Robert S Hoy

List of Publications by Year
in descending order

44	1,552	304602 22	302012 39
papers	citations	h-index	g-index

45	45	45	1424
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Facile equilibration of well-entangled semiflexible beadâ€“spring polymer melts. Journal of Chemical Physics, 2022, 156, 014103.	1.2	8
2	Validation and Refinement of Unified Analytic Model for Flexible and Semiflexible Polymer Melt Entanglement. Macromolecules, 2022, 55, 3613-3626.	2.2	11
3	Efficient <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>d</mml:mi></mml:math> -dimensional molecular dynamics simulations for studies of the glass-jamming transition. Physical Review E, 2022, 105, .	0.8	1
4	Thermodynamic stability of hard sphere crystals in dimensions 3 through 10. European Physical Journal E, 2021, 44, 101.	0.7	6
5	How Does the Character of Glassy-Polymeric Cavitation Depend on Entanglement Density and the Local Poisson Ratio?. Macromolecules, 2021, 54, 7347-7353.	2.2	7
6	Does the Sastry transition control cavitation in simple liquids?. Journal of Chemical Physics, 2020, 153, 184504.	1.2	3
7	Two-stage athermal solidification of semiflexible polymers and fibers. Soft Matter, 2020, 16, 6206-6217.	1.2	9
8	Unified Analytic Expressions for the Entanglement Length, Tube Diameter, and Plateau Modulus of Polymer Melts. Physical Review Letters, 2020, 124, 147801.	2.9	28
9	Factors influencing thermal solidification of bent-core trimers. Journal of Chemical Physics, 2019, 151, 134501.	1.2	5
10	Densest versus jammed packings of bent-core trimers. Physical Review E, 2019, 100, 022903.	0.8	4
11	Multiscale Modeling of Sub-Entanglement-Scale Chain Stretching and Strain Hardening in Deformed Polymeric Glasses. Macromolecules, 2019, 52, 9248-9260.	2.2	9
12	Thermalization of plastic flow versus stationarity of thermomechanical equilibrium in SGR theory. European Physical Journal E, 2019, 42, 2.	0.7	0
13	From sticky-hard-sphere to Lennard-Jones-type clusters. Physical Review E, 2018, 97, 043309.	0.8	15
14	Densest versus jammed packings of two-dimensional bent-core trimers. Physical Review E, 2018, 98, .	0.8	7
15	Effect of the Ratio <i>l</i>_K/<i>p</i> on Glassy-Polymeric Shear Deformation Mechanisms. Macromolecules, 2018, 51, 4370-4380.	2.2	8
16	Jamming of Semiflexible Polymers. Physical Review Letters, 2017, 118, 068002.	2.9	29
17	Entanglements in Glassy Polymer Crazing: Cross-Links or Tubes?. Macromolecules, 2017, 50, 459-471.	2.2	35
18	Isostaticity and the solidification of semiflexible polymer melts. Soft Matter, 2017, 13, 7948-7952.	1.2	11

#	Article	IF	Citations
19	Thermalized formulation of soft glassy rheology. Physical Review E, 2017, 96, 063001.	0.8	1
20	Effect of chain stiffness and temperature on the dynamics and microstructure of crystallizable bead-spring polymer melts. Physical Review E, 2016, 94, 052502.	0.8	3
21	Controlled fragmentation of multimaterial fibres and films via polymer cold-drawing. Nature, 2016, 534, 529-533.	13.7	75
22	Effect of chain stiffness on the competition between crystallization and glass-formation in model unentangled polymers. Journal of Chemical Physics, 2015, 143, 144901.	1.2	28
23	Structure and dynamics of model colloidal clusters with short-range attractions. Physical Review E, 2015, 91, 012303.	0.8	18
24	Effect of temperature, strain rate and particle size on the yield stresses and post-yield strain softening of PMMA and its composites. Polymer, 2015, 63, 196-207.	1.8	16
25	Role of entanglements and bond scission in high strain-rate deformation of polymer gels. Polymer, 2014, 55, 2543-2551.	1.8	17
26	Minimal energy packings of nearly flexible polymers. Journal of Chemical Physics, 2013, 138, 054905.	1.2	0
27	Effect of Particle Size, Temperature, and Deformation Rate on the Plastic Flow and Strain Hardening Response of PMMA Composites. Macromolecules, 2013, 46, 9409-9426.	2.2	30
28	Simple model for chain packing and crystallization of soft colloidal polymers. Physical Review E, 2013, 88, 012601.	0.8	26
29	Particle-scale reversibility in athermal particulate media below jamming. Physical Review E, 2013, 88, 052205.	0.8	47
30	Structure of finite sphere packings via exact enumeration: Implications for colloidal crystal nucleation. Physical Review E, 2012, 85, 051403.	0.8	39
31	Glassy dynamics of crystallite formation: The role of covalent bonds. Soft Matter, 2012, 8, 1215-1225.	1.2	9
32	End grafted polymernanoparticles in a polymeric matrix: Effect of coverage and curvature. Soft Matter, 2011, 7, 1418-1425.	1.2	109
33	Why is understanding glassy polymer mechanics so difficult?. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 979-984.	2.4	41
34	Minimal Energy Packings and Collapse of Sticky Tangent Hard-Sphere Polymers. Physical Review Letters, 2010, 105, 068001.	2.9	25
35	Viscoplasticity and large-scale chain relaxation in glassy-polymeric strain hardening. Physical Review E, 2010, 82, 041803.	0.8	25
36	Strain hardening in bidisperse polymer glasses: Separating the roles of chain orientation and interchain entanglement. Journal of Chemical Physics, 2009, 131, 244901.	1.2	36

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37	Scaling of the strain hardening modulus of glassy polymers with the flow stress. Journal of Polymer Science, Part B: Polymer Physics, 2009, 47, 1406-1411.	2.4	39
38	Topological analysis of polymeric melts: Chain-length effects and fast-converging estimators for entanglement length. Physical Review E, 2009, 80, 031803.	0.8	260
39	Strain hardening of polymer glasses: Entanglements, energetics, and plasticity. Physical Review E, 2008, 77, 031801.	0.8	100
40	Entanglements of an End-Grafted Polymer Brush in a Polymeric Matrix. Macromolecules, 2007, 40, 8389-8395.	2.2	68
41	Strain Hardening in Polymer Glasses: Limitations of Network Models. Physical Review Letters, 2007, 99, 117801.	2.9	119
42	Strain hardening of polymer glasses: Effect of entanglement density, temperature, and rate. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 3487-3500.	2.4	154
43	Effect of equilibration on primitive path analyses of entangled polymers. Physical Review E, 2005, 72, 061802.	0.8	43
44	Fcc-bcc transition for Yukawa interactions determined by applied strain deformation. Physical Review E, 2004, 69, 056103.	0.8	27