Meni Wanunu

List of Publications by Year
in descending order

104 papers	11,690 citations	57758 44 h-index	34986 98 g-index
115 all docs	115 docs citations	115 times ranked	9237 citing authors

#	Article	IF	Citations
1	The potential and challenges of nanopore sequencing. Nature Biotechnology, 2008, 26, 1146-1153.	17.5	2,201
2	DNA Translocation through Graphene Nanopores. Nano Letters, 2010, 10, 2915-2921.	9.1	846
3	Rapid electronic detection of probe-specific microRNAs using thin nanopore sensors. Nature Nanotechnology, 2010, 5, 807-814.	31.5	632
4	Electrostatic focusing of unlabelled DNA into nanoscale pores using a salt gradient. Nature Nanotechnology, 2010, 5, 160-165.	31.5	625
5	Enhanced water permeability and tunable ion selectivity in subnanometer carbon nanotube porins. Science, 2017, 357, 792-796.	12.6	566
6	Nanopores: A journey towards DNA sequencing. Physics of Life Reviews, 2012, 9, 125-158.	2.8	512
7	Integrated nanopore sensing platform with sub-microsecond temporal resolution. Nature Methods, 2012, 9, 487-492.	19.0	418
8	DNA Translocation Governed by Interactions with Solid-State Nanopores. Biophysical Journal, 2008, 95, 4716-4725.	0.5	415
9	Rapid Fabrication of Uniformly Sized Nanopores and Nanopore Arrays for Parallel DNA Analysis. Advanced Materials, 2006, 18, 3149-3153.	21.0	360
10	Chemically Modified Solid-State Nanopores. Nano Letters, 2007, 7, 1580-1585.	9.1	341
11	Solid-state nanopore sensors. Nature Reviews Materials, 2020, 5, 931-951.	48.7	335
12	Assembling 2D MXenes into Highly Stable Pseudocapacitive Electrodes with High Power and Energy Densities. Advanced Materials, 2019, 31, e1806931.	21.0	238
13	Nanopore-Based Measurements of Protein Size, Fluctuations, and Conformational Changes. ACS Nano, 2017, 11, 5706-5716.	14.6	219
14	High-Bandwidth Protein Analysis Using Solid-State Nanopores. Biophysical Journal, 2014, 106, 696-704.	0.5	209
15	The emerging landscape of single-molecule protein sequencing technologies. Nature Methods, 2021, 18, 604-617.	19.0	198
16	Slow DNA Transport through Nanopores in Hafnium Oxide Membranes. ACS Nano, 2013, 7, 10121-10128.	14.6	181
17	Nanopore Based Sequence Specific Detection of Duplex DNA for Genomic Profiling. Nano Letters, 2010, 10, 738-742.	9.1	176
18	Discrimination of Methylcytosine from Hydroxymethylcytosine in DNA Molecules. Journal of the American Chemical Society, 2011, 133, 486-492.	13.7	156

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19	Single-Molecule Sensing Using Nanopores in Two-Dimensional Transition Metal Carbide (MXene) Membranes. ACS Nano, 2019, 13, 3042-3053.	14.6	140
20	DNA Profiling Using Solid-State Nanopores: Detection of DNA-Binding Molecules. Nano Letters, 2009, 9, 3498-3502.	9.1	121
21	Plasmonic Nanopores for Single-Molecule Detection and Manipulation: Toward Sequencing Applications. Nano Letters, 2019, 19, 7553-7562.	9.1	118
22	Length-independent DNA packing into nanopore zero-mode waveguides for low-input DNA sequencing. Nature Nanotechnology, 2017, 12, 1169-1175.	31.5	103
23	Coordination-Based Gold Nanoparticle Layers. Journal of the American Chemical Society, 2005, 127, 9207-9215.	13.7	100
24	Recent trends in nanopores for biotechnology. Current Opinion in Biotechnology, 2013, 24, 699-704.	6.6	97
25	Challenges in DNA motion control and sequence readout using nanopore devices. Nanotechnology, 2015, 26, 074004.	2.6	97
26	Electromechanical Unzipping of Individual DNA Molecules Using Synthetic Sub-2 nm Pores. Nano Letters, 2008, 8, 3418-3422.	9.1	96
27	High permeability sub-nanometre sieve composite MoS2 membranes. Nature Communications, 2020, 11, 2747.	12.8	93
28	Smooth DNA Transport through a Narrowed Pore Geometry. Biophysical Journal, 2014, 107, 2381-2393.	0.5	88
29	Nanocomposite Gold-Silk Nanofibers. Nano Letters, 2012, 12, 5403-5406.	9.1	86
30	Differential Enzyme Flexibility Probed Using Solid-State Nanopores. ACS Nano, 2018, 12, 4494-4502.	14.6	83
31	Label-Free Optical Detection of Biomolecular Translocation through Nanopore Arrays. ACS Nano, 2014, 8, 10774-10781.	14.6	79
32	Direct and Scalable Deposition of Atomically Thin Low-Noise MoS₂ Membranes on Apertures. ACS Nano, 2015, 9, 7352-7359.	14.6	79
33	Branched Coordination Multilayers on Gold. Journal of the American Chemical Society, 2005, 127, 17877-17887.	13.7	72
34	Nanopore Analysis of Individual RNA/Antibiotic Complexes. ACS Nano, 2011, 5, 9345-9353.	14.6	69
35	Photothermally Assisted Thinning of Silicon Nitride Membranes for Ultrathin Asymmetric Nanopores. ACS Nano, 2018, 12, 12472-12481.	14.6	63
36	A rapid approach to reproducible, atomically flat gold films on mica. Surface Science, 2004, 573, L383-L389.	1.9	62

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37	Widely-Applicable Gold Substrate for the Study of Ultrathin Overlayers. Journal of the American Chemical Society, 2004, 126, 5569-5576.	13.7	60
38	Nanopore-Based Conformational Analysis of a Viral RNA Drug Target. ACS Nano, 2014, 8, 6425-6430.	14.6	60
39	2D titanium and vanadium carbide MXene heterostructures for electrochemical energy storage. Energy Storage Materials, 2021, 41, 554-562.	18.0	57
40	Divergent Growth of Coordination Dendrimers on Surfaces. Journal of the American Chemical Society, 2006, 128, 8341-8349.	13.7	55
41	Detection of miRNAs with a nanopore single-molecule counter. Expert Review of Molecular Diagnostics, 2012, 12, 573-584.	3.1	54
42	Picomolar Fingerprinting of Nucleic Acid Nanoparticles Using Solid-State Nanopores. ACS Nano, 2017, 11, 9701-9710.	14.6	54
43	Reversible Positioning of Single Molecules inside Zero-Mode Waveguides. Nano Letters, 2014, 14, 6023-6029.	9.1	49
44	Wafer-Scale Lateral Self-Assembly of Mosaic Ti₃C₂T_{<i>x</i>} MXene Monolayer Films. ACS Nano, 2021, 15, 625-636.	14.6	48
45	Peptide-Decorated Tunable-Fluorescence Graphene Quantum Dots. ACS Applied Materials & Interfaces, 2017, 9, 9378-9387.	8.0	46
46	Strong Electroosmotic Coupling Dominates Ion Conductance of 1.5 nm Diameter Carbon Nanotube Porins. ACS Nano, 2019, 13, 12851-12859.	14.6	46
47	Fast, Label-Free Force Spectroscopy of Histoneâ€“DNA Interactions in Individual Nucleosomes Using Nanopores. Journal of the American Chemical Society, 2013, 135, 15350-15352.	13.7	42
48	Electrophoretic Deformation of Individual Transfer RNA Molecules Reveals Their Identity. Nano Letters, 2016, 16, 138-144.	9.1	40
49	Thermostable virus portal proteins as reprogrammable adapters for solid-state nanopore sensors. Nature Communications, 2018, 9, 4652.	12.8	39
50	Label-Free Single-Molecule Thermoscopy Using a Laser-Heated Nanopore. Nano Letters, 2017, 17, 7067-7074.	9.1	37
51	Driven translocation of a semi-flexible polymer through a nanopore. Scientific Reports, 2017, 7, 7423.	3.3	36
52	Regioselective and Stereospecific Azidation of 1,2- and 1,3-Diols by Azidotrimethylsilane via a Mitsunobu Reaction. Journal of Organic Chemistry, 1999, 64, 6049-6055.	3.2	34
53	Nanopores Suggest a Negligible Influence of CpG Methylation on Nucleosome Packaging and Stability. Nano Letters, 2015, 15, 783-790.	9.1	32
54	Abnormal Ionic-Current Rectification Caused by Reversed Electroosmotic Flow under Viscosity Gradients across Thin Nanopores. Analytical Chemistry, 2019, 91, 996-1004.	6.5	32

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55	Graphene Symmetry Amplified by Designed Peptide Self-Assembly. Biophysical Journal, 2016, 110, 2507-2516.	0.5	31
56	Programmed Synthesis of Freestanding Graphene Nanomembrane Arrays. Small, 2015, 11, 597-603.	10.0	30
57	Electrically Controlled Nanoparticle Synthesis inside Nanopores. Nano Letters, 2013, 13, 423-429.	9.1	29
58	Electrical unfolding of cytochrome <i>c</i> during translocation through a nanopore constriction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	29
59	Simultaneous Electro-Optical Tracking for Nanoparticle Recognition and Counting. Nano Letters, 2015, 15, 5696-5701.	9.1	28
60	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
61	Assembly of Coordination Nanostructures via Ligand Derivatization of Oxide Surfaces. Langmuir, 2006, 22, 2130-2135.	3.5	25
62	The potential and challenges of nanopore sequencing. , 2009, , 261-268.		23
63	Porphyrin-Assisted Docking of a Thermophage Portal Protein into Lipid Bilayers: Nanopore Engineering and Characterization. ACS Nano, 2017, 11, 11931-11945.	14.6	23
64	Hydroxymethyluracil modifications enhance the flexibility and hydrophilicity of double-stranded DNA. Nucleic Acids Research, 2016, 44, 2085-2092.	14.5	22
65	One-Pot Species Release and Nanopore Detection in a Voltage-Stable Lipid Bilayer Platform. Nano Letters, 2019, 19, 9145-9153.	9.1	22
66	Porous Zero-Mode Waveguides for Picogram-Level DNA Capture. Nano Letters, 2019, 19, 921-929.	9.1	22
67	Studies of RNA Sequence and Structure Using Nanopores. Progress in Molecular Biology and Translational Science, 2016, 139, 73-99.	1.7	19
68	Rosette Nanotube Porins as Ion Selective Transporters and Single-Molecule Sensors. Journal of the American Chemical Society, 2020, 142, 1680-1685.	13.7	19
69	Response to Comment on â€œEnhanced water permeability and tunable ion selectivity in subnanometer carbon nanotube porinsâ€• Science, 2018, 359, .	12.6	18
70	Direct Analysis of Gene Synthesis Reactions Using Solid-State Nanopores. ACS Nano, 2015, 9, 12417-12424.	14.6	17
71	How Nanopore Translocation Experiments Can Measure RNA Unfolding. Biophysical Journal, 2020, 118, 1612-1620.	0.5	13
72	Stable polymer bilayers for protein channel recordings at high guanidinium chloride concentrations. Biophysical Journal, 2021, 120, 1537-1541.	0.5	13

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73	Reversible Binding of Gold Nanoparticles to Polymeric Solid Supports. Chemistry of Materials, 2006, 18, 1247-1260.	6.7	12
74	Graphene Nanopore Support System for Simultaneous High-Resolution AFM Imaging and Conductance Measurements. ACS Applied Materials & Interfaces, 2014, 6, 5290-5296.	8.0	12
75	Femtosecond photonic viral inactivation probed using solid-state nanopores. Nano Futures, 2018, 2, 045005.	2.2	12
76	Improved blocking properties of short-chain alkanethiol monolayers self-assembled on gold. Israel Journal of Chemistry, 2005, 45, 337-344.	2.3	11
77	A new type of artificial water channels. Nature Nanotechnology, 2020, 15, 9-10.	31.5	11
78	Osmium-Based Pyrimidine Contrast Tags for Enhanced Nanopore-Based DNA Base Discrimination. PLoS ONE, 2015, 10, e0142155.	2.5	9
79	Ionically Active MXene Nanopore Actuators. Small, 2022, 18, e2105857.	10.0	9
80	Direct Observation of Single-Protein Transition State Passage by Nanopore Ionic Current Jumps. Journal of Physical Chemistry Letters, 2022, 13, 5918-5924.	4.6	9
81	2D MXenes: Assembling 2D MXenes into Highly Stable Pseudocapacitive Electrodes with High Power and Energy Densities (Adv. Mater. 8/2019). Advanced Materials, 2019, 31, 1970057.	21.0	8
82	Back and forth with nanopore peptide sequencing. Nature Biotechnology, 2022, 40, 172-173.	17.5	8
83	Rapid Identification of DNA Fragments through Direct Sequencing with Electroâ€Optical Zeroâ€Mode Waveguides. Advanced Materials, 2022, 34, e2108479.	21.0	8
84	Discrimination of RNA fiber structures using solid-state nanopores. Nanoscale, 2022, 14, 6866-6875.	5.6	8
85	Control of subunit stoichiometry in single-chain MspA nanopores. Biophysical Journal, 2022, 121, 742-754.	0.5	7
86	Nanoporeâ€Based Analysis of Chemically Modified DNA and Nucleic Acid Drug Targets. Israel Journal of Chemistry, 2013, 53, 431-441.	2.3	6
87	Highly-Stable Bio-Inspired Peptide/MoS2 Membranes for Efficient Water Desalination. Biophysical Journal, 2019, 116, 294a.	0.5	6
88	Single-Molecule Studies of Nucleic Acid Interactions Using Nanopores. , 2009, , 265-291.		6
89	Rectification Properties of Low Aspect Ratio TEM Drilled Nanopores. Biophysical Journal, 2015, 108, 172a.	0.5	4
90	Smooth DNA Transport through a Narrowed Pore Geometry. Biophysical Journal, 2015, 108, 331a.	0.5	3

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91	Ions Exclusion by the Bio-Inspired WS2 Lamellar Membrane Under Different Driving Forces. Biophysical Journal, 2020, 118, 476a.	0.5	3
92	MoS₂ Nanosheets with Narrowest Excitonic Line Widths Grown by Flow-Less Direct Heating of Bulk Powders: Implications for Sensing and Detection. ACS Applied Nano Materials, 2021, 4, 2583-2593.	5.0	3
93	DNA-Binding Properties of Peptide-Functionalized Graphene Quantum Dots. Biophysical Journal, 2015, 108, 393a.	0.5	2
94	Research Highlights: Localized profiling of multiple neurotransmitter concentrations. Nanomedicine, 2012, 7, 1479-1481.	3.3	1
95	Nanopores: Past, present and future. Physics of Life Reviews, 2012, 9, 174-176.	2.8	1
96	High-Bandwidth Solid-State Nanopore Sensors. Biophysical Journal, 2012, 102, 428a.	0.5	1
97	Detection of Single Biopolymers at High Current Bandwidth with Hafnium Oxide Nanopores. Biophysical Journal, 2014, 106, 413a-414a.	0.5	1
98	Nanopore Analysis of Individual RNA/Antibiotic Complexes. Biophysical Journal, 2012, 102, 429a.	0.5	0
99	Fast, Label-Free Force Spectroscopy of Histone-DNA Interactions in Individual Nucleosomes using Nanopores. Biophysical Journal, 2014, 106, 213a.	0.5	0
100	Controlling the Mechanism of DNA transport through Synthetic Nanopores. Biophysical Journal, 2014, 106, 213a.	0.5	0
101	Molecular Recognition of tRNA Species using Solid-State Nanopores. Biophysical Journal, 2015, 108, 330a.	0.5	0
102	Nanopore-Enhanced Positioning of Molecules in Zero-Mode Waveguides. Biophysical Journal, 2015, 108, 330a.	0.5	0
103	Label-Free Optical Detection of Biomolecular Translocation through Nanopore Arrays. Biophysical Journal, 2015, 108, 331a.	0.5	0
104	Capture and Translocation of Nucleic Acids into Sub-5 nm Solid-State Nanopores. , 2011, , 227-254.		0