

Thomas M. Truskett

University of Texas at Austin
1 University Station C0400
Austin, TX 78712 U.S.A.
Phone: 512-471-6308
Fax: 512-471-7060
email: truskett@che.utexas.edu
url: <http://www.truskettgroup.com>

Publications

Articles in peer-reviewed journals

citation data from my public profile on [Google Scholar](#)

- 2018 C. A. Saez Cabezas, G. K. Ong, R. B. Jadrich, B. A. Lindquist, A. Agrawal, **T. M. Truskett**, and D. J. Milliron, Gelation of plasmonic metal oxide nanocrystals by polymer-induced depletion attractions. *Proceedings of the National Academy of Sciences, USA*, <https://doi.org/10.1073/pnas.1806927115> (August)
- 2018 B. A. Lindquist, R. B. Jadrich, and **T. M. Truskett**, Communication: From close-packed to topologically close-packed: Formation of Laves phases in moderately polydisperse hard-sphere mixtures. *Journal of Chemical Physics* **148**, 191101 (May) [Cover]
- 2018 J. J. Hung, B. J. Dear, A. K. Dinin, A. U. Borwankar, S. K. Mehta, **T. M. Truskett**, and K. P. Johnston, Improving Viscosity and Stability of a Highly Concentrated monoclonal antibody solution with concentrated proline, *Pharmaceutical Research* **35**, 133 (April)
- 2018 B. A. Lindquist, R. B. Jadrich, and **T. M. Truskett**, Inverse design of self-assembling Frank-Kasper phases and insights into emergent quasicrystals. *Journal of Physical Chemistry B* **122**, 5547-5556 (March)
- 2018 W. D. Piñeros, B. A. Lindquist, R. B. Jadrich, and **T. M. Truskett**, Inverse design of multicomponent assemblies. *Journal of Chemical Physics* **148**, 104509 (March) [Scilight]
- 2017 W. P. Krekelberg, D. W. Siderius, V. K. Shen, **T. M. Truskett**, and J. R. Errington, Position-dependent dynamics explain pore-averaged diffusion in strongly attractive adsorptive systems. *Langmuir* **33**, 13955-13963 (November)
- 2017 W. D. Piñeros, R. B. Jadrich, and **T. M. Truskett**, Design of two-dimensional particle assemblies using isotropic pair interactions with an attractive well. *AIP Advances* **7**, 115307 (November)
- 2017 E. Moaseri, J. A. Bollinger, B. Chagalvaie, J. Schroer, K. P. Johnston, and **T. M. Truskett**, Reversible self-assembly of gold nanoparticle clusters via pH-tunable interactions between glutathione and citrate. *Langmuir* **33**, 12244-12253 (October)
- 2017 J. R. Laber, B. J. Dear, J. D. Gollihar, M. L. Martins, D. E. Jackson, A. D. Ellington, **T. M. Truskett**, K. P. Johnston and J. A. Maynard, Charge shielding prevents aggregation of supercharged GFP variants at high concentration. *Molecular Pharmaceutics* **14**, 3269-3280 (September)
- 2017 W. P. Krekelberg, D. W. Siderius, V. K. Shen, **T. M. Truskett**, and J. R. Errington, Connection between thermodynamics and dynamics of simple fluids in pores: Impact of fluid-fluid interaction range and fluid-solid interaction strength. *Journal of Physical Chemistry C* **121**, 16316-16327 (July)
- 2017 R. B. Jadrich, B. A. Lindquist, and **T. M. Truskett**, Probabilistic inverse design for self-

- assembling materials. [Journal of Chemical Physics](#) **146**, 184103 (May) [Cover][AIP press release]
- 2017 W. D. Piñeros and **T. M. Truskett**, Designing pairwise interactions that stabilize open crystals: Truncated square and truncated hexagonal lattices. [Journal of Chemical Physics](#) **146**, 144501 (April)
- 2017 E. Moaseri, R. J. Stover, B. Changalvaie, A. Cepeda, **T. M. Truskett**, K. V. Sokolov, and K. P. Johnston, Control of primary particle spacing in gold nanoparticle clusters for both high NIR extinction and full reversibility. [Langmuir](#) **33**, 3413–3426 (March)
- 2017 B. A. Lindquist, S. Dutta, R. B. Jadrich, D. J. Milliron, and **T. M. Truskett**, Interactions and design rules for assembly of porous colloidal mesophases. [Soft Matter](#) **13**, 1335 - 1343 (February) [Cover]
- 2017 B. J. Dear, J. J. Hung, **T. M. Truskett**, K. P. Johnston, Contrasting the influence of cationic amino acids on the viscosity and stability of a highly concentrated monoclonal antibody. [Pharmaceutical Research](#) **34**, 193-207 (January)
- 2016 Y. Yu, A. Guillaussier, V. R. Voggu, W. Pinerros, **T. M. Truskett**, D. M. Smilgies, and B. A. Korgel, Cooling dodecanethiol-capped 2 nm diameter gold nanocrystal superlattices below room temperature induces a reversible order-disorder structure transition. [Journal of Physical Chemistry C](#) **120** 27682 - 27687 (November)
- 2016 Y. Yu, X. Lu, A. Guillaussier, V. R. Voggu, W. Pinerros, M. de la Mata, J. Arbiol, D. M. Smilgies, **T.M. Truskett**, and B. A. Korgel, Orientationally ordered silicon nanocrystal cuboctahedra in superlattices. [Nano Letters](#) **16**, 7814–7821 (November)
- 2016 J. A. Bollinger, J. Carmer, A. Jain, and **T. M. Truskett**, Impact of solventgranularity and layering on tracer hydrodynamics in confinement. [Soft Matter](#) **12** 9561-9574 (November)
- 2016 B. A. Lindquist, R. B. Jadrich, and **T. M. Truskett**, Inverse design for self assembly via on- the-fly optimization. [Journal of Chemical Physics](#) **145**, 111101 (September) [2016 Editors' Choice]
- 2016 R. B. Jadrich, B. A. Lindquist, J. A. Bollinger, and **T. M. Truskett**, Consequences of minimising pair correlations in fluids for dynamics, thermodynamics, and structure. [Molecular Physics](#) **114**, 2411-2423 (September)
- 2016 A. U. Borwankar, B. J Dear, A. Twu, J. J Hung, A. K. Dinin, B. K. Wilson, J. Yue, J. A. Maynard, **T.M. Truskett**, and K. P. Johnston, Viscosity reduction of a concentrated monoclonal antibody with arginine·HCl and arginine·glutamate. [Industrial and Engineering Chemistry and Research](#) **55** 11225–11234 (August)
- 2016 B. A. Lindquist, R. B. Jadrich, D. J. Milliron, and **T. M. Truskett**, On the formation of equilibrium gels via a macroscopic bond limitation. [Journal of Chemical Physics](#) **145**, 074906 (August)
- 2016 J. A. Bollinger and **T. M. Truskett**, Fluids with competing interactions: I. Decoding the structure factor to detect and characterize self-limited clustering. [Journal of Chemical Physics](#) **145**, 064902 (August)
- 2016 J. A. Bollinger and **T. M. Truskett**, Fluids with competing interactions: II. Validating a free energy model for equilibrium cluster size. [Journal of Chemical Physics](#) **145**, 064903 (August)
- 2016 W. D. Piñeros, M. Baldea, and **T. M. Truskett**, Designing convex repulsive pair potentials that favor assembly of kagome and snub square lattices. [Journal of Chemical Physics](#) **145**, 054901 (August)
- 2016 M. E. Ferraro, **T. M. Truskett**, and R. T. Bonnecaze, Graphoepitaxy for translational and orientational ordering of monolayers of rectangular nanoparticles. [Physical Review E](#) **93**, 032606 (March)
- 2016 J. J Hung; A. U. Borwankar, B. J Dear, **T. M. Truskett**, and K. P. Johnston, High concentration tangential flow ultrafiltration of stable monoclonal antibody solutions

- with low viscosities. [Journal of Membrane Science](#) **508** 113–126 (February)
- 2016 W. D. Piñeros, M. Baldea, and **T. M. Truskett**, Breadth versus depth: Interactions that stabilize particle assemblies to changes in density or temperature. [Journal of Chemical Physics](#) **144**, 084502 (February)
- 2016 B. A. Lindquist, R. B. Jadrich, and **T. M. Truskett**, Assembly of nothing: Equilibrium fluids with designed structured porosity. [Soft Matter](#) **12**, 2663 - 2667 (February)
- 2016 R. J. Stover, E. Moaseri, S. Gourisankar, M. Iqbal, N. K. Rahbar, B. Changalvaie, **T. M. Truskett**, and K. P. Johnston, Formation of small gold nanoparticle chains with high NIR extinction through bridging with calcium ions. [Langmuir](#) **32**, 1127–1138 (January)
- 2016 A. J. Worthen, V. Tran, K. A. Cornell, **T. M. Truskett**, K. P. Johnston, Steric stabilization of nanoparticles with grafted low molecular weight ligands in highly concentrated brines including divalent ions. [Soft Matter](#) **12**, 2025-2039 (January)
- 2015 A. U. Borwankar, B. W. Willsey, A. Twu, J. J. Hung, R. J. Stover, T. W. Wang, M. D. Feldman, T.E. Milner, **T. M. Truskett**, and K. P. Johnston, Gold nanoparticles with high densities of small protuberances on nanocluster cores with strong NIR extinction. [RSC Advances](#) **5**, 104674-104687 (December)
- 2015 A. Singh, B. A. Lindquist, G. K. Ong, R. B. Jadrich, A. Singh, H. Ha, C. J. Ellison, **T. M. Truskett**, and D. J. Milliron, Linking semiconductor nanocrystals into gel networks through all- inorganic bridges. [Angewandte Chemie International Edition](#) **54**, 14840–14844 (December)
- 2015 R. B. Jadrich, J. A. Bollinger, B. A. Lindquist, and **T. M. Truskett**, Equilibrium cluster fluids: Pair interactions via inverse design [Soft Matter](#) **11**, 9342 - 9354 (September)
- 2015 J. A. Bollinger, A. Jain, and **T. M. Truskett**, How local and average particle diffusivities of inhomogeneous fluids depend on microscopic dynamics. [Journal of Physical Chemistry B](#) **119**, 9103–9113 (July)
- 2015 J. A. Bollinger, A. Jain, J. Carmer, and T. M. Truskett, Local structure-mobility relationships of confined fluids reverse upon supercooling. [Journal of Chemical Physics](#) **142**, 161102 (April)
- 2015 K. B. Hollingshead and **T. M. Truskett**, Predicting the structure of fluids with piecewise constant interactions: Comparing the accuracy of five efficient integral equation theories. [Physical Review E](#) **91**, 043307 (April)
- 2015 R. B. Jadrich, J. A. Bollinger, K. P. Johnston, and **T. M. Truskett**, Origin and detection of microstructural clustering in fluids with spatial-range competitive interactions. [Physical Review E](#) **91**, 042312 (April)
- 2015 J. Carmer, A Jain, J. A. Bollinger, F. van Swol, T. M. Truskett, Tuning structure and mobility of solvation shells surrounding tracer additives. [Journal of Chemical Physics](#) **142**, 124501 (March)
- 2015 T. R. Popp III, K. B. Hollingshead, and **T. M. Truskett**, Web applet for predicting structure and thermodynamics of complex fluids. [American Journal of Physics](#) **83**, 219 (February)
- 2015 Y. Yu, A. Jain, A. Guillaussier, V. Reddy, **T. M. Truskett**, D. Smilgies and B. A. Korgel, Nanocrystal superlattices that exhibit improved order on heating: An example of inverse melting? [Faraday Discussions](#) **181**, 181-192 (January)
- 2015 G. Yu, J. Dong, L. M. Foster, A. E. Metaxas, **T. M. Truskett** and K. P. Johnston, Breakup of oil jets into droplets in seawater with environmentally benign nanoparticle and surfactant dispersants. [Industrial & Engineering Chemistry Research](#) **54**, 4243–4251 (November 2014)
- 2014 A. Jain, J. R. Errington, and **T. M. Truskett**, Dimensionality and design of isotropic interactions that stabilize honeycomb, square, simple cubic, and diamond lattices. [Physical Review X](#) **4**, 031049 (September) Please also see [erratum](#)
- 2014 S. Kalyoncu, J. Hyun, J. C. Pai, J. L. Johnson, K. Etminger, A. Jain, D. Heaner Jr., I. A.

- Morales, **T.M. Truskett**, J. A. Maynard, and R. L. Lieberman, Effects of protein engineering and rational mutagenesis on crystal lattice of single chain antibody fragments: Implications for membrane protein crystallization chaperones. *Proteins: Structure, Function, and Bioinformatics* **82**, 1884–1895 (September)
- 2014 L. M. Foster, A. J. Worthen, E. Foster, J. Dong, C. Roach, A. Metaxas, C. Hardy, E. Larsen, J. A. Bollinger, **T. M. Truskett**, C. W. Bielawski, and K. P. Johnston, High interfacial activity of polymers “grafted through” functionalized iron oxide nanoparticle clusters. *Langmuir* **30**, 10188–10196 (August)
- 2014 M. E. Ferraro, R. T. Bonnecaze, and **T. M. Truskett**, Graphoepitaxy for pattern multiplication of nanoparticle monolayers. *Physical Review Letters* **113**, 085503 (August)
- 2014 A. Jain, J. A. Bollinger, and **T. M. Truskett**, Perspective: Inverse methods for material design. *AIChE Journal* **60** 2732-2740 (August) (highlighted in *Chemical Engineering Progress*)
- 2014 J. Carmer, Frank B. van Swol, and **T. M. Truskett**, Note: Position-dependent pair diffusivity profiles from steady-state solutions of color reaction-counterdiffusion problems. *Journal of Chemical Physics* **141**, 046101 (July)
- 2014 J. A. Bollinger, A. Jain, and **T. M. Truskett**, Structure, thermodynamics, and position-dependent diffusivity in fluids with sinusoidal density variations. *Langmuir* **30**, 8247–8252 (July)
- 2014 J. Dong, A. J. Worthen, L. M. Foster, Y. Chen, K. A. Cornell, S. L. Bryant, **T. M. Truskett**, C. W. Bielawski, and K. P. Johnston, Modified montmorillonite clay microparticles for stable oil- in-seawater emulsions. *ACS Applied Materials and Interfaces* **6**, 11502–11513 (June)
- 2014 A. K. Murthy, R. J. Stover, G. D. Nie, S. Gourisankar, **T. M. Truskett**, K. V. Sokolov, and K. P. Johnston, Quenched assembly of NIR active gold nanoclusters capped with strongly bound ligands by tuning particle charge via pH and salinity. *Journal of Physical Chemistry C* **118**, 14291–14298 (June)
- 2014 A. J. Worthen, L. M. Foster, J. A. Bollinger, J. Dong, A. H. Peterman, L. E. Pastora, S. L. Bryant, **T. M. Truskett**, C. W. Bielawski, and K. P. Johnston, Synergistic formation and stabilization of oil-in-water emulsions by a weakly-interacting mixture of zwitterionic surfactant and silica nanoparticles. *Langmuir* **30**, pp 984–994 (January)
- 2013 W. P. Krekelberg, V. K. Shen, D. W. Siderius, **T. M. Truskett**, and J. R. Errington, Connection between thermodynamics and dynamics of simple fluids in highly attractive pores. *Langmuir* **29**, 14527–14535 (December)
- 2013 T. S. Ingebrigtsen, J. R. Errington, **T. M. Truskett**, and J. C. Dyre, Predicting the relaxation time of a nanoconfined supercooled liquid. *Physical Review Letters* **111**, 235901 (December)
- 2013 K. B. Hollingshead, A. Jain, and **T. M. Truskett**, Fine discretization of pair interactions and an approximate analytical strategy for predicting equilibrium behavior of complex fluids. *Journal of Chemical Physics* **139**, 161102 (October)
- 2013 A. Jain, J. R. Errington, and **T. M. Truskett**, Phase behavior of materials with isotropic interactions designed by inverse strategies to favor diamond and simple cubic lattice ground states. *Journal of Chemical Physics* **139** 141102 (October)
- 2013 A. K. Murthy, R. J. Stover, W. G. Hardin, R. Schramm, G. D. Nie, S. Gourisankar, **T. M. Truskett**, K. V. Sokolov, and K. P. Johnston, Charged gold nanoparticles with essentially zero serum protein adsorption in undiluted fetal bovine serum. *Journal of the American Chemical Society* **135**, 7799–7802 (April)
- 2013 A. Jain, J. R. Errington, and **T. M. Truskett**, Inverse design of simple pairwise interactions with low coordinated 3D lattice ground states. *Soft Matter* **9**, 3866 - 3870 (March)
- 2013 A. K. Murthy, R. J. Stover, A. U. Borwankar, G. D. Nie, S. Gourisankar, **T. M. Truskett**, K.

- V. Sokolov, and K. P. Johnston, Equilibrium gold nanoclusters quenched with biodegradable polymers. *ACS Nano* **7**, 239–251 (January)
- 2013 A. U. Borwankar, A. K. Dinin, J. R. Laber, A. Twu, B. K. Wilson, J. A. Maynard, **T. M. Truskett**, and K. P. Johnston, Tunable equilibrium nanocluster dispersions at high protein concentrations. *Soft Matter* **9** 1766-1771 (January)
- 2013 J. Mittal, T. H. Yoo, G. Georgiou, and **T. M. Truskett**, Structural ensemble of an intrinsically disordered polypeptide. *Journal of Physical Chemistry B* **117**, 118–124 (January)
- 2012 M. A. Miller, T. A. Khan, K. J. Kaczorowski, B. K. Wilson, A. K. Dinin, A. U. Borwankar, M. A. Rodrigues, **T. M. Truskett**, K. P. Johnston, and J. A. Maynard, Antibody nanoparticle dispersions formed with mixtures of crowding molecules retain activity and in vivo bioavailability, *Journal of Pharmaceutical Sciences* **101**, 3763-3778 (October)
- 2012 J. Carmer, G. Goel, M. J. Pond, J. R. Errington, and **T. M. Truskett**, Enhancing tracer diffusivity by tuning interparticle interactions and coordination shell structure. *Soft Matter* **8**, 4083-4089 (March)
- 2012 K. P. Johnston, J. A. Maynard, **T. M. Truskett**, A. U. Borwankar, M. A. Miller, B. K. Wilson, A. K. Dinin, T. A. Khan, and K. J. Kaczorowski, Concentrated dispersions of equilibrium protein nanoclusters that reversibly dissociate into active monomers. *ACS Nano* **6**, 1357-1369 (January) [highlighted in *Nature Materials*, *Nanomedicine*, and *Chemical and Engineering News*]
- 2011 W. P. Krekelberg, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Impact of surface roughness on diffusion of confined fluids. *Journal of Chemical Physics* **135**, 154502 (October)
- 2011 M. J. Pond, J. R. Errington, and **T. M. Truskett**, Mapping between long-time molecular and Brownian dynamics. *Soft Matter* **7**, 9859-9862 (October)
- 2011 M. J. Pond, J. R. Errington, and **T. M. Truskett**, Implications of the effective one-component analysis of pair correlations in colloidal fluids with polydispersity. *Journal of Chemical Physics* **135**, 124513 (September)
- 2011 M. J. Pond, J. R. Errington, and **T. M. Truskett**, Generalizing Rosenfeld’s excess-entropy scaling to predict long-time diffusivity in dense fluids of Brownian particles: From hard to ultrasoft interactions. *Journal of Chemical Physics* **134** 081101 (February)
- 2011 H. S. Ashbaugh and **T. M. Truskett**, Putting the squeeze on cavities in liquids: Quantifying pressure effects on solvation using simulations and revised scaled-particle theory. *Journal of Chemical Physics* **134**, 014507 (January) [highlighted in *Virtual Journal of Biological Physics Research*]
- 2010 R. Chopra, **T. M. Truskett**, and J. R. Errington, On the use of excess entropy scaling to describe single-molecule and collective dynamic properties of hydrocarbon isomer fluids. *Journal of Physical Chemistry B* **114**, 16487 – 16493 (December)
- 2010 R. Chopra, **T. M. Truskett**, and J. R. Errington, Excess entropy scaling of dynamics for a confined fluid of dumbbell-shaped particles. *Physical Review E* **82**, 041201 (October)
- 2010 R. Chopra, **T. M. Truskett**, and J. R. Errington, Excess entropy scaling of dynamic quantities for fluids of dumbbell-shaped particles. *Journal of Chemical Physics* **133**, 104506 (September)
- 2010 R. Chopra, **T. M. Truskett**, and J. R. Errington, On the use of excess entropy scaling to describe the dynamic properties of water. *Journal of Physical Chemistry B* **114**, 10558–10566 (August)
- 2010 W. P. Krekelberg, V. Ganesan, and **T. M. Truskett**, Structural signatures of mobility on intermediate time scales in a supercooled fluid. *Journal of Chemical Physics* **132**, 184503 (May)
- 2010 W. P. Krekelberg, **T. M. Truskett**, and V. Ganesan, Relationship between shear viscosity and structure of a model colloidal suspension. *Chemical Engineering*

- [Communications](#) **197**, 63-75 (January) [invited for special issue in honor of Howard Brenner's 80th birthday]
- 2009 W. P. Krekelberg, M. J. Pond, G. Goel, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Generalized Rosenfeld scalings for tracer diffusivities in not-so-simple fluids: Mixtures and soft particles. [Physical Review E](#) **80** 061205 (December)
- 2009 M. J. Pond, W. P. Krekelberg, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Composition and concentration anomalies for structure and dynamics of Gaussian-core mixtures. [Journal of Chemical Physics](#) **131**, 161101 (October) [One of twenty most downloaded Journal of Chemical Physics articles in 10/2009]
- 2009 V. K. Shen, J. K. Cheung, J. R. Errington, and **T. M. Truskett**, Insights into crowding effects on protein stability from a coarse-grained model, [Journal of Biomechanical Engineering](#) **131**, 071002 (July) [invited for special issue on "Nano and multiscale frontiers in biological heat and mass transfer"]
- 2009 J. E. Yoo, W. P. Krekelberg, Y. Sun, J. D. Tarver, **T. M. Truskett**, and Y.-L. Loo, Polymer conductivity through particle connectivity. [Chemistry of Materials](#) **21**, 1948-1954 (May)
- 2009 G. Goel, W. P. Krekelberg, M. J. Pond, J. Mittal, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Available states and available space: Static properties that predict self diffusivity of confined fluids, [Journal of Statistical Mechanics: Theory and Experiment](#) P04006 (April)
- 2009 W. P. Krekelberg, T. Kumar, J. Mittal, J. R. Errington, and **T. M. Truskett**, Anomalous structure and dynamics of the Gaussian-core fluid. [Physical Review E](#) **79**, 031203 (March) [highlighted in [Virtual Journal of Biological Physics Research](#)]
- 2009 W. P. Krekelberg, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Response to Comment on 'Residual multiparticle entropy does not generally change sign near freezing' [J. Chem. Phys. 128, 161101 (2008)]. [Journal of Chemical Physics](#) **130**, 037102 (January)
- 2008 G. Goel, M. V. Athawale, S. Garde, and **T. M. Truskett**, Attractions, water structure, and thermodynamics of hydrophobic polymer collapse. [Journal of Physical Chemistry B](#) **112**, 13193–13196 (October)
- 2008 W. P. Krekelberg, V. Ganesan, and **T. M. Truskett**, Shear-rate-dependent structural order and viscosity of a fluid with short-range attractions. [Physical Review E](#) **78**, 010201(R) (July)
- 2008 W. P. Krekelberg, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Residual multiparticle entropy does not generally change sign near freezing. [Journal of Chemical Physics](#) **128**, 161101 (April)
- 2008 W. P. Krekelberg, J. Mittal, V. Ganesan, and **T. M. Truskett**, Structural anomalies of fluids: Origins in second and higher coordination shells. [Physical Review E](#) **77**, 041201 (April)
- 2008 J. Mittal, **T. M. Truskett**, J. R. Errington, and G. Hummer, Layering and position-dependent diffusive dynamics of confined fluids. [Physical Review Letters](#) **100**, 145901 (April)
- 2008 G. Goel, W. P. Krekelberg, J. R. Errington, and **T. M. Truskett**, Tuning the density profiles and mobility of inhomogeneous fluids. [Physical Review Letters](#) **100**, 106001 (March)
- 2007 J. Mittal, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Confinement, entropy, and single- particle dynamics of equilibrium hard-sphere mixtures. [Journal of Chemical Physics](#) **127**, 154513 (October)
- 2007 J. Mittal, J. R. Errington, and **T. M. Truskett**, Relationships between self-diffusivity, packing fraction, and excess entropy in simple bulk and confined fluids. [Journal of Physical Chemistry B](#) **111**, 10054- 10063 (August) [Feature Article, Journal Cover]
- 2007 W. P. Krekelberg, J. Mittal, V. Ganesan, and **T. M. Truskett**, How short-range

- attractions impact the structural order, self-diffusivity, and viscosity of a fluid. [Journal of Chemical Physics](#) **127**, 044502 (July)
- 2007 S. M. McClure, E. T. Barlow, M. C. Akin, P. L. Tanaka, D. J. Safarik, **T. M. Truskett**, and C. B. Mullins, Effect of dilute nitric acid on crystallization and fracture of amorphous solid water films. [Journal of Physical Chemistry C](#) **111**, 10438 - 10447 (July)
- 2007 J. Mittal, J. R. Errington, and **T. M. Truskett**, Does confining the hard-sphere fluid between hard walls change its average properties? [Journal of Chemical Physics](#) **126**, 244708 (June)
- 2007 J. K. Cheung, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Coarse-grained strategy for modeling protein stability in concentrated solutions III: Directional protein interactions. [Biophysical Journal](#) **92**, 4316–4324 (June) [Selected as a Hidden Jewel by F1000 biology]
- 2007 M. V. Athawale, G. Goel, T. Ghosh, **T. M. Truskett**, and S. Garde, Effects of lengthscales and attractions on the collapse of hydrophobic polymers in water. [Proceedings of the National Academy of Sciences USA](#) **104**, 733-738 (January) [highlighted in [Virtual Journal of Biological Physics Research](#)]
- 2006 J. R. Errington, **T. M. Truskett**, and J. Mittal, Excess-entropy-based anomalies for a water-like fluid. [Journal of Chemical Physics](#) **125**, 244502 (December)
- 2006 F. N. Braun, W. P. Krekelberg, and **T. M. Truskett**, Volatile diffusional character of cytoplasm. [Journal of Physical Chemistry B](#) **110**, 25606-25607 (December)
- 2006 J. K. Cheung, P. S. Raverkar, and **T. M. Truskett**, Analytical model for studying how environmental factors influence protein conformational stability in solution. [Journal of Chemical Physics](#) **125**, 224903 (December) [highlighted in [Virtual Journal of Biological Physics Research](#)]
- 2006 J. Mittal, J. R. Errington, and **T. M. Truskett**, Using available volume to predict fluid diffusivity in random media. [Physical Review E](#) **74**, 040102 (October)
- 2006 J. Mittal, J. R. Errington, and **T. M. Truskett**, Quantitative link between single-particle dynamics and static structure of supercooled liquids. [Journal of Physical Chemistry B](#) **110**, 18147–18150 (August)
- 2006 J. Mittal, J. R. Errington, and **T. M. Truskett**, Relationship between thermodynamics and dynamics of supercooled liquids. [Journal of Chemical Physics](#) **125**, 076102 (August). Please also see [erratum](#)
- 2006 S. M. McClure, E. T. Barlow, M. C. Akin, D. J. Safarik, **T. M. Truskett**, and C. B. Mullins, Transport in amorphous solid water films: Implications for self-diffusivity. [Journal of Physical Chemistry B](#) **110**, 17987 – 17997 (August)
- 2006 J. K. Cheung, P. Shah, and **T. M. Truskett**, Heteropolymer collapse theory for protein folding in the pressure-temperature plane. [Biophysical Journal](#) **91**, 2427 – 2435 (October)
- 2006 S. M. McClure, D. J. Safarik, **T. M. Truskett**, and C. B. Mullins, Evidence that amorphous water below 160 K is not a fragile liquid. [Journal of Physical Chemistry B](#) **110**, 11033-11036 (June)
- 2006 W. P. Krekelberg, V. Ganesan, and **T. M. Truskett**, Model for the free-volume distributions of equilibrium fluids. [Journal of Chemical Physics](#) **124**, 214502 (June)
- 2006 J. Mittal, J. R. Errington, and **T. M. Truskett**, Thermodynamics predicts how confinement modifies the dynamics of the equilibrium hard-sphere fluid. [Physical Review Letters](#) **96**, 177804 (May) [highlighted in [MRS Bulletin](#)]
- 2006 P. Shah and **T. M. Truskett**, Intrinsic vulnerabilities to mechanical failure in nanoscale films. [Mechanics of Materials](#) **38**, 924-932 (August)
- 2006 W. P. Krekelberg, V. Ganesan, and **T. M. Truskett**, Free volumes and the anomalous self-diffusivity of attractive colloids. [Journal of Physical Chemistry B](#) **110**, 5166-5169 (March)

- 2006 V. K. Shen, J. K. Cheung, J. R. Errington, and **T. M. Truskett**, Coarse-grained strategy for modeling protein stability in concentrated solutions II: Phase behavior. [Biophysical Journal](#) **90**, 1949-1960 (March)
- 2005 J. K. Cheung and **T. M. Truskett**, Coarse-grained strategy for modeling protein stability in concentrated solutions. [Biophysical Journal](#) **89**, 2372-2384 (October)
- 2005 S. Rajamani, **T. M. Truskett**, and S. Garde, Hydrophobic hydration from small to large lengthscales: Understanding and manipulating the crossover. [Proceedings of the National Academy of Sciences USA](#) **102**, 9475-9480 (July)
- 2005 K. A. Dill, **T. M. Truskett**, V. Vlachy, and B. Hribar-Lee, Modeling water, the hydrophobic effect, and ion solvation. [Annual Review of Biophysics and Biomolecular Structure](#) **34**, 173-199 (January)
- 2004 J. Mittal, P. Shah, and **T. M. Truskett**, Using energy landscapes to predict the properties of thin films. [Journal of Physical Chemistry B](#) **108**, 19769-19779 (December)
- 2003 **T. M. Truskett**, The subtleties of water in small spaces. [Proceedings of the National Academy of Sciences USA](#) **100**, 10139-10140 (September) [highlighted in the [Virtual Journal of Nanoscale Science & Technology](#)]
- 2003 **T. M. Truskett** and V. Ganesan, Ideal glass transitions in thin films: An energy landscape perspective. [Journal of Chemical Physics](#) **119**, 1897-1900 (July)
- 2003 H. S. Ashbaugh, **T. M. Truskett**, and P. G. Debenedetti, Response to comment on 'A simple molecular thermodynamic theory for hydrophobic hydration'. [Journal of Chemical Physics](#) **119**, 10450-10451 (November)
- 2003 **T. M. Truskett** and K. A. Dill, A simple analytical model of water. [Biophysical Chemistry](#) **105**, 449-459 (September)
- 2002 **T. M. Truskett**, P. G. Debenedetti, and S. Torquato, 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](#) **117**, 8162-8163 (November)
- 2002 **T. M. Truskett** and K. A. Dill, A simple statistical mechanical model of water. [Journal of Physical Chemistry B](#) **106**, 11829-11842 (November)
- 2002 **T. M. Truskett** and K. A. Dill, Predicting water's phase diagram and liquid-state anomalies. [Journal of Chemical Physics](#) **117**, 5101-5104 (September).
- 2002 H. S. Ashbaugh, **T. M. Truskett**, and P. G. Debenedetti, A simple molecular thermodynamic theory for hydrophobic hydration. [Journal of Chemical Physics](#) **116**, 2907-2921 (February)
- 2001 F. H. Stillinger, P. G. Debenedetti, and **T. M. Truskett**, The Kauzmann paradox revisited. [Journal of Physical Chemistry B](#) **105**, 11809-11816 (November) [highlighted in [Science](#) by Phil Szuromi]
- 2001 F. H. Stillinger, S. Torquato, J. M. Eroles, and **T. M. Truskett**, Iso- $g^{(2)}$ processes in equilibrium statistical mechanics. [Journal of Physical Chemistry B](#) **105**, 6592-6597 (July)
- 2001 **T. M. Truskett**, P. G. Debenedetti, and S. Torquato, Thermodynamic implications of confinement for a waterlike fluid. [Journal of Chemical Physics](#) **114**, 2401-2418 (February) [highlighted in the [Virtual Journal of Nanoscale Science & Technology](#)]
- 2000 P. J. in't Veld, M. T. Stone, **T. M. Truskett**, and I. C. Sanchez, Liquid structure via cavity size distributions. [Journal of Physical Chemistry B](#) **104**, 12028-12034 (December)
- 2000 F. H. Stillinger, D. K. Stillinger, S. Torquato, **T. M. Truskett**, and P. G. Debenedetti, Equation of state of the rigid disk fluid from its triangle distribution. [Journal of Chemical Physics](#) **113**, 10186-10190 (December)
- 2000 A. R. Kansal, **T. M. Truskett**, and S. Torquato, Non-equilibrium hard-disk packings with controlled orientational order. [Journal of Chemical Physics](#) **113**, 4844-4851 (September)
- 2000 **T. M. Truskett**, S. Torquato, and P. G. Debenedetti, Towards a quantification of disorder in materials: Distinguishing equilibrium and glassy sphere packings. [Physical](#)

- Review E **62**, 993-1001 (July)
- 2000 D. K. Stillinger, F. H. Stillinger, S. Torquato, **T. M. Truskett**, and P. G. Debenedetti, Triangle distribution and equation of state for classical rigid disks. *Journal of Statistical Physics* **100**, 49-72 (July)
- 2000 S. Torquato, **T. M. Truskett**, and P. G. Debenedetti, Is random close packing of spheres well defined? *Physical Review Letters* **84**, 2064-2067 (March) [highlighted in *Nature News* by Philip Ball]
- 1999 P. G. Debenedetti, F. H. Stillinger, **T. M. Truskett**, and C. J. Roberts, The equation of state of an energy landscape. *Journal of Physical Chemistry B* **103**, 7390-7397 (September) [Feature Article]
- 1999 **T. M. Truskett**, P. G. Debenedetti, S. Sastry, and S. Torquato, A single-bond approach to orientation-dependent interactions and its implications for liquid water. *Journal of Chemical Physics* **111**, 2647-2656 (August)
- 1999 I. C. Sanchez, **T. M. Truskett**, and P. J. in't Veld, Configurational properties and corresponding states in simple fluids and water. *Journal of Physical Chemistry B* **103**, 5106-5116 (June)
- 1999 P. G. Debenedetti and **T. M. Truskett**, The statistical geometry of voids in liquids. *Fluid Phase Equilibria* **160**, 549-556 (June)
- 1998 **T. M. Truskett**, S. Torquato, and P. G. Debenedetti, Density fluctuations in many-body systems. *Physical Review E* **58**, 7369-7380 (December)
- 1998 S. Sastry, **T. M. Truskett**, P. G. Debenedetti, S. Torquato, and F. H. Stillinger, Free volume in the hard sphere liquid. *Molecular Physics* **95**, 289-297 (October)
- 1998 **T. M. Truskett**, S. Torquato, S. Sastry, P. G. Debenedetti, and F. H. Stillinger, Structural precursor to freezing in the hard-disk and hard-sphere systems. *Physical Review E* **58**, 3083-3088 (September)

Invited review articles, interviews, and book chapters

- 2017 R. B. Jadrich, B. A. Lindquist, and **T. M. Truskett**, Recent advances in accelerated discovery through machine learning and statistical inference. [arXiv:1706.05405](https://arxiv.org/abs/1706.05405) (to appear in *Annual Review of Physical Chemistry*)
- 2017 **T. M. Truskett** and J. J. McKetta, A Conversation with John McKetta. *Annual Review of Chemical and Biomolecular Engineering* **8**, 1-11 (June)
- 2009 J. K. Cheung, V. K. Shen, J. R. Errington, and **T. M. Truskett**, Concentration and crowding effects on protein stability from a coarse-grained model. *Statistical Mechanics of Cellular Systems and Processes*, M. H. Zaman, ed. Cambridge University Press, Cambridge, 1- 25 (January)
- 2007 J. Mittal, W. P. Krekelberg, J. R. Errington, and **T. M. Truskett**. Computing free volume, structural order, and entropy of liquids and glasses. *Reviews in Computational Chemistry* **25**, 125–158 (January)
- 2001 P. G. Debenedetti, F. H. Stillinger, **T. M. Truskett**, and C. P. Lewis, Theory of supercooled liquids and glasses: Statistical geometry and energy landscape perspectives. *Advances in Chemical Engineering* **28**, 22-72 (January)

Patents

- 2012 K. P. Johnston, J. Maynard, M. A. Miller, B. K. Wilson, **T. M. Truskett**, A. U. Borwankar, A. K. Dinin, Protein Nanoparticle Dispersions, US Patent application (publication no. 20120230913), September 13