

Aleksei Aksimentiev

List of Publications by Year in descending order

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159
papers

12,946
citations

20815

60
h-index

28296

105
g-index

184
all docs

184
docs citations

184
times ranked

10554
citing authors

#	ARTICLE	IF	CITATIONS
1	Scalable molecular dynamics on CPU and GPU architectures with NAMD. <i>Journal of Chemical Physics</i> , 2020, 153, 044130.	3.0	1,548
2	Imaging $\hat{\pm}$ -Hemolysin with Molecular Dynamics: Ionic Conductance, Osmotic Permeability, and the Electrostatic Potential Map. <i>Biophysical Journal</i> , 2005, 88, 3745-3761.	0.5	620
3	Slowing down DNA Translocation through a Nanopore in Lithium Chloride. <i>Nano Letters</i> , 2012, 12, 1038-1044.	9.1	343
4	Microscopic Kinetics of DNA Translocation through Synthetic Nanopores. <i>Biophysical Journal</i> , 2004, 87, 2086-2097.	0.5	323
5	Orientation discrimination of single-stranded DNA inside the $\hat{\text{A}}$ -hemolysin membrane channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 12377-12382.	7.1	308
6	Electrical recognition of the twenty proteinogenic amino acids using an aerolysin nanopore. <i>Nature Biotechnology</i> , 2020, 38, 176-181.	17.5	308
7	Water $\hat{\sim}$ Silica Force Field for Simulating Nanodevices. <i>Journal of Physical Chemistry B</i> , 2006, 110, 21497-21508.	2.6	283
8	Improved Parametrization of Li^{+} , Na^{+} , K^{+} , and Mg^{2+} Ions for All-Atom Molecular Dynamics Simulations of Nucleic Acid Systems. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 45-50.	4.6	275
9	Assessing Graphene Nanopores for Sequencing DNA. <i>Nano Letters</i> , 2012, 12, 4117-4123.	9.1	237
10	Multiple rereads of single proteins at single $\hat{\text{a}}$ amino acid resolution using nanopores. <i>Science</i> , 2021, 374, 1509-1513.	12.6	222
11	The emerging landscape of single-molecule protein sequencing technologies. <i>Nature Methods</i> , 2021, 18, 604-617.	19.0	198
12	Modeling and Simulation of Ion Channels. <i>Chemical Reviews</i> , 2012, 112, 6250-6284.	47.7	196
13	The Electromechanics of DNA in a Synthetic Nanopore. <i>Biophysical Journal</i> , 2006, 90, 1098-1106.	0.5	181
14	New tricks for old dogs: improving the accuracy of biomolecular force fields by pair-specific corrections to non-bonded interactions. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8432-8449.	2.8	180
15	Effects of cytosine modifications on DNA flexibility and nucleosome mechanical stability. <i>Nature Communications</i> , 2016, 7, 10813.	12.8	177
16	Large-Conductance Transmembrane Porin Made from DNA Origami. <i>ACS Nano</i> , 2016, 10, 8207-8214.	14.6	171
17	Stretching DNA Using the Electric Field in a Synthetic Nanopore. <i>Nano Letters</i> , 2005, 5, 1883-1888.	9.1	166
18	Detection of DNA Sequences Using an Alternating Electric Field in a Nanopore Capacitor. <i>Nano Letters</i> , 2008, 8, 56-63.	9.1	162

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19	Simulation of the electric response of DNA translocation through a semiconductor nanopore—capacitor. <i>Nanotechnology</i> , 2006, 17, 622-633.	2.6	157
20	Deciphering ionic current signatures of DNA transport through a nanopore. <i>Nanoscale</i> , 2010, 2, 468.	5.6	156
21	Highly permeable artificial water channels that can self-assemble into two-dimensional arrays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 9810-9815.	7.1	152
22	Plasmonic Nanopores for Trapping, Controlling Displacement, and Sequencing of DNA. <i>ACS Nano</i> , 2015, 9, 10598-10611.	14.6	148
23	In situ structure and dynamics of DNA origami determined through molecular dynamics simulations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 20099-20104.	7.1	144
24	Electro-osmotic screening of the DNA charge in a nanopore. <i>Physical Review E</i> , 2008, 78, 021912.	2.1	142
25	Detecting SNPs Using a Synthetic Nanopore. <i>Nano Letters</i> , 2007, 7, 1680-1685.	9.1	133
26	Improved Parameterization of Amine—Carboxylate and Amine—Phosphate Interactions for Molecular Dynamics Simulations Using the CHARMM and AMBER Force Fields. <i>Journal of Chemical Theory and Computation</i> , 2016, 12, 430-443.	5.3	132
27	Exploring transmembrane transport through β -hemolysin with grid-steered molecular dynamics. <i>Journal of Chemical Physics</i> , 2007, 127, 125101.	3.0	126
28	Ion Channels Made from a Single Membrane-Spanning DNA Duplex. <i>Nano Letters</i> , 2016, 16, 4665-4669.	9.1	124
29	Nanopore Sensing of Protein Folding. <i>ACS Nano</i> , 2017, 11, 7091-7100.	14.6	122
30	Atoms to Phenotypes: Molecular Design Principles of Cellular Energy Metabolism. <i>Cell</i> , 2019, 179, 1098-1111.e23.	28.9	122
31	Artificial water channels enable fast and selective water permeation through water-wire networks. <i>Nature Nanotechnology</i> , 2020, 15, 73-79.	31.5	111
32	Competitive Binding of Cations to Duplex DNA Revealed through Molecular Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2012, 116, 12946-12954.	2.6	105
33	Slowing DNA Transport Using Graphene—DNA Interactions. <i>Advanced Functional Materials</i> , 2015, 25, 936-946.	14.9	102
34	A synthetic enzyme built from DNA flips 107 lipids per second in biological membranes. <i>Nature Communications</i> , 2018, 9, 2426.	12.8	101
35	Graphene Nanopores for Protein Sequencing. <i>Advanced Functional Materials</i> , 2016, 26, 4830-4838.	14.9	100
36	Conformational transitions and stop-and-go nanopore transport of single-stranded DNA on charged graphene. <i>Nature Communications</i> , 2014, 5, 5171.	12.8	97

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37	DNA Attraction in Monovalent and Divalent Electrolytes. <i>Journal of the American Chemical Society</i> , 2008, 130, 15754-15755.	13.7	95
38	Mechanical Properties of a Complete Microtubule Revealed through Molecular Dynamics Simulation. <i>Biophysical Journal</i> , 2010, 99, 629-637.	0.5	90
39	Predicting the DNA Sequence Dependence of Nanopore Ion Current Using Atomic-Resolution Brownian Dynamics. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3376-3393.	3.1	90
40	DNA–DNA Interactions in Tight Supercoils Are Described by a Small Effective Charge Density. <i>Physical Review Letters</i> , 2010, 105, 158101.	7.8	88
41	Smooth DNA Transport through a Narrowed Pore Geometry. <i>Biophysical Journal</i> , 2014, 107, 2381-2393.	0.5	88
42	Surface functionalization of thin-film diamond for highly stable and selective biological interfaces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 983-988.	7.1	87
43	Ionic Current Rectification through Silica Nanopores. <i>Journal of Physical Chemistry C</i> , 2009, 113, 1850-1862.	3.1	86
44	Ionic Conductivity, Structural Deformation, and Programmable Anisotropy of DNA Origami in Electric Field. <i>ACS Nano</i> , 2015, 9, 1420-1433.	14.6	86
45	Microscopic Mechanics of Hairpin DNA Translocation through Synthetic Nanopores. <i>Biophysical Journal</i> , 2009, 96, 593-608.	0.5	84
46	Nanopore Sequencing: Electrical Measurements of the Code of Life. <i>IEEE Nanotechnology Magazine</i> , 2010, 9, 281-294.	2.0	81
47	End-to-end attraction of duplex DNA. <i>Nucleic Acids Research</i> , 2012, 40, 3812-3821.	14.5	81
48	A Coarse-Grained Model of Unstructured Single-Stranded DNA Derived from Atomistic Simulation and Single-Molecule Experiment. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 2891-2896.	5.3	79
49	Electric and electrophoretic inversion of the DNA charge in multivalent electrolytes. <i>Soft Matter</i> , 2010, 6, 243-246.	2.7	78
50	Rectification of Ion Current in Nanopores Depends on the Type of Monovalent Cations: Experiments and Modeling. <i>Journal of Physical Chemistry C</i> , 2014, 118, 9809-9819.	3.1	77
51	DNA Base-Calling from a Nanopore Using a Viterbi Algorithm. <i>Biophysical Journal</i> , 2012, 102, L37-L39.	0.5	75
52	Slowing the translocation of double-stranded DNA using a nanopore smaller than the double helix. <i>Nanotechnology</i> , 2010, 21, 395501.	2.6	74
53	Molecular Dynamics of Membrane-Spanning DNA Channels: Conductance Mechanism, Electro-Osmotic Transport, and Mechanical Gating. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4680-4687.	4.6	74
54	Molecular Dynamics Study of MspA Arginine Mutants Predicts Slow DNA Translocations and Ion Current Blockades Indicative of DNA Sequence. <i>ACS Nano</i> , 2012, 6, 6960-6968.	14.6	72

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55	The structure and intermolecular forces of DNA condensates. <i>Nucleic Acids Research</i> , 2016, 44, 2036-2046.	14.5	70
56	Nanopore Analysis of Individual RNA/Antibiotic Complexes. <i>ACS Nano</i> , 2011, 5, 9345-9353.	14.6	69
57	The role of molecular modeling in bionanotechnology. <i>Physical Biology</i> , 2006, 3, S40-S53.	1.8	68
58	Rectification of the Current in \pm -Hemolysin Pore Depends on the Cation Type: The Alkali Series Probed by Molecular Dynamics Simulations and Experiments. <i>Journal of Physical Chemistry C</i> , 2011, 115, 4255-4264.	3.1	68
59	Mechanical Trapping of DNA in a Double-Nanopore System. <i>Nano Letters</i> , 2016, 16, 8021-8028.	9.1	68
60	<i>De novo</i> reconstruction of DNA origami structures through atomistic molecular dynamics simulation. <i>Nucleic Acids Research</i> , 2016, 44, 3013-3019.	14.5	67
61	SDS-assisted protein transport through solid-state nanopores. <i>Nanoscale</i> , 2017, 9, 11685-11693.	5.6	67
62	MrDNA: a multi-resolution model for predicting the structure and dynamics of DNA systems. <i>Nucleic Acids Research</i> , 2020, 48, 5135-5146.	14.5	67
63	Electrical signatures of single-stranded DNA with single base mutations in a nanopore capacitor. <i>Nanotechnology</i> , 2006, 17, 3160-3165.	2.6	65
64	Stretching and unzipping nucleic acid hairpins using a synthetic nanopore. <i>Nucleic Acids Research</i> , 2008, 36, 1532-1541.	14.5	65
65	Direct evidence for sequence-dependent attraction between double-stranded DNA controlled by methylation. <i>Nature Communications</i> , 2016, 7, 11045.	12.8	64
66	Molecular Mechanism of Spontaneous Nucleosome Unraveling. <i>Journal of Molecular Biology</i> , 2019, 431, 323-335.	4.2	63
67	Controlling aggregation of cholesterol-modified DNA nanostructures. <i>Nucleic Acids Research</i> , 2019, 47, 11441-11451.	14.5	60
68	Sequence-dependent DNA condensation as a driving force of DNA phase separation. <i>Nucleic Acids Research</i> , 2018, 46, 9401-9413.	14.5	55
69	Picomolar Fingerprinting of Nucleic Acid Nanoparticles Using Solid-State Nanopores. <i>ACS Nano</i> , 2017, 11, 9701-9710.	14.6	54
70	Foldamer-based ultrapermeable and highly selective artificial water channels that exclude protons. <i>Nature Nanotechnology</i> , 2021, 16, 911-917.	31.5	54
71	Rapid and Accurate Determination of Nanopore Ionic Current Using a Steric Exclusion Model. <i>ACS Sensors</i> , 2019, 4, 634-644.	7.8	53
72	Lipid bilayer coated Al ₂ O ₃ nanopore sensors: towards a hybrid biological solid-state nanopore. <i>Biomedical Microdevices</i> , 2011, 13, 671-682.	2.8	52

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73	PoreDesigner for tuning solute selectivity in a robust and highly permeable outer membrane pore. <i>Nature Communications</i> , 2018, 9, 3661.	12.8	50
74	Synthetic Ion Channels via Self-Assembly: A Route for Embedding Porous Polyoxometalate Nanocapsules in Lipid Bilayer Membranes. <i>Nano Letters</i> , 2008, 8, 3916-3921.	9.1	49
75	Molecular dynamics simulations of DNA-DNA and DNA-protein interactions. <i>Current Opinion in Structural Biology</i> , 2020, 64, 88-96.	5.7	49
76	Stretching and Controlled Motion of Single-Stranded DNA in Locally Heated Solid-State Nanopores. <i>ACS Nano</i> , 2013, 7, 6816-6824.	14.6	48
77	Water Mediates Recognition of DNA Sequence via Ionic Current Blockade in a Biological Nanopore. <i>ACS Nano</i> , 2016, 10, 4644-4651.	14.6	48
78	Control and reversal of the electrophoretic force on DNA in a charged nanopore. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 454123.	1.8	46
79	Close encounters with DNA. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 413101.	1.8	46
80	Polyhydrazide-Based Organic Nanotubes as Efficient and Selective Artificial Iodide Channels. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 4806-4813.	13.8	46
81	Step-defect guided delivery of DNA to a graphene nanopore. <i>Nature Nanotechnology</i> , 2019, 14, 858-865.	31.5	45
82	Beyond the gene chip. <i>Bell Labs Technical Journal</i> , 2005, 10, 5-22.	0.7	44
83	Molecular Dynamics Simulation of DNA Capture and Transport in Heated Nanopores. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 12599-12608.	8.0	44
84	Cations Regulate Membrane Attachment and Functionality of DNA Nanostructures. <i>Journal of the American Chemical Society</i> , 2021, 143, 7358-7367.	13.7	44
85	Modeling transport through synthetic nanopores. <i>IEEE Nanotechnology Magazine</i> , 2009, 3, 20-28.	1.3	43
86	Optical Voltage Sensing Using DNA Origami. <i>Nano Letters</i> , 2018, 18, 1962-1971.	9.1	43
87	Strain Softening in Stretched DNA. <i>Physical Review Letters</i> , 2008, 101, 118101.	7.8	42
88	Interference-Free Detection of Genetic Biomarkers Using Synthetic Dipole-Facilitated Nanopore Dielectrophoresis. <i>ACS Nano</i> , 2017, 11, 1204-1213.	14.6	42
89	Single-Protein Collapse Determines Phase Equilibria of a Biological Condensate. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4923-4929.	4.6	42
90	Chiral Systems Made from DNA. <i>Advanced Science</i> , 2021, 8, 2003113.	11.2	42

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91	Two Structural Scenarios for Protein Stabilization by PEG. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8388-8395.	2.6	41
92	In meso crystal structure and docking simulations suggest an alternative proteoglycan binding site in the OpcA outer membrane adhesin. <i>Proteins: Structure, Function and Bioinformatics</i> , 2008, 71, 24-34.	2.6	40
93	Improved model of hydrated calcium ion for molecular dynamics simulations using classical biomolecular force fields. <i>Biopolymers</i> , 2016, 105, 752-763.	2.4	40
94	Analyzing the forces binding a restriction endonuclease to DNA using a synthetic nanopore. <i>Nucleic Acids Research</i> , 2009, 37, 4170-4179.	14.5	39
95	Molecular mechanism of DNA association with single-stranded DNA binding protein. <i>Nucleic Acids Research</i> , 2017, 45, 12125-12139.	14.5	39
96	Refined Parameterization of Nonbonded Interactions Improves Conformational Sampling and Kinetics of Protein Folding Simulations. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3812-3818.	4.6	38
97	The Manipulation of the Internal Hydrophobicity of FraC Nanopores Augments Peptide Capture and Recognition. <i>ACS Nano</i> , 2021, 15, 9600-9613.	14.6	37
98	Scaling of the Euler Characteristic, Surface Area, and Curvatures in the Phase Separating or Ordering Systems. <i>Physical Review Letters</i> , 2001, 86, 240-243.	7.8	35
99	Protein unfolding by SDS: the microscopic mechanisms and the properties of the SDS-protein assembly. <i>Nanoscale</i> , 2020, 12, 5422-5434.	5.6	34
100	Control of Nanoscale Environment to Improve Stability of Immobilized Proteins on Diamond Surfaces. <i>Advanced Functional Materials</i> , 2011, 21, 1040-1050.	14.9	33
101	Synthetic Macrocyclic Nanopore for Potassium-Selective Transmembrane Transport. <i>Journal of the American Chemical Society</i> , 2021, 143, 15975-15983.	13.7	33
102	Microscopic Perspective on the Adsorption Isotherm of a Heterogeneous Surface. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 1804-1807.	4.6	32
103	Large Scale Simulation of Protein Mechanics and Function. <i>Advances in Protein Chemistry</i> , 2003, 66, 195-247.	4.4	31
104	Dynamics of a Molecular Plug Docked onto a Solid-State Nanopore. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4686-4694.	4.6	31
105	A Stabilized Finite Element Method for Modified Poisson-Nernst-Planck Equations to Determine Ion Flow Through a Nanopore. <i>Communications in Computational Physics</i> , 2014, 15, 93-125.	1.7	30
106	Dynamic Interactions between Lipid-Tethered DNA and Phospholipid Membranes. <i>Langmuir</i> , 2018, 34, 15084-15092.	3.5	30
107	Water-Compression Gating of Nanopore Transport. <i>Physical Review Letters</i> , 2018, 120, 268101.	7.8	30
108	DNA sequence-dependent ionic currents in ultra-small solid-state nanopores. <i>Nanoscale</i> , 2016, 8, 9600-9613.	5.6	29

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109	Electrical unfolding of cytochrome <i>c</i> during translocation through a nanopore constriction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	29
110	Computer Modeling in Biotechnology. Methods in Molecular Biology, 2008, 474, 181-234.	0.9	26
111	Hydrophobic Interactions between DNA Duplexes and Synthetic and Biological Membranes. Journal of the American Chemical Society, 2021, 143, 8305-8313.	13.7	26
112	Modeling Pressure-Driven Transport of Proteins Through a Nanochannel. IEEE Nanotechnology Magazine, 2011, 10, 75-82.	2.0	25
113	High-Fidelity Capture, Threading, and Infinite-Depth Sequencing of Single DNA Molecules with a Double-Nanopore System. ACS Nano, 2020, 14, 15566-15576.	14.6	24
114	Modeling Nanopores for Sequencing DNA. Methods in Molecular Biology, 2011, 749, 317-358.	0.9	24
115	Porphyrim-Assisted Docking of a Thermophage Portal Protein into Lipid Bilayers: Nanopore Engineering and Characterization. ACS Nano, 2017, 11, 11931-11945.	14.6	23
116	Hydroxymethyluracil modifications enhance the flexibility and hydrophilicity of double-stranded DNA. Nucleic Acids Research, 2016, 44, 2085-2092.	14.5	22
117	Translocation of DNA through Ultrathin Nanoslits. Advanced Materials, 2021, 33, e2007682.	21.0	22
118	DNA Origami Voltage Sensors for Transmembrane Potentials with Single-Molecule Sensitivity. Nano Letters, 2021, 21, 8634-8641.	9.1	22
119	Modeling thermophoretic effects in solid-state nanopores. Journal of Computational Electronics, 2014, 13, 826-838.	2.5	21
120	Molecular mechanics of DNA bricks: <i>in situ</i> structure, mechanical properties and ionic conductivity. New Journal of Physics, 2016, 18, 055012.	2.9	21
121	Structure, Dynamics, and Ion Conductance of the Phospholamban Pentamer. Biophysical Journal, 2009, 96, 4853-4865.	0.5	20
122	Quantification of Membrane Protein-Detergent Complex Interactions. Journal of Physical Chemistry B, 2017, 121, 10228-10241.	2.6	20
123	Atoms-to-microns model for small solute transport through sticky nanochannels. Lab on A Chip, 2011, 11, 3766.	6.0	19
124	Inchworm movement of two rings switching onto a thread by biased Brownian diffusion represent a three-body problem. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9391-9396.	7.1	19
125	Rosette Nanotube Porins as Ion Selective Transporters and Single-Molecule Sensors. Journal of the American Chemical Society, 2020, 142, 1680-1685.	13.7	19
126	Determining the In-Plane Orientation and Binding Mode of Single Fluorescent Dyes in DNA Origami Structures. ACS Nano, 2021, 15, 5109-5117.	14.6	18

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127	Expanding the Molecular Alphabet of DNA-Based Data Storage Systems with Neural Network Nanopore Readout Processing. <i>Nano Letters</i> , 2022, 22, 1905-1914.	9.1	18
128	Optimization of the Molecular Dynamics Method for Simulations of DNA and Ion Transport Through Biological Nanopores. <i>Methods in Molecular Biology</i> , 2012, 870, 165-186.	0.9	17
129	The effect of calcium on the conformation of cobalamin transporter BtuB. <i>Proteins: Structure, Function and Bioinformatics</i> , 2010, 78, 1153-1162.	2.6	16
130	Electro-Mechanical Conductance Modulation of a Nanopore Using a Removable Gate. <i>ACS Nano</i> , 2019, 13, 2398-2409.	14.6	16
131	Molecular Transport across the Ionic Liquid–Aqueous Electrolyte Interface in a MoS ₂ Nanopore. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26624-26634.	8.0	16
132	Structure Refinement of the OpcA Adhesin Using Molecular Dynamics. <i>Biophysical Journal</i> , 2007, 93, 3058-3069.	0.5	15
133	Effect of Temperature and Hydrophilic Ratio on the Structure of Poly(<i>N</i> -vinylcaprolactam)- <i>block</i> -poly(dimethylsiloxane)- <i>block</i> -poly(<i>N</i> -vinylcaprolactam) Polymersomes. <i>ACS Applied Polymer Materials</i> , 2019, 1, 722-736.	4.4	15
134	A tetrahedral DNA nanorobot with conformational change in response to molecular trigger. <i>Nanoscale</i> , 2021, 13, 15552-15559.	5.6	15
135	Toward detection of DNA-bound proteins using solid-state nanopores: Insights from computer simulations. <i>Electrophoresis</i> , 2012, 33, 3466-3479.	2.4	14
136	Modulation of Molecular Flux Using a Graphene Nanopore Capacitor. <i>Journal of Physical Chemistry B</i> , 2017, 121, 3724-3733.	2.6	14
137	A nanoscale reciprocating rotary mechanism with coordinated mobility control. <i>Nature Communications</i> , 2021, 12, 7138.	12.8	14
138	Tailoring Interleaflet Lipid Transfer with a DNA-based Synthetic Enzyme. <i>Nano Letters</i> , 2020, 20, 4306-4311.	9.1	13
139	Fluorofoldamer-Based Salt- and Proton-Rejecting Artificial Water Channels for Ultrafast Water Transport. <i>Nano Letters</i> , 2022, 22, 4831-4838.	9.1	12
140	Polyhydrazide-Based Organic Nanotubes as Efficient and Selective Artificial Iodide Channels. <i>Angewandte Chemie</i> , 2020, 132, 4836-4843.	2.0	11
141	DNA sequence and methylation prescribe the inside-out conformational dynamics and bending energetics of DNA minicircles. <i>Nucleic Acids Research</i> , 2021, 49, 11459-11475.	14.5	11
142	Multi-resolution simulation of DNA transport through large synthetic nanostructures. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 2706-2716.	2.8	10
143	Selective Permeability of Truncated Aquaporin 1 in Silico. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 342-348.	5.2	9
144	Single molecule analysis of structural fluctuations in DNA nanostructures. <i>Nanoscale</i> , 2019, 11, 18475-18482.	5.6	9

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145	Nanoscale Ion Pump Derived from a Biological Water Channel. <i>Journal of Physical Chemistry B</i> , 2017, 121, 7899-7906.	2.6	8
146	Discrimination of RNA fiber structures using solid-state nanopores. <i>Nanoscale</i> , 2022, 14, 6866-6875.	5.6	8
147	Molecular Mechanisms of DNA Replication and Repair Machinery: Insights from Microscopic Simulations. <i>Advanced Theory and Simulations</i> , 2019, 2, 1800191.	2.8	7
148	A Practical Guide to Molecular Dynamics Simulations of DNA Origami Systems. <i>Methods in Molecular Biology</i> , 2018, 1811, 209-229.	0.9	6
149	The Hinge Region Strengthens the Nonspecific Interaction between Lac-Repressor and DNA: A Computer Simulation Study. <i>PLoS ONE</i> , 2016, 11, e0152002.	2.5	6
150	Characterization of the Lipid Structure and Fluidity of Lipid Membranes on Epitaxial Graphene and Their Correlation to Graphene Features. <i>Langmuir</i> , 2019, 35, 4726-4735.	3.5	5
151	Membrane Activity of a DNA-Based Ion Channel Depends on the Stability of Its Double-Stranded Structure. <i>Nano Letters</i> , 2021, 21, 9789-9796.	9.1	5
152	Engineering Biological Nanopore MspA for Sequencing DNA. <i>Biophysical Journal</i> , 2011, 100, 168a.	0.5	2
153	Nanopore Sequencing: Graphene Nanopores for Protein Sequencing (<i>Adv. Funct. Mater.</i> 27/2016). <i>Advanced Functional Materials</i> , 2016, 26, 4829-4829.	14.9	2
154	Single molecule force measurements: Insights from molecular simulations. <i>Physics of Life Reviews</i> , 2010, 7, 353-354.	2.8	1
155	Netting proteins, one at a time. <i>Nature Nanotechnology</i> , 2021, 16, 1178-1179.	31.5	1
156	Nanopore Force Spectroscopy: Insights from Molecular Dynamics Simulations. , 2011, , 335-356.		1
157	Single-molecule biophysics experiments in silico: Toward a physical model of a replisome. <i>IScience</i> , 2022, 25, 104264.	4.1	1
158	Third Generation DNA Sequencing with a Nanopore. , 2011, , 287-311.		0
159	Modeling the Interface between Biological and Synthetic Components in Hybrid Nanosystems. , 2011, , 43-60.		0