

Jonas O Tegenfeldt

List of Publications by Year in descending order

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98
papers

6,322
citations

66343

42
h-index

66911

78
g-index

102
all docs

102
docs citations

102
times ranked

5609
citing authors

#	ARTICLE	IF	CITATIONS
1	The dynamics of genomic-length DNA molecules in 100-nm channels. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10979-10983.	7.1	458
2	Electrodeless Dielectrophoresis of Single- and Double-Stranded DNA. Biophysical Journal, 2002, 83, 2170-2179.	0.5	363
3	Fabrication of 10 nm enclosed nanofluidic channels. Applied Physics Letters, 2002, 81, 174-176.	3.3	312
4	Improving the Instrumental Resolution of Sensors Based on Localized Surface Plasmon Resonance. Analytical Chemistry, 2006, 78, 4416-4423.	6.5	305
5	Micro- and nanofluidics for DNA analysis. Analytical and Bioanalytical Chemistry, 2004, 378, 1678-1692.	3.7	292
6	Sorting cells by size, shape and deformability. Lab on A Chip, 2012, 12, 1048.	6.0	223
7	A DNA prism for high-speed continuous fractionation of large DNA molecules. Nature Biotechnology, 2002, 20, 1048-1051.	17.5	206
8	A Method Improving the Accuracy of Fluorescence Recovery after Photobleaching Analysis. Biophysical Journal, 2008, 95, 5334-5348.	0.5	204
9	Gradient nanostructures for interfacing microfluidics and nanofluidics. Applied Physics Letters, 2002, 81, 3058-3060.	3.3	199
10	Single-molecule denaturation mapping of DNA in nanofluidic channels. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13294-13299.	7.1	183
11	Separation of parasites from human blood using deterministic lateral displacement. Lab on A Chip, 2011, 11, 1326.	6.0	180
12	Nanoconfinement-Enhanced Conformational Response of Single DNA Molecules to Changes in Ionic Environment. Physical Review Letters, 2007, 99, 058302.	7.8	161
13	DNA in nanochannels—directly visualizing genomic information. Chemical Society Reviews, 2010, 39, 985.	38.1	149
14	Separation of 100-Kilobase DNA Molecules in 10 Seconds. Analytical Chemistry, 2001, 73, 6053-6056.	6.5	134
15	Single-molecule studies of repressor-DNA interactions show long-range interactions. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 9796-9801.	7.1	120
16	Tipping the balance of deterministic lateral displacement devices using dielectrophoresis. Lab on A Chip, 2009, 9, 2698.	6.0	102
17	Sacrificial polymers for nanofluidic channels in biological applications. Nanotechnology, 2003, 14, 578-583.	2.6	98
18	Deterministic Lateral Displacement: Challenges and Perspectives. ACS Nano, 2020, 14, 10784-10795.	14.6	97

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19	Single-Molecule Detection and Mismatch Discrimination of Unlabeled DNA Targets. Nano Letters, 2008, 8, 183-188.	9.1	95
20	Fibroblasts Cultured on Nanowires Exhibit Low Motility, Impaired Cell Division, and DNA Damage. Small, 2013, 9, 4006-4016.	10.0	94
21	High resolution 100kV electron beam lithography in SU-8. Microelectronic Engineering, 2006, 83, 1609-1612.	2.4	83
22	Directed self-organization of single DNA molecules in a nanoslit via embedded nanopit arrays. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 79-84.	7.1	82
23	Direct observation of the tip shape in scanning probe microscopy. Applied Physics Letters, 1993, 62, 2628-2630.	3.3	80
24	Bacterial chromosome extraction and isolation. Lab on A Chip, 2002, 2, 207.	6.0	79
25	Tuneable separation in elastomeric microfluidics devices. Lab on A Chip, 2008, 8, 657.	6.0	78
26	Lipid-Based Passivation in Nanofluidics. Nano Letters, 2012, 12, 2260-2265.	9.1	76
27	Sorting biomolecules with microdevices. Electrophoresis, 2000, 21, 81-90.	2.4	72
28	Near-Field Scanner for Moving Molecules. Physical Review Letters, 2001, 86, 1378-1381.	7.8	71
29	Role of Molecular Size in Ratchet Fractionation. Physical Review Letters, 2002, 89, 178301.	7.8	68
30	Field-Dependent DNA Mobility in 20 nm High Nanoslits. Nano Letters, 2008, 8, 1785-1790.	9.1	68
31	Diffusion mechanisms of localised knots along a polymer. Europhysics Letters, 2006, 76, 696-702.	2.0	67
32	A single-step competitive binding assay for mapping of single DNA molecules. Biochemical and Biophysical Research Communications, 2012, 417, 404-408.	2.1	67
33	Use of PLL-g-PEG in Micro-Fluidic Devices for Localizing Selective and Specific Protein Binding. Langmuir, 2006, 22, 10103-10108.	3.5	62
34	Competitive binding-based optical DNA mapping for fast identification of bacteria - multi-ligand transfer matrix theory and experimental applications on Escherichia coli. Nucleic Acids Research, 2014, 42, e118-e118.	14.5	59
35	Sorting cells by their dynamical properties. Scientific Reports, 2016, 6, 34375.	3.3	58
36	From immobilized cells to motile cells on a bed-of-nails: effects of vertical nanowire array density on cell behaviour. Scientific Reports, 2015, 5, 18535.	3.3	56

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37	Multidirectional sorting modes in deterministic lateral displacement devices. <i>Physical Review E</i> , 2008, 78, 046304.	2.1	55
38	Shear-Driven Motion of Supported Lipid Bilayers in Microfluidic Channels. <i>Journal of the American Chemical Society</i> , 2009, 131, 5294-5297.	13.7	54
39	Actin-Based Molecular Motors for Cargo Transportation in Nanotechnology – Potentials and Challenges. <i>IEEE Transactions on Advanced Packaging</i> , 2005, 28, 547-555.	1.6	47
40	Mechanical Behavior of a Supported Lipid Bilayer under External Shear Forces. <i>Langmuir</i> , 2009, 25, 6279-6286.	3.5	47
41	Fluorescence Nanoscopy of Single DNA Molecules by Using Stimulated Emission Depletion (STED). <i>Angewandte Chemie - International Edition</i> , 2011, 50, 5581-5583.	13.8	45
42	Label-free enrichment of primary human skeletal progenitor cells using deterministic lateral displacement. <i>Lab on A Chip</i> , 2019, 19, 513-523.	6.0	45
43	Nanoconfined Circular and Linear DNA: Equilibrium Conformations and Unfolding Kinetics. <i>Macromolecules</i> , 2015, 48, 871-878.	4.8	44
44	Open channel deterministic lateral displacement for particle and cell sorting. <i>Lab on A Chip</i> , 2017, 17, 3592-3600.	6.0	44
45	Fluorescent Nanowire Heterostructures as a Versatile Tool for Biology Applications. <i>Nano Letters</i> , 2013, 13, 4728-4732.	9.1	43
46	Topas-based lab-on-a-chip microsystems fabricated by thermal nanoimprint lithography. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005, 23, 2944.	1.6	42
47	Generic surface modification strategy for sensing applications based on Au/SiO ₂ nanostructures. <i>Biointerphases</i> , 2007, 2, 49-55.	1.6	40
48	Scanning the controls: genomics and nanotechnology. <i>IEEE Nanotechnology Magazine</i> , 2002, 1, 12-18.	2.0	37
49	Separation of pathogenic bacteria by chain length. <i>Analytica Chimica Acta</i> , 2018, 1000, 223-231.	5.4	36
50	Fabrication and characterization of a nanosensor for admittance spectroscopy of biomolecules. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995, 13, 1755-1760.	2.1	35
51	Vertical oxide nanotubes connected by subsurface microchannels. <i>Nano Research</i> , 2012, 5, 190-198.	10.4	35
52	Direct observation of the atomic force microscopy tip using inverse atomic force microscopy imaging. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1994, 12, 2222.	1.6	33
53	Simplifying microfluidic separation devices towards field-detection of blood parasites. <i>Analytical Methods</i> , 2016, 8, 3291-3300.	2.7	32
54	Orientational correlations in confined DNA. <i>Physical Review E</i> , 2012, 86, 041802.	2.1	27

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55	Extension of nanoconfined DNA: Quantitative comparison between experiment and theory. <i>Physical Review E</i> , 2015, 92, 062701.	2.1	26
56	Local Conformation of Confined DNA Studied Using Emission Polarization Anisotropy. <i>Small</i> , 2009, 5, 190-193.	10.0	23
57	Image widening not only a question of tip sample convolution. <i>Applied Physics Letters</i> , 1995, 66, 1068-1070.	3.3	20
58	Visualizing the entire DNA from a chromosome in a single frame. <i>Biomicrofluidics</i> , 2015, 9, 044114.	2.4	20
59	Nanofluidics in hollow nanowires. <i>Nanotechnology</i> , 2010, 21, 155301.	2.6	20
60	Applications of optical DNA mapping in microbiology. <i>BioTechniques</i> , 2017, 62, 255-267.	1.8	19
61	Active Posts in Deterministic Lateral Displacement Devices. <i>Advanced Materials Technologies</i> , 2019, 4, 1900339.	5.8	19
62	Monomer Distributions and Intrachain Collisions of a Polymer Confined to a Channel. <i>Macromolecules</i> , 2013, 46, 6644-6650.	4.8	18
63	Fluorescence enhancement of single DNA molecules confined in Si/SiO ₂ nanochannels. <i>Lab on A Chip</i> , 2010, 10, 2049.	6.0	17
64	Bandpass Filtering of DNA Elastic Modes Using Confinement and Tension. <i>Biophysical Journal</i> , 2012, 102, 96-100.	0.5	16
65	Fabrication and characterization of a molecular adhesive layer for micro- and nanofabricated electrochemical electrodes. <i>Microelectronic Engineering</i> , 2003, 67-68, 887-892.	2.4	15
66	Solute transport on the sub 100 ms scale across the lipid bilayer membrane of individual proteoliposomes. <i>Lab on A Chip</i> , 2012, 12, 4635.	6.0	15
67	Charge-Based Separation of Micro- and Nanoparticles. <i>Micromachines</i> , 2020, 11, 1014.	2.9	14
68	Quantitation of Bacterial Adhesion to Polymer Surfaces by Bioluminescence. <i>Zentralblatt Fur Bakteriologie: International Journal of Medical Microbiology</i> , 1998, 287, 7-18.	0.5	13
69	Hydrodynamics in 2½ dimensions: making jets in a plane. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 4891-4902.	1.8	13
70	Nanoimprint in PDMS on glass with two-level hybrid stamp. <i>Microelectronic Engineering</i> , 2008, 85, 210-213.	2.4	13
71	Microfluidic Particle Sorting in Concentrated Erythrocyte Suspensions. <i>Physical Review Applied</i> , 2019, 12, .	3.8	13
72	Polarization dependence of light intensity distribution near a nanometric aluminum slit. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2004, 21, 1005.	2.1	12

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73	Fluidic switching in nanochannels for the control of Inchworm: a synthetic biomolecular motor with a power stroke. <i>Nanoscale</i> , 2014, 6, 15008-15019.	5.6	12
74	Cell Sorting Using Electrokinetic Deterministic Lateral Displacement. <i>Micromachines</i> , 2021, 12, 30.	2.9	12
75	Protein depositions on one hydrocephalus shunt and on fifteen temporary ventricular catheters. <i>Acta Neurochirurgica</i> , 1997, 139, 734-742.	1.7	11
76	Presence of vitronectin and activated complement factor C9 on ventriculoperitoneal shunts and temporary ventricular drainage catheters. <i>Journal of Neurosurgery</i> , 1999, 90, 101-108.	1.6	11
77	Preparation of colloidal molecules with temperature-tunable interactions from oppositely charged microgel spheres. <i>Soft Matter</i> , 2019, 15, 8512-8524.	2.7	11
78	Controlled microfluidic switching in arbitrary time-sequences with low drag. <i>Lab on A Chip</i> , 2013, 13, 2389.	6.0	10
79	New technologies for DNA analysis – a review of the READNA Project. <i>New Biotechnology</i> , 2016, 33, 311-330.	4.4	10
80	Nano-engineered living bacterial motors for active microfluidic mixing. <i>IET Nanobiotechnology</i> , 2010, 4, 61.	3.8	9
81	A Fast and Scalable Kymograph Alignment Algorithm for Nanochannel-Based Optical DNA Mappings. <i>PLoS ONE</i> , 2015, 10, e0121905.	2.5	9
82	Stochastic unfolding of nanoconfined DNA: Experiments, model and Bayesian analysis. <i>Journal of Chemical Physics</i> , 2018, 149, 215101.	3.0	9
83	A Droplet-Based Microfluidics Route to Temperature-Responsive Colloidal Molecules. <i>Journal of Physical Chemistry B</i> , 2019, 123, 9260-9271.	2.6	9
84	How nanochannel confinement affects the DNA melting transition within the Poland-Scheraga model. <i>Journal of Chemical Physics</i> , 2015, 143, 115101.	3.0	8
85	Beaming effect of optical near-field in multiple metallic slits with nanometric linewidth and micrometer pitch. <i>Optics Communications</i> , 2005, 253, 198-204.	2.1	7
86	Long-range interactions between transcription factors. <i>Nanotechnology</i> , 2005, 16, 1993-1999.	2.6	7
87	Nanochannels for Genomic DNA Analysis: The Long and the Short of It., 2007, , 151-186.		7
88	Microfluidics-Based Approaches to the Isolation of African Trypanosomes. <i>Pathogens</i> , 2017, 6, 47.	2.8	6
89	A highly UV-transparent fused silica biochip for sensitive hepatotoxicity testing by autofluorescence. <i>Biochip Journal</i> , 2014, 8, 115-121.	4.9	3
90	Probing concentration-dependent behavior of DNA-binding proteins on a single-molecule level illustrated by Rad51. <i>Analytical Biochemistry</i> , 2013, 443, 261-268.	2.4	2

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91	Fluorescence Microscopy of Nanochannel-Confined DNA. <i>Methods in Molecular Biology</i> , 2018, 1665, 173-198.	0.9	2
92	Fluorescence Microscopy of Nanochannel-Confined DNA. <i>Methods in Molecular Biology</i> , 2011, 783, 159-179.	0.9	1
93	Microfabricated arrays for fractionation of large DNA molecules via pulsed field electrophoresis. , 1999, , .		0
94	Polarization dependence of light intensity distribution from nanometer metallic slits. , 0, , .		0
95	Literature Search and Review. <i>Assay and Drug Development Technologies</i> , 2010, 8, 408-426.	1.2	0
96	Cell Type Dependent Effects of Nanowire Density on Cell Cultures. <i>Biophysical Journal</i> , 2012, 102, 585a.	0.5	0
97	Nanoconfined Circular DNA. <i>Biophysical Journal</i> , 2014, 106, 275a.	0.5	0
98	Microfluidics: Active Posts in Deterministic Lateral Displacement Devices (<i>Adv. Mater. Technol.</i> 9/2019). <i>Advanced Materials Technologies</i> , 2019, 4, 1970048.	5.8	0