Lois Pollack

List of Publications by Year
in descending order

76 papers	4,248 citations	101496 36 h-index	118793 62 g-index
79 all docs	79 docs citations	79 times ranked	4667 citing authors

#	Article	IF	Citations
1	Insights into the structural stability of major groove RNA triplexes by WAXS-guided MD simulations. Cell Reports Physical Science, 2022, 3, 100971.	2.8	5
2	Structural analyses of an RNA stability element interacting with poly(A). Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	13
3	The structural plasticity of nucleic acid duplexes revealed by WAXS and MD. Science Advances, 2021, 7, .	4.7	25
4	Solution structure(s) of trinucleosomes from contrast variation SAXS. Nucleic Acids Research, 2021, 49, 5028-5037.	6.5	3
5	Observation of substrate diffusion and ligand binding in enzyme crystals using high-repetition-rate mix-and-inject serial crystallography. IUCrJ, 2021, 8, 878-895.	1.0	44
6	Ribosomal Protein L11 Selectively Stabilizes a Tertiary Structure of the GTPase Center rRNA Domain. Journal of Molecular Biology, 2020, 432, 991-1007.	2.0	7
7	Visualizing Disordered Single-Stranded RNA: Connecting Sequence, Structure, and Electrostatics. Journal of the American Chemical Society, 2020, 142, 109-119.	6.6	19
8	Characterizing Enzyme Reactions in Microcrystals for Effective Mix-and-Inject Experiments using X-ray Free-Electron Lasers. Analytical Chemistry, 2020, 92, 13864-13870.	3.2	10
9	Visualizing a viral genome with contrast variation small angle X-ray scattering. Journal of Biological Chemistry, 2020, 295, 15923-15932.	1.6	8
10	Structural and functional conservation of the programmed â˜1 ribosomal frameshift signal of SARS coronavirus 2 (SARS-CoV-2). Journal of Biological Chemistry, 2020, 295, 10741-10748.	1.6	163
11	Machine learning deciphers structural features of RNA duplexes measured with solution X-ray scattering. IUCrJ, 2020, 7, 870-880.	1.0	11
12	Elucidating the Role of Microprocessor Protein DGCR8 in Bending RNA Structures. Biophysical Journal, 2020, 119, 2524-2536.	0.2	4
13	Salt Dependence of A-Form RNA Duplexes: Structures and Implications. Journal of Physical Chemistry B, 2019, 123, 9773-9785.	1.2	16
14	Microfluidic Mixing Injector Holder Enables Routine Structural Enzymology Measurements with Mix-and-Inject Serial Crystallography Using X-ray Free Electron Lasers. Analytical Chemistry, 2019, 91, 7139-7144.	3.2	44
15	Conformations of an RNA Helix-Junction-Helix Construct Revealed by SAXS Refinement of MD Simulations. Biophysical Journal, 2019, 116, 19-30.	0.2	16
16	Divalent ions tune the kinetics of a bacterial GTPase center rRNA folding transition from secondary to tertiary structure. Rna, 2018, 24, 1828-1838.	1.6	20
17	How the Conformations of an Internal Junction Contribute to Fold an RNA Domain. Journal of Physical Chemistry B, 2018, 122, 11363-11372.	1.2	9
18	Revealing the distinct folding phases of an RNA three-helix junction. Nucleic Acids Research, 2018, 46, 7354-7365.	6.5	38

#	Article	IF	Citations
19	Local DNA Sequence Controls Asymmetry of DNA Unwrapping from Nucleosome Core Particles. Biophysical Journal, 2018, 115, 773-781.	0.2	36
20	Enzyme intermediates captured â€œon the flyâ€•by mix-and-inject serial crystallography. BMC Biology, 2018, 16, 59.	1.7	117
21	The ATPase motor of the Chd1 chromatin remodeler stimulates DNA unwrapping from the nucleosome. Nucleic Acids Research, 2018, 46, 4978-4990.	6.5	21
22	Visualizing single-stranded nucleic acids in solution. Nucleic Acids Research, 2017, 45, gkw1297.	6.5	25
23	Structural enzymology using X-ray free electron lasers. Structural Dynamics, 2017, 4, 044003.	0.9	92
24	Spermine Condenses DNA, but Not RNA Duplexes. Biophysical Journal, 2017, 112, 22-30.	0.2	48
25	The impact of base stacking on the conformations and electrostatics of single-stranded DNA. Nucleic Acids Research, 2017, 45, 3932-3943.	6.5	47
26	Double-flow focused liquid injector for efficient serial femtosecond crystallography. Scientific Reports, 2017, 7, 44628.	1.6	90
27	Asymmetric unwrapping of nucleosomal DNA propagates asymmetric opening and dissociation of the histone core. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 334-339.	3.3	89
28	Structural changes of tailless bacteriophage Î¦X174 during penetration of bacterial cell walls. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13708-13713.	3.3	40
29	2017 publication guidelines for structural modelling of small-angle scattering data from biomolecules in solution: an update. Acta Crystallographica Section D: Structural Biology, 2017, 73, 710-728.	1.1	205
30	<scp>SAXS</scp> studies of <scp>RNA</scp>: structures, dynamics, and interactions with partners. Wiley Interdisciplinary Reviews RNA, 2016, 7, 512-526.	3.2	60
31	Understanding nucleic acid structural changes by comparing wide-angle x-ray scattering (WAXS) experiments to molecular dynamics simulations. Journal of Chemical Physics, 2016, 144, 205102.	1.2	15
32	Multi-shell model of ion-induced nucleic acid condensation. Journal of Chemical Physics, 2016, 144, 155101.	1.2	13
33	Extracting water and ion distributions from solution x-ray scattering experiments. Journal of Chemical Physics, 2016, 144, 214105.	1.2	15
34	Succinyl-5-aminoimidazole-4-carboxamide-1-ribose 5â€²-Phosphate (SAICAR) Activates Pyruvate Kinase Isoform M2 (PKM2) in Its Dimeric Form. Biochemistry, 2016, 55, 4731-4736.	1.2	24
35	Opposing Effects of Multivalent Ions on the Flexibility of DNA and RNA. Physical Review Letters, 2016, 117, 028101.	2.9	47
36	Mixing injector enables time-resolved crystallography with high hit rate at X-ray free electron lasers. Structural Dynamics, 2016, 3, 054301.	0.9	84

#	Article	IF	Citations
37	Proteinâ€"DNA and ionâ€"DNA interactions revealed through contrast variation SAXS. Biophysical Reviews, 2016, 8, 139-149.	1.5	25
38	The Role of Correlation and Solvation in Ion Interactions with B-DNA. Biophysical Journal, 2016, 110, 315-326.	0.2	33
39	Tuning RNA Flexibility with Helix Length and Junction Sequence. Biophysical Journal, 2015, 109, 2644-2653.	0.2	19
40	A microfabricated fixed path length silicon sample holder improves background subtraction for cryoSAXS. Journal of Applied Crystallography, 2015, 48, 227-237.	1.9	3
41	Determining the Locations of Ions and Water around DNA from X-Ray Scattering Measurements. Biophysical Journal, 2015, 108, 2886-2895.	0.2	52
42	Making water-soluble integral membrane proteins in vivo using an amphipathic protein fusion strategy. Nature Communications, 2015, 6, 6826.	5.8	30
43	Double-focusing mixing jet for XFEL study of chemical kinetics. Journal of Synchrotron Radiation, 2014, 21, 1364-1366.	1.0	68
44	Accurate small and wide angle x-ray scattering profiles from atomic models of proteins and nucleic acids. Journal of Chemical Physics, 2014, 141, 22D508.	1.2	33
45	Revealing transient structures of nucleosomes as DNA unwinds. Nucleic Acids Research, 2014, 42, 8767-8776.	6.5	73
46	Why double-stranded RNA resists condensation. Nucleic Acids Research, 2014, 42, 10823-10831.	6.5	67
47	Role of Ion Valence in the Submillisecond Collapse and Folding of a Small RNA Domain. Biochemistry, 2013, 52, 1539-1546.	1.2	18
48	T box RNA decodes both the information content and geometry of tRNA to affect gene expression. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7240-7245.	3.3	65
49	Polyelectrolyte properties of single stranded DNA measured using SAXS and singleâ€molecule FRET: Beyond the wormlike chain model. Biopolymers, 2013, 99, 1032-1045.	1.2	34
50	Following RNA Folding From Local and Global Perspectives. , 2013, , 187-203.		0
51	Ionic strength-dependent persistence lengths of single-stranded RNA and DNA. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 799-804.	3.3	322
52	Specificity of the Double-Stranded RNA-Binding Domain from the RNA-Activated Protein Kinase PKR for Double-Stranded RNA: Insights from Thermodynamics and Small-Angle X-ray Scattering. Biochemistry, 2012, 51, 9312-9322.	1.2	15
53	Small-Angle X-ray Scattering and Single-Molecule FRET Spectroscopy Produce Highly Divergent Views of the Low-Denaturant Unfolded State. Journal of Molecular Biology, 2012, 418, 226-236.	2.0	92
54	RNA and Its Ionic Cloud: Solution Scattering Experiments and Atomically Detailed Simulations. Biophysical Journal, 2012, 102, 819-828.	0.2	89

#	Article	IF	Citations
55	Effects of a Protecting Osmolyte on the Ion Atmosphere Surrounding DNA Duplexes. Biochemistry, 2011, 50, 8540-8547.	1.2	16
56	Double-Stranded RNA Resists Condensation. Physical Review Letters, 2011, 106, 108101.	2.9	47
57	SAXS Studies of Ionâ€“Nucleic Acid Interactions. Annual Review of Biophysics, 2011, 40, 225-242.	4.5	64
58	Time resolved SAXS and RNA folding. Biopolymers, 2011, 95, 543-549.	1.2	40
59	Electrostatics of Strongly Charged Biological Polymers: Ion-Mediated Interactions and Self-Organization in Nucleic Acids and Proteins. Annual Review of Physical Chemistry, 2010, 61, 171-189.	4.8	213
60	Counting Ions around DNA with Anomalous Small-Angle X-ray Scattering. Journal of the American Chemical Society, 2010, 132, 16334-16336.	6.6	83
61	Both helix topology and counterion distribution contribute to the more effective charge screening in dsRNA compared with dsDNA. Nucleic Acids Research, 2009, 37, 3887-3896.	6.5	72
62	Time-Resolved X-ray Scattering and RNA Folding. Methods in Enzymology, 2009, 469, 253-268.	0.4	22
63	Using Anomalous Small Angle X-Ray Scattering to Probe the Ion Atmosphere Around Nucleic Acids. Methods in Enzymology, 2009, 469, 391-410.	0.4	26
64	Reconstructing three-dimensional shape envelopes from time-resolved small-angle X-ray scattering data. Journal of Applied Crystallography, 2008, 41, 1046-1052.	1.9	24
65	Mono- and Trivalent Ions around DNA: A Small-Angle Scattering Study of Competition and Interactions. Biophysical Journal, 2008, 95, 287-295.	0.2	55
66	Hinge Stiffness Is a Barrier to RNA Folding. Journal of Molecular Biology, 2008, 379, 859-870.	2.0	48
67	Abrupt Transition from a Free, Repulsive to a Condensed, Attractive DNA Phase, Induced by Multivalent Polyamine Cations. Physical Review Letters, 2008, 101, 228101.	2.9	57
68	Time-Resolved Dimerization of a PAS-LOV Protein Measured with Photocoupled Small Angle X-ray Scattering. Journal of the American Chemical Society, 2008, 130, 12226-12227.	6.6	41
69	Conformational changes of calmodulin upon Ca ²⁺ binding studied with a microfluidic mixer. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 542-547.	3.3	113
70	Closing the lid on DNA end-to-end stacking interactions. Applied Physics Letters, 2008, 92, 223901-2239013.	1.5	31
71	Inter-DNA Attraction Mediated by Divalent Counterions. Physical Review Letters, 2007, 99, 038104.	2.9	120
72	Achieving Uniform Mixing in a Microfluidic Device:Â Hydrodynamic Focusing Prior to Mixing. Analytical Chemistry, 2006, 78, 4465-4473.	3.2	123

#	Article	IF	Citations
73	Measuring Inter-DNA Potentials in Solution. Physical Review Letters, 2006, 96, 138101.	2.9	64
74	Concordant Exploration of the Kinetics of RNA Folding from Global and Local Perspectives. Journal of Molecular Biology, 2006, 355, 282-293.	2.0	68
75	The Fastest Global Events in RNA Folding: Electrostatic Relaxation and Tertiary Collapse of the Tetrahymena Ribozyme. Journal of Molecular Biology, 2003, 332, 311-319.	2.0	130
76	Rapid compaction during RNA folding. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4266-4271.	3.3	207