

Udayan Mohanty

List of Publications by Year in descending order

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48
papers

1,268
citations

471509
17
h-index

361022
35
g-index

51
all docs

51
docs citations

51
times ranked

965
citing authors

#	ARTICLE	IF	CITATIONS
1	Exponential intermolecular dynamics in optical Kerr effect spectroscopy of small-molecule liquids. Journal of Chemical Physics, 1999, 111, 2686-2694.	3.0	132
2	A lattice field theory for polymer systems with nearest-neighbor interaction energies. Journal of Chemical Physics, 1987, 87, 5534-5540.	3.0	97
3	Magnesium Fluctuations Modulate RNA Dynamics in the SAM-I Riboswitch. Journal of the American Chemical Society, 2012, 134, 12043-12053.	13.7	91
4	A density functional-variational treatment of the hard sphere transition. Molecular Physics, 1985, 54, 1241-1252.	1.7	85
5	A lattice model for self-avoiding polymers with controlled length distributions. II. Corrections to Flory-Huggins mean field. Journal of Chemical Physics, 1986, 84, 7036-7047.	3.0	73
6	Compact and ordered collapse of randomly generated RNA sequences. Nature Structural and Molecular Biology, 2005, 12, 1130-1136.	8.2	72
7	Generalized Manning Condensation Model Captures the RNA Ion Atmosphere. Physical Review Letters, 2015, 114, 258105.	7.8	69
8	The elastic constants of condensed matter: A direct-correlation function approach. Journal of Chemical Physics, 1985, 82, 472-479.	3.0	66
9	A Metal-Organic Framework Thin Film for Selective Mg ²⁺ Transport. Angewandte Chemie - International Edition, 2019, 58, 15313-15317.	13.8	56
10	Slow secondary relaxation in a free-energy landscape model for relaxation in glass-forming liquids. Physical Review E, 1999, 59, 2067-2083.	2.1	55
11	Counterion condensation on ionic oligomers. Physica A: Statistical Mechanics and Its Applications, 1997, 247, 196-204.	2.6	54
12	Inhibition of Bubble Coalescence in Aqueous Solutions. 1. Electrolytes. Journal of Physical Chemistry B, 1998, 102, 5115-5119.	2.6	46
13	Reduced Model Captures Mg ²⁺ -RNA Interaction Free Energy of Riboswitches. Biophysical Journal, 2014, 106, 1508-1519.	0.5	46
14	Free solution mobility of oligomeric DNA. Biopolymers, 1999, 49, 209-214.	2.4	37
15	Polarization of counterions in polyelectrolytes. Biopolymers, 1998, 38, 377-388.	2.4	33
16	Supercooled Liquids. Advances in Chemical Physics, 2007, , 89-158.	0.3	27
17	Relationship between kinetics and thermodynamics of supercooled liquids. Journal of Chemical Physics, 2001, 114, 10577-10578.	3.0	25
18	Quantitative Measure of Hydrophobicity: Experiment and Theory. Journal of Physical Chemistry B, 1997, 101, 5777-5779.	2.6	18

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19	Anomalous Migration of Short Sequences of Nucleic Acids in Polyacrylamide Gels: Prediction and Experiment. Journal of the American Chemical Society, 1998, 120, 8275-8276.	13.7	18
20	Configuration entropy dependence of cooperative relaxation properties in glass-forming liquids. Journal of Chemical Physics, 1988, 89, 3778-3782.	3.0	13
21	A steric gate controls P/E hybrid-state formation of tRNA on the ribosome. Nature Communications, 2020, 11, 5706.	12.8	13
22	Ion Atmosphere of Three-Way Junction Nucleic Acid. Journal of Physical Chemistry B, 2005, 109, 21369-21374.	2.6	11
23	RNA as a Complex Polymer with Coupled Dynamics of Ions and Water in the Outer Solvation Sphere. Journal of Physical Chemistry B, 2018, 122, 11218-11227.	2.6	11
24	<scp>SMOG 2 and OpenSMOG: Extending the</scp> limits of structure-based models. Protein Science, 2022, 31, 158-172.	7.6	11
25	On the relationships among special temperatures for supercooled liquids: A configuration space analysis. Journal of Chemical Physics, 2000, 113, 3719-3722.	3.0	10
26	Dynamics of supercooled liquids: Universality of relaxation time near the crossover temperature. Journal of Chemical Physics, 2003, 119, 4473-4477.	3.0	10
27	Ion Atmosphere around Nucleic Acid. Journal of Physical Chemistry B, 2005, 109, 21267-21272.	2.6	10
28	Diffuse Ions Coordinate Dynamics in a Ribonucleoprotein Assembly. Journal of the American Chemical Society, 2022, 144, 9510-9522.	13.7	10
29	The correlation length divergence of Tolman's length. Journal of Chemical Physics, 1985, 83, 6392-6395.	3.0	9
30	Perturbation theory of fluids of axisymmetric molecules. Molecular Physics, 1989, 68, 1047-1066.	1.7	8
31	ON THE CHARACTERISTICS OF MIGRATION OF OLIGOMERIC DNA IN POLYACRYLAMIDE GELS AND IN FREE SOLUTION. Annual Review of Physical Chemistry, 2001, 52, 93-106.	10.8	8
32	Dynamics of Curved DNA Molecules: Prediction and Experiment. Journal of the American Chemical Society, 2003, 125, 11160-11161.	13.7	7
33	The limiting concentration dependence of the heat of transport in electrolyte solutions. Journal of Chemical Physics, 1986, 84, 6401-6409.	3.0	5
34	Migration Effects for Small Phosphate-Labeled Single-Stranded DNA Fragments in Gels: Prediction and Experiment. Journal of the American Chemical Society, 2000, 122, 1225-1226.	13.7	5
35	Characteristics of Migration Patterns of DNA Oligomers in Gels and the Relationship to the Question of Intrinsic DNA Bending. Journal of the American Chemical Society, 2004, 126, 2372-2377.	13.7	5
36	Fluctuation Effects in the Adam-Gibbs Model of Cooperative Relaxation. Journal of Physical Chemistry B, 2019, 123, 8086-8090.	2.6	3

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37	Molecular-Level Insights into Selective Transport of Mg ²⁺ in Metal-Organic Frameworks. ACS Applied Materials & Interfaces, 2021, 13, 51974-51987.	8.0	3
38	Using SMOG 2 to Simulate Complex Biomolecular Assemblies. Methods in Molecular Biology, 2019, 2022, 129-151.	0.9	3
39	Dynamics of Bent Molecules in Gels. Journal of Physical Chemistry B, 2003, 107, 6187-6193.	2.6	2
40	Quantum mechanical rate constants in the presence of linear dissipative mechanism. Journal of Chemical Physics, 1988, 88, 3057-3060.	3.0	1
41	A Brief Introduction to Supercooled Liquids. ACS Symposium Series, 1997, , 2-12.	0.5	1
42	Anomalous Migration of Short Sequences of DNA: Comparison of Theory and Experiment. Journal of Biomolecular Structure and Dynamics, 2000, 17, 371-375.	3.5	1
43	Fragility Metrics in Glass-Forming Liquids. Advances in Chemical Physics, 2004, , 71-103.	0.3	1
44	Entropic Approach to Relaxation Behavior in Glass-Forming Liquids. ACS Symposium Series, 1997, , 95-109.	0.5	0
45	On a Connection between Replica Symmetry Breaking and Narayanaswamy-Gardner Nonlinear Parameters. ACS Symposium Series, 2002, , 249-255.	0.5	0
46	Toward a Model for the Mobility of Circularly Permuted DNA Fragments in Gel. ACS Symposium Series, 2004, , 149-165.	0.5	0
47	Curvature and Deformation of Nucleic Acids: Overview. ACS Symposium Series, 2004, , 1-11.	0.5	0
48	Temperature Dependence of Relaxation Time in Adam-Gibbs Model of Glass-Forming Liquids: Fluctuation Effects. AIP Conference Proceedings, 2008, , .	0.4	0