
| 197 | Accurate prediction of clathrate hydrate phase equilibria below 300 K from a simple model. Journal of Petroleum Science and Engineering, 2006, 51, 45-53.  | 4.2 | 25        |
| 198 | Massively parallel chemical potential calculation on graphics processing units. Computer Physics Communications, 2012, 183, 2054-2062.   | 7.5 | 25        |

| #   | Article  | IF   | Citations |
|-----|--|------|-----------|
| 199 | The role of material flexibility on the drying transition of water between hydrophobic objects: A thermodynamic analysis. Journal of Chemical Physics, 2014, 141, 18C531.  | 3.0  | 25        |
| 200 | Free volume in the hard sphere liquid. Molecular Physics, 1998, 95, 289-297.   | 1.7  | 25        |
| 201 | Anomalies and Local Structure of Liquid Water from Boiling to the Supercooled Regime as Predicted by the Many-Body MB-pol Model. Journal of Physical Chemistry Letters, 2022, 13, 3652-3658.   | 4.6  | 25        |
| 202 | Persistence time for bonds in a tetravalent network fluid. Molecular Physics, 1995, 86, 1375-1386.   | 1.7  | 24        |
| 203 | Hydrate Molecular Ballet. Science, 2009, 326, 1070-1071.   | 12.6 | 24        |
| 204 | Liquid li structure and dynamics: A comparison between OFDFT and second nearestâ€neighbor embeddedâ€atom method. AICHE Journal, 2015, 61, 2841-2853.   | 3.6  | 24        |
| 205 | Perspective: Surface freezing in water: A nexus of experiments and simulations. Journal of Chemical Physics, 2017, 147, 060901.  | 3.0  | 24        |
| 206 | A novel fused metal anode solid electrolyte fuel cell for direct coal gasification: a steady-state model. Industrial & Description of the company of the com | 3.7  | 23        |
| 207 | Use of the McQuarrie equation for the computation of shear viscosity via equilibrium molecular dynamics. Physical Review A, 1991, 43, 4289-4295.   | 2.5  | 23        |
| 208 | Test of nonequilibrium thermodynamics in glassy systems: The soft-sphere case. Physical Review E, 2003, 68, 032103.  | 2.1  | 23        |
| 209 | A theoretical study of Gemini surfactant phase behavior. Journal of Chemical Physics, 1998, 109, 5651-5658.  | 3.0  | 22        |
| 210 | Isotropic tensile strength of molecular glasses. Journal of Chemical Physics, 2001, 114, 10049-10057.  | 3.0  | 22        |
| 211 | Structural and dynamic properties of liquid tin from a new modified embedded-atom method force field. Physical Review B, 2017, 95, .   | 3.2  | 22        |
| 212 | Compressibility Effects in the Analysis and Interpretation of Neutron Scattering Data from Polymer Blends. Macromolecules, 1996, 29, 764-773.  | 4.8  | 21        |
| 213 | Inherent-Structure View of Self-Diffusion in Liquids. Journal of Physical Chemistry B, 2004, 108, 6772-6777.   | 2.6  | 21        |
| 214 | Thermodynamics and the glass transition in model energy landscapes. Physical Review E, 2004, 69, 051102.   | 2.1  | 20        |
| 215 | Alternative View of Self-Diffusion and Shear Viscosityâ€. Journal of Physical Chemistry B, 2005, 109, 6604-6609.   | 2.6  | 20        |
| 216 | Molecular model for chirality phenomena. Journal of Chemical Physics, 2016, 145, 154503.   | 3.0  | 20        |

| #   | Article  | IF          | Citations |
|-----|--|-------------|-----------|
| 217 | Liquid–liquid criticality in the WAIL water model. Journal of Chemical Physics, 2022, 157, .   | 3.0         | 20        |
| 218 | The statistical geometry of voids in liquids. Fluid Phase Equilibria, 1999, 158-160, 549-556.  | 2.5         | 19        |
| 219 | Incoherent Quasi-elastic Neutron Scattering from Fructoseâ^'Water Solutions. Journal of Physical Chemistry B, 2001, 105, 7799-7804.  | 2.6         | 19        |
| 220 | Chiral symmetry breaking in a microscopic model with asymmetric autocatalysis and inhibition. Journal of Chemical Physics, 2010, 133, 224502.  | 3.0         | 19        |
| 221 | Water's two-critical-point scenario in the Ising paradigm. Journal of Chemical Physics, 2019, 150, 244509.   | 3.0         | 19        |
| 222 | On the performance of an automated Verlet neighbor list algorithm for large systems on a vector processor. Computer Physics Communications, 1991, 64, 15-18.   | <b>7.</b> 5 | 18        |
| 223 | Modeling simple amphiphilic solutes in a Jagla solvent. Journal of Chemical Physics, 2012, 136, 044511.  | 3.0         | 18        |
| 224 | Thermodynamic and kinetic anisotropies in octane thin films. Journal of Chemical Physics, 2015, 143, 214501.   | 3.0         | 18        |
| 225 | Insights into Hydrophobic Ion Pairing from Molecular Simulation and Experiment. ACS Nano, 2020, 14, 6097-6106.   | 14.6        | 18        |
| 226 | Scaled particle theory for hard sphere pairs. I. Mathematical structure. Journal of Chemical Physics, 2006, 125, 204504.   | 3.0         | 17        |
| 227 | A conformal solution theory for the energy landscape and glass transition of mixtures. Fluid Phase Equilibria, 2006, 241, 147-154.   | 2.5         | 17        |
| 228 | Palmer et al. reply. Nature, 2016, 531, E2-E3.   | 27.8        | 17        |
| 229 | The distribution of tetravalent network glasses. Molecular Physics, 1996, 88, 1293-1316.   | 1.7         | 17        |
| 230 | Fluctuationâ€based computer calculation of partial molar properties. II. A numerically accurate method for the determination of partial molar energies and enthalpies. Journal of Chemical Physics, 1988, 88, 2681-2684. | 3.0         | 16        |
| 231 | Triangle Distribution and Equation of State for Classical Rigid Disks. Journal of Statistical Physics, 2000, 100, 49-72.   | 1.2         | 16        |
| 232 | Molecular modeling of mechanical stresses on proteins in glassy matrices: Formalism. Journal of Chemical Physics, 2012, 137, 035103.   | 3.0         | 16        |
| 233 | Computer Simulation of Water Sorption on Flexible Protein Crystals. Journal of Physical Chemistry Letters, 2012, 3, 2713-2718.   | 4.6         | 16        |
| 234 | Molecular modeling and structural characterization of a high glycine–tyrosine hair keratin associated protein. Physical Chemistry Chemical Physics, 2017, 19, 8575-8583.   | 2.8         | 16        |

| #   | Article  | IF   | Citations |
|-----|--|------|-----------|
| 235 | Communication: Nucleation rates of supersaturated aqueous NaCl using a polarizable force field. Journal of Chemical Physics, 2018, 149, 141102.  | 3.0  | 16        |
| 236 | Supercritical Fluids as Particle Formation Media. , 1994, , 719-729.   |      | 16        |
| 237 | The effect of sequence on the conformational stability of a model heteropolymer in explicit water. Journal of Chemical Physics, 2008, 128, 175102.   | 3.0  | 15        |
| 238 | Temperature and length scale dependence of solvophobic solvation in a single-site water-like liquid. Journal of Chemical Physics, 2013, 138, 064506.   | 3.0  | 15        |
| 239 | Computational investigation of dynamical transitions in Trp-cage miniprotein powders. Scientific Reports, 2016, 6, 25612.  | 3.3  | 15        |
| 240 | Thermodynamics of DNA Hybridization from Atomistic Simulations. Journal of Physical Chemistry B, 2021, 125, 771-779.   | 2.6  | 15        |
| 241 | Energy Landscape and Isotropic Tensile Strength ofn-Alkane Glasses. Journal of Physical Chemistry B, 2002, 106, 10447-10459.   | 2.6  | 14        |
| 242 | Water anomalous thermodynamics, attraction, repulsion, and hydrophobic hydration. Journal of Chemical Physics, 2016, 144, 164501.  | 3.0  | 14        |
| 243 | Density and bond-orientational relaxations in supercooled water. Molecular Physics, 2016, 114, 2580-2585.  | 1.7  | 14        |
| 244 | A free energy study of the liquid-liquid phase transition of the Jagla two-scale potential. Journal of Chemical Sciences, 2017, 129, 801-823.  | 1.5  | 14        |
| 245 | Manifestations of metastable criticality in the long-range structure of model water glasses. Nature Communications, 2021, 12, 3398.  | 12.8 | 14        |
| 246 | Metastability and Constraints: A Study of the Superheated Leonard-Jones Liquid in the Void-Constrained Ensemble. Industrial & Engineering Chemistry Research, 1995, 34, 3573-3580.                           | 3.7  | 13        |
| 247 | Liquidâ^'Liquid Immiscibility in Single-Component Network-Forming Fluids:Â Model Calculations and Implications for Polyamorphism in Water. Industrial & Engineering Chemistry Research, 1998, 37, 3012-3020. | 3.7  | 13        |
| 248 | A Theoretical Study of the Interfacial Properties of Supercooled Water. Industrial & Engineering Chemistry Research, 2003, 42, 6396-6405.  | 3.7  | 13        |
| 249 | Reply to Comment on ÂSupercooled and glassy waterÂ. Journal of Physics Condensed Matter, 2004, 16, 6815-6817.  | 1.8  | 13        |
| 250 | Generating inherent structures of liquids: Comparison of local minimization algorithms. Journal of Chemical Physics, 2005, 123, 206101.  | 3.0  | 13        |
| 251 | Scaled particle theory for hard sphere pairs. II. Numerical analysis. Journal of Chemical Physics, 2006, 125, 204505.  | 3.0  | 13        |
| 252 | Chemical physics of water. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13325-13326.  | 7.1  | 13        |

| #   | Article   | lF              | CITATIONS |
|-----|---|-----------------|-----------|
| 253 | Communication: Relationship between local structure and the stability of water in hydrophobic confinement. Journal of Chemical Physics, 2017, 147, 241102.  | 3.0             | 13        |
| 254 | Low temperature protein refolding suggested by molecular simulation. Journal of Chemical Physics, 2019, 151, 185101.  | 3.0             | 13        |
| 255 | Response to "Comment on â€~Reversible work of formation of an embryo of a new phase within a uniform macroscopic mother phase' ―[J. Chem. Phys. 111, 3769 (1999)]. Journal of Chemical Physics, 111, 3771-3772. | .9 <b>9.0</b> , | 12        |
| 256 | Structure, dynamics and thermodynamics in complex systems: Theoretical challenges and opportunities. AICHE Journal, 2005, 51, 2391-2395.  | 3.6             | 12        |
| 257 | Physics and chemistry of water and ice. Physical Chemistry Chemical Physics, 2011, 13, 19660.   | 2.8             | 12        |
| 258 | Stretched to the limit. Nature Physics, 2013, 9, 7-8.   | 16.7            | 12        |
| 259 | A Coarse-Grained Protein Model in a Water-like Solvent. Scientific Reports, 2013, 3, 1841.  | 3.3             | 12        |
| 260 | Chain-packing effects in the thermodynamics of polymers. Journal of Polymer Science, Part B: Polymer Physics, 1998, 36, 3001-3005.  | 2.1             | 11        |
| 261 | Phase Separation By Nucleation and Ly Spinodal Decomposition: Fundamentals. , 2000, , 123-166.  |                 | 11        |
| 262 | Computational characterization of the sequence landscape in simple protein alphabets. Proteins: Structure, Function and Bioinformatics, 2005, 62, 232-243.  | 2.6             | 11        |
| 263 | Viscosity of Nafion Oligomers as a Function of Hydration and Counterion Type: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2014, 118, 13981-13991.  | 2.6             | 11        |
| 264 | Computational Investigation of the Effect of Pressure on Protein Stability. Journal of Physical Chemistry Letters, 2019, 10, 1894-1899.   | 4.6             | 11        |
| 265 | Structure–energy relations in hen egg white lysozyme observed during refolding from a quenched unfolded state. Chemical Communications, 2009, , 4441.   | 4.1             | 10        |
| 266 | Creation and Persistence of Chiral Asymmetry in a Microscopically Reversible Molecular Model. Journal of Physical Chemistry B, 2013, 117, 602-614.  | 2.6             | 10        |
| 267 | Computational Investigation of the Effect of Backbone Chiral Inversions on Polypeptide Structure. Journal of Physical Chemistry B, 2018, 122, 6357-6363.  | 2.6             | 10        |
| 268 | An automated Verlet neighbor list algorithm with a multiple time-step approach for the simulation of large systems. Computer Physics Communications, 1992, 70, 467-477.   | 7.5             | 9         |
| 269 | Freeze Crystallization of Imipenem. Journal of Pharmaceutical Sciences, 1996, 85, 174-177.  | 3.3             | 9         |
| 270 | Compressibility Effects in Neutron Scattering by Polymer Blends. Macromolecules, 1997, 30, 6943-6946.   | 4.8             | 9         |

| #   | Article  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 271 | A Computational Study of the Effect of Matrix Structural Order on Water Sorption by Trp-Cage Miniproteins. Journal of Physical Chemistry B, 2015, 119, 1847-1856.  | 2.6 | 9         |
| 272 | A computational investigation of the thermodynamics of the Stillinger-Weber family of models at supercooled conditions. Molecular Physics, 2019, 117, 3254-3268.   | 1.7 | 9         |
| 273 | Effect of heterochiral inversions on the structure of a βâ€hairpin peptide. Proteins: Structure, Function and Bioinformatics, 2019, 87, 569-578.   | 2.6 | 9         |
| 274 | Pattern of property extrema in supercooled and stretched water models and a new correlation for predicting the stability limit of the liquid state. Journal of Chemical Physics, 2019, 150, 064503.                          | 3.0 | 9         |
| 275 | Interconversion-controlled liquid–liquid phase separation in a molecular chiral model. Journal of Chemical Physics, 2021, 155, 204502.   | 3.0 | 9         |
| 276 | The statistical mechanical theory of concentration fluctuations in mixtures. Journal of Chemical Physics, 1987, 87, 1256-1260.   | 3.0 | 8         |
| 277 | Thermodynamic stability of singleâ€phase fluids and fluid mixtures under the influence of gravity.<br>Journal of Chemical Physics, 1988, 89, 6881-6888.  | 3.0 | 8         |
| 278 | A Study of Solute-Solvent Interactions at Infinite Dilution via the Coupling Parameter Approach. Molecular Simulation, 1991, 7, 265-283.   | 2.0 | 8         |
| 279 | A Computational Study of the Ionic Liquid-Induced Destabilization of the Miniprotein Trp-Cage. Journal of Physical Chemistry B, 2018, 122, 5707-5715.  | 2.6 | 8         |
| 280 | Water's Thermal Pressure Drives the Temperature Dependence of Hydrophobic Hydration. Journal of Physical Chemistry B, 2018, 122, 3620-3625.  | 2.6 | 8         |
| 281 | Effect of configuration-dependent multi-body forces on interconversion kinetics of a chiral tetramer model. Journal of Chemical Physics, 2021, 155, 084105.  | 3.0 | 8         |
| 282 | A cavitation transition in the energy landscape of simple cohesive liquids and glasses. Journal of Chemical Physics, 2016, 145, 211905.  | 3.0 | 7         |
| 283 | Characterization of the liquid Li-solid Mo ( $1\hat{a}\in\%.1\hat{a}\in\%.0$ ) interface from classical molecular dynamics for plasma-facing applications. Nuclear Fusion, 2017, 57, 116036.                                 | 3.5 | 7         |
| 284 | Thermodynamic analysis of the stability of planar interfaces between coexisting phases and its application to supercooled water. Journal of Chemical Physics, 2019, 150, 224503.   | 3.0 | 7         |
| 285 | Thermodynamics and kinetics of crystallization in deeply supercooled Stillinger–Weber silicon. Journal of Chemical Physics, 2021, 155, 194502.   | 3.0 | 7         |
| 286 | Derivation of operational definitions for the computer calculation of partial molar properties in multicomponent mixtures. Chemical Physics Letters, 1986, 132, 325-329.   | 2.6 | 6         |
| 287 | A molecular dynamics study of the influence of elongation and quadrupole moment upon some thermodynamic and transport properties of linear heteronuclear triatomic fluids. Journal of Chemical Physics, 1989, 91, 7818-7830. | 3.0 | 6         |
| 288 | Fluctuation Simulations and the Calculation of Mechanical Partial Molar Properties. Molecular Simulation, 1989, 2, 33-53.  | 2.0 | 6         |

| #   | Article   | IF                 | CITATIONS |
|-----|---|--------------------|-----------|
| 289 | Equation of state of the rigid disk fluid from its triangle distribution. Journal of Chemical Physics, 2000, 113, 10186-10190.  | 3.0                | 6         |
| 290 | Method for Efficient Computation of the Density of States in Water-Explicit Biopolymer Simulations on a Lattice. Journal of Physical Chemistry A, 2007, 111, 12651-12658.           | 2.5                | 6         |
| 291 | Cavitation transition in the energy landscape: Distinct tensile yielding behavior in strongly and weakly attractive systems. Journal of Chemical Physics, 2018, 148, 114501.        | 3.0                | 6         |
| 292 | The Handedness of DNA Assembly around Carbon Nanotubes Is Determined by the Chirality of DNA. Journal of Physical Chemistry B, 2020, 124, 5362-5369.                                | 2.6                | 6         |
| 293 | Generalized Massieu–Planck functions: Geometric representation, extrema and uniqueness properties.<br>Journal of Chemical Physics, 1986, 85, 2132-2139.                             | 3.0                | 5         |
| 294 | Response to "Comment on â€~A simple molecular thermodynamic theory of hydrophobic hydration' â€Chem. Phys. 119, 10448 (2003)]. Journal of Chemical Physics, 2003, 119, 10450-10451. | •[] <sub>3.0</sub> | 5         |
| 295 | A Computational Study of RNA Tetraloop Thermodynamics, Including Misfolded States. Journal of Physical Chemistry B, 2021, 125, 13685-13695.   | 2.6                | 5         |
| 296 | Effects of disulfide bridges and backbone connectivity on water sorption by protein matrices. Scientific Reports, 2017, 7, 7957.  | 3.3                | 4         |
| 297 | Computational investigation of retroâ€isomer equilibrium structures: Intrinsically disordered, foldable, and cyclic peptides. FEBS Letters, 2020, 594, 104-113.                     | 2.8                | 4         |
| 298 | Genetic Algorithm Approach for the Optimization of Protein Antifreeze Activity Using Molecular Simulations. Journal of Chemical Theory and Computation, 2020, 16, 7866-7873.        | <b>5.</b> 3        | 4         |
| 299 | Effects of Compressed Carbon Dioxide on the Phase Equilibrium and Molecular Order of a Lyotropic Polyamide Solution. Macromolecules, 1996, 29, 4904-4909.                           | 4.8                | 3         |
| 300 | Comment on "Observations on an equation of state for water confined in narrow slit-pores―[J. Chem. Phys. 116, 2565 (2002)]. Journal of Chemical Physics, 2002, 117, 8162-8163.      | 3.0                | 3         |
| 301 | Phase Behavior of a Lattice Hydrophobic Oligomer in Explicit Water. Journal of Physical Chemistry B, 2012, 116, 9540-9548.  | 2.6                | 3         |
| 302 | Microscopic Origin of Hysteresis in Water Sorption on Protein Matrices. Journal of Physical Chemistry Letters, 2017, 8, 1185-1190.  | 4.6                | 3         |
| 303 | Effects of Trehalose on Lipid Membranes under Rapid Cooling using All-Atom and Coarse-Grained Molecular Simulations. Journal of Physical Chemistry B, 2021, 125, 5346-5357.         | 2.6                | 3         |
| 304 | Thermal Expansion and Stability Limits of Generalized van der Waals Fluids. The Journal of Physical Chemistry, 1994, 98, 6876-6884.   | 2.9                | 2         |
| 305 | A molecular dynamics study of intermolecular structure, thermodynamics and miscibility in hydrocarbon polymers. Computers and Chemical Engineering, 1998, 22, S19-S26.              | 3.8                | 2         |
| 306 | Direct coal gasification with simultaneous production of electricity in a novel fused metal anode SOFC: a theoretical approach. lonics, 1999, 5, 460-471.                           | 2.4                | 2         |

| #   | Article   | IF   | CITATIONS |
|-----|---|------|-----------|
| 307 | Frank H. Stillinger, Theoretical Chemist:Â A Tribute. Journal of Physical Chemistry B, 2004, 108, 19569-19570.  | 2.6  | 2         |
| 308 | Reply to "Comment on Test of nonequilibrium thermodynamics in glassy systems: The soft-sphere case― Physical Review E, 2005, 71, .  | 2.1  | 2         |
| 309 | Preparation of Microparticulates Using Supercritical Fluids. , 2020, , 89-125.  |      | 2         |
| 310 | Plea for Argentinians. Nature, 1976, 262, 253-253.  | 27.8 | 1         |
| 311 | Comment on   Entropy catastrophe and configurational entropies in supercooled and superheated regimes'' [J. Chem. Phys. 101, 7037 (1994)]. Journal of Chemical Physics, 1996, 104, 5349-5350. | 3.0  | 1         |
| 312 | In Honor of Charles A. Eckert. Industrial & Engineering Chemistry Research, 2003, 42, 6263-6266.  | 3.7  | 1         |
| 313 | Novel Computational Probes of Diffusive Motion. Journal of Physical Chemistry B, 2005, 109, 21329-21333.  | 2.6  | 1         |
| 314 | Computational Investigation of the Effect of Backbone Chiral Inversions on Polypeptide Structure. Biophysical Journal, 2019, 116, 46a.  | 0.5  | 1         |
| 315 | Stability of Protein Structure during Nanocarrier Encapsulation: Insights on Solvent Effects from Simulations and Spectroscopic Analysis. ACS Nano, 2020, 14, 16962-16972.                    | 14.6 | 1         |
| 316 | Recent Developments in the Theory of Amorphous Aqueous Systems. ChemInform, 2003, 34, no.   | 0.0  | 0         |
| 317 | Culmination of the 50th year and some changes for the 51st year. AICHE Journal, 2005, 51, 1836-1838.  | 3.6  | 0         |
| 318 | Preface to perspectives. AICHE Journal, 2005, 51, 2370-2370.  | 3.6  | 0         |
| 319 | Preface to perspectives. AICHE Journal, 2005, 51, 3082-3082.  | 3.6  | 0         |
| 320 | In Honor of Eduardo Glandt. Industrial & Engineering Chemistry Research, 2006, 45, 5419-5420.   | 3.7  | 0         |
| 321 | Bill Russel:Â A Tribute. Industrial & Engineering Chemistry Research, 2006, 45, 6877-6879.  | 3.7  | 0         |
| 322 | Properties of Liquids Made from Modified Water Models., 2010,, 89-99.   |      | 0         |
| 323 | Tribute to H. Eugene Stanley. Journal of Physical Chemistry B, 2011, 115, 13963-13964.  | 2.6  | 0         |
| 324 | Thermal Stability of Hydrophobic Helical Oligomers: A Lattice Simulation Study in Explicit Water. Journal of Physical Chemistry B, 2012, 116, 9963-9970.                                      | 2.6  | 0         |

| #   | Article  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 325 | Solute-Solute Interactions: Theory and Simulations. , 1994, , 439-445.   |     | O         |
| 326 | Recent developments in the theory of amorphous aqueous systems. Special Publication - Royal Society of Chemistry, 2007, , 115-120. | 0.0 | 0         |