Alexis VallÃ©e-BÃ©lisle

List of Publications by Year
in descending order

50	4,217	101543 36	182427 51
papers	citations	h-index	g-index
54	54	54	4746
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	Programmable pH-Triggered DNA Nanoswitches. Journal of the American Chemical Society, 2014, 136, 5836-5839.	13.7	296
3	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
4	Structure-switching biosensors: inspired by Nature. Current Opinion in Structural Biology, 2010, 20, 518-526.	5.7	163
5	A Highly Selective Electrochemical DNA-Based Sensor That Employs Steric Hindrance Effects to Detect Proteins Directly in Whole Blood. Journal of the American Chemical Society, 2015, 137, 15596-15599.	13.7	162
6	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
7	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. NPG Asia Materials, 2012, 4, e1-e1.	7.9	138
8	Engineering Biosensors with Extended, Narrowed, or Arbitrarily Edited Dynamic Range. Journal of the American Chemical Society, 2012, 134, 2876-2879.	13.7	135
9	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
10	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
11	[14] Detection of protein-protein interactions by protein fragment complementation strategies. Methods in Enzymology, 2000, 328, 208-230.	1.0	117
12	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
13	Antibody-powered nucleic acid release using a DNA-based nanomachine. Nature Communications, 2017, 8, 15150.	12.8	108
14	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
15	Programmable DNA switches and their applications. Nanoscale, 2018, 10, 4607-4641.	5.6	101
16	Allosterically Tunable, DNA-Based Switches Triggered by Heavy Metals. Journal of the American Chemical Society, 2013, 135, 13238-13241.	13.7	99
17	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
18	General Strategy to Introduce pH-Induced Allostery in DNA-Based Receptors to Achieve Controlled Release of Ligands. Nano Letters, 2015, 15, 4467-4471.	9.1	91

#	Article	IF	Citations
19	Using Triplex-Forming Oligonucleotide Probes for the Reagentless, Electrochemical Detection of Double-Stranded DNA. Analytical Chemistry, 2010, 82, 9109-9115.	6.5	87
20	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
21	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
22	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
23	Reâ€engineering Electrochemical Biosensors To Narrow or Extend Their Useful Dynamic Range. Angewandte Chemie - International Edition, 2012, 51, 6717-6721.	13.8	80
24	Transcription Factor Beacons for the Quantitative Detection of DNA Binding Activity. Journal of the American Chemical Society, 2011, 133, 13836-13839.	13.7	79
25	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
26	Programmable Quantitative DNA Nanothermometers. Nano Letters, 2016, 16, 3976-3981.	9.1	67
27	Thermodynamic Basis for Engineering High-Affinity, High-Specificity Binding-Induced DNA Clamp Nanoswitches. ACS Nano, 2013, 7, 10863-10869.	14.6	58
28	Controlling Hybridization Chain Reactions with pH. Nano Letters, 2015, 15, 5539-5544.	9.1	49
29	Visualizing transient protein-folding intermediates by tryptophan-scanning mutagenesis. Nature Structural and Molecular Biology, 2012, 19, 731-736.	8.2	48
30	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
31	Enzyme-Operated DNA-Based Nanodevices. Nano Letters, 2015, 15, 8407-8411.	9.1	46
32	Aptamer-based liposomes improve specific drug loading and release. Journal of Controlled Release, 2017, 251, 82-91.	9.9	46
33	Electrochemical DNA-Based Immunoassay That Employs Steric Hindrance To Detect Small Molecules Directly in Whole Blood. ACS Sensors, 2017, 2, 718-723.	7.8	45
34	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
35	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
36	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

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37	Biomolecular Steric Hindrance Effects Are Enhanced on Nanostructured Microelectrodes. Analytical Chemistry, 2017, 89, 9751-9757.	6.5	39
38	Peptide-Mediated Electrochemical Steric Hindrance Assay for One-Step Detection of HIV Antibodies. Analytical Chemistry, 2019, 91, 4943-4947.	6.5	35
39	Multiple Tryptophan Probes Reveal that Ubiquitin Folds via a Late Misfolded Intermediate. Journal of Molecular Biology, 2007, 374, 791-805.	4.2	28
40	Electrochemical plasmonic sensing system for highly selective multiplexed detection of biomolecules based on redox nanoswitches. Biosensors and Bioelectronics, 2015, 71, 75-81.	10.1	26
41	Determining the folding and binding free energy of DNA-based nanodevices and nanoswitches using urea titration curves. Nucleic Acids Research, 2017, 45, 7571-7580.	14.5	26
42	A DNA Nanodevice That Loads and Releases a Cargo with Hemoglobin-Like Allosteric Control and Cooperativity. Nano Letters, 2017, 17, 3225-3230.	9.1	25
43	Engineering Biosensors with Dual Programmable Dynamic Ranges. Analytical Chemistry, 2018, 90, 1506-1510.	6.5	19
44	Monitoring protein conformational changes using fluorescent nanoantennas. Nature Methods, 2022, 19, 71-80.	19.0	17
45	Steric Hindrance Assay for Secreted Factors in Stem Cell Culture. ACS Sensors, 2017, 2, 495-500.	7.8	14
46	Optimizing the Specificity Window of Biomolecular Receptors Using Structure-Switching and Allostery. ACS Sensors, 2020, 5, 1937-1942.	7.8	14
47	A comparison of the folding kinetics of a small, artificially selected DNA aptamer with those of equivalently simple naturally occurring proteins. Protein Science, 2014, 23, 56-66.	7.6	12
48	Electrochemical structureâ€switching sensing using nanoplasmonic devices. Annalen Der Physik, 2015, 527, 806-813.	2.4	4
49	Silver oxide model surface improves computational simulation of surface-enhanced Raman spectroscopy on silver nanoparticles. Physical Chemistry Chemical Physics, 2021, 23, 15480-15484.	2.8	1
50	Principles for the Rational Design of Allosterically Cooperative Biomolecular Receptors. Biophysical Journal, 2014, 106, 614a.	0.5	0