William M Gelbart

List of Publications by Year
in descending order

47 papers	5,713 citations	94433 37 h-index	223800 46 g-index
47 all docs	47 docs citations	47 times ranked	4217 citing authors

#	Article	IF	Citations
1	Counterion-Induced Attraction between Rigid Polyelectrolytes. Physical Review Letters, 1997, 78, 2477-2480.	7.8	462
2	Crystallization of Opals from Polydisperse Nanoparticles. Physical Review Letters, 1995, 75, 3466-3469.	7.8	369
3	Molecular theory of curvature elasticity in surfactant films. Journal of Chemical Physics, 1990, 92, 6800-6817.	3.0	337
4	From The Cover: Origin of icosahedral symmetry in viruses. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15556-15560.	7.1	320
5	Osmotic pressure inhibition of DNA ejection from phage. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9292-9295.	7.1	296
6	The â€œNewâ€•Science of â€œComplex Fluidsâ€. The Journal of Physical Chemistry, 1996, 100, 13169-13189.	2.9	257
7	Self-Assembly of Submicrometer Rings of Particles from Solutions of Nanoparticles. Angewandte Chemie International Edition in English, 1997, 36, 1078-1080.	4.4	246
8	Forces and Pressures in DNA Packaging and Release from Viral Capsids. Biophysical Journal, 2003, 84, 1616-1627.	0.5	238
9	Structure, Stability, and Thermodynamics of Lamellar DNA-Lipid Complexes. Biophysical Journal, 1998, 75, 159-173.	0.5	224
10	Interplay between Hole Instability and Nanoparticle Array Formation in Ultrathin Liquid Films. Langmuir, 1998, 14, 3418-3424.	3.5	193
11	Packaging of a Polymer by a Viral Capsid: The Interplay between Polymer Length and Capsid Size. Biophysical Journal, 2008, 94, 1428-1436.	0.5	192
12	Curvature Elasticity of Pure and Mixed Surfactant Films. Physical Review Letters, 1988, 60, 1966-1969.	7.8	190
13	Viral Self-Assembly as a Thermodynamic Process. Physical Review Letters, 2003, 90, 248101.	7.8	176
14	Spontaneous patterning of quantum dots at the air-water interface. Physical Review E, 1999, 59, R6255-R6258.	2.1	171
15	Self-Assembly of Viral Capsid Protein and RNA Molecules of Different Sizes: Requirement for a Specific High Protein/RNA Mass Ratio. Journal of Virology, 2012, 86, 3318-3326.	3.4	151
16	Microphase separation versus the vapor-liquid transition in systems of spherical particles. Journal of Chemical Physics, 1999, 110, 4582-4588.	3.0	127
17	The effect of genome length on ejection forces in bacteriophage lambda. Virology, 2006, 348, 430-436.	2.4	115
18	Elasticity theory and shape transitions of viral shells. Physical Review E, 2005, 72, 051923.	2.1	108

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19	Osmotic Shock and the Strength of Viral Capsids. Biophysical Journal, 2003, 85, 70-74.	0.5	94
20	Pressurized Viruses. Science, 2009, 323, 1682-1683.	12.6	89
21	Bildung von Submikrometerâ€groÃŸen Partikelringen beim Verdunsten Nanopartikelâ€haltiger LÃ¶sungen. Angewandte Chemie, 1997, 109, 1120-1122.	2.0	86
22	Physical Principles in the Self-Assembly of a Simple Spherical Virus. Accounts of Chemical Research, 2016, 49, 48-55.	15.6	85
23	Effects of Salt Concentrations and Bending Energy on the Extent of Ejection of Phage Genomes. Biophysical Journal, 2008, 94, 1110-1120.	0.5	84
24	Topological Defects and the Optimum Size of DNA Condensates. Biophysical Journal, 1998, 75, 714-720.	0.5	81
25	Physical Chemistry of DNA Viruses. Annual Review of Physical Chemistry, 2009, 60, 367-383.	10.8	78
26	Measuring the Force Ejecting DNA from Phage. Journal of Physical Chemistry B, 2004, 108, 6838-6843.	2.6	76
27	Dynamics of DNA Ejection from Bacteriophage. Biophysical Journal, 2006, 91, 411-420.	0.5	76
28	Reconstituted plant viral capsids can release genes to mammalian cells. Virology, 2013, 441, 12-17.	2.4	74
29	Effect of Mono- and Multivalent Salts on Angle-Dependent Attractions Between Charged Rods. Physical Review Letters, 2004, 93, 128101.	7.8	72
30	Curvature Dependence of Viral Protein Structures on Encapsidated Nanoemulsion Droplets. ACS Nano, 2008, 2, 281-286.	14.6	70
31	Salt-Dependent DNA-DNA Spacings in Intact Bacteriophage<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î»</mml:mi></mml:math>Reflect Relative Importance of DNA Self-Repulsion and Bending Energies. Physical Review Letters, 2011, 106, 028102.	7.8	70
32	Exploiting Fluorescent Polymers To Probe the Self-Assembly of Virus-like Particles. Journal of Physical Chemistry B, 2011, 115, 2386-2391.	2.6	68
33	Flowâ€induced gelation of living (micellar) polymers. Journal of Chemical Physics, 1992, 96, 7710-7727.	3.0	66
34	Measurements of DNA Lengths Remaining in a Viral Capsid after Osmotically Suppressed Partial Ejection. Biophysical Journal, 2005, 88, 751-756.	0.5	62
35	<i>In Vitro</i> Quantification of the Relative Packaging Efficiencies of Single-Stranded RNA Molecules by Viral Capsid Protein. Journal of Virology, 2012, 86, 12271-12282.	3.4	60
36	Association of two semiflexible polyelectrolytes by interchain linkers: Theory and simulations. Journal of Chemical Physics, 2002, 117, 462-480.	3.0	43

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37	Statistical Thermodynamics of Amphiphile Self-Assembly: Structure and Phase Transitions in Micellar Solutions. Partially Ordered Systems, 1994, , 1-104.	6.5	42
38	Elastically Driven Linker Aggregation between Two Semiflexible Polyelectrolytes. Physical Review Letters, 2001, 86, 2182-2185.	7.8	34
39	Bacteriophage P22 ejects all of its internal proteins before its genome. Virology, 2015, 485, 128-134.	2.4	34
40	The Effect of RNA Secondary Structure onÂtheÂSelf-Assembly of Viral Capsids. Biophysical Journal, 2017, 113, 339-347.	0.5	30
41	The physics of phages. Physics Today, 2008, 61, 42-47.	0.3	27
42	Smecticâ€Ato bilayer evolution in concentrated surfactant solutions: The role of spontaneous curvature. Journal of Chemical Physics, 1994, 101, 4331-4342.	3.0	14
43	The Force Acting on a Polymer Partially Confined in a Tube. Journal of Physical Chemistry B, 2009, 113, 3873-3879.	2.6	13
44	RNA Homopolymers Form Higher-Curvature Virus-like Particles Than Do Normal-Composition RNAs. Biophysical Journal, 2019, 117, 1331-1341.	0.5	7
45	Controlling the extent of viral genome release by a combination of osmotic stress and polyvalent cations. Physical Review E, 2015, 92, 022708.	2.1	4
46	How and why RNA genomes are (partially) ordered in viral capsids. Current Opinion in Virology, 2022, 52, 203-210.	5.4	2
47	DNA Condensation and Complexation. , 2001, , 53-86.		0