Alexis VallÃ©e-BÃ©lisle

List of Publications by Year
in descending order

50 papers	4,217 citations	101384 36 h-index	182168 51 g-index
54 all docs	54 docs citations	54 times ranked	4746 citing authors

#	Article	IF	Citations
1	Monitoring protein conformational changes using fluorescent nanoantennas. Nature Methods, 2022, 19, 71-80.	9.0	17
2	Silver oxide model surface improves computational simulation of surface-enhanced Raman spectroscopy on silver nanoparticles. Physical Chemistry Chemical Physics, 2021, 23, 15480-15484.	1.3	1
3	Optimizing the Specificity Window of Biomolecular Receptors Using Structure-Switching and Allostery. ACS Sensors, 2020, 5, 1937-1942.	4.0	14
4	Peptide-Mediated Electrochemical Steric Hindrance Assay for One-Step Detection of HIV Antibodies. Analytical Chemistry, 2019, 91, 4943-4947.	3.2	35
5	Programmable DNA switches and their applications. Nanoscale, 2018, 10, 4607-4641.	2.8	101
6	Engineering Biosensors with Dual Programmable Dynamic Ranges. Analytical Chemistry, 2018, 90, 1506-1510.	3.2	19
7	Aptamer-based liposomes improve specific drug loading and release. Journal of Controlled Release, 2017, 251, 82-91.	4.8	46
8	Steric Hindrance Assay for Secreted Factors in Stem Cell Culture. ACS Sensors, 2017, 2, 495-500.	4.0	14
9	Electrochemical DNA-Based Immunoassay That Employs Steric Hindrance To Detect Small Molecules Directly in Whole Blood. ACS Sensors, 2017, 2, 718-723.	4.0	45
10	Antibody-powered nucleic acid release using a DNA-based nanomachine. Nature Communications, 2017, 8, 15150.	5.8	108
11	A DNA Nanodevice That Loads and Releases a Cargo with Hemoglobin-Like Allosteric Control and Cooperativity. Nano Letters, 2017, 17, 3225-3230.	4.5	25
12	Biomolecular Steric Hindrance Effects Are Enhanced on Nanostructured Microelectrodes. Analytical Chemistry, 2017, 89, 9751-9757.	3.2	39
13	Determining the folding and binding free energy of DNA-based nanodevices and nanoswitches using urea titration curves. Nucleic Acids Research, 2017, 45, 7571-7580.	6.5	26
14	Programmable Quantitative DNA Nanothermometers. Nano Letters, 2016, 16, 3976-3981.	4.5	67
15	Using Natureâ€™s â€œTricksâ€•To Rationally Tune the Binding Properties of Biomolecular Receptors. Accounts of Chemical Research, 2016, 49, 1884-1892.	7.6	123
16	A Modular, DNAâ€Based Beacon for Singleâ€Step Fluorescence Detection of Antibodies and Other Proteins. Angewandte Chemie - International Edition, 2015, 54, 13214-13218.	7.2	93
17	Electrochemical structureâ€switching sensing using nanoplasmonic devices. Annalen Der Physik, 2015, 527, 806-813.	0.9	4
18	Controlling Hybridization Chain Reactions with pH. Nano Letters, 2015, 15, 5539-5544.	4.5	49

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19	General Strategy to Introduce pH-Induced Allostery in DNA-Based Receptors to Achieve Controlled Release of Ligands. Nano Letters, 2015, 15, 4467-4471.	4.5	91
20	Electrochemical plasmonic sensing system for highly selective multiplexed detection of biomolecules based on redox nanoswitches. Biosensors and Bioelectronics, 2015, 71, 75-81.	5.3	26
21	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.	6.6	162
22	Enzyme-Operated DNA-Based Nanodevices. Nano Letters, 2015, 15, 8407-8411.	4.5	46
23	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.	3.1	12
24	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.	3.3	69
25	Programmable pH-Triggered DNA Nanoswitches. Journal of the American Chemical Society, 2014, 136, 5836-5839.	6.6	296
26	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.	7.2	41
27	Principles for the Rational Design of Allosterically Cooperative Biomolecular Receptors. Biophysical Journal, 2014, 106, 614a.	0.2	0
28	Thermodynamic Basis for Engineering High-Affinity, High-Specificity Binding-Induced DNA Clamp Nanoswitches. ACS Nano, 2013, 7, 10863-10869.	7.3	58
29	Allosterically Tunable, DNA-Based Switches Triggered by Heavy Metals. Journal of the American Chemical Society, 2013, 135, 13238-13241.	6.6	99
30	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. NPG Asia Materials, 2012, 4, e1-e1.	3.8	138
31	Engineering Biosensors with Extended, Narrowed, or Arbitrarily Edited Dynamic Range. Journal of the American Chemical Society, 2012, 134, 2876-2879.	6.6	135
32	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.	3.2	41
33	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.	6.6	47
34	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.	6.6	80
35	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.	6.6	132
36	Bioelectrochemical Switches for the Quantitative Detection of Antibodies Directly in Whole Blood. Journal of the American Chemical Society, 2012, 134, 15197-15200.	6.6	103

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37	Quantification of Transcription Factor Binding in Cell Extracts Using an Electrochemical, Structure-Switching Biosensor. Journal of the American Chemical Society, 2012, 134, 3346-3348.	6.6	81
38	Reâ€engineering Electrochemical Biosensors To Narrow or Extend Their Useful Dynamic Range. Angewandte Chemie - International Edition, 2012, 51, 6717-6721.	7.2	80
39	Visualizing transient protein-folding intermediates by tryptophan-scanning mutagenesis. Nature Structural and Molecular Biology, 2012, 19, 731-736.	3.6	48
40	Transcription Factor Beacons for the Quantitative Detection of DNA Binding Activity. Journal of the American Chemical Society, 2011, 133, 13836-13839.	6.6	79
41	High-Precision, In Vitro Validation of the Sequestration Mechanism for Generating Ultrasensitive Dose-Response Curves in Regulatory Networks. PLoS Computational Biology, 2011, 7, e1002171.	1.5	44
42	Structure-switching biosensors: inspired by Nature. Current Opinion in Structural Biology, 2010, 20, 518-526.	2.6	163
43	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.	3.3	505
44	Label-Free, Dual-Analyte Electrochemical Biosensors: A New Class of Molecular-Electronic Logic Gates. Journal of the American Chemical Society, 2010, 132, 8557-8559.	6.6	117
45	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.	6.6	82
46	Using Triplex-Forming Oligonucleotide Probes for the Reagentless, Electrochemical Detection of Double-Stranded DNA. Analytical Chemistry, 2010, 82, 9109-9115.	3.2	87
47	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.	3.3	146
48	Multiple Tryptophan Probes Reveal that Ubiquitin Folds via a Late Misfolded Intermediate. Journal of Molecular Biology, 2007, 374, 791-805.	2.0	28
49	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.	3.1	207
50	[14] Detection of protein-protein interactions by protein fragment complementation strategies. Methods in Enzymology, 2000, 328, 208-230.	0.4	117