

Single-Molecule Lysozyme Dynamics Monitored by an

Science

335, 319-324

DOI: [10.1126/science.1214824](https://doi.org/10.1126/science.1214824)

Citation Report

#	ARTICLE	IF	CITATIONS
3	Quantitative nanoscale visualization of heterogeneous electron transfer rates in 2D carbon nanotube networks. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11487-11492.	3.3	93
4	Enzymes in Coherent Motion. Science, 2012, 335, 300-301.	6.0	7
5	Origins of Charge Noise in Carbon Nanotube Field-Effect Transistor Biosensors. Nano Letters, 2012, 12, 6380-6384.	4.5	42
7	Building High-Throughput Molecular Junctions Using Indented Graphene Point Contacts. Angewandte Chemie - International Edition, 2012, 51, 12228-12232.	7.2	157
8	Single-Molecule Dynamics of Lysozyme Processing Distinguishes Linear and Cross-Linked Peptidoglycan Substrates. Journal of the American Chemical Society, 2012, 134, 2032-2035.	6.6	45
9	Single Enzyme Studies Reveal the Existence of Discrete Functional States for Monomeric Enzymes and How They Are "Selected" upon Allosteric Regulation. Journal of the American Chemical Society, 2012, 134, 9296-9302.	6.6	38
10	Graphene: An Emerging Electronic Material. Advanced Materials, 2012, 24, 5782-5825.	11.1	718
11	Not all protein-mediated single-wall carbon nanotube dispersions are equally bioactive. Nanoscale, 2012, 4, 7425.	2.8	32
12	Direct Observation of T4 Lysozyme Hinge-Bending Motion by Fluorescence Correlation Spectroscopy. Biophysical Journal, 2012, 103, 1525-1536.	0.2	27
13	Investigating bioconjugation by atomic force microscopy. Journal of Nanobiotechnology, 2013, 11, 25.	4.2	19
14	Test of Normality for Integrated Change Point Detection and Mixture Modeling. Journal of Membrane Biology, 2013, 246, 57-66.	1.0	0
15	Plasma-Enabled Graded Nanotube Biosensing Arrays on a Si Nanodevice Platform: Catalyst-Free Integration and In Situ Detection of Nucleation Events. Advanced Materials, 2013, 25, 69-74.	11.1	19
16	Current and emerging challenges of field effect transistor based bio-sensing. Nanoscale, 2013, 5, 10702.	2.8	81
17	Single molecule sensing with carbon nanotube devices. , 2013, , .		2
18	Carbon Nanotubes for the Label-Free Detection of Biomarkers. ACS Nano, 2013, 7, 7448-7453.	7.3	43
19	Single molecule recordings of lysozyme activity. Physical Chemistry Chemical Physics, 2013, 15, 14879.	1.3	9
20	Genetically encoding phenyl azide chemistry: new uses and ideas for classical biochemistry. Biochemical Society Transactions, 2013, 41, 1177-1182.	1.6	33
21	Carbon nanomaterials for electronics, optoelectronics, photovoltaics, and sensing. Chemical Society Reviews, 2013, 42, 2824-2860.	18.7	1,105

#	ARTICLE	IF	CITATIONS
22	Coarse-graining of proteins based on elastic network models. <i>Chemical Physics</i> , 2013, 422, 165-174.	0.9	26
23	Dissecting Single-Molecule Signal Transduction in Carbon Nanotube Circuits with Protein Engineering. <i>Nano Letters</i> , 2013, 13, 625-631.	4.5	77
24	Rigid versus Flexible Ligands on Carbon Nanotubes for the Enhanced Sensitivity of Cobalt Ions. <i>Macromolecules</i> , 2013, 46, 1376-1383.	2.2	18
25	DNA sequencing using electrical conductance measurements of a DNA polymerase. <i>Nature Nanotechnology</i> , 2013, 8, 452-458.	15.6	28
26	Can Protein Conformers Be Fractionated by Crystallization?. <i>Analytical Chemistry</i> , 2013, 85, 6372-6377.	3.2	7
27	Single-Molecule Electrical Biosensors Based on Single-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2013, 25, 3397-3408.	11.1	104
28	The Devil and Holy Water: Protein and Carbon Nanotube Hybrids. <i>Accounts of Chemical Research</i> , 2013, 46, 2454-2463.	7.6	136
29	Electronic Measurements of Single-Molecule Catalysis by cAMP-Dependent Protein Kinase A. <i>Journal of the American Chemical Society</i> , 2013, 135, 7861-7868.	6.6	66
30	Electronic Measurements of Single-Molecule Processing by DNA Polymerase I (Klenow Fragment). <i>Journal of the American Chemical Society</i> , 2013, 135, 7855-7860.	6.6	41
31	Single cell in-vivo carbon nanotube device with multimodal sensing potential. <i>AIP Advances</i> , 2013, 3, 032122.	0.6	0
32	Single molecule enzymology using carbon nanotube circuits. , 2013, , .		0
33	INSIGHTS IN ENZYME FUNCTIONAL DYNAMICS AND ACTIVITY REGULATION BY SINGLE MOLECULE STUDIES. <i>Biophysical Reviews and Letters</i> , 2013, 08, 137-160.	0.9	16
34	Possible origin of life between mica sheets: does life imitate mica?. <i>Journal of Biomolecular Structure and Dynamics</i> , 2013, 31, 888-895.	2.0	24
35	Protein Engineering with Biosynthesized Libraries from <i>Bordetella bronchiseptica</i> Bacteriophage. <i>PLoS ONE</i> , 2013, 8, e55617.	1.1	6
36	Shedding Light on Protein Folding, Structural and Functional Dynamics by Single Molecule Studies. <i>Molecules</i> , 2014, 19, 19407-19434.	1.7	19
37	Interfacing CMOS electronics to biological systems: from single molecules to cellular communities. , 2014, , .		1
38	Nanowire Biosensors. <i>RSC Smart Materials</i> , 2014, , 167-199.	0.1	0
39	Characteristics and Applications of Carbon Nanotubes with Different Numbers of Walls. , 2014, , 313-339.		5

#	ARTICLE	IF	CITATIONS
40	Comparison of Six Sample Preparation Methods for Analysis of Food Additives in Milk Powder. <i>Food Analytical Methods</i> , 2014, 7, 1345-1352.	1.3	11
41	Application and Future Challenges of Functional Nanocarbon Hybrids. <i>Advanced Materials</i> , 2014, 26, 2295-2318.	11.1	290
42	25th Anniversary Article: Label-Free Electrical Biodetection Using Carbon Nanostructures. <i>Advanced Materials</i> , 2014, 26, 1154-1175.	11.1	80
43	Nanoscale semiconductor devices as new biomaterials. <i>Biomaterials Science</i> , 2014, 2, 619-626.	2.6	25
44	Single molecule insights on conformational selection and induced fit mechanism. <i>Biophysical Chemistry</i> , 2014, 186, 46-54.	1.5	46
45	Extracting signal from noise: kinetic mechanisms from a Michaelis-Menten-like expression for enzymatic fluctuations. <i>FEBS Journal</i> , 2014, 281, 498-517.	2.2	76
46	Elucidating the relationship between substrate and inhibitor binding to the active sites of tetrameric β -galactosidase. <i>Chemical Science</i> , 2014, 5, 4467-4473.	3.7	10
47	Optical and electronic properties of graphene nanoribbons upon adsorption of ligand-protected aluminum clusters. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 3558.	1.3	22
48	Supramolecular immobilization of bio-entities for bioelectrochemical applications. <i>New Journal of Chemistry</i> , 2014, 38, 5173-5180.	1.4	18
49	Selective ion-sensing with membrane-functionalized electrolyte-gated carbon nanotube field-effect transistors. <i>Analyst</i> , 2014, 139, 4947.	1.7	35
50	Probing Protein Multidimensional Conformational Fluctuations by Single-Molecule Multiparameter Photon Stamping Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11943-11955.	1.2	18
51	C ₆₀ @Lysozyme: Direct Observation by Nuclear Magnetic Resonance of a 1:1 Fullerene Protein Adduct. <i>ACS Nano</i> , 2014, 8, 1871-1877.	7.3	70
52	Single Electron Charge Sensitivity of Liquid-Gated Carbon Nanotube Transistors. <i>Nano Letters</i> , 2014, 14, 4925-4930.	4.5	27
53	Sequence Specific Detection of Restriction Enzymes at DNA-Modified Carbon Nanotube Field Effect Transistors. <i>Analytical Chemistry</i> , 2014, 86, 8628-8633.	3.2	14
54	The carbon nanotube-based nanobiosensor: a key component for ubiquitous real-time bioscreening system?. <i>Nanomedicine</i> , 2014, 9, 565-567.	1.7	5
55	Sizing up single-molecule enzymatic conformational dynamics. <i>Chemical Society Reviews</i> , 2014, 43, 1118-1143.	18.7	61
56	Point Decoration of Silicon Nanowires: An Approach Toward Single-Molecule Electrical Detection. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 5038-5043.	7.2	32
59	Controlled covalent binding of antiferromagnetic tetramanganese complexes to carbon nanotubes. <i>RSC Advances</i> , 2015, 5, 84119-84124.	1.7	3

#	ARTICLE	IF	CITATIONS
61	Single-molecule bioelectronics. , 0, , 66-85.		1
62	Observing Lysozyme's Closing and Opening Motions by High-Resolution Single-Molecule Enzymology. ACS Chemical Biology, 2015, 10, 1495-1501.	1.6	21
63	Protein dynamics: from rattling in a cage to structural relaxation. Soft Matter, 2015, 11, 4984-4998.	1.2	104
64	Revealing the direct effect of individual intercalations on DNA conductance toward single-molecule electrical biodetection. Journal of Materials Chemistry B, 2015, 3, 5150-5154.	2.9	22
65	Graphene's DNAzyme junctions: a platform for direct metal ion detection with ultrahigh sensitivity. Chemical Science, 2015, 6, 2469-2473.	3.7	40
66	Selective Breakdown of Metallic Pathways in Double-Walled Carbon Nanotube Networks. Small, 2015, 11, 96-102.	5.2	10
67	Single-molecule bioelectronics. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2015, 7, 475-493.	3.3	19
68	Graft-Induced Midgap States in Functionalized Carbon Nanotubes. ACS Nano, 2015, 9, 2626-2634.	7.3	13
69	Smart Sensors and Systems. , 2015, , .		11
70	Carbon Electrode's Molecule Junctions: A Reliable Platform for Molecular Electronics. Accounts of Chemical Research, 2015, 48, 2565-2575.	7.6	141
71	Processive Incorporation of Deoxynucleoside Triphosphate Analogs by Single-Molecule DNA Polymerase I (Klenow Fragment) Nanocircuits. Journal of the American Chemical Society, 2015, 137, 9587-9594.	6.6	34
72	Functional modulation and directed assembly of an enzyme through designed non-natural post-translation modification. Chemical Science, 2015, 6, 3712-3717.	3.7	19
73	Single-molecule spectroscopy exposes hidden states in an enzymatic electron relay. Nature Communications, 2015, 6, 8624.	5.8	16
74	Real-Time Label-Free Direct Electronic Monitoring of Topoisomerase Enzyme Binding Kinetics on Graphene. ACS Nano, 2015, 9, 11166-11176.	7.3	43
75	An on-chip electrical transport spectroscopy approach for in situ monitoring electrochemical interfaces. Nature Communications, 2015, 6, 7867.	5.8	64
76	Real-time electrochemical monitoring of covalent bond formation in solution via nanoparticle's electrode collisions. Chemical Communications, 2015, 51, 16349-16352.	2.2	15
77	Al^2 self-association and adsorption on a hydrophobic nanosurface: competitive effects and the detection of small oligomers via electrical response. Soft Matter, 2015, 11, 269-279.	1.2	15
78	Hydrolysis of a Lipid Membrane by Single Enzyme Molecules: Accurate Determination of Kinetic Parameters. Angewandte Chemie - International Edition, 2015, 54, 1022-1026.	7.2	20

#	ARTICLE	IF	CITATIONS
79	Flexible Electrolyte-Gated Ion-Selective Sensors Based on Carbon Nanotube Networks. IEEE Sensors Journal, 2015, 15, 3127-3134.	2.4	31
80	Single Molecule Bioelectronics and Their Application to Amplification-Free Measurement of DNA Lengths. Biosensors, 2016, 6, 29.	2.3	12
81	Direct Measurement of Single-Molecule DNA Hybridization Dynamics with Single-Base Resolution. Angewandte Chemie, 2016, 128, 9182-9186.	1.6	7
82	Direct Measurement of Single-Molecule DNA Hybridization Dynamics with Single-Base Resolution. Angewandte Chemie - International Edition, 2016, 55, 9036-9040.	7.2	53
83	Dynamics of Biopolymers: Role of Hydration and Electrostatic Interactions. Macromolecular Chemistry and Physics, 2016, 217, 256-265.	1.1	4
84	Landauer's formula with finite-time relaxation: Kramers' crossover in electronic transport. Scientific Reports, 2016, 6, 24514.	1.6	34
85	Scalable Production of Molybdenum Disulfide Based Biosensors. ACS Nano, 2016, 10, 6173-6179.	7.3	68
86	Electrical Monitoring of sp^3 Defect Formation in Individual Carbon Nanotubes. Journal of Physical Chemistry C, 2016, 120, 1971-1976.	1.5	40
87	Molecular dynamics study of nanojoining between axially positioned Ag nanowires. Applied Surface Science, 2016, 378, 57-62.	3.1	42
88	Enzyme assays using sensor arrays based on ion-selective carbon nanotube field-effect transistors. Biosensors and Bioelectronics, 2016, 84, 7-14.	5.3	33
89	Direct real-time detection of single proteins using silicon nanowire-based electrical circuits. Nanoscale, 2016, 8, 16172-16176.	2.8	40
90	Complex formation dynamics in a single-molecule electronic device. Science Advances, 2016, 2, e1601113.	4.7	82
91	Quantum transport in carbon nanotubes covalently functionalized with magnetic molecules. Physica Status Solidi (B): Basic Research, 2016, 253, 2424-2427.	0.7	5
92	Single-molecule fluorescence resonance energy transfer in molecular biology. Nanoscale, 2016, 8, 19928-19944.	2.8	78
93	Single-Molecule Reaction Chemistry in Patterned Nanowells. Nano Letters, 2016, 16, 4679-4685.	4.5	38
94	Protein Conformational Motions: Enzyme Catalysis. , 2016, , 45-70.		0
95	Two-color spectroscopy of UV excited ssDNA complex with a single-wall nanotube photoluminescence probe: Fast relaxation by nucleobase autoionization mechanism. Nano Research, 2016, 9, 571-583.	5.8	7
96	Molecular-Scale Electronics: From Concept to Function. Chemical Reviews, 2016, 116, 4318-4440.	23.0	1,014

#	ARTICLE	IF	CITATIONS
97	Monitoring the Waiting Time Sequence of Single Ras GTPase Activation Events Using Liposome Functionalized Zero-Mode Waveguides. <i>Nano Letters</i> , 2016, 16, 2890-2895.	4.5	22
98	Complementary Metal-Oxide-Semiconductor Integrated Carbon Nanotube Arrays: Toward Wide-Bandwidth Single-Molecule Sensing Systems. <i>Nano Letters</i> , 2016, 16, 2674-2679.	4.5	7
99	Analysis of the solution conformations of T4 lysozyme by paramagnetic NMR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 5850-5859.	1.3	17
100	Nanoparticle detection by mode splitting in hollow bottle microresonators. <i>Journal of Nanophotonics</i> , 2016, 10, 016009.	0.4	8
101	Deciphering Complexity in Molecular Biophysics with Single-Molecule Resolution. <i>Journal of Molecular Biology</i> , 2016, 428, 301-307.	2.0	11
102	Atomistic details of protein dynamics and the role of hydration water. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2017, 1861, 3546-3552.	1.1	37
103	Quantifying the effect of ionic screening with protein-decorated graphene transistors. <i>Biosensors and Bioelectronics</i> , 2017, 89, 689-692.	5.3	35
104	Real-time monitoring of conformational transitions of single-molecule histone deacetylase 8 with nanocircuits. <i>Chemical Communications</i> , 2017, 53, 3307-3310.	2.2	3
105	Chemical Gating of a Synthetic Tube-in-a-Tube Semiconductor. <i>Journal of the American Chemical Society</i> , 2017, 139, 3045-3051.	6.6	17
106	Mechanically Controlled Electron Transfer in a Single-Polypeptide Transistor. <i>Scientific Reports</i> , 2017, 7, 39792.	1.6	9
107	Single-Molecule Electrical Detection with Real-Time Label-Free Capability and Ultrasensitivity. <i>Small Methods</i> , 2017, 1, 1700071.	4.6	36
108	Switching Effects in Molecular Electronic Devices. <i>Topics in Current Chemistry</i> , 2017, 375, 56.	3.0	33
109	Revealing Multiple Pathways in T4 Lysozyme Substep Conformational Motions by Single-Molecule Enzymology and Modeling. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5017-5024.	1.2	8
110	Electrostatic melting in a single-molecule field-effect transistor with applications in genomic identification. <i>Nature Communications</i> , 2017, 8, 15450.	5.8	30
111	Room-temperature discrete-charge-fluctuation dynamics of a single molecule adsorbed on a carbon nanotube. <i>Nanoscale</i> , 2017, 9, 10674-10683.	2.8	25
112	Single Nucleotide Polymorphism Genotyping in Single-Molecule Electronic Circuits. <i>Advanced Science</i> , 2017, 4, 1700158.	5.6	18
113	Interface-engineered charge separation at selective electron tunneling heterointerfaces. <i>Materials Chemistry Frontiers</i> , 2017, 1, 2125-2131.	3.2	5
114	Direct Measurement of Single-Molecule Adenosine Triphosphatase Hydrolysis Dynamics. <i>ACS Nano</i> , 2017, 11, 12789-12795.	7.3	20

#	ARTICLE	IF	CITATIONS
115	Site-Specific One-to-One Click Coupling of Single Proteins to Individual Carbon Nanotubes: A Single-Molecule Approach. <i>Journal of the American Chemical Society</i> , 2017, 139, 17834-17840.	6.6	30
116	Single-Walled Carbon Nanotube Sensor Concepts. <i>Springer Handbooks</i> , 2017, , 431-456.	0.3	1
117	Towards Novel Graphene-Enabled Diagnostic Assays with Improved Signal-to-Noise Ratio. <i>MRS Advances</i> , 2017, 2, 3733-3739.	0.5	8
118	Communication: Relaxation-limited electronic currents in extended reservoir simulations. <i>Journal of Chemical Physics</i> , 2017, 147, 141102.	1.2	19
119	Inverse counting statistics based on generalized factorial cumulants. <i>New Journal of Physics</i> , 2017, 19, 023018.	1.2	12
120	Direct observation of single-molecule hydrogen-bond dynamics with single-bond resolution. <i>Nature Communications</i> , 2018, 9, 807.	5.8	78
121	Defined covalent assembly of protein molecules on graphene using a genetically encoded photochemical reaction handle. <i>RSC Advances</i> , 2018, 8, 5768-5775.	1.7	8
122	Selective and sensitive detection of lysozyme based on plasmon resonance light-scattering of hydrolyzed peptidoglycan stabilized-gold nanoparticles. <i>Analyst</i> , The, 2018, 143, 1133-1140.	1.7	18
123	Ultrasensitive Single-Molecule Enzyme Detection and Analysis Using a Polymer Microarray. <i>Analytical Chemistry</i> , 2018, 90, 3091-3098.	3.2	18
124	Direct single-molecule dynamic detection of chemical reactions. <i>Science Advances</i> , 2018, 4, eaar2177.	4.7	78
125	First-passage times in renewal and nonrenewal systems. <i>Physical Review E</i> , 2018, 97, 012127.	0.8	19
126	Slow domain reconfiguration causes power-law kinetics in a two-state enzyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 513-518.	3.3	34
127	Two types of lysozymes from the whitefly <i>Bemisia tabaci</i> : Molecular characterization and functional diversification. <i>Developmental and Comparative Immunology</i> , 2018, 81, 252-261.	1.0	7
128	Bioelectronics at the Single Molecule Level. , 2018, , .		0
129	Single-Molecule Studies of Allosteric Inhibition of Individual Enzyme on a DNA Origami Reactor. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6786-6794.	2.1	19
130	Direct Measurement of $\tilde{\epsilon}$ Coupling at the Single-Molecule Level using a Carbon Nanotube Force Sensor. <i>Nano Letters</i> , 2018, 18, 7883-7888.	4.5	8
131	Advanced Nanoscale Approaches to Single-(Bio)entity Sensing and Imaging. <i>Biosensors</i> , 2018, 8, 100.	2.3	15
132	Electrically Controllable Single-Point Covalent Functionalization of Spin-Cast Carbon-Nanotube Field-Effect Transistor Arrays. <i>ACS Nano</i> , 2018, 12, 9922-9930.	7.3	20

#	ARTICLE	IF	CITATIONS
133	Digital enzyme assay using attoliter droplet array. <i>Analyst, The</i> , 2018, 143, 4923-4929.	1.7	27
134	Real-time tracking of single-molecule collagenase on native collagen and partially structured collagen-mimic substrates. <i>Chemical Communications</i> , 2018, 54, 10248-10251.	2.2	1
135	The Exterior of Single-Walled Carbon Nanotubes as a Millimeter-Long Cation-Preferring Nanochannel. <i>Chemistry of Materials</i> , 2018, 30, 5184-5193.	3.2	6
136	Reconfigurable Carbon Nanotube Multiplexed Sensing Devices. <i>Nano Letters</i> , 2018, 18, 4130-4135.	4.5	52
137	Carbon-Nanotube-Based Monolithic CMOS Platform for Electrochemical Detection of Neurotransmitter Glutamate. <i>Sensors</i> , 2019, 19, 3080.	2.1	17
138	Probing Ca ²⁺ -induced conformational change of calmodulin with gold nanoparticle-decorated single-walled carbon nanotube field-effect transistors. <i>Nanoscale</i> , 2019, 11, 13397-13406.	2.8	16
139	A novel CuFe ₂ O ₄ nanospheres molecularly imprinted polymers modified electrochemical sensor for lysozyme determination. <i>Journal of Electroanalytical Chemistry</i> , 2019, 853, 113465.	1.9	28
140	Analysis of Additives in Milk Powders with SPE-HPLC or 2D-HPLC Method. , 0, , .		0
141	Low-Noise Schottky Junction Trigate Silicon Nanowire Field-Effect Transistor for Charge Sensing. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 3994-4000.	1.6	5
142	Digital Biosensing by Foundry-Fabricated Graphene Sensors. <i>Scientific Reports</i> , 2019, 9, 434.	1.6	74
143	Multi-parameter measurements of conformational dynamics in nucleic acids and nucleoprotein complexes. <i>Methods</i> , 2019, 169, 69-77.	1.9	2
144	Bayesian-Estimated Hierarchical HMMs Enable Robust Analysis of Single-Molecule Kinetic Heterogeneity. <i>Biophysical Journal</i> , 2019, 116, 1790-1802.	0.2	22
145	Role of contacts in long-range protein conductance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 5886-5891.	3.3	67
146	Concepts in the design and engineering of single-molecule electronic devices. <i>Nature Reviews Physics</i> , 2019, 1, 211-230.	11.9	327
147	Identification and preparation of stable water dispersions of protein - Carbon nanotube hybrids and efficient design of new functional materials. <i>Carbon</i> , 2019, 147, 70-82.	5.4	30
148	Monolithic CMOS sensor platform featuring an array of 9â€™216 carbon-nanotube-sensor elements and low-noise, wide-bandwidth and wide-dynamic-range readout circuitry. <i>Sensors and Actuators B: Chemical</i> , 2019, 279, 255-266.	4.0	11
149	Single-Molecule Electrical Detection: A Promising Route toward the Fundamental Limits of Chemistry and Life Science. <i>Accounts of Chemical Research</i> , 2020, 53, 159-169.	7.6	84
150	Improved cellular bioactivity by heparin immobilization on polycarbonate film via an aminolysis modification for potential tendon repair. <i>International Journal of Biological Macromolecules</i> , 2020, 142, 835-845.	3.6	10

#	ARTICLE	IF	CITATIONS
151	Large amplitude charge noise and random telegraph fluctuations in room-temperature graphene single-electron transistors. <i>Nanoscale</i> , 2020, 12, 871-876.	2.8	13
152	Single-Molecule Nanotechnologies: An Evolution in Biological Dynamics Detection. <i>ACS Applied Bio Materials</i> , 2020, 3, 68-85.	2.3	24
153	Site-Specific Protein Photochemical Covalent Attachment to Carbon Nanotube Side Walls and Its Electronic Impact on Single Molecule Function. <i>Bioconjugate Chemistry</i> , 2020, 31, 584-594.	1.8	16
154	Critical Review: digital resolution biomolecular sensing for diagnostics and life science research. <i>Lab on A Chip</i> , 2020, 20, 2816-2840.	3.1	35
155	Understanding and Mapping Sensitivity in MoS ₂ Field-Effect-Transistor-Based Sensors. <i>ACS Nano</i> , 2020, 14, 11637-11647.	7.3	11
158	Noise suppression beyond the thermal limit with nanotransistor biosensors. <i>Scientific Reports</i> , 2020, 10, 12678.	1.6	12
159	Computational assessment of the feasibility of protonation-based protein sequencing. <i>PLoS ONE</i> , 2020, 15, e0238625.	1.1	7
160	Selective Fabrication of Single-Molecule Junctions by Interface Engineering. <i>Small</i> , 2020, 16, e2004720.	5.2	20
161	Toward Chemistry in Real Space and Real Time Preface. <i>Journal of Physical Chemistry C</i> , 2020, 124, 10263-10264.	1.5	0
162	Protein Detection Using Quadratic Fit Analysis near the Dirac Point of Graphene Field-Effect Biosensors. <i>ACS Applied Electronic Materials</i> , 2020, 2, 913-919.	2.0	10
163	Resolving dynamics and function of transient states in single enzyme molecules. <i>Nature Communications</i> , 2020, 11, 1231.	5.8	71
164	The Emergence of Insect Odorant Receptor-Based Biosensors. <i>Biosensors</i> , 2020, 10, 26.	2.3	35
165	Picking Flowers with Carbon Nanotube Sensors. <i>ACS Central Science</i> , 2020, 6, 461-463.	5.3	6
166	Design, preparation and measurement of protein/CNTs hybrids: A concise review. <i>Journal of Materials Science and Technology</i> , 2020, 46, 74-87.	5.6	43
167	Different Anomeric Sugar Bound States of Maltose Binding Protein Resolved by a Cytolysin A Nanopore Tweezer. <i>ACS Nano</i> , 2020, 14, 1727-1737.	7.3	30
168	Pyrocinchonimides Conjugate to Amine Groups on Proteins via Imide Transfer. <i>Bioconjugate Chemistry</i> , 2020, 31, 1449-1462.	1.8	7
169	Graphene field-effect transistors as bioanalytical sensors: design, operation and performance. <i>Analyst</i> , The, 2021, 146, 403-428.	1.7	101
170	Molecular insights on the dynamic stability of peptide nucleic acid functionalized carbon and boron nitride nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 219-228.	1.3	4

#	ARTICLE	IF	CITATIONS
171	Single molecule electronic devices with carbon-based materials: status and opportunity. <i>Nanoscale</i> , 2021, 13, 659-671.	2.8	18
172	Green Fabrication of (6,5)Carbon Nanotube/Protein Transistor Endowed with Specific Recognition. <i>Advanced Electronic Materials</i> , 2021, 7, 2001114.	2.6	11
173	Biofunctionalization of carbon nanotubes for reversible site-specific protein immobilization. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	5
174	Prospects for single-molecule electrostatic detection in molecular motor gliding motility assays. <i>New Journal of Physics</i> , 2021, 23, 065003.	1.2	2
175	Different Single-Enzyme Conformational Dynamics upon Binding Hydrolyzable or Nonhydrolyzable Ligands. <i>Journal of Physical Chemistry B</i> , 2021, 125, 5750-5756.	1.2	5
176	Tuning Electrostatic Gating of Semiconducting Carbon Nanotubes by Controlling Protein Orientation in Biosensing Devices. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 20184-20189.	7.2	15
177	Tuning Electrostatic Gating of Semiconducting Carbon Nanotubes by Controlling Protein Orientation in Biosensing Devices. <i>Angewandte Chemie</i> , 2021, 133, 20346-20351.	1.6	3
178	â€œC-chipâ€ Platform for Electrical Biomolecular Sensors. , 2015, , 3-23.		2
179	Multiplex Single-Molecule Kinetics of Nanopore-Coupled Polymerases. <i>ACS Nano</i> , 2021, 15, 489-502.	7.3	10
180	Advances in Nanotechnology: Influence on Biomolecular Detection Sensors. <i>Pakistan Journal of Scientific and Industrial Research Series A: Physical Sciences</i> , 2018, 57, 109-124.	0.2	0
181	What Happens When Molecules Meet Nanostructures: The Convergence of Chemistry and Electronics at the Nanoscale. <i>Nanostructure Science and Technology</i> , 2015, , 217-235.	0.1	0
182	A CNT Network Platform Integrated on the CMOS Circuit. <i>KAIST Research Series</i> , 2015, , 3-18.	1.5	0
183	Nano-partical sensing based on Raman laser in the whispering gallery mode microresonators. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015, 64, 164212.	0.2	3
184	Photoelectrochemistry with Nanostructured Semiconductors. , 2015, , 160-195.		0
186	Chemically tailored carbon nanotubes as a new toolbox for biomedicine and beyond. <i>Biochemist</i> , 2019, 41, 10-13.	0.2	0
187	Theranostic Applications of Lysozyme-Based Nanoparticles. , 2020, , 1-23.		2
190	Synchronization and Enhanced Catalysis of Mechanically Coupled Enzymes. <i>Physical Review Letters</i> , 2021, 127, 208103.	2.9	6
191	The molecular origin of the electrostatic gating of single-molecule field-effect biosensors investigated by molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 4174-4186.	1.3	4

#	ARTICLE	IF	CITATIONS
192	Preparation of lysozyme/carbon nanotube hybrids and their interactions at the nano-bio interface. <i>Progress in Organic Coatings</i> , 2022, 163, 106659.	1.9	3
193	Large-Area Interfaces for Single-Molecule Label-free Bioelectronic Detection. <i>Chemical Reviews</i> , 2022, 122, 4636-4699.	23.0	43
195	Pushing the Limits in Real-Time Measurements of Quantum Dynamics. <i>Physical Review Letters</i> , 2022, 128, 087701.	2.9	12
196	Polylysine-functionalized carbon nanotubes carrying lysozyme with synergistic and potent antimicrobial activity. <i>Journal of Materials Science</i> , 2022, 57, 5596-5605.	1.7	0
197	Single-molecule Taq DNA polymerase dynamics. <i>Science Advances</i> , 2022, 8, eabl3522.	4.7	9
198	Parallel Field-Effect Nanosensors Detect Trace Biomarkers Rapidly at Physiological High-Ionic-Strength Conditions. <i>ACS Sensors</i> , 0, , .	4.0	3
199	A Critical Review on the Sensing, Control, and Manipulation of Single Molecules on Optofluidic Devices. <i>Micromachines</i> , 2022, 13, 968.	1.4	3
200	A Scalable CMOS Molecular Electronics Chip for Single-Molecule Biosensing. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2022, 16, 1030-1043.	2.7	2
201	Molecular Electronics: Creating and Bridging Molecular Junctions and Promoting Its Commercialization. <i>Advanced Materials</i> , 2023, 35, .	11.1	13
202	Characterizing the Conformational Free-Energy Landscape of RNA Stem-Loops Using Single-Molecule Field-Effect Transistors. <i>Journal of the American Chemical Society</i> , 2023, 145, 402-412.	6.6	1
203	Reactions in single-molecule junctions. <i>Nature Reviews Materials</i> , 2023, 8, 165-185.	23.3	20
204	Unraveling the impact of nano-scaling on silicon field-effect transistors for the detection of single-molecules. <i>Nanoscale</i> , 2023, 15, 2354-2368.	2.8	1
205	Single-Molecule Electronic Biosensors: Principles and Applications. , 2023, 2, .		2
206	The next generation of hybrid microfluidic/integrated circuit chips: recent and upcoming advances in high-speed, high-throughput, and multifunctional lab-on-IC systems. <i>Lab on A Chip</i> , 2023, 23, 2553-2576.	3.1	2
207	Chemical Sensors using Single-Molecule Electrical Measurements. <i>Chemistry - an Asian Journal</i> , 2023, 18, .	1.7	1
210	Single-molecular protein-based bioelectronics<i> via</i> electronic transport: fundamentals, devices and applications. <i>Chemical Society Reviews</i> , 2023, 52, 5968-6002.	18.7	3
215	Applications of Graphene Field Effect Biosensors for Biological Sensing. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2024, , .	0.6	0