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Separation of preferential interaction and excluded volume effects on DNA duplex and hairpin stability

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#	Paper	IF	Citations
145	MACROMOLECULAR CROWDING IN BIOLOGICAL SYSTEMS: DYNAMIC LIGHT SCATTERING (DLS) TO QUANTIFY THE EXCLUDED VOLUME EFFECT (EVE). <b>2006</b> , 01, 317-325		24
144	Unraveling the Molecular Mechanism of Enthalpy Driven Peptide Folding by Polyol Osmolytes. <b>2011</b> , 7, 3816-28		44
143	Effects of a protecting osmolyte on the ion atmosphere surrounding DNA duplexes. <b>2011</b> , 50, 8540-7		13
142	Quantifying why urea is a protein denaturant, whereas glycine betaine is a protein stabilizer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 16932-7	11.5	179
141	Insights into the disparate action of osmolytes and macromolecular crowders on amyloid formation. <b>2012</b> , 6, 26-31		25
140	Hydration changes upon DNA folding studied by osmotic stress experiments. <i>Biophysical Journal</i> , <b>2012</b> , 102, 2808-17	2.9	44
139	Amplifying the macromolecular crowding effect using nanoparticles. <b>2012</b> , 134, 35-8		46
138	Exploring the thermal stability of DNA-linked gold nanoparticles in ionic liquids and molecular solvents. <b>2012</b> , 3, 3216		27
137	Molecular crowding and hydration regulating of G-quadruplex formation. <b>2013</b> , 330, 87-110		29
136	The stability of intramolecular DNA G-quadruplexes compared with other macromolecules. <b>2012</b> , 94, 277-86		22
135	Dimerization of nucleic acid hairpins in the conditions caused by neutral cosolutes. <i>Journal of Physical Chemistry B</i> , <b>2012</b> , 116, 7406-15	3.4	22
134	Reducing the dimensionality of the protein-folding search problem. <b>2012</b> , 21, 1231-40		7
133	Effects of macromolecular crowding on the structural stability of human $\beta$ -lactalbumin. <b>2012</b> , 44, 703-11		52
132	Quantifying functional group interactions that determine urea effects on nucleic acid helix formation. <b>2013</b> , 135, 5828-38		41
131	Quadruplex Nucleic Acids. <b>2013</b> ,		10
130	Crowders perturb the entropy of RNA energy landscapes to favor folding. <b>2013</b> , 135, 10055-63		34
129	Balance of enthalpy and entropy in depletion forces. <b>2013</b> , 18, 495-501		71

128	Molecular crowding favors reactivity of a human ribozyme under physiological ionic conditions. <b>2013</b> , 52, 8187-97		36
127	DNA duplex stabilization in crowded polyanion solutions. <b>2013</b> , 49, 1306-8		20
126	Validation of a sandwich hybridization assay for marine copepod detection. <b>2013</b> , 446, 306-310		6
125	Polyelectrolyte effects in G-quadruplexes. <i>Biophysical Chemistry</i> , <b>2013</b> , 184, 95-100	3.5	17
124	Introductory lecture: interpreting and predicting Hofmeister salt ion and solute effects on biopolymer and model processes using the solute partitioning model. <b>2013</b> , 160, 9-44; discussion 103-20		86
123	Thermodynamic characterization of human telomere quadruplex unfolding. <b>2013</b> , 99, 1006-18		33
122	Parts-per-million of polyethylene glycol as a non-interfering blocking agent for homogeneous biosensor development. <i>Analytical Chemistry</i> , <b>2013</b> , 85, 10045-50	7.8	34
121	Effects of salt, polyethylene glycol, and locked nucleic acids on the thermodynamic stabilities of consecutive terminal adenosine mismatches in RNA duplexes. <i>Journal of Physical Chemistry B</i> , <b>2013</b> , 117, 3531-40	3.4	10
120	Quantifying the temperature dependence of glycine-betaine RNA duplex destabilization. <b>2013</b> , 52, 9339-46		4
119	Diversity in the mechanisms of cosolute action on biomolecular processes. <b>2013</b> , 160, 225-37; discussion 311-27		50
118	Polyethylene glycol binding alters human telomere G-quadruplex structure by conformational selection. <i>Nucleic Acids Research</i> , <b>2013</b> , 41, 7934-46	20.1	105
117	Impact of reconstituted cytosol on protein stability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 19342-7	11.5	144
116	Regulation of <i>Deinococcus radiodurans</i> RecA protein function via modulation of active and inactive nucleoprotein filament states. <b>2013</b> , 288, 21351-21366		23
115	The excluded volume effect induced by poly(ethylene glycol) modulates the motility of actin filaments interacting with myosin. <b>2013</b> , 280, 5875-83		5
114	Effect of Pressure on the Stability of G-Quadruplex DNA: Thermodynamics under Crowding Conditions. <b>2013</b> , 125, 14019-14023		18
113	Effect of pressure on the stability of G-quadruplex DNA: thermodynamics under crowding conditions. <b>2013</b> , 52, 13774-8		57
112	The human telomere sequence, (TTAGGG) <sub>4</sub> , in the absence and presence of cosolutes: a spectroscopic investigation. <b>2014</b> , 19, 595-608		6
111	Stability of human telomere quadruplexes at high DNA concentrations. <b>2014</b> , 101, 428-38		14

110	Control of stability and structure of nucleic acids using cosolutes. <b>2014</b> , 67, 151-8		12
109	Protein crowder charge and protein stability. <b>2014</b> , 53, 1601-6		84
108	Phase separation as a possible means of nuclear compartmentalization. <b>2014</b> , 307, 109-49		30
107	Noncanonical structures and their thermodynamics of DNA and RNA under molecular crowding: beyond the Watson-Crick double helix. <b>2014</b> , 307, 205-73		23
106	Effect of salt on the formation of salt-bridges in $\beta$ hairpin peptides. <b>2014</b> , 50, 8193-6		9
105	Interactions of macromolecular crowding agents and cosolutes with small-molecule substrates: effect on horseradish peroxidase activity with two different substrates. <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 10624-32	3-4	53
104	Residue level quantification of protein stability in living cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 11335-40	11.5	82
103	Origin of Enthalpic Depletion Forces. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 1061-5	6.4	57
102	Hammerhead ribozyme activity and oligonucleotide duplex stability in mixed solutions of water and organic compounds. <b>2014</b> , 4, 643-50		22
101	Molecular crowders and cosolutes promote folding cooperativity of RNA under physiological ionic conditions. <b>2014</b> , 20, 331-47		47
100	Coupled enzyme reactions performed in heterogeneous reaction media: experiments and modeling for glucose oxidase and horseradish peroxidase in a PEG/citrate aqueous two-phase system. <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 2506-17	3-4	27
99	Hydration changes accompanying helix-to-coil DNA transitions. <b>2014</b> , 136, 4040-7		44
98	Molecular-crowding effects on single-molecule RNA folding/unfolding thermodynamics and kinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 8464-9	11.5	101
97	Effects of crowding on the stability of a surface-tethered biopolymer: an experimental study of folding in a highly crowded regime. <b>2014</b> , 136, 8923-7		38
96	Effects of molecular crowding on the structures, interactions, and functions of nucleic acids. <b>2014</b> , 114, 2733-58		329
95	Short chain polyethylene glycols unusually assist thermal unfolding of human serum albumin. <b>2014</b> , 104, 81-9		31
94	Separating chemical and excluded volume interactions of polyethylene glycols with native proteins: Comparison with PEG effects on DNA helix formation. <b>2015</b> , 103, 517-27		33
93	Macromolecular Stabilization by Excluded Cosolutes: Mean Field Theory of Crowded Solutions. <b>2015</b> , 11, 3478-90		21

92	Chemical Interactions of Polyethylene Glycols (PEGs) and Glycerol with Protein Functional Groups: Applications to Effects of PEG and Glycerol on Protein Processes. <b>2015</b> , 54, 3528-42		68
91	Crowding-Induced Hybridization of Single DNA Hairpins. <b>2015</b> , 137, 16020-3		49
90	Molecular crowding enhances facilitated diffusion of two human DNA glycosylases. <i>Nucleic Acids Research</i> , <b>2015</b> , 43, 4087-97	20.1	34
89	Stabilization of DNA Structures with Poly(ethylene sodium phosphate). <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 11969-77	3-4	6
88	Macromolecular crowding impacts on the diffusion and conformation of DNA hairpins. <b>2015</b> , 91, 012703		5
87	Melting of highly oriented fiber DNA subjected to osmotic pressure. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 4441-9	3-4	2
86	Molecular and Thermodynamic Factors Explain the Passivation Properties of Poly(ethylene glycol)-Coated Substrate Surfaces against Fluorophore-Labeled DNA Oligonucleotides. <b>2015</b> , 31, 11491-501		14
85	Challenge of mimicking the influences of the cellular environment on RNA structure by PEG-induced macromolecular crowding. <b>2015</b> , 54, 6447-53		42
84	Do Macromolecular Crowding Agents Exert Only an Excluded Volume Effect? A Protein Solvation Study. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 14145-56	3-4	51
83	Unusual effects of crowders on heme retention in myoglobin. <b>2015</b> , 589, 3807-15		14
82	Is the depletion force entropic? Molecular crowding beyond steric interactions. <b>2015</b> , 20, 3-10		77
81	A New Physiological Role for the DNA Molecule as a Protector against Drying Stress in Desiccation-Tolerant Microorganisms. <b>2016</b> , 7, 2066		14
80	Synthesis and Assessment of DNA/Silver Nanoclusters Probes for Optimal and Selective Detection of Tristeza Virus Mild Strains. <b>2016</b> , 26, 1795-803		10
79	A New Na(+)-Dependent RNA-Cleaving DNAzyme with over 1000-fold Rate Acceleration by Ethanol. <b>2016</b> , 17, 159-63		64
78	Globular Protein Folding In Vitro and In Vivo. <i>Annual Review of Biophysics</i> , <b>2016</b> , 45, 233-51	21.1	67
77	RNA Hairpin Folding in the Crowded Cell. <b>2016</b> , 55, 3224-8		59
76	Pharmaceutical Perspective on Opalescence and Liquid-Liquid Phase Separation in Protein Solutions. <b>2016</b> , 13, 1431-44		63
75	Faltung einer RNA-Haarnadel in der dicht gedrängten Zelle. <b>2016</b> , 128, 3279-3283		9

74	Thermal Stability of RNA Structures with Bulky Cations in Mixed Aqueous Solutions. <i>Biophysical Journal</i> , <b>2016</b> , 111, 1350-1360	2.9	11
73	DNA Island Formation on Binary Block Copolymer Vesicles. <b>2016</b> , 138, 10157-62		26
72	Entropic stabilization of folded RNA in crowded solutions measured by SAXS. <i>Nucleic Acids Research</i> , <b>2016</b> , 44, 9452-9461	20.1	14
71	Effect of Excipients on Liquid-Liquid Phase Separation and Aggregation in Dual Variable Domain Immunoglobulin Protein Solutions. <b>2016</b> , 13, 774-83		26
70	Role of solvent properties of aqueous media in macromolecular crowding effects. <i>Journal of Biomolecular Structure and Dynamics</i> , <b>2016</b> , 34, 92-103	3.6	43
69	The structural stability and catalytic activity of DNA and RNA oligonucleotides in the presence of organic solvents. <b>2016</b> , 8, 11-23		42
68	Macromolecular compaction by mixed solutions: Bridging versus depletion attraction. <b>2016</b> , 22, 80-87		29
67	The effect of ionizing radiation on biocompatible polymers: From sterilization to radiolysis and hydrogel formation. <b>2017</b> , 137, 1-10		16
66	Effect of PEG Architecture on the Hybridization Thermodynamics and Protein Accessibility of PEGylated Oligonucleotides. <b>2017</b> , 129, 1259-1263		11
65	Effect of PEG Architecture on the Hybridization Thermodynamics and Protein Accessibility of PEGylated Oligonucleotides. <b>2017</b> , 56, 1239-1243		33
64	Effects of osmolytes on stable UUCG tetraloops and their preference for a CG closing base pair. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , <b>2017</b> , 36, 583-597	1.4	0
63	l-Proline and RNA Duplex m-Value Temperature Dependence. <i>Journal of Physical Chemistry B</i> , <b>2017</b> , 121, 7247-7255	3.4	0
62	The effects of a neutral cosolute on the B to Z transition for DNA duplexes incorporating both CG and CA steps. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , <b>2017</b> , 36, 690-703	1.4	1
61	Temperature-Dependent Implicit-Solvent Model of Polyethylene Glycol in Aqueous Solution. <b>2017</b> , 13, 6317-6327		17
60	Experimental Atom-by-Atom Dissection of Amide-Amide and Amide-Hydrocarbon Interactions in HO. <b>2017</b> , 139, 9885-9894		13
59	Model studies of the effects of intracellular crowding on nucleic acid interactions. <b>2016</b> , 13, 32-41		34
58	Catalytic Activities of Ribozymes and DNAzymes in Water and Mixed Aqueous Media. <b>2017</b> , 7, 355		8
57	Pursuing origins of (poly)ethylene glycol-induced G-quadruplex structural modulations. <i>Nucleic Acids Research</i> , <b>2018</b> , 46, 4301-4315	20.1	27

56	The mechanisms of a mammalian splicing enhancer. <i>Nucleic Acids Research</i> , <b>2018</b> , 46, 2145-2158	20.1	15
55	Probing the Ionic Atmosphere and Hydration of the c-MYC i-Motif. <b>2018</b> , 140, 2229-2238		20
54	Impact of macromolecular crowding on RNA/spermine complex coacervation and oligonucleotide compartmentalization. <i>Soft Matter</i> , <b>2018</b> , 14, 368-378	3.6	32
53	Ultrasensitive DNAzyme-Based Ca Detection Boosted by Ethanol and a Solvent-Compatible Scaffold for Aptazyme Design. <b>2018</b> , 19, 31-36		21
52	Counteraction of denaturant-induced protein unfolding is a general property of stabilizing agents. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 29389-29398	3.6	16
51	Microscopic picture of water-ethylene glycol interaction near a model DNA by computer simulation: Concentration dependence, structure, and localized thermodynamics. <b>2018</b> , 13, e0206359		4
50	Improving the Enzymatic Stability and the Pharmacokinetics of Oligonucleotides via DNA-Backboned Bottlebrush Polymers. <b>2018</b> , 18, 7378-7382		9
49	Understanding chain looping kinetics in polymer solutions: crowding effects of microviscosity and collapse. <i>Soft Matter</i> , <b>2018</b> , 14, 8060-8072	3.6	8
48	The Role of Structural Enthalpy in Spherical Nucleic Acid Hybridization. <b>2018</b> , 140, 6226-6230		31
47	The solvent side of proteinaceous membrane-less organelles in light of aqueous two-phase systems. <i>International Journal of Biological Macromolecules</i> , <b>2018</b> , 117, 1224-1251	7.9	30
46	Identification of somatostatin receptors using labeled PEGylated octreotide, as an active internalization. <b>2019</b> , 45, 1707-1715		6
45	Crowder-Induced Conformational Ensemble Shift in Escherichia coli Prolyl-tRNA Synthetase. <i>Biophysical Journal</i> , <b>2019</b> , 117, 1269-1284	2.9	6
44	Unusual crowding-induced chain looping kinetics in hard-sphere fluids: a contrastive study with polymer solutions. <i>Soft Matter</i> , <b>2019</b> , 15, 4976-4988	3.6	5
43	Single-molecule visualization of the effects of ionic strength and crowding on structure-mediated interactions in supercoiled DNA molecules. <i>Nucleic Acids Research</i> , <b>2019</b> , 47, 6360-6368	20.1	4
42	Polyethylene glycols affect electron transfer rate in phenosafranin-DNA complex. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2020</b> , 225, 117464	4.4	2
41	DNA Hairpin Hybridization under Extreme Pressures: A Single-Molecule FRET Study. <i>Journal of Physical Chemistry B</i> , <b>2020</b> , 124, 110-120	3.4	9
40	Stability prediction of canonical and non-canonical structures of nucleic acids in various molecular environments and cells. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 8439-8468	58.5	17
39	Understanding DNA interactions in crowded environments with a coarse-grained model. <i>Nucleic Acids Research</i> , <b>2020</b> , 48, 10726-10738	20.1	6

38	Duplex-tetraplex equilibria in guanine- and cytosine-rich DNA. <i>Biophysical Chemistry</i> , <b>2020</b> , 267, 106473	3.5	12
37	Molecular crowding and RNA catalysis. <i>Organic and Biomolecular Chemistry</i> , <b>2020</b> , 18, 7724-7739	3.9	7
36	Inter-particle biomolecular reactivity tuned by surface crowders. <i>Nanoscale</i> , <b>2020</b> , 12, 14605-14614	7.7	2
35	Nearest-neighbor parameters for predicting DNA duplex stability in diverse molecular crowding conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 14194-14201	11.5	19
34	Crowding-Induced DNA Translocation through a Protein Nanopore. <i>Analytical Chemistry</i> , <b>2020</b> , 92, 3827-3833	7.8	11
33	Salt Effects on Hydrophobic Solvation: Is the Observed Salt Specificity the Result of Excluded Volume Effects or Water Mediated Ion-Hydrophobe Association?. <i>ChemPhysChem</i> , <b>2020</b> , 21, 484-493	3.2	7
32	Potassium Glutamate and Glycine Betaine Induce Self-Assembly of the PCNA and Sliding Clamps. <i>Biophysical Journal</i> , <b>2021</b> , 120, 73-85	2.9	2
31	Folding Stability and Self-Association of a Triplet-Repeat (CAG) <sub>20</sub> RNA Hairpin in Cytomimetic Media. <i>ChemSystemsChem</i> , <b>2021</b> , 3, e2000052	3.1	0
30	Comparative study of polymer looping kinetics in passive and active environments. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 12171-12190	3.6	1
29	Smaller molecules crowd better: Crowder size dependence revealed by single-molecule FRET studies and depletion force modeling analysis. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 155101	3.9	4
28	Volumetric Interplay between the Conformational States Adopted by Guanine-Rich DNA from the c-MYC Promoter. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 7406-7416	3.4	5
27	Polyethylene glycol perturbs the unfolding of CRABP I: A correlation between experimental and theoretical approach. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2021</b> , 202, 111696	6	0
26	Effects of chain length of polyethylene glycol molecular crowders on a mutant group I ribozyme lacking large peripheral module. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , <b>2021</b> , 40, 867-883	1.4	
25	Direct observation of effect of crowding induced macromolecular hydration on molecular breathing in the stem of Fork-DNA by single-molecule FRET microspectroscopy. <i>International Journal of Biological Macromolecules</i> , <b>2021</b> , 167, 559-569	7.9	2
24	Polymer looping kinetics in active heterogeneous environments. <i>Soft Matter</i> , <b>2021</b> , 17, 10334-10349	3.6	
23	Effects of osmolytes and macromolecular crowders on stable GAAA tetraloops and their preference for a CG closing base pair. <i>PeerJ</i> , <b>2018</b> , 6, e4236	3.1	0
22	Single-molecule visualization of the effects of ionic strength and crowding on structure-mediated interactions in supercoiled DNA molecules.		
21	Experimentally-Determined Strengths of Atom-Atom (C, N, O) Interactions Responsible for Protein Self-Assembly in Water: Applications to Folding and Other Protein Processes.		



20	Understanding DNA interactions in crowded environments with a coarse-grained model.		
19	Potassium Glutamate and Glycine Betaine Induce Self-Assembly of Sliding Clamps into Higher Order Oligomers.		
18	PEG mediated destabilization of holo $\beta$ -lactalbumin probed by and studies: deviation from excluded volume effect. <i>Journal of Biomolecular Structure and Dynamics</i> , <b>2021</b> , 1-13	3.6	0
17	Cooperative electrolyte-PEG interactions drive the signal amplification in a solid-state nanopore.		0
16	Effects of Molecular Crowders on Single-Molecule Nucleic Acid Folding: Temperature-Dependent Studies Reveal True Crowding vs Enthalpic Interactions. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 13147-13157	3.4	1
15	Kineto-Mechanistic Investigation of Effect of Macromolecular Crowding on the Breathing of DNA Bubble.. <i>Journal of Physical Chemistry B</i> , <b>2022</b> ,	3.4	
14	Passive and active tracer dynamics in polymer solutions with isotropic-to-nematic phase transition.. <i>Physical Chemistry Chemical Physics</i> , <b>2022</b> ,	3.6	1
13	Exploring the Structural Diversity of DNA Bottlebrush Polymers Using an Oligonucleotide Macromonomer Approach. <i>Macromolecules</i> , <b>2022</b> , 55, 2235-2242	5.5	
12	Macromolecular Crowding Is More than Hard-Core Repulsions.. <i>Annual Review of Biophysics</i> , <b>2022</b> ,	21.1	4
11	Ion Complexation Explains Orders of Magnitude Changes in the Equilibrium Constant of Biochemical Reactions in Buffers Crowded by Nonionic Compounds.. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 112-117	6.4	0
10	Macromolecular crowding and intrinsically disordered proteins: a polymer physics perspective.. <i>ChemSystemsChem</i> ,	3.1	1
9	Synergism in the Molecular Crowding of Ligand-Induced Riboswitch Folding: Kinetic/Thermodynamic Insights from Single-Molecule Spectroscopy.		1
8	Zeptoliter DNA Origami Reactor to Reveal Cosolute Effects on Nanoconfined G-Quadruplexes. <b>2022</b> , 13, 8692-8698		0
7	Probing RNA Conformations Using a Polymer-Electrolyte Solid-State Nanopore.		1
6	Biophysical principles of liquid-liquid phase separation. <b>2023</b> , 3-82		0
5	Stability Prediction of Canonical and Noncanonical Structures of Nucleic Acids. <b>2022</b> , 1-44		0
4	Multiplexed and scalable cellular phenotyping toward the standardized three-dimensional human neuroanatomy.		0
3	Evaluation of Thermal Stability of DNA Oligonucleotide Structures Embedded in Hydrogels. <b>2022</b> , 2, 302-313		0

- 2 Nearest-neighbor parameters for the prediction of RNA duplex stability in diverse in vitro and cellular-like crowding conditions. ○
- 1 Molecular Crowding Modulates SARS-CoV-2 Aptamer Affinity. ○