Kevin W Plaxco

List of Publications by Year
in descending order

238 papers	24,835 citations	83 h-index (5268)	151 g-index (7518)
275 all docs	275 docs citations	275 times ranked	15888 citing authors

#	Article	IF	Citations
1	Contact order, transition state placement and the refolding rates of single domain proteins 1 1Edited by P. E. Wright. Journal of Molecular Biology, 1998, 277, 985-994.	4.2	1,449
2	Electrochemical interrogation of conformational changes as a reagentless method for the sequence-specific detection of DNA. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9134-9137.	7.1	985
3	An Electronic, Aptamer-Based Small-Molecule Sensor for the Rapid, Label-Free Detection of Cocaine in Adulterated Samples and Biological Fluids. Journal of the American Chemical Society, 2006, 128, 3138-3139.	13.7	759
4	Label-Free Electronic Detection of Thrombin in Blood Serum by Using an Aptamer-Based Sensor. Angewandte Chemie - International Edition, 2005, 44, 5456-5459.	13.8	683
5	Random-coil behavior and the dimensions of chemically unfolded proteins. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12491-12496.	7.1	629
6	Colorimetric detection of DNA, small molecules, proteins, and ions using unmodified gold nanoparticles and conjugated polyelectrolytes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10837-10841.	7.1	505
7	A Reagentless Signal-On Architecture for Electronic, Aptamer-Based Sensors via Target-Induced Strand Displacement. Journal of the American Chemical Society, 2005, 127, 17990-17991.	13.7	500
8	Beyond superquenching: Hyper-efficient energy transfer from conjugated polymers to gold nanoparticles. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6297-6301.	7.1	492
9	Sensitive and Selective Amplified Fluorescence DNA Detection Based on Exonuclease III-Aided Target Recycling. Journal of the American Chemical Society, 2010, 132, 1816-1818.	13.7	477
10	Electrochemical Detection of Parts-Per-Billion Lead via an Electrode-Bound DNAzyme Assembly. Journal of the American Chemical Society, 2007, 129, 262-263.	13.7	456
11	Folding-Based Electrochemical Biosensors: The Case for Responsive Nucleic Acid Architectures. Accounts of Chemical Research, 2010, 43, 496-505.	15.6	452
12	High Specificity, Electrochemical Sandwich Assays Based on Single Aptamer Sequences and Suitable for the Direct Detection of Small-Molecule Targets in Blood and Other Complex Matrices. Journal of the American Chemical Society, 2009, 131, 6944-6945.	13.7	391
13	Topology, Stability, Sequence, and Length:â€‰ Defining the Determinants of Two-State Protein Folding Kinetics. Biochemistry, 2000, 39, 11177-11183.	2.5	360
14	Preparation of electrode-immobilized, redox-modified oligonucleotides for electrochemical DNA and aptamer-based sensing. Nature Protocols, 2007, 2, 2875-2880.	12.0	350
15	Continuous, Real-Time Monitoring of Cocaine in Undiluted Blood Serum via a Microfluidic, Electrochemical Aptamer-Based Sensor. Journal of the American Chemical Society, 2009, 131, 4262-4266.	13.7	333
16	Aptamer-Based Electrochemical Detection of Picomolar Platelet-Derived Growth Factor Directly in Blood Serum. Analytical Chemistry, 2007, 79, 229-233.	6.5	329
17	Contact order revisited: Influence of protein size on the folding rate. Protein Science, 2003, 12, 2057-2062.	7.6	327
18	High-Efficiency Fluorescence Quenching of Conjugated Polymers by Proteins. Journal of the American Chemical Society, 2002, 124, 5642-5643.	13.7	303

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19	Real-time measurement of small molecules directly in awake, ambulatory animals. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 645-650.	7.1	302
20	Effect of Molecular Crowding on the Response of an Electrochemical DNA Sensor. Langmuir, 2007, 23, 6827-6834.	3.5	293
21	Real-Time, Aptamer-Based Tracking of Circulating Therapeutic Agents in Living Animals. Science Translational Medicine, 2013, 5, 213ra165.	12.4	291
22	Optimization of Electrochemical Aptamer-Based Sensors via Optimization of Probe Packing Density and Surface Chemistry. Langmuir, 2008, 24, 10513-10518.	3.5	278
23	Fast imaging and fast force spectroscopy of single biopolymers with a new atomic force microscope designed for small cantilevers. Review of Scientific Instruments, 1999, 70, 4300-4303.	1.3	246
24	Label-Free Electrochemical Detection of DNA in Blood Serum via Target-Induced Resolution of an Electrode-Bound DNA Pseudoknot. Journal of the American Chemical Society, 2007, 129, 11896-11897.	13.7	240
25	Rapid, Sensitive, and Quantitative Detection of Pathogenic DNA at the Point of Care through Microfluidic Electrochemical Quantitative Loopâ€Mediated Isothermal Amplification. Angewandte Chemie - International Edition, 2012, 51, 4896-4900.	13.8	230
26	CheapStat: An Open-Source, â€œDo-It-Yourselfâ€•Potentiostat for Analytical and Educational Applications. PLoS ONE, 2011, 6, e23783.	2.5	223
27	Single-step electronic detection of femtomolar DNA by target-induced strand displacement in an electrode-bound duplex. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16677-16680.	7.1	220
28	An Electrochemical Supersandwich Assay for Sensitive and Selective DNA Detection in Complex Matrices. Journal of the American Chemical Society, 2010, 132, 14346-14348.	13.7	214
29	Protein folding: Defining a â€œstandardâ€•set of experimental conditions and a preliminary kinetic data set of two-state proteins. Protein Science, 2005, 14, 602-616.	7.6	207
30	Probing the collective vibrational dynamics of a protein in liquid water by terahertz absorption spectroscopy. Protein Science, 2006, 15, 1175-1181.	7.6	188
31	Sequence-Specific, Electronic Detection of Oligonucleotides in Blood, Soil, and Foodstuffs with the Reagentless, Reusable E-DNA Sensor. Analytical Chemistry, 2006, 78, 5671-5677.	6.5	180
32	The topomer search model: A simple, quantitative theory of two-state protein folding kinetics. Protein Science, 2003, 12, 17-26.	7.6	176
33	Rapid, sequence-specific detection of unpurified PCR amplicons via a reusable, electrochemical sensor. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4017-4021.	7.1	174
34	An Electrochemical Sensor for Single Nucleotide Polymorphism Detection in Serum Based on a Triple-Stem DNA Probe. Journal of the American Chemical Society, 2009, 131, 15311-15316.	13.7	171
35	Chain collapse can occur concomitantly with the rate-limiting step in protein folding. Nature Structural Biology, 1999, 6, 554-556.	9.7	167
36	Limited internal friction in the rate-limiting step of a two-state protein folding reaction. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 13591-13596.	7.1	164

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37	Structure-switching biosensors: inspired by Nature. Current Opinion in Structural Biology, 2010, 20, 518-526.	5.7	163
38	Calibration-Free Electrochemical Biosensors Supporting Accurate Molecular Measurements Directly in Undiluted Whole Blood. Journal of the American Chemical Society, 2017, 139, 11207-11213.	13.7	161
39	Reagentless Measurement of Aminoglycoside Antibiotics in Blood Serum via an Electrochemical, Ribonucleic Acid Aptamer-Based Biosensor. Analytical Chemistry, 2010, 82, 7090-7095.	6.5	160
40	The Folding Kinetics and Thermodynamics of the Fyn-SH3 Domainâ€. Biochemistry, 1998, 37, 2529-2537.	2.5	152
41	Comparing the Properties of Electrochemical-Based DNA Sensors Employing Different Redox Tags. Analytical Chemistry, 2009, 81, 9109-9113.	6.5	152
42	Switch-based biosensors: a new approach towards real-time, in vivo molecular detection. Trends in Biotechnology, 2011, 29, 1-5.	9.3	149
43	Thermodynamic basis for the optimization of binding-induced biomolecular switches and structure-switching biosensors. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 13802-13807.	7.1	146
44	Toward a taxonomy of the denatured state: Small angle scattering studies of unfolded proteins. Advances in Protein Chemistry, 2002, 62, 241-262.	4.4	145
45	Electrochemical Aptamer-Based Sensors for Improved Therapeutic Drug Monitoring and High-Precision, Feedback-Controlled Drug Delivery. ACS Sensors, 2019, 4, 2832-2837.	7.8	142
46	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. NPG Asia Materials, 2012, 4, e1-e1.	7.9	138
47	How the folding rate constant of simple, single-domain proteins depends on the number of native contacts. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 3535-3539.	7.1	137
48	An Electrochemical Sensor for the Detection of Proteinâ^'Small Molecule Interactions Directly in Serum and Other Complex Matrices. Journal of the American Chemical Society, 2009, 131, 6955-6957.	13.7	137
49	Engineering Biosensors with Extended, Narrowed, or Arbitrarily Edited Dynamic Range. Journal of the American Chemical Society, 2012, 134, 2876-2879.	13.7	135
50	Integrated Electrochemical Microsystems for Genetic Detection of Pathogens at the Point of Care. Accounts of Chemical Research, 2015, 48, 911-920.	15.6	135
51	Time-resolved biophysical methods in the study of protein folding. Current Opinion in Structural Biology, 1996, 6, 630-636.	5.7	132
52	Using Distal-Site Mutations and Allosteric Inhibition To Tune, Extend, and Narrow the Useful Dynamic Range of Aptamer-Based Sensors. Journal of the American Chemical Society, 2012, 134, 20601-20604.	13.7	132
53	Biosensors based on binding-modulated donorâ€"acceptor distances. Trends in Biotechnology, 2005, 23, 186-192.	9.3	130
54	Folding kinetics of the SH3 domain of PI3 kinase by real-time NMR combined with optical spectroscopy. Journal of Molecular Biology, 1998, 276, 657-667.	4.2	126

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55	Exploiting Binding-Induced Changes in Probe Flexibility for the Optimization of Electrochemical Biosensors. Analytical Chemistry, 2010, 82, 73-76.	6.5	125
56	Using Natureâ€™s â€œTricksâ€• To Rationally Tune the Binding Properties of Biomolecular Receptors. Accounts of Chemical Research, 2016, 49, 1884-1892.	15.6	123
57	A comparison of the folding kinetics and thermodynamics of two homologous fibronectin type III modules. Journal of Molecular Biology, 1997, 270, 763-770.	4.2	119
58	Fluorescence Detection of Singleâ€Nucleotide Polymorphisms with a Single, Selfâ€Complementary, Tripleâ€Stem DNA Probe. Angewandte Chemie - International Edition, 2009, 48, 4354-4358.	13.8	118
59	Label-Free, Dual-Analyte Electrochemical Biosensors: A New Class of Molecular-Electronic Logic Gates. Journal of the American Chemical Society, 2010, 132, 8557-8559.	13.7	117
60	Dual-Reporter Drift Correction To Enhance the Performance of Electrochemical Aptamer-Based Sensors in Whole Blood. Journal of the American Chemical Society, 2016, 138, 15809-15812.	13.7	115
61	The importance of being unfolded. Nature, 1997, 386, 657-659.	27.8	114
62	Effects of Probe Length, Probe Geometry, and Redox-Tag Placement on the Performance of the Electrochemical E-DNA Sensor. Analytical Chemistry, 2009, 81, 2150-2158.	6.5	112
63	A Biomimetic Phosphatidylcholineâ€Terminated Monolayer Greatly Improves the In Vivo Performance of Electrochemical Aptamerâ€Based Sensors. Angewandte Chemie - International Edition, 2017, 56, 7492-7495.	13.8	112
64	Linear, redox modified DNA probes as electrochemical DNA sensors. Chemical Communications, 2007, , 3768.	4.1	108
65	Detection of Telomerase Activity in High Concentration of Cell Lysates Using Primer-Modified Gold Nanoparticles. Journal of the American Chemical Society, 2010, 132, 15299-15307.	13.7	105
66	Comparison of the Signaling and Stability of Electrochemical DNA Sensors Fabricated from 6- or 11-Carbon Self-Assembled Monolayers. Langmuir, 2006, 22, 10796-10800.	3.5	103
67	Bioelectrochemical Switches for the Quantitative Detection of Antibodies Directly in Whole Blood. Journal of the American Chemical Society, 2012, 134, 15197-15200.	13.7	103
68	Allosterically Tunable, DNA-Based Switches Triggered by Heavy Metals. Journal of the American Chemical Society, 2013, 135, 13238-13241.	13.7	99
69	Subsecond-Resolved Molecular Measurements in the Living Body Using Chronoamperometrically Interrogated Aptamer-Based Sensors. ACS Sensors, 2018, 3, 360-366.	7.8	98
70	E-DNA sensors for convenient, label-free electrochemical detection of hybridization. Mikrochimica Acta, 2008, 163, 149-155.	5.0	97
71	The effects of guanidine hydrochloride on the 'random coil' conformations and NMR chemical shifts of the peptide series GGXGG. Journal of Biomolecular NMR, 1997, 10, 221-230.	2.8	96
72	Label-Free SERS Detection of Small Proteins Modified to Act as Bifunctional Linkers. Journal of Physical Chemistry C, 2008, 112, 4880-4883.	3.1	96

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73	Dielectric Spectroscopy of Proteins as a Quantitative Experimental Test of Computational Models of Their Low-Frequency Harmonic Motions. Journal of the American Chemical Society, 2011, 133, 8942-8947.	13.7	96
74	Optimization of a Reusable, DNA Pseudoknot-Based Electrochemical Sensor for Sequence-Specific DNA Detection in Blood Serum. Analytical Chemistry, 2009, 81, 656-661.	6.5	94
75	High-precision gigahertz-to-terahertz spectroscopy of aqueous salt solutions as a probe of the femtosecond-to-picosecond dynamics of liquid water. Journal of Chemical Physics, 2015, 142, 164502.	3.0	94
76	A Modular, DNAâ€Based Beacon for Singleâ€Step Fluorescence Detection of Antibodies and Other Proteins. Angewandte Chemie - International Edition, 2015, 54, 13214-13218.	13.8	93
77	Re-engineering aptamers to support reagentless, self-reporting electrochemical sensors. Analyst, The, 2010, 135, 589.	3.5	92
78	Small-Angle X-ray Scattering and Single-Molecule FRET Spectroscopy Produce Highly Divergent Views of the Low-Denaturant Unfolded State. Journal of Molecular Biology, 2012, 418, 226-236.	4.2	92
79	High Surface Area Electrodes Generated via Electrochemical Roughening Improve the Signaling of Electrochemical Aptamer-Based Biosensors. Analytical Chemistry, 2017, 89, 12185-12191.	6.5	92
80	Maximizing the Signal Gain of Electrochemical-DNA Sensors. Analytical Chemistry, 2016, 88, 11654-11662.	6.5	90
81	Is There or Isn't There? The Case for (and Against) Residual Structure in Chemically Denatured Proteins. Critical Reviews in Biochemistry and Molecular Biology, 2005, 40, 181-189.	5.2	87
82	Using Triplex-Forming Oligonucleotide Probes for the Reagentless, Electrochemical Detection of Double-Stranded DNA. Analytical Chemistry, 2010, 82, 9109-9115.	6.5	87
83	Surface chemistry effects on the performance of an electrochemical DNA sensor. Bioelectrochemistry, 2009, 76, 208-213.	4.6	86
84	Improving the Stability and Sensing of Electrochemical Biosensors by Employing Trithiol-Anchoring Groups in a Six-Carbon Self-Assembled Monolayer. Analytical Chemistry, 2009, 81, 1095-1100.	6.5	86
85	Collective Dynamics of Lysozyme in Water:Â Terahertz Absorption Spectroscopy and Comparison with Theory. Journal of Physical Chemistry B, 2006, 110, 24255-24259.	2.6	84
86	Absorption spectra of liquid water and aqueous buffers between 0.3 and 3.72THz. Journal of Chemical Physics, 2006, 124, 036101.	3.0	84
87	Cooperativity, Smooth Energy Landscapes and the Origins of Topology-dependent Protein Folding Rates. Journal of Molecular Biology, 2003, 326, 247-253.	4.2	82
88	On the Binding of Cationic, Water-Soluble Conjugated Polymers to DNA: Electrostatic and Hydrophobic Interactions. Journal of the American Chemical Society, 2010, 132, 1252-1254.	13.7	82
89	Unfolded, yes, but random? Never!. , 2001, 8, 659-660.		81
90	Quantification of Transcription Factor Binding in Cell Extracts Using an Electrochemical, Structure-Switching Biosensor. Journal of the American Chemical Society, 2012, 134, 3346-3348.	13.7	81

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91	Evolutionary conservation in protein folding kinetics. Journal of Molecular Biology, 2000, 298, 303-312.	4.2	80
92	Rational Design of Allosteric Inhibitors and Activators Using the Population-Shift Model: In Vitro Validation and Application to an Artificial Biosensor. Journal of the American Chemical Society, 2012, 134, 15177-15180.	13.7	80
93	Reâ€engineering Electrochemical Biosensors To Narrow or Extend Their Useful Dynamic Range. Angewandte Chemie - International Edition, 2012, 51, 6717-6721.	13.8	80
94	Rapid refolding of a proline-rich all-beta-sheet fibronectin type III module.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 10703-10706.	7.1	79
95	Transcription Factor Beacons for the Quantitative Detection of DNA Binding Activity. Journal of the American Chemical Society, 2011, 133, 13836-13839.	13.7	79
96	Calibration-Free Measurement of Phenylalanine Levels in the Blood Using an Electrochemical Aptamer-Based Sensor Suitable for Point-of-Care Applications. ACS Sensors, 2019, 4, 3227-3233.	7.8	78
97	Excimer-Based Peptide Beacons:Â A Convenient Experimental Approach for Monitoring Polypeptideâˆ'Protein and Polypeptideâˆ'Oligonucleotide Interactions. Journal of the American Chemical Society, 2006, 128, 14018-14019.	13.7	77
98	Microfluidic Device Architecture for Electrochemical Patterning and Detection of Multiple DNA Sequences. Langmuir, 2008, 24, 1102-1107.	3.5	77
99	Determinants of the Detection Limit and Specificity of Surface-Based Biosensors. Analytical Chemistry, 2013, 85, 6593-6597.	6.5	77
100	Engineering a signal transduction mechanism for protein-based biosensors. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10841-10845.	7.1	74
101	Seconds-resolved pharmacokinetic measurements of the chemotherapeutic irinotecan <i>in situ</i> in the living body. Chemical Science, 2019, 10, 8164-8170.	7.4	74
102	Reagentless, Electrochemical Approach for the Specific Detection of Double- and Single-Stranded DNA Binding Proteins. Analytical Chemistry, 2009, 81, 1608-1614.	6.5	72
103	On the Signaling of Electrochemical Aptamerâ€Based Sensors: Collisionâ€•and Foldingâ€Based Mechanisms. Electroanalysis, 2009, 21, 1267-1271.	2.9	71
104	Intrinsic disorder as a generalizable strategy for the rational design of highly responsive, allosterically cooperative receptors. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15048-15053.	7.1	69
105	Site-specific Dimensions Across a Highly Denatured Protein; A Single Molecule Study. Journal of Molecular Biology, 2005, 352, 672-682.	4.2	68
106	Survey of Redox-Active Moieties for Application in Multiplexed Electrochemical Biosensors. Analytical Chemistry, 2016, 88, 10452-10458.	6.5	66
107	Simplified proteins: minimalist solutions to the â€˜protein folding problemâ€™. Current Opinion in Structural Biology, 1998, 8, 80-85.	5.7	64
108	Wash-free, Electrochemical Platform for the Quantitative, Multiplexed Detection of Specific Antibodies. Analytical Chemistry, 2012, 84, 1098-1103.	6.5	64

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109	Electrochemical real-time nucleic acid amplification: towards point-of-care quantification of pathogens. Trends in Biotechnology, 2013, 31, 704-712.	9.3	63
110	High-Precision Control of Plasma Drug Levels Using Feedback-Controlled Dosing. ACS Pharmacology and Translational Science, 2018, 1, 110-118.	4.9	62
111	The Backbone Conformational Entropy of Protein Folding: Experimental Measures from Atomic Force Microscopy. Journal of Molecular Biology, 2002, 322, 645-652.	4.2	61
112	Terahertz Circular Dichroism Spectroscopy: A Potential Approach to the In Situ Detection of Life's Metabolic and Genetic Machinery. Astrobiology, 2003, 3, 489-504.	3.0	61
113	Using Protein Folding Rates to Test Protein Folding Theories. Annual Review of Biochemistry, 2004, 73, 837-859.	11.1	61
114	On the Disinfection of Electrochemical Aptamer-Based Sensors. , 2022, 1, 011604.		61
115	Electrochemical Biosensors Employing an Internal Electrode Attachment Site and Achieving Reversible, High Gain Detection of Specific Nucleic Acid Sequences. Analytical Chemistry, 2011, 83, 9462-9466.	6.5	60
116	Electrochemical DNA-Based Sensors for Molecular Quality Control: Continuous, Real-Time Melamine Detection in Flowing Whole Milk. Analytical Chemistry, 2018, 90, 10641-10645.	6.5	60
117	Real-Time Monitoring of a Protein Biomarker. ACS Sensors, 2020, 5, 1877-1881.	7.8	60
118	Thermodynamic Basis for Engineering High-Affinity, High-Specificity Binding-Induced DNA Clamp Nanoswitches. ACS Nano, 2013, 7, 10863-10869.	14.6	58
119	Residues participating in the protein folding nucleus do not exhibit preferential evolutionary conservation. Journal of Molecular Biology, 2002, 316, 225-233.	4.2	57
120	A Mechanistic Study of Electron Transfer from the Distal Termini of Electrode-Bound, Single-Stranded DNAs. Journal of the American Chemical Society, 2010, 132, 16120-16126.	13.7	56
121	Activity modulation and allosteric control of a scaffolded DNAzyme using a dynamic DNA nanostructure. Chemical Science, 2016, 7, 1200-1204.	7.4	56
122	High frequency, calibration-free molecular measurements <i>in situ</i> in the living body. Chemical Science, 2019, 10, 10843-10848.	7.4	52
123	The Protein Folding Transition State: What Are φ-Values Really Telling Us?. Protein and Peptide Letters, 2005, 12, 117-122.	0.9	52
124	Peptide Beacons:Â A New Design for Polypeptide-Based Optical Biosensors. Bioconjugate Chemistry, 2007, 18, 607-609.	3.6	51
125	Polarityâ€Switching Electrochemical Sensor for Specific Detection of Singleâ€Nucleotide Mismatches. Angewandte Chemie - International Edition, 2011, 50, 11176-11180.	13.8	51
126	Biomimetic glass nanopores employing aptamer gates responsive to a small molecule. Chemical Communications, 2010, 46, 7984.	4.1	50

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127	Simulation-Based Approach to Determining Electron Transfer Rates Using Square-Wave Voltammetry. Langmuir, 2017, 33, 4407-4413.	3.5	50
128	Twoâ€Step, PCRâ€Free Telomerase Detection by Using Exonuclease IIIâ€Aided Target Recycling. ChemBioChem, 2011, 12, 2745-2747.	2.6	48
129	Random coil negative control reproduces the discrepancy between scattering and FRET measurements of denatured protein dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6631-6636.	7.1	48
130	Nanoporous Gold for the Miniaturization of In Vivo Electrochemical Aptamer-Based Sensors. ACS Sensors, 2021, 6, 2299-2306.	7.8	48
131	Elucidating the Mechanisms Underlying the Signal Drift of Electrochemical Aptamer-Based Sensors in Whole Blood. ACS Sensors, 2021, 6, 3340-3347.	7.8	48
132	NMR and Temperature-jump Measurements of de Novo Designed Proteins Demonstrate Rapid Folding in the Absence of Explicit Selection for Kinetics. Journal of Molecular Biology, 2003, 330, 813-819.	4.2	47
133	Comparison of the Folding Processes of Distantly Related Proteins. Importance of Hydrophobic Content in Folding. Journal of Molecular Biology, 2003, 330, 577-591.	4.2	47
134	Entropic and Electrostatic Effects on the Folding Free Energy of a Surface-Attached Biomolecule: An Experimental and Theoretical Study. Journal of the American Chemical Society, 2012, 134, 2120-2126.	13.7	47
135	High-Precision, In Vitro Validation of the Sequestration Mechanism for Generating Ultrasensitive Dose-Response Curves in Regulatory Networks. PLoS Computational Biology, 2011, 7, e1002171.	3.2	44
136	Effects of Crowding on the Stability of a Surface-Tethered Biopolymer: An Experimental Study of Folding in a Highly Crowded Regime. Journal of the American Chemical Society, 2014, 136, 8923-8927.	13.7	44
137	Commonly used FRET fluorophores promote collapse of an otherwise disordered protein. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 8889-8894.	7.1	43
138	High-Precision Electrochemical Measurements of the Guanine-, Mismatch-, and Length-Dependence of Electron Transfer from Electrode-Bound DNA Are Consistent with a Contact-Mediated Mechanism. Journal of the American Chemical Society, 2019, 141, 1304-1311.	13.7	42
139	Equilibrium Collapse and the Kinetic â€˜Foldability' of Proteinsâ€. Biochemistry, 2002, 41, 321-325.	2.5	41
140	On the precision of experimentally determined protein folding rates and Â-values. Protein Science, 2006, 15, 553-563.	7.6	41
141	Employing the Metabolic â€œBranch Point Effectâ€•to Generate an All-or-None, Digital-like Response in Enzymatic Outputs and Enzyme-Based Sensors. Analytical Chemistry, 2012, 84, 1076-1082.	6.5	41
142	Using the Populationâ€Shift Mechanism to Rationally Introduce â€œHillâ€typeâ€•Cooperativity into a Normally Nonâ€Cooperative Receptor. Angewandte Chemie - International Edition, 2014, 53, 9471-9475.	13.8	41
143	Probe accessibility effects on the performance of electrochemical biosensors employing DNA monolayers. Analytical and Bioanalytical Chemistry, 2012, 402, 413-421.	3.7	40
144	Microfluidic Chip-Based Detection and Intraspecies Strain Discrimination of Salmonella Serovars Derived from Whole Blood of Septic Mice. Applied and Environmental Microbiology, 2013, 79, 2302-2311.	3.1	40

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145	Beyond Molecular Beacons: Optical Sensors Based on the Bindingâ€Induced Folding of Proteins and Polypeptides. Chemistry - A European Journal, 2009, 15, 2244-2251.	3.3	39
146	Subsecond-Resolved Molecular Measurements Using Electrochemical Phase Interrogation of Aptamer-Based Sensors. Analytical Chemistry, 2020, 92, 14063-14068.	6.5	38
147	Apparent Debyeâˆ'Huckel Electrostatic Effects in the Folding of a Simple, Single Domain Protein. Biochemistry, 2005, 44, 1243-1250.	2.5	37
148	Influence of local and residual structures on the scaling behavior and dimensions of unfolded proteins. Biopolymers, 2007, 86, 321-328.	2.4	37
149	New Architecture for Reagentless, Protein-Based Electrochemical Biosensors. Journal of the American Chemical Society, 2017, 139, 12113-12116.	13.7	37
150	Expanding the Scope of Protein-Detecting Electrochemical DNA â€œScaffoldâ€•Sensors. ACS Sensors, 2018, 3, 1271-1275.	7.8	37
151	Terahertz circular dichroism spectroscopy of biomolecules. , 2004, 5268, 19.		36
152	A general electrochemical method for label-free screening of proteinâ€"small molecule interactions. Chemical Communications, 2009, , 6222.	4.1	35
153	An electrochemical aptamer-based sensor for the rapid and convenient measurement of l-tryptophan. Analytical and Bioanalytical Chemistry, 2019, 411, 4629-4635.	3.7	35
154	Seconds-Resolved, In Situ Measurements of Plasma Phenylalanine Disposition Kinetics in Living Rats. Analytical Chemistry, 2021, 93, 4023-4032.	6.5	35
155	The Length and Viscosity Dependence of End-to-End Collision Rates in Single-Stranded DNA. Biophysical Journal, 2009, 97, 205-210.	0.5	34
156	Electrochemical Aptamer-Based Sensors for Rapid Point-of-Use Monitoring of the Mycotoxin Ochratoxin A Directly in a Food Stream. Molecules, 2018, 23, 912.	3.8	34
157	Chimeric peptide beacons: a direct polypeptide analog of DNA molecular beacons. Chemical Communications, 2007, , 4869.	4.1	33
158	Open Source Software for the Real-Time Control, Processing, and Visualization of High-Volume Electrochemical Data. Analytical Chemistry, 2019, 91, 12321-12328.	6.5	33
159	Quantitative, reagentless, single-step electrochemical detection of anti-DNA antibodies directly in blood serum. Chemical Communications, 2010, 46, 1742.	4.1	32
160	Programmable, Multiplexed DNA Circuits Supporting Clinically Relevant, Electrochemical Antibody Detection. ACS Sensors, 2021, 6, 2442-2448.	7.8	32
161	Differential Labeling of Closely Spaced Biosensor Electrodes via Electrochemical Lithography. Langmuir, 2006, 22, 1932-1936.	3.5	29
162	Accurate Zygoteâ€Specific Discrimination of Singleâ€Nucleotide Polymorphisms Using Microfluidic Electrochemical DNA Melting Curves. Angewandte Chemie - International Edition, 2014, 53, 3163-3167.	13.8	29

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