Amit Meller

List of Publications by Year
in descending order

		50276	45317
99	11,634	46	90
papers	citations	h-index	g-index

104	104	104	6935
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lifetime-based analysis of binary fluorophores mixtures in the low photon count limit. IScience, 2022, 25, 103554.	4.1	4
2	Are nanopore technologies ready for the proteomic challenge primetime?. Molecular Cell, 2022, 82, 237-238.	9.7	2
3	Purely electrical SARS-CoV-2 sensing based on single-molecule counting. Nanoscale, 2022, 14, 4977-4986.	5.6	11
4	Single-File Translocation Dynamics of SDS-Denatured, Whole Proteins through Sub-5 nm Solid-State Nanopores. ACS Nano, 2022, 16, 11405-11414.	14.6	16
5	Nanopore Identification of Single Nucleotide Mutations in Circulating Tumor DNA by Multiplexed Ligation. Clinical Chemistry, 2021, 67, 753-762.	3.2	20
6	The emerging landscape of single-molecule protein sequencing technologies. Nature Methods, 2021, 18, 604-617.	19.0	198
7	Fast and Deterministic Fabrication of Sub-5 Nanometer Solid-State Pores by Feedback-Controlled Laser Processing. ACS Nano, 2021, 15, 12189-12200.	14.6	13
8	Leaders of the field: What does the future hold for single molecule technology?. IScience, 2021, 24, 103161.	4.1	0
9	Automated, Ultraâ€Fast Laserâ€Drilling of Nanometer Scale Pores and Nanopore Arrays in Aqueous Solutions. Advanced Functional Materials, 2020, 30, 1900642.	14.9	41
10	On-chip protein separation with single-molecule resolution. Scientific Reports, 2020, 10, 15313.	3.3	6
11	Quantification of mRNA Expression Using Single-Molecule Nanopore Sensing. ACS Nano, 2020, 14, 13964-13974.	14.6	40
12	Microfluidic device for coupling isotachophoretic sample focusing with nanopore single-molecule sensing. Nanoscale, 2020, 12, 17805-17811.	5.6	19
13	Sub-second, super-resolved imaging of biological systems using parallel EO-STED. Optics Letters, 2020, 45, 2712.	3.3	5
14	A new tool for cell signalling research. Nature Nanotechnology, 2019, 14, 732-733.	31.5	9
15	Simulation of single-protein nanopore sensing shows feasibility for whole-proteome identification. PLoS Computational Biology, 2019, 15, e1007067.	3.2	46
16	Plasmonicâ€Nanopore Biosensors for Superior Singleâ€Molecule Detection. Advanced Materials, 2019, 31, e1900422.	21.0	124
17	On-Chip Stretching, Sorting, and Electro-Optical Nanopore Sensing of Ultralong Human Genomic DNA. ACS Nano, 2019, 13, 14388-14398.	14.6	28
18	Sensing Native Protein Solution Structures Using a Solid-state Nanopore: Unraveling the States of VEGF. Scientific Reports, 2018, 8, 1017.	3.3	40

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19	Single-molecule DNA unzipping reveals asymmetric modulation of a transcription factor by its binding site sequence and context. Nucleic Acids Research, 2018, 46, 1513-1524.	14.5	16
20	Single-molecule protein sensing in a nanopore: a tutorial. Chemical Society Reviews, 2018, 47, 8512-8524.	38.1	203
21	A Solidâ€State Hard Microfluidicâ€“Nanopore Biosensor with Multilayer Fluidics and Onâ€Chip Bioassay/Purification Chamber. Advanced Functional Materials, 2018, 28, 1804182.	14.9	27
22	Single-Molecule Discrimination of Labeled DNAs and Polypeptides Using Photoluminescent-Free TiO₂ Nanopores. ACS Nano, 2018, 12, 11648-11656.	14.6	45
23	Optically-Monitored Nanopore Fabrication Using a Focused Laser Beam. Scientific Reports, 2018, 8, 9765.	3.3	53
24	Structural Characterization of Vascular Endothelial Growth Factor by Solid-State Nanopores. Biophysical Journal, 2017, 112, 154a-155a.	0.5	0
25	Lightâ€Enhancing Plasmonicâ€Nanopore Biosensor for Superior Singleâ€Molecule Detection. Advanced Materials, 2017, 29, 1605442.	21.0	90
26	Real-time visualization and sub-diffraction limit localization of nanometer-scale pore formation by dielectric breakdown. Nanoscale, 2017, 9, 16437-16445.	5.6	39
27	Single-Molecule Characterization of DNAâ€“Protein Interactions Using Nanopore Biosensors. Methods in Enzymology, 2017, 582, 353-385.	1.0	15
28	Single-Molecule DNA Methylation Quantification Using Electro-optical Sensing in Solid-State Nanopores. ACS Nano, 2016, 10, 8861-8870.	14.6	72
29	Optical sensing and analyte manipulation in solid-state nanopores. Analyst, The, 2015, 140, 4733-4747.	3.5	74
30	Functionalized Nanofiber Meshes Enhance Immunosorbent Assays. Analytical Chemistry, 2015, 87, 11863-11870.	6.5	22
31	Two Color DNA Barcode Detection in Photoluminescence Suppressed Silicon Nitride Nanopores. Nano Letters, 2015, 15, 745-752.	9.1	47
32	Nanopore sensing of individual transcription factors bound to DNA. Scientific Reports, 2015, 5, 11643.	3.3	64
33	Direct Sensing and Discrimination among Ubiquitin and Ubiquitin Chains Using Solid-State Nanopores. Biophysical Journal, 2015, 108, 2340-2349.	0.5	76
34	Genomic Pathogen Typing Using Solid-State Nanopores. PLoS ONE, 2015, 10, e0142944.	2.5	18
35	Probing Solid-State Nanopores with Light for the Detection of Unlabeled Analytes. ACS Nano, 2014, 8, 11836-11845.	14.6	58
36	Stationary nanoliter droplet array with a substrate of choice for single adherent/nonadherent cell incubation and analysis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11293-11298.	7.1	64

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37	Single-Molecule Kinetics of the Eukaryotic Initiation Factor 4AI upon RNA Unwinding. Structure, 2014, 22, 941-948.	3.3	48
38	A Nanoporeâ€“Nanofiber Mesh Biosensor To Control DNA Translocation. Journal of the American Chemical Society, 2013, 135, 16304-16307.	13.7	84
39	Optoelectronic control of surface charge and translocation dynamics in solid-state nanopores. Nature Nanotechnology, 2013, 8, 946-951.	31.5	149
40	DNA Capture and Translocation through Nanoscale Poresâ€”a Fine Balance of Electrophoresis and Electroosmosis. Biophysical Journal, 2013, 105, 543-544.	0.5	12
41	Probing Conformational Changes and Dynamics in eIF4A Helicase during RNA Unwinding by Single-Molecule FRET. Biophysical Journal, 2013, 104, 421a.	0.5	1
42	pH Tuning of DNA Translocation Time through Organically Functionalized Nanopores. ACS Nano, 2013, 7, 1408-1414.	14.6	114
43	The eukaryotic initiation factor eIF4H facilitates loop-binding, repetitive RNA unwinding by the eIF4A DEAD-box helicase. Nucleic Acids Research, 2012, 40, 6199-6207.	14.5	43
44	<scp>DNA</scp> sequencing and barâ€coding using solidâ€state nanopores. Electrophoresis, 2012, 33, 3437-3447.	2.4	30
45	Electronic Barcoding of a Viral Gene at the Single-Molecule Level. Nano Letters, 2012, 12, 1722-1728.	9.1	98
46	Nanopore Detachment Kinetics of Poly(A) Binding Proteins from RNA Molecules Reveals the Critical Role of C-Terminus Interactions. Biophysical Journal, 2012, 102, 1427-1434.	0.5	32
47	DNA Sequencing by Nanopore-Induced Photon Emission. Methods in Molecular Biology, 2012, 870, 99-114.	0.9	3
48	Fabrication and characterization of solid-state nanopore arrays for high-throughput DNA sequencing. Nanotechnology, 2012, 23, 385308.	2.6	57
49	Programmed trapping of individual bacteria using micrometre-size sieves. Lab on A Chip, 2011, 11, 1089.	6.0	37
50	Capture and Translocation of Nucleic Acids into Sub-5 nm Solid-State Nanopores. , 2011, , 227-254.		0
51	Localized Joule heating produced by ion current focusing through micron-size holes. Applied Physics Letters, 2010, 96, .	3.3	9
52	Electrostatic focusing of unlabelled DNA into nanoscale pores using a salt gradient. Nature Nanotechnology, 2010, 5, 160-165.	31.5	625
53	Synchronous optical and electrical detection of biomolecules traversing through solid-state nanopores. Review of Scientific Instruments, 2010, 81, 014301.	1.3	85
54	Nanopore Force Spectroscopy Tools for Analyzing Single Biomolecular Complexes. Methods in Enzymology, 2010, 475, 565-589.	1.0	24

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55	Mechanisms governing the control of mRNA translation. Physical Biology, 2010, 7, 021001.	1.8	67
56	Optical Recognition of Converted DNA Nucleotides for Single-Molecule DNA Sequencing Using Nanopore Arrays. Nano Letters, 2010, 10, 2237-2244.	9.1	257
57	Nanopore Based Sequence Specific Detection of Duplex DNA for Genomic Profiling. Nano Letters, 2010, 10, 738-742.	9.1	176
58	The Effect of Dye-Dye Interactions on the Spatial Resolution of Single-Molecule FRET Measurements in Nucleic Acids. Biophysical Journal, 2010, 98, 2265-2272.	0.5	72
59	Nanopore-based Sensing of Individual Nucleic Acid Complexes. Israel Journal of Chemistry, 2010, 49, 323-331.	2.3	2
60	Detection of urea-induced internal denaturation of dsDNA using solid-state nanopores. Journal of Physics Condensed Matter, 2010, 22, 454111.	1.8	16
61	Helix-Coil Kinetics of Individual Polyadenylic Acid Molecules in a Protein Channel. Physical Review Letters, 2010, 104, 158101.	7.8	23
62	Automated System for Single Molecule Fluorescence Measurements of Surface-immobilized Biomolecules. Journal of Visualized Experiments, 2009, , .	0.3	3
63	Spatiotemporal patterns and transcription kinetics of induced RNA in single bacterial cells. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16399-16404.	7.1	47
64	DNA Profiling Using Solid-State Nanopores: Detection of DNA-Binding Molecules. Nano Letters, 2009, 9, 3498-3502.	9.1	121
65	Nanopore Unzipping Of Ultra-long Dna Repeats For Single-molecule Mutation Detection. Biophysical Journal, 2009, 96, 645a.	0.5	0
66	Deciphering the Mechanism of RNA helicase eIF4A in Translation Initiation. Biophysical Journal, 2009, 96, 415a.	0.5	0
67	Urea-Induced Conformational Changes in dsDNA Probed by Solid-State Nanopores. Biophysical Journal, 2009, 96, 644a.	0.5	0
68	The potential and challenges of nanopore sequencing. , 2009, , 261-268.		23
69	Single-Molecule Studies of Nucleic Acid Interactions Using Nanopores. , 2009, , 265-291.		6
70	The potential and challenges of nanopore sequencing. Nature Biotechnology, 2008, 26, 1146-1153.	17.5	2,201
71	DNA Translocation Governed by Interactions with Solid-State Nanopores. Biophysical Journal, 2008, 95, 4716-4725.	0.5	415
72	Electromechanical Unzipping of Individual DNA Molecules Using Synthetic Sub-2 nm Pores. Nano Letters, 2008, 8, 3418-3422.	9.1	96

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73	Orientation-dependent interactions of DNA with an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>-hemolysin channel. Physical Review E, 2008, 77, 031904.	2.1	26
74	Progress toward Ultrafast DNA Sequencing Using Solid-State Nanopores. Clinical Chemistry, 2007, 53, 1996-2001.	3.2	73
75	Chapter 8 Rapid DNA Sequencing by Direct Nanoscale Reading of Nucleotide Bases on Individual DNA chains. Perspectives in Bioanalysis, 2007, 2, 245-263.	0.3	10
76	Characteristics of solid-state nanometre pores fabricated using a transmission electron microscope. Nanotechnology, 2007, 18, 205302.	2.6	142
77	Accurate Single Molecule FRET Efficiency Determination for Surface Immobilized DNA Using Maximum Likelihood Calculated Lifetimes. Journal of Physical Chemistry B, 2007, 111, 2986-2990.	2.6	34
78	Chemically Modified Solid-State Nanopores. Nano Letters, 2007, 7, 1580-1585.	9.1	341
79	Extracting Kinetics from Single-Molecule Force Spectroscopy: Nanopore Unzipping of DNA Hairpins. Biophysical Journal, 2007, 92, 4188-4195.	0.5	174
80	Single-molecule analysis of DNA-protein complexes using nanopores. Nature Methods, 2007, 4, 315-317.	19.0	287
81	DNA Nanomechanical Switches under Folding Kinetics Control. Nano Letters, 2006, 6, 101-104.	9.1	44
82	Nanoscale Engineering with a TEM for DNA Sequencing. Microscopy and Microanalysis, 2006, 12, 638-639.	0.4	0
83	Rapid Fabrication of Uniformly Sized Nanopores and Nanopore Arrays for Parallel DNA Analysis. Advanced Materials, 2006, 18, 3149-3153.	21.0	360
84	Self-Energy-Limited Ion Transport in Subnanometer Channels. Physical Review Letters, 2006, 97, 128104.	7.8	62
85	Nanopore Sensors for Ultra-Fast DNA Analysis. , 2006, , .		0
86	Long time scale blinking kinetics of cyanine fluorophores conjugated to DNA and its effect on FÃ¶rster resonance energy transfer. Journal of Chemical Physics, 2005, 123, 224708.	3.0	81
87	Using fluorescence resonance energy transfer to measure distances along individual DNA molecules: Corrections due to nonideal transfer. Journal of Chemical Physics, 2005, 122, 061103.	3.0	91
88	Orientation discrimination of single-stranded DNA inside the Â-hemolysin membrane channel. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12377-12382.	7.1	308
89	High-throughput scanning confocal microscope for single molecule analysis. Applied Physics Letters, 2004, 84, 1216-1218.	3.3	33
90	Nanopore Unzipping of Individual DNA Hairpin Molecules. Biophysical Journal, 2004, 87, 3205-3212.	0.5	273

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91	Dynamics of DNA Molecules in a Membrane Channel Probed by Active Control Techniques. Biophysical Journal, 2003, 84, 2366-2372.	0.5	136
92	Dynamics of polynucleotide transport through nanometre-scale pores. Journal of Physics Condensed Matter, 2003, 15, R581-R607.	1.8	260
93	Single molecule measurements of DNA transport through a nanopore. Electrophoresis, 2002, 23, 2583-2591.	2.4	342
94	Voltage-Driven DNA Translocations through a Nanopore. Physical Review Letters, 2001, 86, 3435-3438.	7.8	822
95	Rapid nanopore discrimination between single polynucleotide molecules. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 1079-1084.	7.1	860
96	Optical Gradient Forces of Strongly Localized Fields. Physical Review Letters, 1998, 81, 1738-1741.	7.8	116
97	Stability of Emulsions with Nonadsorbing Polymers. Langmuir, 1996, 12, 301-304.	3.5	53
98	Entropy Driven Phase Separation in Binary Emulsions. Physical Review Letters, 1995, 74, 4750-4753.	7.8	68
99	Glass transition and phase diagrams of strongly interacting binary colloidal mixtures. Physical Review Letters, 1992, 68, 3646-3649.	7.8	51