Peter Schuck

List of Publications by Year in descending order

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272 papers

20,098 citations

64 h-index 131 g-index

324 all docs

324 docs citations

times ranked

324

18225 citing authors

#	Article	IF	CITATIONS
1	Size-Distribution Analysis of Macromolecules by Sedimentation Velocity Ultracentrifugation and Lamm Equation Modeling. Biophysical Journal, 2000, 78, 1606-1619.	0.2	3,484
2	Modern analytical ultracentrifugation in protein science: A tutorial review. Protein Science, 2009, 11, 2067-2079.	3.1	642
3	Size-Distribution Analysis of Proteins by Analytical Ultracentrifugation: Strategies and Application to Model Systems. Biophysical Journal, 2002, 82, 1096-1111.	0.2	639
4	USE OF SURFACE PLASMON RESONANCE TO PROBE THE EQUILIBRIUM AND DYNAMIC ASPECTS OF INTERACTIONS BETWEEN BIOLOGICAL MACROMOLECULES. Annual Review of Biophysics and Biomolecular Structure, 1997, 26, 541-566.	18.3	589
5	On the analysis of protein self-association by sedimentation velocity analytical ultracentrifugation. Analytical Biochemistry, 2003, 320, 104-124.	1.1	578
6	Macromolecular Size-and-Shape Distributions by Sedimentation Velocity Analytical Ultracentrifugation. Biophysical Journal, 2006, 90, 4651-4661.	0.2	494
7	High-Precision Isothermal Titration Calorimetry with Automated Peak-Shape Analysis. Analytical Chemistry, 2012, 84, 5066-5073.	3.2	440
8	On the Distribution of Protein Refractive Index Increments. Biophysical Journal, 2011, 100, 2309-2317.	0.2	410
9	Crystal structure of an NK cell immunoglobulin-like receptor in complex with its class I MHC ligand. Nature, 2000, 405, 537-543.	13.7	386
10	Sedimentation equilibrium analysis of protein interactions with global implicit mass conservation constraints and systematic noise decomposition. Analytical Biochemistry, 2004, 326, 234-256.	1.1	333
11	Sedimentation Analysis of Noninteracting and Self-Associating Solutes Using Numerical Solutions to the Lamm Equation. Biophysical Journal, 1998, 75, 1503-1512.	0.2	331
12	Determination of the sedimentation coefficient distribution by least-squares boundary modeling. Biopolymers, 2000, 54, 328-341.	1.2	306
13	Studying multisite binary and ternary protein interactions by global analysis of isothermal titration calorimetry data in SEDPHAT: Application to adaptor protein complexes in cell signaling. Protein Science, 2007, 16, 30-42.	3.1	295
14	Modern analytical ultracentrifugation in protein science: a tutorial review. Protein Science, 2002, 11, 2067-79.	3.1	286
15	Calculating Sedimentation Coefficient Distributions by Direct Modeling of Sedimentation Velocity Concentration Profiles. Methods in Enzymology, 2004, 384, 185-212.	0.4	264
16	SEDPHAT – A platform for global ITC analysis and global multi-method analysis of molecular interactions. Methods, 2015, 76, 137-148.	1.9	264
17	Kinetics of ligand binding to receptor immobilized in a polymer matrix, as detected with an evanescent wave biosensor. I. A computer simulation of the influence of mass transport. Biophysical Journal, 1996, 70, 1230-1249.	0.2	226
18	Integration and global analysis of isothermal titration calorimetry data for studying macromolecular interactions. Nature Protocols, 2016, 11, 882-894.	5.5	225

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19	Analysis of Mass Transport-Limited Binding Kinetics in Evanescent Wave Biosensors. Analytical Biochemistry, 1996, 240, 262-272.	1.1	217
20	Oligomerization of signaling complexes by the multipoint binding of GRB2 to both LAT and SOS1. Nature Structural and Molecular Biology, 2006, 13, 798-805.	3.6	195
21	Higherâ€order oligomerization promotes localization of <scp>SPOP</scp> to liquid nuclear speckles. EMBO Journal, 2016, 35, 1254-1275.	3.5	172
22	Direct Sedimentation Analysis of Interference Optical Data in Analytical Ultracentrifugation. Biophysical Journal, 1999, 76, 2288-2296.	0.2	168
23	Sedimentation Velocity Analysis of Heterogeneous Protein-Protein Interactions: Lamm Equation Modeling and Sedimentation Coefficient Distributions c(s). Biophysical Journal, 2005, 89, 619-634.	0.2	168
24	Reliable determination of binding affinity and kinetics using surface plasmon resonance biosensors. Current Opinion in Biotechnology, 1997, 8, 498-502.	3.3	160
25	The Role of Mass Transport Limitation and Surface Heterogeneity in the Biophysical Characterization of Macromolecular Binding Processes by SPR Biosensing. Methods in Molecular Biology, 2010, 627, 15-54.	0.4	160
26	Overview of Current Methods in Sedimentation Velocity and Sedimentation Equilibrium Analytical Ultracentrifugation. Current Protocols in Protein Science, 2013, 71, Unit20.12.	2.8	154
27	A conformational switch in HP1 releases auto-inhibition to drive heterochromatin assembly. Nature, 2013, 496, 377-381.	13.7	141
28	Combining biophysical methods for the analysis of protein complex stoichiometry and affinity in <i>SEDPHAT</i> . Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 3-14.	2.5	139
29	Crystal Structure of a Superantigen Bound to the High-Affinity, Zinc-Dependent Site on MHC Class II. Immunity, 2001, 14, 93-104.	6.6	134
30	Studying multiprotein complexes by multisignal sedimentation velocity analytical ultracentrifugation. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 81-86.	3.3	132
31	Kinetic analysis of biosensor data: elementary tests for self-consistency. Trends in Biochemical Sciences, 1996, 21, 458-460.	3.7	131
32	Alanine-scanning Mutations in Domain 4 of Anthrax Toxin Protective Antigen Reveal Residues Important for Binding to the Cellular Receptor and to a Neutralizing Monoclonal Antibody. Journal of Biological Chemistry, 2003, 278, 30936-30944.	1.6	130
33	Variable MHC class I engagement by Ly49 natural killer cell receptors demonstrated by the crystal structure of Ly49C bound to H-2Kb. Nature Immunology, 2003, 4, 1213-1222.	7.0	127
34	Combined Affinity and Rate Constant Distributions of Ligand Populations from Experimental Surface Binding Kinetics and Equilibria. Biophysical Journal, 2003, 84, 4062-4077.	0.2	118
35	Sedimentation Velocity Analysis of Heterogeneous Protein-Protein Interactions: Sedimentation Coefficient Distributions c(s) and Asymptotic Boundary Profiles from Gilbert-Jenkins Theory. Biophysical Journal, 2005, 89, 651-666.	0.2	109
36	Self-association of Human Apolipoprotein E3 and E4 in the Presence and Absence of Phospholipid. Journal of Biological Chemistry, 2000, 275, 36758-36765.	1.6	108

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37	Conformational restriction blocks glutamate receptor desensitization. Nature Structural and Molecular Biology, 2006, 13, 1120-1127.	3.6	106
38	Binding Specificity of Multiprotein Signaling Complexes Is Determined by Both Cooperative Interactions and Affinity Preferences. Biochemistry, 2004, 43, 4170-4178.	1.2	105
39	Structure and Assembly Mechanism for Heteromeric Kainate Receptors. Neuron, 2011, 71, 319-331.	3.8	102
40	Recorded scan times can limit the accuracy of sedimentation coefficients in analytical ultracentrifugation. Analytical Biochemistry, 2013, 437, 104-108.	1.1	102
41	Cooperative interactions at the SLP-76 complex are critical for actin polymerization. EMBO Journal, 2010, 29, 2315-2328.	3.5	98
42	Bacteriorhodopsin/Amphipol Complexes: Structural and Functional Properties. Biophysical Journal, 2008, 94, 3523-3537.	0.2	97
43	The N-terminal domain of GluR6-subtype glutamate receptor ion channels. Nature Structural and Molecular Biology, 2009, 16, 631-638.	3.6	97
44	Chimpanzee/human mAbs to vaccinia virus B5 protein neutralize vaccinia and smallpox viruses and protect mice against vaccinia virus. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1882-1887.	3.3	94
45	Exposure of acidic residues as a danger signal for recognition of fibrinogen and other macromolecules by integrin ÂXÂ2. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1614-1619.	3.3	91
46	Non-Ideality by Sedimentation Velocity of Halophilic Malate Dehydrogenase in Complex Solvents. Biophysical Journal, 2001, 81, 1868-1880.	0.2	90
47	Cooperative behavior of Escherichia coli cell-division protein FtsZ assembly involves the preferential cyclization of long single-stranded fibrils. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1895-1900.	3.3	90
48	Rotavirus Nonstructural Protein NSP2 Self-assembles into Octamers That Undergo Ligand-induced Conformational Changes. Journal of Biological Chemistry, 2001, 276, 9679-9687.	1.6	88
49	A new adaptive grid-size algorithm for the simulation of sedimentation velocity profiles in analytical ultracentrifugation. Computer Physics Communications, 2008, 178, 105-120.	3.0	84
50	Characterizing Proteinâ€Protein Interactions by Sedimentation Velocity Analytical Ultracentrifugation. Current Protocols in Immunology, 2008, 81, Unit 18.15.	3.6	84
51	Characterization of DC-SIGN/R Interaction with Human Immunodeficiency Virus Type 1 gp120 and ICAM Molecules Favors the Receptor's Role as an Antigen-Capturing Rather than an Adhesion Receptor. Journal of Virology, 2005, 79, 4589-4598.	1.5	83
52	Probing the Functional Heterogeneity of Surface Binding Sites by Analysis of Experimental Binding Traces and the Effect of Mass Transport Limitation. Biophysical Journal, 2007, 92, 1742-1758.	0.2	83
53	SEDFIT–MSTAR: molecular weight and molecular weight distribution analysis of polymers by sedimentation equilibrium in the ultracentrifuge. Analyst, The, 2014, 139, 79-92.	1.7	83
54	Inhibition of Hemostasis by a High Affinity Biogenic Amine-binding Protein from the Saliva of a Blood-feeding Insect. Journal of Biological Chemistry, 2003, 278, 4611-4617.	1.6	80

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55	An antibody single-domain phage display library of a native heavy chain variable region: isolation of functional single-domain VH molecules with a unique interface 1 1Edited by I. A. Wilson. Journal of Molecular Biology, 1999, 290, 685-698.	2.0	79
56	A model for sedimentation in inhomogeneous media. I. Dynamic density gradients from sedimenting co-solutes. Biophysical Chemistry, 2004, 108, 187-200.	1.5	77
57	Determination of Sedimentation Coefficients for Small Peptides. Biophysical Journal, 1998, 74, 466-474.	0.2	74
58	Determination of Binding Constants by Equilibrium Titration with Circulating Sample in a Surface Plasmon Resonance Biosensor. Analytical Biochemistry, 1998, 265, 79-91.	1.1	73
59	Efficient Neutralization of Anthrax Toxin by Chimpanzee Monoclonal Antibodies against Protective Antigen. Journal of Infectious Diseases, 2006, 193, 625-633.	1.9	73
60	Analytical ultracentrifugation as a tool for studying protein interactions. Biophysical Reviews, 2013, 5, 159-171.	1.5	73
61	Interaction of TAPBPR, a tapasin homolog, with MHC-I molecules promotes peptide editing. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1006-15.	3.3	73
62	A multi-step nucleation process determines the kinetics of prion-like domain phase separation. Nature Communications, 2021, 12, 4513.	5.8	73
63	Structure of mouse protocadherin 15 of the stereocilia tip link in complex with LHFPL5. ELife, 2018, 7, .	2.8	73
64	Biochemical and Biological Characterization of a Dodecameric CD4-lg Fusion Protein. Journal of Biological Chemistry, 2002, 277, 11456-11464.	1.6	71
65	Humanized Monoclonal Antibodies Derived from Chimpanzee Fabs Protect against Japanese Encephalitis Virus In Vitro and In Vivo. Journal of Virology, 2008, 82, 7009-7021.	1.5	71
66	A Multilaboratory Comparison of Calibration Accuracy and the Performance of External References in Analytical Ultracentrifugation. PLoS ONE, 2015, 10, e0126420.	1.1	71
67	Biointeractions of ultrasmall glutathione-coated gold nanoparticles: effect of small size variations. Nanoscale, 2016, 8, 6577-6588.	2.8	69
68	Basic Principles of Analytical Ultracentrifugation. , 0, , .		69
69	The Molecular Refractive Function of Lens \hat{I}^3 -Crystallins. Journal of Molecular Biology, 2011, 411, 680-699.	2.0	68
70	Apolipoprotein C-II Amyloid Fibrils Assemble via a Reversible Pathway that Includes Fibril Breaking and Rejoining. Journal of Molecular Biology, 2008, 376, 1116-1129.	2.0	66
71	Using Prior Knowledge in the Determination of Macromolecular Size-Distributions by Analytical Ultracentrifugation. Biomacromolecules, 2007, 8, 2011-2024.	2.6	65
72	Sedimentation Patterns of Rapidly Reversible Protein Interactions. Biophysical Journal, 2010, 98, 2005-2013.	0.2	65

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73	SDR grafting of a murine antibody using multiple human germline templates to minimize its immunogenicity. Molecular Immunology, 2004, 41, 863-872.	1.0	64
74	An allosteric site in the T-cell receptor \hat{Cl}^2 domain plays a critical signalling role. Nature Communications, 2017, 8, 15260.	5.8	64
75	Autoinhibition of Arf GTPase-activating Protein Activity by the BAR Domain in ASAP1. Journal of Biological Chemistry, 2009, 284, 1652-1663.	1.6	63
76	Characterization of Chimpanzee/Human Monoclonal Antibodies to Vaccinia Virus A33 Glycoprotein and Its Variola Virus Homolog In Vitro and in a Vaccinia Virus Mouse Protection Model. Journal of Virology, 2007, 81, 8989-8995.	1.5	61
77	The Human Immunodeficiency Virus Type 1 gp120 V2 Domain Mediates gp41-Independent Intersubunit Contacts. Journal of Virology, 2000, 74, 4448-4455.	1.5	60
78	Adaptation of a Surface Plasmon Resonance Biosensor with Microfluidics for Use with Small Sample Volumes and Long Contact Times. Analytical Chemistry, 2001, 73, 2828-2835.	3.2	60
79	Improving the thermal, radial, and temporal accuracy of the analytical ultracentrifuge through external references. Analytical Biochemistry, 2013, 440, 81-95.	1.1	60
80	Role of humoral immunity against hepatitis B virus core antigen in the pathogenesis of acute liver failure. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11369-E11378.	3.3	59
81	Mass Spectrometry after Capture and Small-Volume Elution of Analyte from a Surface Plasmon Resonance Biosensor. Analytical Chemistry, 2002, 74, 2041-2047.	3.2	58
82	Stability of ligand-binding domain dimer assembly controls kainate receptor desensitization. EMBO Journal, 2009, 28, 1518-1530.	3.5	54
83	Oligomeric structure of virion-associated and soluble forms of the simian immunodeficiency virus envelope protein in the prefusion activated conformation. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 14877-14882.	3.3	52
84	A comparison of binding surfaces for SPR biosensing using an antibody–antigen system and affinity distribution analysis. Methods, 2013, 59, 328-335.	1.9	52
85	Crystal Structure of the C-terminal Peptidoglycan-binding Domain of Human Peptidoglycan Recognition Protein lα. Journal of Biological Chemistry, 2004, 279, 31873-31882.	1.6	51
86	Novel Chimpanzee/Human Monoclonal Antibodies That Neutralize Anthrax Lethal Factor, and Evidence for Possible Synergy with Anti-Protective Antigen Antibody. Infection and Immunity, 2009, 77, 3902-3908.	1.0	51
87	On the analysis of sedimentation velocity in the study of protein complexes. European Biophysics Journal, 2009, 38, 1079-1099.	1.2	51
88	Simultaneous radial and wavelength analysis with the Optima XL-A analytical ultracentrifuge. , 1994 , , $1-13$.		50
89	Interaction of the NK Cell Inhibitory Receptor Ly49A with H-2Dd. Immunity, 1999, 11, 591-601.	6.6	50
90	Density Contrast Sedimentation Velocity for the Determination of Protein Partial-Specific Volumes. PLoS ONE, 2011, 6, e26221.	1.1	49

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91	Surface plasmon resonance-based competition assay to assess the sera reactivity of variants of humanized antibodies. Journal of Immunological Methods, 2002, 268, 197-210.	0.6	48
92	Global Multi-Method Analysis of Affinities and Cooperativity in Complex Systems of Macromolecular Interactions. Analytical Chemistry, 2012, 84, 9513-9519.	3.2	48
93	Measuring macromolecular size distributions and interactions at high concentrations by sedimentation velocity. Nature Communications, 2018, 9, 4415.	5.8	48
94	The dimerization stability of the HLH-LZ transcription protein family is modulated by the leucine zippers: A CD and NMR study of TFEB and c-Myc. Biochemistry, 1994, 33, 11296-11306.	1.2	46
95	Eukaryotic RNases H1 act processively by interactions through the duplex RNA-binding domain. Nucleic Acids Research, 2005, 33, 2166-2175.	6.5	46
96	Energetics of glutamate receptor ligand binding domain dimer assembly are modulated by allosteric ions. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12329-12334.	3.3	46
97	Analysis of Transport Experiments Using Pseudo-Absorbance Data. Analytical Biochemistry, 2000, 285, 135-142.	1.1	45
98	Biophysical characterization of DNA and RNA aptamer interactions with hen egg lysozyme. International Journal of Biological Macromolecules, 2011, 48, 392-397.	3.6	45
99	Extended Fujita approach to the molecular weight distribution of polysaccharides and other polymeric systems. Methods, 2011, 54, 136-144.	1.9	45
100	Analysis of high-affinity assembly for AMPA receptor amino-terminal domains. Journal of General Physiology, 2012, 139, 371-388.	0.9	45
101	Amino Acid Residues That Influence FcεRI-Mediated Effector Functions of Human Immunoglobulin Eâ€. Biochemistry, 1998, 37, 16152-16164.	1.2	44
102	Calcium-Sensitive Interaction between Calmodulin and Modified Forms of Rat Brain Neurogranin/RC3. Biochemistry, 2000, 39, 7291-7299.	1.2	43
103	Grafting of "Abbreviated―Complementarity-Determining Regions Containing Specificity-Determining Residues Essential for Ligand Contact to Engineer a Less Immunogenic Humanized Monoclonal Antibody. Journal of Immunology, 2002, 169, 3076-3084.	0.4	43
104	Multipoint Binding of the SLP-76 SH2 Domain to ADAP Is Critical for Oligomerization of SLP-76 Signaling Complexes in Stimulated T Cells. Molecular and Cellular Biology, 2013, 33, 4140-4151.	1.1	43
105	Sedimentation Velocity Analytical Ultracentrifugation. , 0, , .		42
106	Bayesian Analysis of Heterogeneity in the Distribution of Binding Properties of Immobilized Surface Sites. Langmuir, 2008, 24, 11577-11586.	1.6	41
107	Analysis of Protein Interactions with Picomolar Binding Affinity by Fluorescence-Detected Sedimentation Velocity. Analytical Chemistry, 2014, 86, 3181-3187.	3.2	41
108	Analysis of a Temperature-Sensitive Mutant Rotavirus Indicates that NSP2 Octamers Are the Functional Form of the Protein. Journal of Virology, 2002, 76, 7082-7093.	1.5	40

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109	Dissection of Merozoite Surface Protein 3, a Representative of a Family of Plasmodium falciparum Surface Proteins, Reveals an Oligomeric and Highly Elongated Molecule. Journal of Biological Chemistry, 2005, 280, 37236-37245.	1.6	40
110	Characterizing the Solution Properties of Supramolecular Systems by Analytical Ultracentrifugation. Chemistry - A European Journal, 1999, 5, 1377-1383.	1.7	39
111	Binding kinetics of ultrasmall gold nanoparticles with proteins. Nanoscale, 2018, 10, 3235-3244.	2.8	39
112	Sedimentation equilibrium analysis of recombinant mouse FcRn with murine IgG1. Molecular Immunology, 1999, 36, 1117-1125.	1.0	37
113	Regulation of ASAP1 by phospholipids is dependent on the interface between the PH and Arf GAP domains. Cellular Signalling, 2005, 17, 1276-1288.	1.7	37
114	Use of fluorescence-detected sedimentation velocity to study high-affinity protein interactions. Nature Protocols, 2017, 12, 1777-1791.	5 . 5	37
115	A Bayesian Approach for Quantifying Trace Amounts of Antibody Aggregates by Sedimentation Velocity Analytical Ultracentrifugation. AAPS Journal, 2008, 10, 481-93.	2.2	36
116	The biofilm adhesion protein Aap from Staphylococcus epidermidis forms zinc-dependent amyloid fibers. Journal of Biological Chemistry, 2020, 295, 4411-4427.	1.6	36
117	Plasticity in structure and assembly of SARS-CoV-2 nucleocapsid protein., 2022, 1, .		36
118	A model for sedimentation in inhomogeneous media. II. Compressibility of aqueous and organic solvents. Biophysical Chemistry, 2004, 108, 201-214.	1.5	35
119	The boundary structure in the analysis of reversibly interacting systems by sedimentation velocity. Methods, 2011, 54, 16-30.	1.9	35
120	Diffusion of the Reaction Boundary of Rapidly Interacting Macromolecules in Sedimentation Velocity. Biophysical Journal, 2010, 98, 2741-2751.	0.2	34
121	AUC and Small-Angle Scattering for Membrane Proteins. Methods in Enzymology, 2015, 562, 257-286.	0.4	34
122	Energetic and structural features of SARS-CoV-2 N-protein co-assemblies with nucleic acids. IScience, 2021, 24, 102523.	1.9	34
123	Differences in the binding capacity of human apolipoprotein E3 and E4 to size-fractionated lipid emulsions. FEBS Journal, 2002, 269, 5939-5949.	0.2	33
124	Targeted lysis of HIV-infected cells by natural killer cells armed and triggered by a recombinant immunoglobulin fusion protein: implications for immunotherapy. Virology, 2005, 332, 491-497.	1.1	33
125	Reversible and Fast Association Equilibria of a Molecular Chaperone, gp57A, of Bacteriophage T4. Biophysical Journal, 2003, 85, 2606-2618.	0.2	32
126	Analytical ultracentrifugation as a tool for studying membrane proteins., 1991,, 12-22.		31

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127	Analytical band centrifugation of proteins and protein complexes. Biochemical Society Transactions, 1998, 26, 745-749.	1.6	31
128	Quantifying the Energetics of Cooperativity in a Ternary Protein Complexâ€. Biochemistry, 2002, 41, 5177-5184.	1.2	31
129	Measuring Proteinâ€Protein Interactions by Equilibrium Sedimentation. Current Protocols in Immunology, 2007, 79, Unit 18.8.	3.6	31
130	Direct Interaction of the Mouse Cytomegalovirus m152/gp40 Immunoevasin with RAE-1 Isoforms. Biochemistry, 2010, 49, 2443-2453.	1.2	31
131	The role of macromolecular crowding in the evolution of lens crystallins with high molecular refractive index. Physical Biology, 2011, 8, 046004.	0.8	31
132	Analysis of High Affinity Self-Association by Fluorescence Optical Sedimentation Velocity Analytical Ultracentrifugation of Labeled Proteins: Opportunities and Limitations. PLoS ONE, 2013, 8, e83439.	1.1	31
133	Structural, Bioinformatic, and In Vivo Analyses of Two Treponema pallidum Lipoproteins Reveal a Unique TRAP Transporter. Journal of Molecular Biology, 2012, 416, 678-696.	2.0	30
134	Solution properties of γâ€crystallins: Hydration of fish and mammal γâ€crystallins. Protein Science, 2014, 23, 88-99.	3.1	30
135	On computational approaches for size-and-shape distributions from sedimentation velocity analytical ultracentrifugation. European Biophysics Journal, 2010, 39, 1261-1275.	1.2	29
136	Band 3-hemoglobin associations The band 3 tetramer is the oxyhemoglobin binding site. FEBS Letters, 1991, 293, 81-84.	1.3	28
137	Minimizing immunogenicity of the SDR-grafted humanized antibody CC49 by genetic manipulation of the framework residues. Molecular Immunology, 2003, 40, 337-349.	1.0	28
138	Variable Dimerization of the Ly49A Natural Killer Cell Receptor Results in Differential Engagement of its MHC Class I Ligand. Journal of Molecular Biology, 2006, 362, 102-113.	2.0	27
139	Crystal Structure of Group A Streptococcus Mac-1: Insight into Dimer-Mediated Specificity for Recognition of Human IgG. Structure, 2006, 14, 225-235.	1.6	27
140	Structural and Thermodynamic Characterization of the Interaction between Two Periplasmic Treponema pallidum Lipoproteins that are Components of a TPR-Protein-Associated TRAP Transporter (TPAT). Journal of Molecular Biology, 2012, 420, 70-86.	2.0	27
141	Allosteric inhibition of α-thrombin enzymatic activity with ultrasmall gold nanoparticles. Nanoscale Advances, 2019, 1, 378-388.	2.2	27
142	Biomolecular interactions of ultrasmall metallic nanoparticles and nanoclusters. Nanoscale Advances, 2021, 3, 2995-3027.	2.2	27
143	Tools for the Quantitative Analysis of Sedimentation Boundaries Detected by Fluorescence Optical Analytical Ultracentrifugation. PLoS ONE, 2013, 8, e77245.	1.1	27
144	3D-Printing for Analytical Ultracentrifugation. PLoS ONE, 2016, 11, e0155201.	1.1	27

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145	Characterization of serum albumin nanoparticles by sedimentation velocity analysis and electron microscopy., 2002,, 31-36.		26
146	Accounting for Solvent Signal Offsets in the Analysis of Interferometric Sedimentation Velocity Data. Macromolecular Bioscience, 2010, 10, 736-745.	2.1	26
147	Malaria vaccine candidate: Design of a multivalent subunit α-helical coiled coil poly-epitope. Vaccine, 2011, 29, 7090-7099.	1.7	26
148	The Influence of Two Anion-transport Inhibitors, 4,4'-Diisothiocyanatodihydrostilbene-2,2'-Disulfonate and 4,4'-Dibenzoylstilbene-2,2'-Disulfonate, on the Self-association of Erythrocyte Band 3 Protein. FEBS Journal, 1995, 230, 806-812.	0.2	26
149	Variable Field Analytical Ultracentrifugation: II. Gravitational Sweep Sedimentation Velocity. Biophysical Journal, 2016, 110, 103-112.	0.2	25
150	Preferential assembly of heteromeric kainate and AMPA receptor amino terminal domains. ELife, 2017, 6,	2.8	25
151	Rapid Determination of Molar Mass in Modified Archibald Experiments Using Direct Fitting of the Lamm Equation. Analytical Biochemistry, 1998, 259, 48-53.	1.1	24
152	Self-Association and Ligand-Induced Conformational Changes of Iron Regulatory Proteins 1 and 2. Biochemistry, 2005, 44, 8470-8478.	1.2	24
153	Cooperative assembly of a four-molecule signaling complex formed upon T cell antigen receptor activation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11914-E11923.	3.3	24
154	Sedimentation Equilibrium Analysis of Interference Optical Data by Systematic Noise Decomposition. Analytical Biochemistry, 1999, 272, 199-208.	1.1	23
155	Solution properties of γâ€crystallins: Compact structure and low frictional ratio are conserved properties of diverse γâ€crystallins. Protein Science, 2014, 23, 76-87.	3.1	23
156	Identification of nanomaterials: A validation report of two laboratories using analytical ultracentrifugation with fixed and ramped speed options. NanoImpact, 2018, 10, 87-96.	2.4	23
157	Cellular Expression and Crystal Structure of the Murine Cytomegalovirus Major Histocompatibility Complex Class I-like Glycoprotein, m153. Journal of Biological Chemistry, 2007, 282, 35247-35258.	1.6	22
158	Superantigen natural affinity maturation revealed by the crystal structure of staphylococcal enterotoxin G and its binding to T-cell receptor $V\hat{l}^2$ 8.2. Proteins: Structure, Function and Bioinformatics, 2007, 68, 389-402.	1.5	22
159	Extended Polypeptide Linkers Establish the Spatial Architecture of a Pyruvate Dehydrogenase Multienzyme Complex. Structure, 2008, 16, 93-103.	1.6	22
160	Measuring Ultra-Weak Protein Self-Association by Non-ideal Sedimentation Velocity. Journal of the American Chemical Society, 2019, 141, 2990-2996.	6.6	22
161	A Mechanism for Assembly of Complexes of Vitronectin and Plasminogen Activator Inhibitor-1 from Sedimentation Velocity Analysis. Journal of Biological Chemistry, 2005, 280, 28711-28720.	1.6	21
162	The C-terminal domain of Plasmodium falciparum merozoite surface protein 3 self-assembles into \hat{l}_{\pm} -helical coiled coil tetramer. Molecular and Biochemical Parasitology, 2009, 165, 153-161.	0.5	20

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163	Improved measurement of the rotor temperature in analytical ultracentrifugation. Analytical Biochemistry, 2014, 451, 69-75.	1.1	20
164	Zwitterionic glutathione monoethyl ester as a new capping ligand for ultrasmall gold nanoparticles. RSC Advances, 2016, 6, 46350-46355.	1.7	20
165	In vitro affinity maturation of a specificity-determining region-grafted humanized anticarcinoma antibody: isolation and characterization of minimally immunogenic high-affinity variants. Clinical Cancer Research, 2003, 9, 5521-31.	3.2	20
166	Hydrodynamics of Nanoscopic Tubulin Rings in Dilute Solutions. Physical Review Letters, 2004, 93, 098106.	2.9	19
167	Influence of Temperature on the Conformation of Canine Plasminogen:  An Analytical Ultracentrifugation and Dynamic Light Scattering Study. Biochemistry, 2005, 44, 13122-13131.	1.2	19
168	Some statistical properties of differencing schemes for baseline correction of sedimentation velocity data. Analytical Biochemistry, 2010, 401, 280-287.	1.1	19
169	An Equilibrium Model for Linear and Closed-Loop Amyloid Fibril Formation. Journal of Molecular Biology, 2012, 421, 364-377.	2.0	19
170	An intrinsically disordered motif regulates the interaction between the p47 adaptor and the p97 AAA+ ATPase. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26226-26236.	3.3	19
171	Multi-Signal Sedimentation Velocity Analysis with Mass Conservation for Determining the Stoichiometry of Protein Complexes. PLoS ONE, 2013, 8, e62694.	1.1	18
172	Mechanistic Insights into Ultrasmall Gold Nanoparticleâ€"Protein Interactions through Measurement of Binding Kinetics. Journal of Physical Chemistry C, 2019, 123, 28450-28459.	1.5	18
173	Salt Links Dominate Affinity of Antibody HyHEL-5 for Lysozyme through Enthalpic Contributions. Journal of Biological Chemistry, 1999, 274, 26838-26842.	1.6	17
174	Measuring Protein Interactions by Optical Biosensors. Current Protocols in Protein Science, 1999, 17, Unit20.2.	2.8	17
175	Complexes of Neutralizing and Non-Neutralizing Affinity Matured Fabs with a Mimetic of the Internal Trimeric Coiled-Coil of HIV-1 gp41. PLoS ONE, 2013, 8, e78187.	1.1	17
176	Human Herpesvirus 7 U21 Tetramerizes To Associate with Class I Major Histocompatibility Complex Molecules. Journal of Virology, 2014, 88, 3298-3308.	1.5	17
177	Sedimentation coefficient distributions of large particles. Analyst, The, 2016, 141, 4400-4409.	1.7	17
178	Dissecting Titin into Its Structural Motifs: Identification of an .alphaHelix Motif near the Titin N-Terminus. Biochemistry, 1995, 34, 553-561.	1.2	16
179	Protein S multimers and monomers each have direct anticoagulant activity. Journal of Thrombosis and Haemostasis, 2006, 4, 385-391.	1.9	16
180	Quaternary Structure and Cleavage Specificity of a Poxvirus Holliday Junction Resolvase. Journal of Biological Chemistry, 2006, 281, 11618-11626.	1.6	16

#	Article	IF	Citations
181	Assembly, Loading, and Alignment of an Analytical Ultracentrifuge Sample Cell. Journal of Visualized Experiments, 2009, , .	0.2	16
182	Enhanced Sample Handling for Analytical Ultracentrifugation with 3D-Printed Centerpieces. Analytical Chemistry, 2019, 91, 5866-5873.	3.2	16
183	Determination of the molar mass of pigment-containing complexes of intrinsic membrane proteins: Problems, solutions and application to the light-harvesting complex B800/820 of Rhodospirillum molischianum., 1994,, 14-19.		15
184	Phospholipids Enhance Nucleation but Not Elongation of Apolipoprotein C-II Amyloid Fibrils. Journal of Molecular Biology, 2010, 399, 731-740.	2.0	15
185	Crystal Structure of Chicken \hat{l}^3 S-Crystallin Reveals Lattice Contacts with Implications for Function in the Lens and the Evolution of the $\hat{l}^2\hat{l}^3$ -Crystallins. Structure, 2017, 25, 1068-1078.e2.	1.6	15
186	Nucleic acid–induced dimerization of HIV-1 Gag protein. Journal of Biological Chemistry, 2019, 294, 16480-16493.	1.6	15
187	The relationships between the oligomeric structure and the functions of human erythrocyte band 3 protein: the functional unit for the binding of ankyrin, hemoglobin and aldolase and for anion transport. Progress in Cell Research, 1992, , 209-217.	0.3	15
188	Editorial for the special issue of methods "Modern Analytical Ultracentrifugation― Methods, 2011, 54, 1-3.	1.9	14
189	Strategies for assessing proton linkage to bimolecular interactions by global analysis of isothermal titration calorimetry data. Journal of Chemical Thermodynamics, 2012, 52, 95-107.	1.0	14
190	Measurement of the temperature of the resting rotor in analytical ultracentrifugation. Analytical Biochemistry, 2014, 458, 37-39.	1.1	14
191	A histogram approach to the quality of fit in sedimentation velocity analyses. Analytical Biochemistry, 2015, 483, 1-3.	1.1	14
192	Measuring aggregates, self-association, and weak interactions in concentrated therapeutic antibody solutions. MAbs, 2020, 12, 1810488.	2.6	14
193	Studies on the partial specific volume of a poly(ethylene glycol) derivative in different solvent systems., 2002,, 24-30.		14
194	Dimeric States of Neural- and Epithelial-Cadherins are Distinguished by the Rate of Disassembly. Biochemistry, 2011, 50, 2951-2961.	1.2	13
195	NBD-Labeled Phospholipid Accelerates Apolipoprotein C-II Amyloid Fibril Formation but Is Not Incorporated into Mature Fibrils. Biochemistry, 2011, 50, 9579-9586.	1.2	13
196	A Structural Framework for a Near-Minimal Form of Life: Mass and Compositional Analysis of the Helical Mollicute Spiroplasma melliferum BC3. PLoS ONE, 2014, 9, e87921.	1.1	13
197	Tubulin Dimer Reversible Dissociation. Journal of Biological Chemistry, 2016, 291, 9281-9294.	1.6	13
198	Measuring Protein Interactions by Optical Biosensors. Current Protocols in Protein Science, 2017, 88, 20.2.1-20.2.25.	2.8	13

#	Article	lF	Citations
199	All tubulins are not alike: Heterodimer dissociation differs among different biological sources. Journal of Biological Chemistry, 2019, 294, 10315-10324.	1.6	13
200	Elucidating Kinetic and Thermodynamic Constants for Interaction of G Protein Subunits and Receptors by Surface Plasmon Resonance Spectroscopy. Methods in Enzymology, 2002, 344, 15-42.	0.4	12
201	Multipoint measurements of field-aligned current density in the auroral zone. Journal of Geophysical Research, 2003, 108, .	3.3	12
202	Variable-Field Analytical Ultracentrifugation: I. Time-Optimized Sedimentation Equilibrium. Biophysical Journal, 2015, 109, 827-837.	0.2	12
203	Ultrasmall Gold Nanoparticles Coated with Zwitterionic Glutathione Monoethyl Ester: A Model Platform for the Incorporation of Functional Peptides. Journal of Physical Chemistry B, 2020, 124, 3892-3902.	1.2	12
204	A multi-laboratory benchmark study of isothermal titration calorimetry (ITC) using Ca2+ and Mg2+ binding to EDTA. European Biophysics Journal, 2021, 50, 429-451.	1.2	12
205	Sedimentation Velocity Analytical Ultracentrifugation. , 0, , .		12
206	Single-walled tubulin ring polymers. Biopolymers, 2007, 86, 424-436.	1.2	11
207	Accounting for Photophysical Processes and Specific Signal Intensity Changes in Fluorescence-Detected Sedimentation Velocity. Analytical Chemistry, 2014, 86, 9286-9292.	3.2	11
208	A Reappraisal of Sedimentation Nonideality Coefficients for the Analysis of Weak Interactions of Therapeutic Proteins. AAPS Journal, 2019, 21, 35.	2.2	11
209	Competing stress-dependent oligomerization pathways regulate self-assembly of the periplasmic protease-chaperone DegP. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118 , .	3.3	11
210	Monochromatic multicomponent fluorescence sedimentation velocity for the study of high-affinity protein interactions. ELife, 2016, 5 , .	2.8	11
211	The intrinsic kinase activity of BRD4 spans its BD2-B-BID domains. Journal of Biological Chemistry, 2021, 297, 101326.	1.6	10
212	Two Interferons Alpha Influence Each Other during Their Interaction with the Extracellular Domain of Human Type Interferon Receptor Subunit 2. Biochemistry, 2007, 46, 14638-14649.	1.2	9
213	Biocalorimetry. Methods, 2015, 76, 1-2.	1.9	9
214	Best Practices for Aggregate Quantitation of Antibody Therapeutics by Sedimentation Velocity Analytical Ultracentrifugation. Journal of Pharmaceutical Sciences, 2022, 111, 2121-2133.	1.6	9
215	The Molar Mass of an Active Photosystem I Complex from the Cyanobacterium Synechococcus PCC 7002. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1994, 49, 220-222.	0.6	8
216	Sedimentation Equilibrium Analytical Ultracentrifugation for Multicomponent Protein Interactions. , 2007, , 289-316.		8

#	Article	IF	Citations
217	Sedimentation of Reversibly Interacting Macromolecules with Changes in Fluorescence Quantum Yield. Biophysical Journal, 2017, 112, 1374-1382.	0.2	8
218	A radial calibration window for analytical ultracentrifugation. PLoS ONE, 2018, 13, e0201529.	1.1	8
219	Quantitative Analysis of Protein Selfâ€Association by Sedimentation Velocity. Current Protocols in Protein Science, 2020, 101, e109.	2.8	8
220	Global multi-method analysis of interaction parameters for reversibly self-associating macromolecules at high concentrations. Scientific Reports, 2021, 11, 5741.	1.6	7
221	Characterization of DNA–protein complexes by nanoparticle tracking analysis and their association with systemic lupus erythematosus. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	7
222	The Human Immunodeficiency Virus Type 1 gp120 V2 Domain Mediates gp41-Independent Intersubunit Contacts. Journal of Virology, 2000, 74, 4448-4455.	1.5	7
223	Sedimentation Velocity in the Study of Reversible Multiprotein Complexes., 2007,, 469-518.		6
224	Surface Plasmon Resonance Biosensing in the Study of Ternary Systems of Interacting Proteins. , 2007, , 97-141.		6
225	Studying heterologous associations between membrane proteins by analytical ultracentrifugation: Experience with erythrocyte band 3., 1995,, 69-73.		5
226	Ultracentrifugation Studies on the Solution Properties of Supramolecular Building Blocks for Polymers: Potential, Problems, and Solutions. ACS Symposium Series, 2002, , 185-200.	0.5	5
227	Measuring Protein Interactions by Optical Biosensors. Current Protocols in Cell Biology, 2004, 22, Unit 17.6.	2.3	5
228	Efficient data acquisition with three-channel centerpieces in sedimentation velocity. Analytical Biochemistry, 2019, 586, 113414.	1.1	5
229	Determining the Stoichiometry of a Protein–Polymer Conjugate Using Multisignal Sedimentation Velocity Analytical Ultracentrifugation. Bioconjugate Chemistry, 2021, 32, 942-949.	1.8	5
230	Distinct disease features in chimpanzees infected with a precore HBV mutant associated with acute liver failure in humans. PLoS Pathogens, 2020, 16, e1008793.	2.1	4
231	Calibrating analytical ultracentrifuges. European Biophysics Journal, 2021, 50, 353-362.	1.2	4
232	The Influence of Two Anion-transport Inhibitors, 4,4'-Dibenzoylstilbene-2,2'-Disulfonate, on the Self-association of Erythrocyte Band 3 Protein. FEBS Journal, 1995, 230, 806-812.	0.2	3
233	Biophysical methods for the study of protein interactions. Methods, 2013, 59, 259-260.	1.9	2
234	All Tubulins are Not Alike: Dimer Dissociation and Monomer Exchange Differ Depending on the Biological Source of Tubulin. Biophysical Journal, 2018, 114, 504a.	0.2	2

#	Article	IF	Citations
235	Reply to Panayotou and Waterfield. Trends in Biochemical Sciences, 1997, 22, 149.	3.7	1
236	Reply to Masson. Trends in Biochemical Sciences, 1997, 22, 150.	3.7	1
237	Measuring Proteinâ€Protein Interactions by Equilibrium Sedimentation. Current Protocols in Immunology, 2000, 40, 18.8.1.	3.6	1
238	Fredholm Integral Equations in Biophysical Data Analysis. IFMBE Proceedings, 2010, , 340-343.	0.2	1
239	Tubulin Monomer-Monomer Association is Less Influenced by the Solvent than Dimer-Dimer Association: Structure and Function of Tubulin Interaction Interfaces. Biophysical Journal, 2016, 110, 26a-27a.	0.2	1
240	Congratulations to Dr. Fumio Arisaka on his 70th birthday. Biophysical Reviews, 2018, 10, 137-137.	1.5	1
241	Studying Multi-Protein Interactions by Fluorescence Detected Sedimentation Velocity Combining Hydrodynamic Separation of Complexes with Fluorescence Quenching Analysis. Biophysical Journal, 2019, 116, 194a.	0.2	1
242	Determination of the sedimentation coefficient distribution by least-squares boundary modeling. , 2000, 54, 328.		1
243	The state of association of the Na+-translocating reduced nicotinamide adenine dinucleotide:quinone oxidoreductase in detergent solution – an ultracentrifugation study. , 0, , 48-53.		0
244	Probing the Heterogeneity in the Distribution of Binding Properties of Immobilized Surface Sites through Bayesian Analysis. Biophysical Journal, 2009, 96, 74a-75a.	0.2	0
245	Structure And Stability Of Ligand Binding Core Dimer Assembly Controls Desensitization In A Kainate Receptor. Biophysical Journal, 2009, 96, 491a.	0.2	0
246	Macromol. Biosci. 7/2010. Macromolecular Bioscience, 2010, 10, .	2.1	O
247	Energetics of Allosteric ion Binding to a Ligand-Gated ion Channel. Biophysical Journal, 2010, 98, 610a.	0.2	0
248	Determining Thermodynamic Parameters of Protein Interactions By Global Analysis of Data From Multiple Techniques. Biophysical Journal, 2010, 98, 61a.	0.2	0
249	Studying Rapidly Reversible Protein-Protein Interactions by Sedimentation Velocity Analytical Ultracentrifugation. Biophysical Journal, 2011, 100, 387a.	0.2	0
250	The Molecular Refractive Function of Lens Gamma Crystallins. Biophysical Journal, 2012, 102, 185a.	0.2	0
251	Analysis of Oligomer Assembly for the GluA2 Amino Terminal Domain. Biophysical Journal, 2012, 102, 335a-336a.	0.2	0
252	Analysis of High-Affinity Protein Interactions by Fluorescence Optical Analytical Ultracentrifugation. Biophysical Journal, 2014, 106, 236a.	0.2	0

#	Article	IF	Citations
253	Tubulin Heterodimers Reversibly Dissociate with Moderate Kinetics as Demonstrated using Sedimentation Velocity Analytical Ultracentrifugation. Biophysical Journal, 2014, 106, 351a.	0.2	O
254	Role of Amino-Terminal Domain in the Assembly Mechanism of Kainate-Subtype Glutamate Receptor Ion Channels. Biophysical Journal, 2014, 106, 151a.	0.2	0
255	Investigating High Affinity Protein Self-Association by Fluorescence Optical Sedimentation Velocity Analytical Ultracentrifugation. Biophysical Journal, 2014, 106, 151a.	0.2	0
256	Sedimentation in a Time-Varying Centrifugal Field for Rapid Attainment of Sedimentation Equilibrium. Biophysical Journal, 2015, 108, 222a.	0.2	0
257	Sedimentation Velocity Analysis of the EGFPs in E. coli Whole Cell Extracts using Fluorescence Detection System. Biophysical Journal, 2015, 108, 624a.	0.2	0
258	The Role of Higher-Order SPOP Oligomers for Localization to Cellular "Bodies―and Ubiquitination Activity. Biophysical Journal, 2015, 108, 390a.	0.2	0
259	Accounting for Photophysical Processes and Specific Signal Intensity Change in Fluorescence-Detected Sedimentation Velocity Analytical Ultracentrifugation. Biophysical Journal, 2015, 108, 624a.	0.2	0
260	Biointeractions of Ultrasmall Gold Nanoparticles: Influence of Nanoparticle Size and Surface Chemistry. Biophysical Journal, 2016, 110, 530a.	0.2	0
261	Study Molecular Interactions in whole Cell Extracts by Fluorescence-Detected Analytical Ultracentrifugation. Biophysical Journal, 2016, 110, 384a.	0.2	0
262	Gravitational Sweep Sedimentation Velocity. Biophysical Journal, 2016, 110, 384a.	0.2	0
263	A New Dimension of Detection in Analytical Ultracentrifugation with Fluorescence Detection using Photoswitchable FPs as Time Domain Probes. Biophysical Journal, 2016, 110, 347a.	0.2	0
264	A New Temporal Dimension for Multisignal Sedimentation Velocity as a Tool to Analyze Multicomponent Interactions. Biophysical Journal, 2017, 112, 192a.	0.2	0
265	A General Framework for the Boundary Structure in Multi-Component Sedimentation Velocity with Reversible Interactions. Biophysical Journal, 2017, 112, 199a.	0.2	0
266	Fluorescence Detected Sedimentation Velocity Analytical Ultracentrifugation for Investigating Affinity and Stoichiometry of Protein Interactions. Biophysical Journal, 2017, 112, 199a.	0.2	0
267	All Tubulins are Not the Same: Reversible Dissociation of AB-Tubulin Dimers Differ Depending on the Source of Tubulin. Biophysical Journal, 2017, 112, 360a.	0.2	0
268	Assembly of Kainate and AMPA Receptors. Biophysical Journal, 2018, 114, 126a.	0.2	0
269	Sedimentation Boundary Structure of Multi-Component Solutions with Rapidly Reversible Interactions. Biophysical Journal, 2018, 114, 172a-173a.	0.2	0
270	Measuring Macromolecular Size-Distributions and Interactions at High Concentrations by Sedimentation Velocity. Biophysical Journal, 2019, 116, 158a.	0.2	0

#	Article	IF	CITATIONS
271	Abstract IA23: Functional and structural studies of HP1 heterochromatin., 2013,,.		0
272	Sedimentation Velocity Analytical Ultracentrifugation. , 2018, , 1-14.		0