

Aurelien Bancaud

List of Publications by Year in descending order

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57
papers

2,749
citations

257450

24
h-index

189892

50
g-index

59
all docs

59
docs citations

59
times ranked

3202
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Assembled Magnetic Matrices for DNA Separation Chips. <i>Science</i> , 2002, 295, 2237-2237.	12.6	445
2	Molecular crowding affects diffusion and binding of nuclear proteins in heterochromatin and reveals the fractal organization of chromatin. <i>EMBO Journal</i> , 2009, 28, 3785-3798.	7.8	376
3	High-throughput chromatin motion tracking in living yeast reveals the flexibility of the fiber throughout the genome. <i>Genome Research</i> , 2013, 23, 1829-1838.	5.5	195
4	Real-Time Imaging of a Single Gene Reveals Transcription-Initiated Local Confinement. <i>Biophysical Journal</i> , 2017, 113, 1383-1394.	0.5	158
5	Structural plasticity of single chromatin fibers revealed by torsional manipulation. <i>Nature Structural and Molecular Biology</i> , 2006, 13, 444-450.	8.2	156
6	High-Energy Al/CuO Nanocomposites Obtained by DNA-Directed Assembly. <i>Advanced Functional Materials</i> , 2012, 22, 323-329.	14.9	144
7	Nucleosome Chiral Transition under Positive Torsional Stress in Single Chromatin Fibers. <i>Molecular Cell</i> , 2007, 27, 135-147.	9.7	122
8	Quantitative Microfluidic Separation of DNA in Self-Assembled Magnetic Matrixes. <i>Analytical Chemistry</i> , 2004, 76, 3770-3776.	6.5	103
9	A fractal model for nuclear organization: current evidence and biological implications. <i>Nucleic Acids Research</i> , 2012, 40, 8783-8792.	14.5	97
10	Fluorescence Perturbation Techniques to Study Mobility and Molecular Dynamics of Proteins in Live Cells: FRAP, Photoactivation, Photoconversion, and FLIP. <i>Cold Spring Harbor Protocols</i> , 2010, 2010, pdb.top90.	0.3	94
11	Investigation of the selectivity of thrombin-binding aptamers for thrombin titration in murine plasma. <i>Biosensors and Bioelectronics</i> , 2016, 78, 58-66.	10.1	62
12	Rouse model with transient intramolecular contacts on a timescale of seconds recapitulates folding and fluctuation of yeast chromosomes. <i>Nucleic Acids Research</i> , 2019, 47, 6195-6207.	14.5	53
13	Systematic characterization of the conformation and dynamics of budding yeast chromosome XII. <i>Journal of Cell Biology</i> , 2013, 202, 201-210.	5.2	51
14	A system for imaging the regulatory noncoding <i>Xist</i> RNA in living mouse embryonic stem cells. <i>Molecular Biology of the Cell</i> , 2011, 22, 2634-2645.	2.1	45
15	Lab-on-Chip for fast 3D particle tracking in living cells. <i>Lab on A Chip</i> , 2009, 9, 3054.	6.0	42
16	Twisting and Untwisting a Single DNA Molecule Covered by RecA Protein. <i>Biophysical Journal</i> , 2004, 87, 2552-2563.	0.5	40
17	Mechanism of RecA-mediated homologous recombination revisited by single molecule nanomanipulation. <i>EMBO Journal</i> , 2006, 25, 4293-4304.	7.8	40
18	DNA separation and enrichment using electro-hydrodynamic bidirectional flows in viscoelastic liquids. <i>Lab on A Chip</i> , 2016, 16, 1243-1253.	6.0	38

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19	Principles of chromatin organization in yeast: relevance of polymer models to describe nuclear organization and dynamics. <i>Current Opinion in Cell Biology</i> , 2015, 34, 54-60.	5.4	34
20	BIABooster: Online DNA Concentration and Size Profiling with a Limit of Detection of 10 fg/µL and Application to High-Sensitivity Characterization of Circulating Cell-Free DNA. <i>Analytical Chemistry</i> , 2018, 90, 3766-3774.	6.5	33
21	Compaction Kinetics on Single DNAs: Purified Nucleosome Reconstitution Systems versus Crude Extract. <i>Biophysical Journal</i> , 2005, 89, 3647-3659.	0.5	32
22	Development of a flexible microfluidic system integrating magnetic micro-actuators for trapping biological species. <i>Journal of Micromechanics and Microengineering</i> , 2009, 19, 105019.	2.6	32
23	On chip magnetic actuator for batch-mode dynamic manipulation of magnetic particles in compact lab-on-chip. <i>Sensors and Actuators B: Chemical</i> , 2011, 160, 1520-1528.	7.8	29
24	Relevance and Limitations of Crowding, Fractal, and Polymer Models to Describe Nuclear Architecture. <i>International Review of Cell and Molecular Biology</i> , 2014, 307, 443-479.	3.2	27
25	Correlation between DNA Self-Assembly Kinetics, Microstructure, and Thermal Properties of Tunable Highly Energetic Al-CuO Nanocomposites for Micropyrotechnic Applications. <i>ACS Applied Nano Materials</i> , 2018, 1, 4716-4725.	5.0	24
26	Technological Challenges and Future Issues for the Detection of Circulating MicroRNAs in Patients With Cancer. <i>Frontiers in Chemistry</i> , 2019, 7, 815.	3.6	24
27	Right-Handed Nucleosome: Myth or Reality?. <i>Cell</i> , 2009, 139, 1216-1217.	28.9	23
28	DNA Grafting and Arrangement on Oxide Surfaces for Self-Assembly of Al and CuO Nanoparticles. <i>Langmuir</i> , 2017, 33, 12193-12203.	3.5	23
29	Analysis of DNA Replication by Optical Mapping in Nanochannels. <i>Small</i> , 2016, 12, 5963-5970.	10.0	19
30	Measurement of the Surface Concentration for Bioassay Kinetics in Microchannels. <i>Analytical Chemistry</i> , 2005, 77, 833-839.	6.5	15
31	Hydrodynamic Manipulation of DNA in Nanopost Arrays: Unhooking Dynamics and Size Separation. <i>Small</i> , 2011, 7, 3508-3518.	10.0	13
32	Efficient prototyping of large-scale pdms and silicon nanofluidic devices using pdms-based phase-shift lithography. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 465-473.	2.2	13
33	Spatial Analysis of Nanofluidic-Embedded Biosensors for Wash-Free Single-Nucleotide Difference Discrimination. <i>ACS Sensors</i> , 2018, 3, 606-611.	7.8	13
34	ÅµLAS: Sizing of expanded trinucleotide repeats with femtomolar sensitivity in less than 5 minutes. <i>Scientific Reports</i> , 2019, 9, 23.	3.3	13
35	Binding modes of thrombin binding aptamers investigated by simulations and experiments. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	12
36	Directed Assembly of Nanoparticles along Predictable Large-Scale Patterns Using Micromolded Hydrogels. <i>Langmuir</i> , 2011, 27, 6598-6605.	3.5	10

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37	Modeling of DNA transport in viscoelastic electro-hydrodynamic flows for enhanced size separation. <i>Soft Matter</i> , 2018, 14, 5069-5079.	2.7	10
38	Conformational Manipulation of DNA in Nanochannels Using Hydrodynamics. <i>Macromolecules</i> , 2013, 46, 6195-6202.	4.8	9
39	Metrology of confined flows using wide field nanoparticle velocimetry. <i>Scientific Reports</i> , 2015, 5, 10128.	3.3	8
40	Microfluidics for minute DNA sample analysis: open challenges for genetic testing of cell-free circulating DNA in blood plasma. <i>Micro and Nano Engineering</i> , 2018, 1, 25-32.	2.9	8
41	Contraction and Tumbling Dynamics of DNA in Shear Flows under Confinement Induced by Transverse Viscoelastic Forces. <i>Macromolecules</i> , 2019, 52, 1843-1852.	4.8	8
42	Optimized micromirrors for three-dimensional single-particle tracking in living cells. <i>Applied Physics Letters</i> , 2011, 98, 243701.	3.3	6
43	4LAS technology for DNA isolation coupled to Cas9-assisted targeting for sequencing and assembly of a 30 kb region in plant genome. <i>Nucleic Acids Research</i> , 2019, 47, 8050-8060.	14.5	6
44	A tunable filter for high molecular weight DNA selection and linked-read sequencing. <i>Lab on A Chip</i> , 2020, 20, 175-184.	6.0	5
45	micro-RNA 21 detection with a limit of 2 pM in 1 min using a size-accordable concentration module operated by electrohydrodynamic actuation. <i>Biosensors and Bioelectronics</i> , 2021, 178, 112992.	10.1	5
46	Bringing aptamers into technologies: Impact of spacer terminations. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	4
47	Single molecule study of DNA collision with elliptical nanoposts conveyed by hydrodynamics. <i>Electrophoresis</i> , 2013, 34, 3300-3304.	2.4	4
48	Characterization and minimization of band broadening in DNA electrohydrodynamic migration for enhanced size separation. <i>Soft Matter</i> , 2020, 16, 5640-5649.	2.7	4
49	Single-step electrohydrodynamic separation of 150 kbp in less than 5 min using homogeneous glass/adhesive/glass microchips. <i>Talanta</i> , 2020, 217, 121013.	5.5	4
50	Nanocomposites: High Energy Al/CuO Nanocomposites Obtained by DNA-Directed Assembly (Adv. Funct. Mater.)	14.9	3
51	Chromatin Topological Transitions. <i>Progress of Theoretical Physics Supplement</i> , 2011, 191, 30-39.	0.1	2
52	DNA polymerase γ gene expression influences fludarabine resistance in chronic lymphocytic leukemia independently of p53 status. <i>Haematologica</i> , 2018, 103, 1038-1046.	3.5	2
53	Capturing Chromosome Structural Properties From Their Spatial and Temporal Fluctuations. , 2017, , 239-263.		1
54	Accelerated Transport of Particles in Confined Channels with a High Roughness Amplitude. <i>Langmuir</i> , 2018, 34, 1394-1399.	3.5	1

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55	Thrombin detection in murine plasma using engineered fluorescence resonance energy transfer aptadimers. Applied Physics Letters, 2015, 107, 233701.	3.3	0
56	DNA Self-Assembly for the Design of Advanced Functional Materials and Nanocomposites. , 2019, , .		0
57	Trapping Biological Species in a Lab-on-Chip Microsystem: Micro Inductor Optimization Design and SU8 Process. International Federation for Information Processing, 2010, , 81-96.	0.4	0