Hagan Bayley

List of Publications by Year
in descending order

310 papers	31,395 citations	2975 93 h-index	4991 167 g-index
344 all docs	344 docs citations	344 times ranked	16839 citing authors

#	Article	IF	Citations
1	Structure of Staphylococcal Î±-Hemolysin, a Heptameric Transmembrane Pore. Science, 1996, 274, 1859-1865.	12.6	2,237
2	The potential and challenges of nanopore sequencing. Nature Biotechnology, 2008, 26, 1146-1153.	17.5	2,201
3	Continuous base identification for single-molecule nanopore DNA sequencing. Nature Nanotechnology, 2009, 4, 265-270.	31.5	1,507
4	Stochastic sensors inspired by biology. Nature, 2001, 413, 226-230.	27.8	1,046
5	Sequence-specific detection of individual DNA strands using engineered nanopores. Nature Biotechnology, 2001, 19, 636-639.	17.5	689
6	Stochastic sensing of organic analytes by a pore-forming protein containing a molecular adapter. Nature, 1999, 398, 686-690.	27.8	679
7	A Tissue-Like Printed Material. Science, 2013, 340, 48-52.	12.6	516
8	Resistive-Pulse SensingFrom Microbes to Molecules. Chemical Reviews, 2000, 100, 2575-2594.	47.7	491
9	Intracellular trehalose improves the survival of cryopreserved mammalian cells. Nature Biotechnology, 2000, 18, 163-167.	17.5	475
10	[8] Photoaffinity labeling. Methods in Enzymology, 1977, 46, 69-114.	1.0	463
11	Droplet interface bilayers. Molecular BioSystems, 2008, 4, 1191.	2.9	411
12	Single-nucleotide discrimination in immobilized DNA oligonucleotides with a biological nanopore. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7702-7707.	7.1	411
13	Functional Bionetworks from Nanoliter Water Droplets. Journal of the American Chemical Society, 2007, 129, 8650-8655.	13.7	346
14	Detecting protein analytes that modulate transmembrane movement of a polymer chain within a single protein pore. Nature Biotechnology, 2000, 18, 1091-1095.	17.5	337
15	Toward Single Molecule DNA Sequencing:Â Direct Identification of Ribonucleoside and Deoxyribonucleoside 5â€˜-Monophosphates by Using an Engineered Protein Nanopore Equipped with a Molecular Adapter. Journal of the American Chemical Society, 2006, 128, 1705-1710.	13.7	298
16	Simultaneous stochastic sensing of divalent metal ions. Nature Biotechnology, 2000, 18, 1005-1007.	17.5	290
17	Staphylococcal alpha-toxin, streptolysin-O, and Escherichia coli hemolysin: prototypes of pore-forming bacterial cytolysins. Archives of Microbiology, 1996, 165, 73-79.	2.2	287
18	Protein Detection by Nanopores Equipped with Aptamers. Journal of the American Chemical Society, 2012, 134, 2781-2787.	13.7	284

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19	Designed protein pores as components for biosensors. Chemistry and Biology, 1997, 4, 497-505.	6.0	280
20	Multistep protein unfolding during nanopore translocation. Nature Nanotechnology, 2013, 8, 288-295.	31.5	275
21	Molecular cloning and primary structure of myelin-associated glycoprotein.. Proceedings of the National Academy of Sciences of the United States of America, 1987, 84, 600-604.	7.1	265
22	Hybrid pore formation by directed insertion of Î±-haemolysin into solid-state nanopores. Nature Nanotechnology, 2010, 5, 874-877.	31.5	261
23	Interactions of Peptides with a Protein Pore. Biophysical Journal, 2005, 89, 1030-1045.	0.5	248
24	Subunit stoichiometry of staphylococcal alpha-hemolysin in crystals and on membranes: a heptameric transmembrane pore.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 12828-12831.	7.1	245
25	Enhanced translocation of single DNA molecules through Î±-hemolysin nanopores by manipulation of internal charge. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19720-19725.	7.1	241
26	Single-molecule site-specific detection of protein phosphorylation with a nanopore. Nature Biotechnology, 2014, 32, 179-181.	17.5	229
27	Droplet networks with incorporated protein diodes show collective properties. Nature Nanotechnology, 2009, 4, 437-440.	31.5	210
28	Reduction of aryl azides by thiols: Implications for the use of photoaffinity reagents. Biochemical and Biophysical Research Communications, 1978, 80, 568-572.	2.1	207
29	Nanopore Sequencing: From Imagination to Reality. Clinical Chemistry, 2015, 61, 25-31.	3.2	200
30	Asymmetric Droplet Interface Bilayers. Journal of the American Chemical Society, 2008, 130, 5878-5879.	13.7	195
31	Propane-1,3-dithiol: A selective reagent for the efficient reduction of alkyl and aryl azides to amines. Tetrahedron Letters, 1978, 19, 3633-3634.	1.4	194
32	Kinetics of duplex formation for individual DNA strands within a single protein nanopore. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 12996-13001.	7.1	192
33	Secondary structure and assembly mechanism of an oligomeric channel protein. Biochemistry, 1985, 24, 1915-1920.	2.5	185
34	A molecular mechanism for long-term sensitization in Aplysia. Nature, 1987, 329, 62-65.	27.8	185
35	Formation of droplet networks that function in aqueous environments. Nature Nanotechnology, 2011, 6, 803-808.	31.5	185
36	An Engineered ClyA Nanopore Detects Folded Target Proteins by Selective External Association and Pore Entry. Nano Letters, 2012, 12, 4895-4900.	9.1	183

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37	Functional engineered channels and pores (Review). Molecular Membrane Biology, 2004, 21, 209-220.	2.0	182
38	Recognizing a Single Base in an Individual DNA Strand: A Step Toward DNA Sequencing in Nanopores. Angewandte Chemie - International Edition, 2005, 44, 1401-1404.	13.8	181
39	Light-activated communication in synthetic tissues. Science Advances, 2016, 2, e1600056.	10.3	173
40	Purification and characterization of recombinant spider silk expressed in Escherichia coli. Applied Microbiology and Biotechnology, 1998, 49, 31-38.	3.6	167
41	Site of attachment of retinal in bacteriorhodopsin.. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 2225-2229.	7.1	166
42	Beneficial Effect of Intracellular Trehalose on the Membrane Integrity of Dried Mammalian Cells. Cryobiology, 2001, 43, 168-181.	0.7	166
43	Identification of epigenetic DNA modifications with a protein nanopore. Chemical Communications, 2010, 46, 8195.	4.1	161
44	Outer membrane protein G: Engineering a quiet pore for biosensing. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6272-6277.	7.1	160
45	The role of lipids in mechanosensation. Nature Structural and Molecular Biology, 2015, 22, 991-998.	8.2	160
46	Sequencing single molecules of DNA. Current Opinion in Chemical Biology, 2006, 10, 628-637.	6.1	155
47	High-Resolution Patterned Cellular Constructs by Droplet-Based 3D Printing. Scientific Reports, 2017, 7, 7004.	3.3	154
48	Multi-responsive hydrogel structures from patterned droplet networks. Nature Chemistry, 2020, 12, 363-371.	13.6	148
49	Key Residues for Membrane Binding, Oligomerization, and Pore Forming Activity of Staphylococcal Î±-Hemolysin Identified by Cysteine Scanning Mutagenesis and Targeted Chemical Modification. Journal of Biological Chemistry, 1995, 270, 23065-23071.	3.4	145
50	Stochastic Detection of Enantiomers. Journal of the American Chemical Society, 2006, 128, 10684-10685.	13.7	143
51	Capture of a Single Molecule in a Nanocavity. Science, 2001, 291, 636-640.	12.6	141
52	Elimination of a bacterial poreâ€forming toxin by sequential endocytosis and exocytosis. FEBS Letters, 2009, 583, 337-344.	2.8	141
53	Screening Blockers Against a Potassium Channel with a Droplet Interface Bilayer Array. Journal of the American Chemical Society, 2008, 130, 15543-15548.	13.7	139
54	Stochastic Sensing of Nanomolar Inositol 1,4,5-Trisphosphate with an Engineered Pore. Chemistry and Biology, 2002, 9, 829-838.	6.0	138

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55	Cyclic Peptides as Molecular Adapters for a Pore-Forming Protein. Journal of the American Chemical Society, 2000, 122, 11757-11766.	13.7	134
56	A Storable Encapsulated Bilayer Chip Containing a Single Protein Nanopore. Journal of the American Chemical Society, 2007, 129, 4701-4705.	13.7	132
57	High-throughput optical sensing of nucleic acids in a nanopore array. Nature Nanotechnology, 2015, 10, 986-991.	31.5	132
58	The RII subunit of camp-dependent protein kinase binds to a common amino-terminal domain in microtubule-associated proteins 2A, 2B, and 2C. Neuron, 1989, 3, 639-645.	8.1	131
59	Reversal of charge selectivity in transmembrane protein pores by using noncovalent molecular adapters. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 3959-3964.	7.1	129
60	Catalyzing the Translocation of Polypeptides through Attractive Interactions. Journal of the American Chemical Society, 2007, 129, 14034-14041.	13.7	129
61	Photogenerated reagents for membrane labeling. 1. Phenylnitrene formed within the lipid bilayer. Biochemistry, 1978, 17, 2414-2419.	2.5	127
62	An intermediate in the assembly of a pore-forming protein trapped with a genetically-engineered switch. Chemistry and Biology, 1995, 2, 99-105.	6.0	123
63	Electroosmotic enhancement of the binding of a neutral molecule to a transmembrane pore. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15498-15503.	7.1	123
64	Subunit composition of a bicomponent toxin: Staphylococcal leukocidin forms an octameric transmembrane pore. Protein Science, 2002, 11, 894-902.	7.6	122
65	Stochastic Sensing of TNT with a Genetically Engineered Pore. ChemBioChem, 2005, 6, 1875-1881.	2.6	121
66	Photoisomerization of an Individual Azobenzene Molecule in Water: An Onâ˘'Off Switch Triggered by Light at a Fixed Wavelength. Journal of the American Chemical Society, 2006, 128, 12404-12405.	13.7	120
67	Temperature-Responsive Protein Pores. Journal of the American Chemical Society, 2006, 128, 15332-15340.	13.7	118
68	Simultaneous Measurement of Ionic Current and Fluorescence from Single Protein Pores. Journal of the American Chemical Society, 2009, 131, 1652-1653.	13.7	118
69	Controlled Translocation of Individual DNA Molecules through Protein Nanopores with Engineered Molecular Brakes. Nano Letters, 2011, 11, 746-750.	9.1	116
70	Photogenerated reagents for membrane labeling. 2. Phenylcarbene and adamantylidene formed within the lipid bilayer. Biochemistry, 1978, 17, 2420-2423.	2.5	115
71	Delipidation of bacteriorhodopsin and reconstitution with exogenous phospholipid.. Proceedings of the National Academy of Sciences of the United States of America, 1980, 77, 323-327.	7.1	115
72	Partitioning of Individual Flexible Polymers into a Nanoscopic Protein Pore. Biophysical Journal, 2003, 85, 897-910.	0.5	112

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73	Protein Nanopores with Covalently Attached Molecular Adapters. Journal of the American Chemical Society, 2007, 129, 16142-16148.	13.7	112
74	Membrane Protein Stoichiometry Determined from the Step-Wise Photobleaching of Dye-Labelled Subunits. ChemBioChem, 2007, 8, 994-999.	2.6	111
75	Transmembrane Î²-barrel of staphylococcal Î±-toxin forms in sensitive but not in resistantâ€‰cells. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 11607-11611.	7.1	110
76	Kinetics of a Reversible Covalent-Bond-Forming Reaction Observed at the Single-Molecule Level. Angewandte Chemie - International Edition, 2002, 41, 3707-3709.	13.8	109
77	Intrinsically Disordered Protein Threads Through the Bacterial Outer-Membrane Porin OmpF. Science, 2013, 340, 1570-1574.	12.6	109
78	Molecular bases of cyclodextrin adapter interactions with engineered protein nanopores. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8165-8170.	7.1	108
79	Stochastic Detection of Monovalent and Bivalent Proteinâ€“Ligand Interactions. Angewandte Chemie - International Edition, 2004, 43, 842-846.	13.8	105
80	Single-Molecule Detection of Nitrogen Mustards by Covalent Reaction within a Protein Nanopore. Journal of the American Chemical Society, 2008, 130, 6813-6819.	13.7	103
81	Analysis of Single Nucleic Acid Molecules with Protein Nanopores. Methods in Enzymology, 2010, 475, 591-623.	1.0	103
82	Nanopore-Based Identification of Individual Nucleotides for Direct RNA Sequencing. Nano Letters, 2013, 13, 6144-6150.	9.1	103
83	Combinatorial RNA splicing alters the surface charge on the NMDA receptor. FEBS Letters, 1992, 305, 27-30.	2.8	102
84	Interaction of the Noncovalent Molecular Adapter, Î²-Cyclodextrin, with the Staphylococcal Î±-Hemolysin Pore. Biophysical Journal, 2000, 79, 1967-1975.	0.5	102
85	Biochemical and Biophysical Characterization of OmpG:Â A Monomeric Porinâ€. Biochemistry, 2000, 39, 11845-11854.	2.5	101
86	Prolonged Residence Time of a Noncovalent Molecular Adapter, Î²-Cyclodextrin, within the Lumen of Mutant Î±-Hemolysin Pores. Journal of General Physiology, 2001, 118, 481-494.	1.9	101
87	A Protein Pore with a Single Polymer Chain Tethered within the Lumen. Journal of the American Chemical Society, 2000, 122, 2411-2416.	13.7	100
88	Multiple Baseâ€Recognition Sites in a Biological Nanopore: Two Heads are Better than One. Angewandte Chemie - International Edition, 2010, 49, 556-559.	13.8	100
89	Primary structure of a molluscan egg-specific NADase, a second-messenger enzyme.. Molecular Biology of the Cell, 1991, 2, 211-218.	6.5	99
90	Single-Molecule Covalent Chemistry with Spatially Separated Reactants. Angewandte Chemie - International Edition, 2003, 42, 3766-3771.	13.8	99

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91	Protein components for nanodevices. Current Opinion in Chemical Biology, 2005, 9, 576-584.	6.1	99
92	Electrical Behavior of Droplet Interface Bilayer Networks:â€‰ Experimental Analysis and Modeling. Journal of the American Chemical Society, 2007, 129, 11854-11864.	13.7	98
93	Altered Antibiotic Transport in OmpC Mutants Isolated from a Series of Clinical Strains of Multi-Drug Resistant E. coli. PLoS ONE, 2011, 6, e25825.	2.5	98
94	A photogenerated pore-forming protein. Chemistry and Biology, 1995, 2, 391-400.	6.0	97
95	A monodisperse transmembrane Î±-helical peptide barrel. Nature Chemistry, 2017, 9, 411-419.	13.6	97
96	Engineered transmembrane pores. Current Opinion in Chemical Biology, 2016, 34, 117-126.	6.1	95
97	Single Protein Pores Containing Molecular Adapters at High Temperatures. Angewandte Chemie - International Edition, 2005, 44, 1495-1499.	13.8	93
98	Reversible permeabilization of plasma membranes with an engineered switchable pore. Nature Biotechnology, 1997, 15, 278-282.	17.5	92
99	A functional protein pore with a â€œretroâ€• transmembrane domain. Protein Science, 1999, 8, 1257-1267.	7.6	92
100	Photogenerated reagents for membranes: selective labeling of intrinsic membrane proteins in the human erythrocyte membrane. Biochemistry, 1980, 19, 3883-3892.	2.5	91
101	Nucleobase Recognition in ssDNA at the Central Constriction of the Î±-Hemolysin Pore. Nano Letters, 2010, 10, 3633-3637.	9.1	91
102	Genetically Engineered Metal Ion Binding Sites on the Outside of a Channel's Transmembrane Î²-Barrel. Biophysical Journal, 1999, 76, 837-845.	0.5	89
103	Probing Distance and Electrical Potential within a Protein Pore with Tethered DNA. Biophysical Journal, 2002, 83, 3202-3210.	0.5	84
104	Designed membrane channels and pores. Current Opinion in Biotechnology, 1999, 10, 94-103.	6.6	83
105	Continuous Stochastic Detection of Amino Acid Enantiomers with a Protein Nanopore. Angewandte Chemie - International Edition, 2012, 51, 9606-9609.	13.8	82
106	Location of a Constriction in the Lumen of a Transmembrane Pore by Targeted Covalent Attachment of Polymer Molecules. Journal of General Physiology, 2001, 117, 239-252.	1.9	79
107	Single DNA Rotaxanes of a Transmembrane Pore Protein. Angewandte Chemie - International Edition, 2004, 43, 3063-3067.	13.8	78
108	Folding of a Monomeric Porin, OmpG, in Detergent Solutionâ€. Biochemistry, 2003, 42, 9453-9465.	2.5	76

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109	Single-Molecule Observation of the Catalytic Subunit of cAMP-Dependent Protein Kinase Binding to an Inhibitor Peptide. Chemistry and Biology, 2005, 12, 109-120.	6.0	76
110	Rapid Assembly of a Multimeric Membrane Protein Pore. Biophysical Journal, 2011, 101, 2679-2683.	0.5	75
111	A pore-forming protein with a metal-actuated switch. Protein Engineering, Design and Selection, 1994, 7, 655-662.	2.1	74
112	The leukocidin pore: Evidence for an octamer with four LukF subunits and four LukS subunits alternating around a central axis. Protein Science, 2005, 14, 2550-2561.	7.6	74
113	Homomeric assemblies of NMDAR1 splice variants are sensitive to ethanol. Neuroscience Letters, 1993, 152, 13-16.	2.1	73
114	Self-assembled Î±-hemolysin pores in an S-layer-supported lipid bilayer. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1370, 280-288.	2.6	72
115	S-layer Ultrafiltration Membranes:Â A New Support for Stabilizing Functionalized Lipid Membranes. Langmuir, 2001, 17, 499-503.	3.5	72
116	Ion Channels and Lipid Bilayer Membranes Under High Potentials Using Microfabricated Apertures. Biomedical Microdevices, 2002, 4, 231-236.	2.8	71
117	A primary hydrogenâ€“deuterium isotope effect observed at the single-molecule level. Nature Chemistry, 2010, 2, 921-928.	13.6	70
118	Singleâ€Molecule Determination of the Isomers of <scp>d</scp>â€Glucose and <scp>d</scp>â€Fructose that Bind to Boronic Acids. Angewandte Chemie - International Edition, 2018, 57, 2841-2845.	13.8	70
119	Catalytic Subunit of Protein Kinase A Caged at the Activating Phosphothreonine. Journal of the American Chemical Society, 2002, 124, 8220-8229.	13.7	69
120	Directional control of a processive molecular hopper. Science, 2018, 361, 908-912.	12.6	69
121	Tumor protease-activated, pore-forming toxins from a combinatorial library. Nature Biotechnology, 1996, 14, 852-856.	17.5	67
122	The Heptameric Prepore of a Staphylococcal Î±-Hemolysin Mutant in Lipid Bilayers Imaged by Atomic Force Microscopy. Biochemistry, 1997, 36, 9518-9522.	2.5	67
123	Multi-compartment encapsulation of communicating droplets and droplet networks in hydrogel as a model for artificial cells. Scientific Reports, 2017, 7, 45167.	3.3	66
124	Individual RNA Base Recognition in Immobilized Oligonucleotides Using a Protein Nanopore. Nano Letters, 2012, 12, 5637-5643.	9.1	65
125	Functional truncated membrane pores. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2425-2430.	7.1	65
126	DNA scaffolds support stable and uniform peptide nanopores. Nature Nanotechnology, 2018, 13, 739-745.	31.5	65

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127	Real-Time Stochastic Detection of Multiple Neurotransmitters with a Protein Nanopore. ACS Nano, 2012, 6, 5304-5308.	14.6	64
128	Controlled packing and single-droplet resolution of 3D-printed functional synthetic tissues. Nature Communications, 2020, 11, 2105.	12.8	64
129	A regulatory subunit of the cAMP-dependent protein kinase down-regulated in aplysia sensory neurons during long-term sensitization. Neuron, 1992, 8, 387-397.	8.1	63
130	Properties of Bacillus cereus hemolysin II: A heptameric transmembrane pore. Protein Science, 2009, 11, 1813-1824.	7.6	62
131	Protein co-translocational unfolding depends on the direction of pulling. Nature Communications, 2014, 5, 4841.	12.8	62
132	A carbene-yielding amino acid for incorporation into peptide photoaffinity reagents. Analytical Biochemistry, 1985, 144, 132-141.	2.4	60
133	The Staphylococcal Leukocidin Bicomponent Toxin Forms Large Ionic Channels,. Biochemistry, 2001, 40, 8514-8522.	2.5	60
134	Piercing insights. Nature, 2009, 459, 651-652.	27.8	60
135	Singleâ€Molecule Detection of 5â€Hydroxymethylcytosine in DNA through Chemical Modification and Nanopore Analysis. Angewandte Chemie - International Edition, 2013, 52, 4350-4355.	13.8	60
136	Constructing ion channels from water-soluble Î±-helical barrels. Nature Chemistry, 2021, 13, 643-650.	13.6	59
137	Measurement of trehalose loading of mammalian cells porated with a metal-actuated switchable pore. Biotechnology and Bioengineering, 2003, 82, 525-532.	3.3	58
138	Holes with an edge. Nature, 2010, 467, 164-165.	27.8	58
139	Light-patterning of synthetic tissues with single droplet resolution. Scientific Reports, 2017, 7, 9315.	3.3	58
140	Selective labelling of the hydrophobic segments of intrinsic membrane proteins with a lipophilic photogenerated carbene. Nature, 1979, 280, 841-843.	27.8	57
141	Caged Catalytic Subunit of cAMP-Dependent Protein Kinase. Journal of the American Chemical Society, 1998, 120, 7661-7662.	13.7	57
142	Sequence of abductin, the molluscan â€˜rubberâ€™ protein. Current Biology, 1997, 7, R677-R678.	3.9	56
143	Kinetics of a Three-Step Reaction Observed at the Single-Molecule Level. Angewandte Chemie - International Edition, 2003, 42, 1926-1929.	13.8	56
144	Direct Introduction of Single Protein Channels and Pores into Lipid Bilayers. Journal of the American Chemical Society, 2005, 127, 6502-6503.	13.7	56

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145	Functional aqueous droplet networks. Molecular BioSystems, 2017, 13, 1658-1691.	2.9	56
146	A new class of hybrid secretion system is employed in Pseudomonas amyloid biogenesis. Nature Communications, 2017, 8, 263.	12.8	56
147	Surface labeling of key residues during assembly of the transmembrane pore formed by staphylococcal Î±-hemolysin. FEBS Letters, 1994, 356, 66-71.	2.8	55
148	Semisynthetic protein nanoreactor for single-molecule chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13768-13773.	7.1	55
149	Caged cysteine and thiophosphoryl peptides. FEBS Letters, 1997, 405, 81-85.	2.8	54
150	Surface-accessible Residues in the Monomeric and Assembled Forms of a Bacterial Surface Layer Protein. Journal of Biological Chemistry, 2000, 275, 37876-37886.	3.4	53
151	Stepwise Growth of a Single Polymer Chain. Journal of the American Chemical Society, 2005, 127, 10462-10463.	13.7	53
152	A Genetically Encoded Pore for the Stochastic Detection of a Protein Kinase. ChemBioChem, 2006, 7, 1923-1927.	2.6	52
153	Single-molecule analysis of chirality in a multicomponent reaction network. Nature Chemistry, 2014, 6, 603-607.	13.6	52
154	Construction and Manipulation of Functional Three-Dimensional Droplet Networks. ACS Nano, 2014, 8, 771-779.	14.6	52
155	A Pore-forming protein with a protease-activated trigger. Protein Engineering, Design and Selection, 1994, 7, 91-97.	2.1	51
156	Direct transfer of membrane proteins from bacteria to planar bilayers for rapid screening by single-channel recording. Nature Chemical Biology, 2006, 2, 314-318.	8.0	51
157	Continuous observation of the stochastic motion of an individual small-molecule walker. Nature Nanotechnology, 2015, 10, 76-83.	31.5	50
158	Two catalytic subunits of cAMP-dependent protein kinase generated by alternative RNA splicing are expressed in Aplysia neurons. Neuron, 1988, 1, 853-864.	8.1	49
159	Stochastic detection of Pim protein kinases reveals electrostatically enhanced association of a peptide substrate. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E4417-26.	7.1	49
160	Translocating Kilobase RNA through the Staphylococcal Î±-Hemolysin Nanopore. Nano Letters, 2013, 13, 2500-2505.	9.1	49
161	Droplet printing reveals the importance of micron-scale structure for bacterial ecology. Nature Communications, 2021, 12, 857.	12.8	48
162	Single-Molecule Covalent Chemistry in a Protein Nanoreactor. Springer Series in Biophysics, 2008, , 251-277.	0.4	48

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163	Toxin structure: Part of a hole?. Current Biology, 1997, 7, R763-R767.	3.9	46
164	Role of the Amino Latch of Staphylococcal Î±-Hemolysin in Pore Formation. Journal of Biological Chemistry, 2006, 281, 2195-2204.	3.4	46
165	An engineered dimeric protein pore that spans adjacent lipid bilayers. Nature Communications, 2013, 4, 1725.	12.8	44
166	Single-Molecule Protein Phosphorylation and Dephosphorylation by Nanopore Enzymology. ACS Nano, 2019, 13, 633-641.	14.6	44
167	DNA Strands from Denatured Duplexes are Translocated through Engineered Protein Nanopores at Alkaline pH. Nano Letters, 2009, 9, 3831-3836.	9.1	43
168	Urea Facilitates the Translocation of Single-Stranded DNA and RNA Through the Î±-Hemolysin Nanopore. Biophysical Journal, 2010, 98, 1856-1863.	0.5	43
169	Designing a Hydrophobic Barrier within Biomimetic Nanopores. ACS Nano, 2014, 8, 11268-11279.	14.6	43
170	A droplet microfluidic system for sequential generation of lipid bilayers and transmembrane electrical recordings. Lab on A Chip, 2015, 15, 541-548.	6.0	43
171	Triggeps and switches in a self-assembling pore-forming portein. Journal of Cellular Biochemistry, 1994, 56, 177-182.	2.6	42
172	Caged Thiophosphotyrosine Peptides. Angewandte Chemie - International Edition, 2001, 40, 3049-3051.	13.8	42
173	Tuning the Cavity of Cyclodextrins: Altered Sugar Adaptors in Protein Pores. Journal of the American Chemical Society, 2011, 133, 1987-2001.	13.7	42
174	Single-molecule interrogation of a bacterial sugar transporter allows the discovery of an extracellular inhibitor. Nature Chemistry, 2013, 5, 651-659.	13.6	42
175	Building Doors into Cells. Scientific American, 1997, 277, 62-67.	1.0	41
176	Carriers versus Adapters in Stochastic Sensing. ChemPhysChem, 2005, 6, 889-892.	2.1	41
177	Singleâ€Molecule Kinetics of Twoâ€Step Divalent Cation Chelation. Angewandte Chemie - International Edition, 2010, 49, 5085-5090.	13.8	41
178	Single-Molecule Kinetics of Growth and Degradation of Cell-Penetrating Poly(disulfide)s. Journal of the American Chemical Society, 2019, 141, 12444-12447.	13.7	41
179	VI. Applications of S-layers. FEMS Microbiology Reviews, 1997, 20, 151-175.	8.6	40
180	Nucleobase Recognition by Truncated Î±-Hemolysin Pores. ACS Nano, 2015, 9, 7895-7903.	14.6	40

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181	Lipidâ€Bilayerâ€Supported 3D Printing of Human Cerebral Cortex Cells Reveals Developmental Interactions. Advanced Materials, 2020, 32, e2002183.	21.0	40
182	Lipid binding attenuates channel closure of the outer membrane protein OmpF. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6691-6696.	7.1	39
183	Photoaffinity Labeling and Related Techniques. , 1984, , 433-490.		38
184	Interactions between Residues in Staphylococcal Î±-Hemolysin Revealed by Reversion Mutagenesis. Journal of Biological Chemistry, 1995, 270, 23072-23076.	3.4	37
185	Recognizing a Single Base in an Individual DNA Strand: A Step Toward DNA Sequencing in Nanopores. Angewandte Chemie, 2005, 117, 1425-1428.	2.0	37
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