Arnaud Buhot

List of Publications by Year
in descending order

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88	1,984	236925	276875
papers	citations	25 h-index	41 g-index

90	90	90	2115
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Stretching of Homopolymeric RNA Reveals Single-Stranded Helices and Base-Stacking. Physical Review Letters, 2007, 98, 158103.	7.8	133
2	Sensitivity, Specificity, and the Hybridization Isotherms of DNA Chips. Biophysical Journal, 2004, 86, 718-730.	0.5	127
3	Brush Effects on DNA Chips: Thermodynamics, Kinetics, and Design Guidelines. Biophysical Journal, 2005, 89, 796-811.	0.5	89
4	Temperature Effects on DNA Chip Experiments from Surface Plasmon Resonance Imaging: Isotherms and Melting Curves. Biophysical Journal, 2007, 92, 935-946.	0.5	87
5	On the hybridization isotherms of DNA microarrays: the Langmuir model and its extensions. Journal of Physics Condensed Matter, 2006, 18, S463-S490.	1.8	85
6	Numerical Solution of Hard-Core Mixtures. Physical Review Letters, 1998, 80, 3787-3790.	7.8	65
7	Highly-Selective Optoelectronic Nose Based on Surface Plasmon Resonance Imaging for Sensing Volatile Organic Compounds. Analytical Chemistry, 2018, 90, 9879-9887.	6.5	65
8	Salt Concentration Effects on Equilibrium Melting Curves from DNA Microarrays. Biophysical Journal, 2010, 99, 1886-1895.	0.5	52
9	Solution-Phase vs Surface-Phase Aptamer-Protein Affinity from a Label-Free Kinetic Biosensor. PLoS ONE, 2013, 8, e75419.	2.5	50
10	Physico-chemical foundations underpinning microarray and next-generation sequencing experiments. Nucleic Acids Research, 2013, 41, 2779-2796.	14.5	49
11	Point Mutation Detection by Surface Plasmon Resonance Imaging Coupled with a Temperature Scan Method in a Model System. Analytical Chemistry, 2008, 80, 1049-1057.	6.5	47
12	Hybridization at a Surface:Â The Role of Spacers in DNA Microarrays. Langmuir, 2006, 22, 11290-11304.	3.5	45
13	Extension of Rod-Coil Multiblock Copolymers and the Effect of the Helix-Coil Transition. Physical Review Letters, 2000, 84, 2160-2163.	7.8	43
14	Highly sensitive olfactory biosensors for the detection of volatile organic compounds by surface plasmon resonance imaging. Biosensors and Bioelectronics, 2019, 123, 230-236.	10.1	41
15	Extension Behavior of Helicogenic Polypeptides. Macromolecules, 2002, 35, 3238-3252.	4.8	40
16	Effects of formamide on the thermal stability of DNA duplexes on biochips. Analytical Biochemistry, 2010, 397, 132-134.	2.4	40
17	Effects of stacking on the configurations and elasticity of single-stranded nucleic acids. Physical Review E, 2004, 70, 020902.	2.1	39
18	TOX4 and its binding partners recognize DNA adducts generated by platinum anticancer drugs. Archives of Biochemistry and Biophysics, 2011, 507, 296-303.	3.0	36

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19	Real time monitoring of thrombin interactions with its aptamers: Insights into the sandwich complex formation. Biosensors and Bioelectronics, 2013, 40, 186-192.	10.1	36
20	Gold Nanoparticles Surface Plasmon Resonance Enhanced Signal for the Detection of Small Molecules on Split-Aptamer Microarrays (Small Molecules Detection from Split-Aptamers). Microarrays (Basel, Switzerland), 2015, 4, 41-52.	1.4	34
21	Bio-Inspired Strategies for Improving the Selectivity and Sensitivity of Artificial Noses: A Review. Sensors, 2020, 20, 1803.	3.8	33
22	Fluctuation-Dissipation Relations in the Activated Regime of Simple Strong-Glass Models. Physical Review Letters, 2002, 88, 225702.	7.8	32
23	Sensing with Nanopores and Aptamers: A Way Forward. Sensors, 2020, 20, 4495.	3.8	30
24	Polymer translocation through nano-pores in vibrating thin membranes. Scientific Reports, 2016, 6, 38558.	3.3	28
25	SPR imaging for label-free multiplexed analyses of DNA N-glycosylase interactions with damaged DNA duplexes. Analyst, The, 2008, 133, 1036.	3.5	27
26	An Overview of Artificial Olfaction Systems with a Focus on Surface Plasmon Resonance for the Analysis of Volatile Organic Compounds. Biosensors, 2021, 11, 244.	4.7	27
27	Enhanced Bipolar Electrochemistry at Solid-State Micropores: Demonstration by Wireless Electrochemiluminescence Imaging. Analytical Chemistry, 2019, 91, 8900-8907.	6.5	26
28	Phase separation in two-dimensional additive mixtures. Physical Review E, 1999, 59, 2939-2941.	2.1	25
29	Crossover from fragile to strong glassy behavior in kinetically constrained systems. Physical Review E, 2001, 64, 021505.	2.1	25
30	Development of an optoelectronic nose based on surface plasmon resonance imaging with peptide and hairpin DNA for sensing volatile organic compounds. Sensors and Actuators B: Chemical, 2020, 303, 127188.	7.8	25
31	Polarization-Induced Local Pore-Wall Functionalization for Biosensing: From Micropore to Nanopore. Analytical Chemistry, 2012, 84, 3254-3261.	6.5	23
32	Discrimination of Î±-Thrombin and Î³-Thrombin Using Aptamer-Functionalized Nanopore Sensing. Analytical Chemistry, 2021, 93, 7889-7897.	6.5	22
33	Cluster algorithm for nonadditive hard-core mixtures. Journal of Chemical Physics, 2005, 122, 024105.	3.0	21
34	A nanoparticle-based thermo-dynamic aptasensor for small molecule detection. Nanoscale, 2016, 8, 16947-16954.	5.6	21
35	Kovacs effect and fluctuationâ€“dissipation relations in 1D kinetically constrained models. Journal of Physics A, 2003, 36, 12367-12377.	1.6	20
36	Recent advances in cardiac biomarkers detection: From commercial devices to emerging technologies. Journal of Pharmaceutical and Biomedical Analysis, 2021, 194, 113777.	2.8	20

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37	On chip real time monitoring of B-cells hybridoma secretion of immunoglobulin. Biosensors and Bioelectronics, 2011, 26, 2728-2732.	10.1	19
38	Real time observation and automated measurement of red blood cells agglutination inside a passive microfluidic biochip containing embedded reagents. Biosensors and Bioelectronics, 2017, 93, 110-117.	10.1	19
39	Red Blood Cell Agglutination for Blood Typing Within Passive Microfluidic Biochips. High-Throughput, 2018, 7, 10.	4.4	19
40	Multiplexed Remote SPR Detection of Biological Interactions through Optical Fiber Bundles. Sensors, 2020, 20, 511.	3.8	19
41	Continuous Evolution Profiles for Electronicâ€Tongueâ€Based Analysis. Angewandte Chemie - International Edition, 2012, 51, 10394-10398.	13.8	18
42	Hybridization Isotherms of DNA Microarrays and the Quantification of Mutation Studies. Clinical Chemistry, 2004, 50, 2254-2262.	3.2	16
43	A Versatile Electronic Tongue Based on Surface Plasmon Resonance Imaging and Cross-Reactive Sensor Arraysâ€"A Mini-Review. Sensors, 2017, 17, 1046.	3.8	16
44	Development of an Innovative Quantification Assay Based on Aptamer Sandwich and Isothermal Dumbbell Exponential Amplification. Analytical Chemistry, 2022, 94, 3376-3385.	6.5	15
45	Highly parallel remote SPR detection of DNA hybridization by micropillar optical arrays. Analytical and Bioanalytical Chemistry, 2019, 411, 2249-2259.	3.7	14
46	Phase transitions in optimal unsupervised learning. Physical Review E, 1998, 57, 3326-3333.	2.1	13
47	SPR imaging based electronic tongue via landscape images for complex mixture analysis. Talanta, 2014, 130, 49-54.	5.5	13
48	Optical Index Prism Sensitivity of Surface Plasmon Resonance Imaging in Gas Phase: Experiment versus Theory. Journal of Physical Chemistry C, 2020, 124, 3756-3767.	3.1	12
49	On the helix-coil transition in grafted chains. Europhysics Letters, 2000, 50, 756-761.	2.0	11
50	Temperature scans/cycles for the detection of low abundant DNA point mutations on microarrays. Biosensors and Bioelectronics, 2012, 31, 554-557.	10.1	11
51	Improvement of sensitivity of surface plasmon resonance imaging for the gas-phase detection of volatile organic compounds. Talanta, 2020, 212, 120777.	5.5	11
52	Glassy behaviour in simple kinetically constrained models: topological networks, lattice analogues and annihilation-diffusion. Journal of Physics Condensed Matter, 2002, 14, 1673-1682.	1.8	10
53	Finite size scaling of the Bayesian perceptron. Physical Review E, 1997, 55, 7434-7440.	2.1	9
54	Simple strong glass forming models: mean-field solution with activation. Journal of Physics A, 2003, 36, 307-328.	1.6	9

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55	Exact curvilinear diffusion coefficients in the repton model. European Physical Journal E, 2005, 18, 239-244.	1.6	9
56	Linear Chain Formation of Split-Aptamer Dimers on Surfaces Triggered by Adenosine. Langmuir, 2017, 33, 12785-12792.	3.5	8
57	Surfactant-like Peptide Self-Assembled into Hybrid Nanostructures for Electronic Nose Applications. ACS Nano, 2022, 16, 4444-4457.	14.6	8
58	Packing Fraction at Phase-Separation Transition in Hard-Core Mixtures. Physical Review Letters, 1999, 82, 960-963.	7.8	7
59	Crossover from fragile to strong glassy behaviour in the spin facilitated chain model. Journal of Physics Condensed Matter, 2002, 14, 1499-1507.	1.8	7
60	Wireless Enhanced Electrochemiluminescence at a Bipolar Microelectrode in a Solid-State Micropore. Journal of the Electrochemical Society, 2020, 167, 137509.	2.9	7
61	Kinetics of Isothermal Dumbbell Exponential Amplification: Effects of Mix Composition on LAMP and Its Derivatives. Biosensors, 2022, 12, 346.	4.7	7
62	Bipolar Electrochemiluminescence Imaging: A Way to Investigate the Passivation of Silicon Surfaces. ChemPhysChem, 2021, 22, 1094-1100.	2.1	6
63	Landscapes of Taste by a Novel Electronic Tongue for the Analysis of Complex Mixtures. Sensor Letters, 2014, 12, 1059-1064.	0.4	6
64	Robust learning and generalization with support vector machines. Journal of Physics A, 2001, 34, 4377-4388.	1.6	5
65	Polarization Induced Electro-Functionalization of Pore Walls: A Contactless Technology. Biosensors, 2019, 9, 121.	4.7	5
66	Storage capacity of a constructive learning algorithm. Journal of Physics A, 2000, 33, 1713-1727.	1.6	4
67	Relationship between humoral response against hepatitis C virus and disease overcome. SpringerPlus, 2014, 3, 56.	1.2	4
68	On the use of aptamer microarrays as a platform for the exploration of human prothrombin/thrombin conversion. Analytical Biochemistry, 2015, 473, 66-71.	2.4	4
69	Melting Curve Analysis of Aptachains: Adenosine Detection with Internal Calibration. Biosensors, 2021, 11, 112.	4.7	4
70	Enhancing the sensitivity of plasmonic optical fiber sensors by analyzing the distribution of the optical modes intensity. Optics Express, 2020, 28, 28740.	3.4	4
71	Cost function and pattern distribution of the Bayesian perceptron. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 228, 73-78.	2.1	3
72	Bayesian learning versus optimal learning. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 85-98.	2.6	3

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73	Electronic Tongue Generating Continuous Recognition Patterns for Protein Analysis. Journal of Visualized Experiments, 2014, , 51901.	0.3	3
74	Development of a novel multiplexed optoelectronic nose for analysis of volatile organic compounds. , 2017, , .		3
75	Small Molecule SPR Imaging Detection from Split Aptamer Microarrays. Procedia Technology, 2017, 27, 6-7.	1.1	3
76	Opto-electronic nose - temperature and VOC concentration effects on the equilibrium response. , 2019, , .		2
77	Buhot Replies:. Physical Review Letters, 2000, 84, 1841-1841.	7.8	1
78	Rigorous Bounds to Retarded Learning. Physical Review Letters, 2002, 88, 099801.	7.8	1
79	Viscosity and Renewal Time of Polymer Reptation Models. Macromolecules, 2010, 43, 9155-9159.	4.8	1
80	D-dimer Quantification from Autologous Red Blood Cells Agglutination by a Lens-free Imaging Device. Procedia Technology, 2017, 27, 167-168.	1.1	1
81	Odorant-binding protein-based optoelectronic tongue and nose for sensing volatile organic compounds. , 2019, , .		1
82	Surface plasmon resonance imaging-based optoelectronic nose: fundamental study on the effects of temperature and humidity. , 2020, , .		1
83	Storage capacity of the Tilinglike Learning Algorithm. AIP Conference Proceedings, 2001, , .	0.4	0
84	Contactless Bioâ€Electrofunctionalization of Planar Micropores. Advanced Materials Technologies, 2021, 6, 2001154.	5.8	0
85	Discrimination of deletion to point cytokine mutants based on an array of cross-reactive receptors mimicking protein recognition by heparan sulfate. Analytical and Bioanalytical Chemistry, 2022, 414, 551-559.	3.7	0
86	Synergistic or Antagonist Effects of Different UV Ranges Analyzed by the Combination Index: Application to DNA Photoproducts. Photochemistry and Photobiology, 2021, , .	2.5	0
87	Stability of Peptide in Microarrays: A Challenge for High-Throughput Screening. , 0, , .		0
88	Surface plasmon resonance imaging of the conversion of clustered DNA lesions into double strand breaks by Fpg protein. AIMS Materials Science, 2015, 2, 473-483.	1.4	0