

Amit Meller

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91
papers

9,788
citations

45
h-index

98
g-index

104
ext. papers

10,869
ext. citations

9.3
avg, IF

6.22
L-index

#	Paper	IF	Citations
91	The potential and challenges of nanopore sequencing. <i>Nature Biotechnology</i> , 2008 , 26, 1146-53	44.5	1881
90	Rapid nanopore discrimination between single polynucleotide molecules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000 , 97, 1079-84	11.5	794
89	Voltage-driven DNA translocations through a nanopore. <i>Physical Review Letters</i> , 2001 , 86, 3435-8	7.4	742
88	Electrostatic focusing of unlabelled DNA into nanoscale pores using a salt gradient. <i>Nature Nanotechnology</i> , 2010 , 5, 160-5	28.7	522
87	DNA translocation governed by interactions with solid-state nanopores. <i>Biophysical Journal</i> , 2008 , 95, 4716-25	2.9	363
86	Rapid Fabrication of Uniformly Sized Nanopores and Nanopore Arrays for Parallel DNA Analysis. <i>Advanced Materials</i> , 2006 , 18, 3149-3153	24	315
85	Chemically modified solid-state nanopores. <i>Nano Letters</i> , 2007 , 7, 1580-5	11.5	310
84	Single molecule measurements of DNA transport through a nanopore. <i>Electrophoresis</i> , 2002 , 23, 2583-91	3.6	305
83	Orientation discrimination of single-stranded DNA inside the alpha-hemolysin membrane channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 12377-82	11.5	277
82	Single-molecule analysis of DNA-protein complexes using nanopores. <i>Nature Methods</i> , 2007 , 4, 315-7	21.6	255
81	Nanopore unzipping of individual DNA hairpin molecules. <i>Biophysical Journal</i> , 2004 , 87, 3205-12	2.9	247
80	Dynamics of polynucleotide transport through nanometre-scale pores. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, R581-R607	1.8	242
79	Optical recognition of converted DNA nucleotides for single-molecule DNA sequencing using nanopore arrays. <i>Nano Letters</i> , 2010 , 10, 2237-44	11.5	221
78	Extracting kinetics from single-molecule force spectroscopy: nanopore unzipping of DNA hairpins. <i>Biophysical Journal</i> , 2007 , 92, 4188-95	2.9	160
77	Nanopore based sequence specific detection of duplex DNA for genomic profiling. <i>Nano Letters</i> , 2010 , 10, 738-42	11.5	150
76	Single-molecule protein sensing in a nanopore: a tutorial. <i>Chemical Society Reviews</i> , 2018 , 47, 8512-8524	58.5	125
75	Dynamics of DNA molecules in a membrane channel probed by active control techniques. <i>Biophysical Journal</i> , 2003 , 84, 2366-72	2.9	124

74	Optoelectronic control of surface charge and translocation dynamics in solid-state nanopores. <i>Nature Nanotechnology</i> , 2013 , 8, 946-51	28.7	122
73	Characteristics of solid-state nanometre pores fabricated using a transmission electron microscope. <i>Nanotechnology</i> , 2007 , 18, 205302	3.4	118
72	DNA profiling using solid-state nanopores: detection of DNA-binding molecules. <i>Nano Letters</i> , 2009 , 9, 3498-502	11.5	113
71	pH tuning of DNA translocation time through organically functionalized nanopores. <i>ACS Nano</i> , 2013 , 7, 1408-14	16.7	95
70	Optical Gradient Forces of Strongly Localized Fields. <i>Physical Review Letters</i> , 1998 , 81, 1738-1741	7.4	91
69	Electromechanical unzipping of individual DNA molecules using synthetic sub-2 nm pores. <i>Nano Letters</i> , 2008 , 8, 3418-22	11.5	88
68	Electronic barcoding of a viral gene at the single-molecule level. <i>Nano Letters</i> , 2012 , 12, 1722-8	11.5	84
67	Using fluorescence resonance energy transfer to measure distances along individual DNA molecules: corrections due to nonideal transfer. <i>Journal of Chemical Physics</i> , 2005 , 122, 061103	3.9	84
66	Plasmonic-Nanopore Biosensors for Superior Single-Molecule Detection. <i>Advanced Materials</i> , 2019 , 31, e1900422	24	76
65	Long time scale blinking kinetics of cyanine fluorophores conjugated to DNA and its effect on FRET resonance energy transfer. <i>Journal of Chemical Physics</i> , 2005 , 123, 224708	3.9	74
64	A nanopore-nanofiber mesh biosensor to control DNA translocation. <i>Journal of the American Chemical Society</i> , 2013 , 135, 16304-7	16.4	73
63	Synchronous optical and electrical detection of biomolecules traversing through solid-state nanopores. <i>Review of Scientific Instruments</i> , 2010 , 81, 014301	1.7	70
62	The Effect of dye-dye interactions on the spatial resolution of single-molecule FRET measurements in nucleic acids. <i>Biophysical Journal</i> , 2010 , 98, 2265-72	2.9	66
61	Progress toward ultrafast DNA sequencing using solid-state nanopores. <i>Clinical Chemistry</i> , 2007 , 53, 1996-2001	5.5	64
60	Light-Enhancing Plasmonic-Nanopore Biosensor for Superior Single-Molecule Detection. <i>Advanced Materials</i> , 2017 , 29, 1605442	24	63
59	Optical sensing and analyte manipulation in solid-state nanopores. <i>Analyst, The</i> , 2015 , 140, 4733-47	5	61
58	Mechanisms governing the control of mRNA translation. <i>Physical Biology</i> , 2010 , 7, 021001	3	61
57	Entropy driven phase separation in binary emulsions. <i>Physical Review Letters</i> , 1995 , 74, 4750-4753	7.4	61

56	The emerging landscape of single-molecule protein sequencing technologies. <i>Nature Methods</i> , 2021 , 18, 604-617	21.6	60
55	Self-energy-limited ion transport in subnanometer channels. <i>Physical Review Letters</i> , 2006 , 97, 128104	7.4	59
54	Single-Molecule DNA Methylation Quantification Using Electro-optical Sensing in Solid-State Nanopores. <i>ACS Nano</i> , 2016 , 10, 8861-70	16.7	58
53	Direct Sensing and Discrimination among Ubiquitin and Ubiquitin Chains Using Solid-State Nanopores. <i>Biophysical Journal</i> , 2015 , 108, 2340-9	2.9	52
52	Stationary nanoliter droplet array with a substrate of choice for single adherent/nonadherent cell incubation and analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 11293-8	11.5	52
51	Fabrication and characterization of solid-state nanopore arrays for high-throughput DNA sequencing. <i>Nanotechnology</i> , 2012 , 23, 385308	3.4	51
50	Glass transition and phase diagrams of strongly interacting binary colloidal mixtures. <i>Physical Review Letters</i> , 1992 , 68, 3646-3649	7.4	49
49	Probing solid-state nanopores with light for the detection of unlabeled analytes. <i>ACS Nano</i> , 2014 , 8, 11836-45	7.4	48
48	Nanopore sensing of individual transcription factors bound to DNA. <i>Scientific Reports</i> , 2015 , 5, 11643	4.9	46
47	Stability of Emulsions with Nonadsorbing Polymers. <i>Langmuir</i> , 1996 , 12, 301-304	4	45
46	Spatiotemporal patterns and transcription kinetics of induced RNA in single bacterial cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 16399-404	11.5	41
45	Single-molecule kinetics of the eukaryotic initiation factor 4A1 upon RNA unwinding. <i>Structure</i> , 2014 , 22, 941-8	5.2	39
44	Two color DNA barcode detection in photoluminescence suppressed silicon nitride nanopores. <i>Nano Letters</i> , 2015 , 15, 745-52	11.5	39
43	Optically-Monitored Nanopore Fabrication Using a Focused Laser Beam. <i>Scientific Reports</i> , 2018 , 8, 97654	4.9	37
42	DNA nanomechanical switches under folding kinetics control. <i>Nano Letters</i> , 2006 , 6, 101-4	11.5	37
41	The eukaryotic initiation factor eIF4H facilitates loop-binding, repetitive RNA unwinding by the eIF4A DEAD-box helicase. <i>Nucleic Acids Research</i> , 2012 , 40, 6199-207	20.1	32
40	Real-time visualization and sub-diffraction limit localization of nanometer-scale pore formation by dielectric breakdown. <i>Nanoscale</i> , 2017 , 9, 16437-16445	7.7	31
39	Accurate single molecule FRET efficiency determination for surface immobilized DNA using maximum likelihood calculated lifetimes. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 2986-90	3.4	31

38	Simulation of single-protein nanopore sensing shows feasibility for whole-proteome identification. <i>PLoS Computational Biology</i> , 2019 , 15, e1007067	5	29
37	Programmed trapping of individual bacteria using micrometre-size sieves. <i>Lab on A Chip</i> , 2011 , 11, 1089-95		29
36	High-throughput scanning confocal microscope for single molecule analysis. <i>Applied Physics Letters</i> , 2004 , 84, 1216-1218	3.4	28
35	Automated, Ultra-Fast Laser-Drilling of Nanometer Scale Pores and Nanopore Arrays in Aqueous Solutions. <i>Advanced Functional Materials</i> , 2020 , 30, 1900642	15.6	28
34	Single-Molecule Discrimination of Labeled DNAs and Polypeptides Using Photoluminescent-Free TiO Nanopores. <i>ACS Nano</i> , 2018 , 12, 11648-11656	16.7	26
33	Sensing Native Protein Solution Structures Using a Solid-state Nanopore: Unraveling the States of VEGF. <i>Scientific Reports</i> , 2018 , 8, 1017	4.9	25
32	Nanopore detachment kinetics of poly(A) binding proteins from RNA molecules reveals the critical role of C-terminus interactions. <i>Biophysical Journal</i> , 2012 , 102, 1427-34	2.9	25
31	Orientation-dependent interactions of DNA with an alpha-hemolysin channel. <i>Physical Review E</i> , 2008 , 77, 031904	2.4	24
30	DNA sequencing and bar-coding using solid-state nanopores. <i>Electrophoresis</i> , 2012 , 33, 3437-47	3.6	23
29	Nanopore force spectroscopy tools for analyzing single biomolecular complexes. <i>Methods in Enzymology</i> , 2010 , 475, 565-89	1.7	22
28	Helix-coil kinetics of individual polyadenylic acid molecules in a protein channel. <i>Physical Review Letters</i> , 2010 , 104, 158101	7.4	22
27	On-Chip Stretching, Sorting, and Electro-Optical Nanopore Sensing of Ultralong Human Genomic DNA. <i>ACS Nano</i> , 2019 , 13, 14388-14398	16.7	18
26	A Solid-State Hard Microfluidic-Nanopore Biosensor with Multilayer Fluidics and On-Chip Bioassay/Purification Chamber. <i>Advanced Functional Materials</i> , 2018 , 28, 1804182	15.6	17
25	The potential and challenges of nanopore sequencing 2009 , 261-268		16
24	Detection of urea-induced internal denaturation of dsDNA using solid-state nanopores. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 454111	1.8	15
23	Quantification of mRNA Expression Using Single-Molecule Nanopore Sensing. <i>ACS Nano</i> , 2020 , 14, 13964-13974	16.7	15
22	Functionalized Nanofiber Meshes Enhance Immunosorbent Assays. <i>Analytical Chemistry</i> , 2015 , 87, 11863-70		14
21	Genomic Pathogen Typing Using Solid-State Nanopores. <i>PLoS ONE</i> , 2015 , 10, e0142944	3.7	14

20	Single-molecule DNA unzipping reveals asymmetric modulation of a transcription factor by its binding site sequence and context. <i>Nucleic Acids Research</i> , 2018 , 46, 1513-1524	20.1	12
19	Single-Molecule Characterization of DNA-Protein Interactions Using Nanopore Biosensors. <i>Methods in Enzymology</i> , 2017 , 582, 353-385	1.7	11
18	DNA capture and translocation through nanoscale pores-a fine balance of electrophoresis and electroosmosis. <i>Biophysical Journal</i> , 2013 , 105, 543-4	2.9	10
17	Microfluidic device for coupling isotachophoretic sample focusing with nanopore single-molecule sensing. <i>Nanoscale</i> , 2020 , 12, 17805-17811	7.7	10
16	Nanopore Identification of Single Nucleotide Mutations in Circulating Tumor DNA by Multiplexed Ligation. <i>Clinical Chemistry</i> , 2021 , 67, 753-762	5.5	7
15	Localized Joule heating produced by ion current focusing through micron-size holes. <i>Applied Physics Letters</i> , 2010 , 96, 163701	3.4	6
14	Chapter 8 Rapid DNA Sequencing by Direct Nanoscale Reading of Nucleotide Bases on Individual DNA chains. <i>Perspectives in Bioanalysis</i> , 2007 , 2, 245-263		6
13	Single-Molecule Studies of Nucleic Acid Interactions Using Nanopores 2009 , 265		6
12	Sub-second, super-resolved imaging of biological systems using parallel EO-STED. <i>Optics Letters</i> , 2020 , 45, 2712-2715	3	5
11	Automated system for single molecule fluorescence measurements of surface-immobilized biomolecules. <i>Journal of Visualized Experiments</i> , 2009 ,	1.6	3
10	Nanopores: Single-Molecule Sensors of Nucleic Acid-Based Complexes. <i>Advances in Chemical Physics</i> , 251-268		3
9	DNA sequencing by nanopore-induced photon emission. <i>Methods in Molecular Biology</i> , 2012 , 870, 99-114	1.4	2
8	Probing Biomolecular Interactions Using Nanopore Force Spectroscopy 2009 ,		2
7	On-chip protein separation with single-molecule resolution. <i>Scientific Reports</i> , 2020 , 10, 15313	4.9	2
6	Fast and Deterministic Fabrication of Sub-5 Nanometer Solid-State Pores by Feedback-Controlled Laser Processing. <i>ACS Nano</i> , 2021 ,	16.7	2
5	Nanopore-based Sensing of Individual Nucleic Acid Complexes. <i>Israel Journal of Chemistry</i> , 2010 , 49, 323-331	3.1	1
4	Are nanopore technologies ready for the proteomic challenge primetime?. <i>Molecular Cell</i> , 2022 , 82, 237-238	2.8	0
3	Lifetime-based analysis of binary fluorophores mixtures in the low photon count limit.. <i>IScience</i> , 2022 , 25, 103554	6.1	0

- 2 Nanoscale Engineering with a TEM for DNA Sequencing. *Microscopy and Microanalysis*, **2006**, 12, 638-639_{0.5}
- 1 Capture and Translocation of Nucleic Acids into Sub-5 nm Solid-State Nanopores **2011**, 227-254