Ion-Current Rectification in Nanopores and Nanotubes

Advanced Functional Materials 16, 735-746 DOI: 10.1002/adfm.200500471

Citation Report

#	Article	IF	CITATIONS
1	Cation Vacancies and Divalent Mu Ions in NaCl Crystals at Low Temperature. Japanese Journal of Applied Physics, 1967, 6, 1021-1022.	0.8	1
2	Maskless Ion Beam Assisted Etching of Si Using Chlorine Gas. Japanese Journal of Applied Physics, 1985, 24, L169-L172.	0.8	12
3	Current Rectification with Poly-I-Lysine-Coated Quartz Nanopipettes. Nano Letters, 2006, 6, 2486-2492.	4.5	188
4	Conical nanopore membranes: solvent shaping of nanopores. Nanotechnology, 2006, 17, 3951-3956.	1.3	81
5	Calcium-Induced Voltage Gating in Single Conical Nanopores. Nano Letters, 2006, 6, 1729-1734.	4.5	140
6	Polymer-Modified Opal Nanopores. Langmuir, 2006, 22, 10523-10527.	1.6	56
7	Tuning ion current rectification in asymmetric nanopores by signal mixing. Europhysics Letters, 2007, 78, 28002.	0.7	17
8	Polymer capture by electro-osmotic flow of oppositely charged nanopores. Journal of Chemical Physics, 2007, 126, 164903.	1.2	132
9	Asymmetric properties of ion transport in a charged conical nanopore. Physical Review E, 2007, 75, 051201.	0.8	111
10	Solid-state nanopore technologies for nanopore-based DNA analysis. Nanomedicine, 2007, 2, 875-897.	1.7	186
11	Tuning Ion Current Rectification in Synthetic Nanotubes. , 2007, , 349-365.		8
12	Noise analysis and reduction in solid-state nanopores. Nanotechnology, 2007, 18, 305505.	1.3	251
13	How the geometric configuration and the surface charge distribution influence the ionic current rectification in nanopores. Journal Physics D: Applied Physics, 2007, 40, 7077-7084.	1.3	65
14	Poisson-Nernst-Planck model of ion current rectification through a nanofluidic diode. Physical Review E, 2007, 76, 041202.	0.8	187
15	Asymmetric Selectivity of Synthetic Conical Nanopores Probed by Reversal Potential Measurements. Journal of Physical Chemistry C, 2007, 111, 12265-12273.	1.5	106
16	pâ~'n Semiconductor Membrane for Electrically Tunable Ion Current Rectification and Filtering. Nano Letters, 2007, 7, 1717-1722.	4.5	88
17	Rectified Ion Transport through Concentration Gradient in Homogeneous Silica Nanochannels. Nano Letters, 2007, 7, 3165-3171.	4.5	205
18	A Biological Porin Engineered into a Molecular, Nanofluidic Diode. Nano Letters, 2007, 7, 2886-2891.	4.5	78

# 19	ARTICLE Detecting SNPs Using a Synthetic Nanopore. Nano Letters, 2007, 7, 1680-1685.	IF 4.5	CITATIONS 133
20	Fabrication of nanopores in polymer foils with surfactant-controlled longitudinal profiles. Nanotechnology, 2007, 18, 305302.	1.3	114
21	Bench-Top Method for Fabricating Glass-Sealed Nanodisk Electrodes, Glass Nanopore Electrodes, and Glass Nanopore Membranes of Controlled Size. Analytical Chemistry, 2007, 79, 4778-4787.	3.2	250
22	Ionic conductance of nanopores in microscale analysis systems: Where microfluidics meets nanofluidics. Journal of Separation Science, 2007, 30, 1398-1419.	1.3	147
23	Nanopore sensor for fast label-free detection of short double-stranded DNAs. Biosensors and Bioelectronics, 2007, 22, 2926-2931.	5.3	69
24	Electrically tunable solid-state silicon nanopore ion filter. Nanoscale Research Letters, 2007, 2, 61-68.	3.1	30
25	Investigation of nanopore evolution in ion track-etched polycarbonate membranes. Nuclear Instruments & Methods in Physics Research B, 2007, 265, 553-557.	0.6	60
26	Controllable etching of heavy ion tracks with organic solvent addition in etchant. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 3095-3099.	0.6	31
27	Electrohydrodynamics around single ion-permselective glass beads fixed in a microfluidic device. Microfluidics and Nanofluidics, 2008, 4, 471-487.	1.0	25
28	Conducting Polypyrrole Conical Nanocontainers: Formation Mechanism and Voltage Switchable Property. Macromolecular Rapid Communications, 2008, 29, 1335-1340.	2.0	25
29	Ion flux through membrane channels—An enhanced algorithm for the Poissonâ€Nernstâ€Planck model. Journal of Computational Chemistry, 2008, 29, 1876-1888.	1.5	16
30	Nanofluidic Bipolar Transistors. Advanced Materials, 2008, 20, 293-297.	11.1	250
31	Fabrication of ordered Ni nanocones using a porous anodic alumina template. Electrochemistry Communications, 2008, 10, 681-685.	2.3	42
32	Synthetic Nanopores as a Test Case for Ion Channel Theories: The Anomalous Mole Fraction Effect without Single Filing. Biophysical Journal, 2008, 95, 609-619.	0.2	72
33	Nanofluidic Ionic Diodes. Comparison of Analytical and Numerical Solutions. ACS Nano, 2008, 2, 1589-1602.	7.3	221
34	Rectification in synthetic conical nanopores: A one-dimensional Poisson-Nernst-Planck model. Physical Review E, 2008, 77, 031131.	0.8	126
35	Gating of Single Synthetic Nanopores by Proton-Driven DNA Molecular Motors. Journal of the American Chemical Society, 2008, 130, 8345-8350.	6.6	295
36	Fabrication and functionalization of single asymmetric nanochannels for electrostatic/hydrophobic association of protein molecules. Nanotechnology, 2008, 19, 485711.	1.3	51

#	Article	IF	CITATIONS
37	lonic current rectification at a nanofluidic/microfluidic interface with an asymmetric microfluidic system. Lab on A Chip, 2008, 8, 1729.	3.1	23
38	Noise and Bandwidth of Current Recordings from Submicrometer Pores and Nanopores. ACS Nano, 2008, 2, 857-872.	7.3	134
39	Self-Supporting Nanopore Membranes with Controlled Pore Size and Shape. ACS Nano, 2008, 2, 993-999.	7.3	39
40	Multilayered Semiconductor Membranes for Nanopore Ionic Conductance Modulation. ACS Nano, 2008, 2, 2349-2355.	7.3	42
41	Pore structure and function of synthetic nanopores with fixed charges: tip shape and rectification properties. Nanotechnology, 2008, 19, 315707.	1.3	191
42	A new drug-sensing paradigm based on ion-current rectification in a conically shaped nanopore. Nanomedicine, 2008, 3, 13-20.	1.7	51
43	Resistive-pulse detection of short dsDNAs using a chemically functionalized conical nanopore sensor. Nanomedicine, 2008, 3, 787-796.	1.7	37
44	Stretching and unzipping nucleic acid hairpins using a synthetic nanopore. Nucleic Acids Research, 2008, 36, 1532-1541.	6.5	65
45	Electric energy generation in single track-etched nanopores. Applied Physics Letters, 2008, 93, .	1.5	111
46	Nanopore Concentration Polarization. , 2008, , .		Ο
48	Rapid Energy Transfer and Improved Performance of Organic Light-Emitting Diodes Using Composite Film Based on π-Conjugated Polymers. Japanese Journal of Applied Physics, 2009, 48, 101502.	0.8	1
49	Modeling transport through synthetic nanopores. IEEE Nanotechnology Magazine, 2009, 3, 20-28.	0.9	43
50	Biosensing with Nanopores. , 0, , 457-490.		0
51	Effect of etching conditions on pore shape in etched ion-track polycarbonate membranes. Radiation Measurements, 2009, 44, 779-782.	0.7	22
52	Glucose determination using a re-usable enzyme-modified ion track membrane sensor. Biosensors and Bioelectronics, 2009, 24, 2702-2706.	5.3	53
53	Directional ion selectivity in a biological nanopore with bipolar structure. Journal of Membrane Science, 2009, 331, 137-142.	4.1	38
54	Diode-like ion-track asymmetric nanopores: Some alternative methods of fabrication. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 1023-1027.	0.6	38
55	Pore opening detection for controlled dissolution of barrier oxide layer and fabrication of nanoporous alumina with through-hole morphology. Journal of Membrane Science, 2009, 327, 11-17.	4.1	74

#	Article	IF	CITATIONS
56	Effect of linear surface-charge non-uniformities on the electrokinetic ionic-current rectification in conical nanopores. Journal of Colloid and Interface Science, 2009, 329, 376-383.	5.0	46
57	Nanofluidic diode generated by pH gradient inside track-etched conical nanopore. Radiation Measurements, 2009, 44, 1119-1122.	0.7	40
58	Control of ionic transport through gated single conical nanopores. Analytical and Bioanalytical Chemistry, 2009, 394, 413-419.	1.9	153
59	Ionic Current Rectification, Breakdown, and Switching in Heterogeneous Oxide Nanofluidic Devices. ACS Nano, 2009, 3, 575-584.	7.3	178
60	Mesoporous Films and Polymer Brushes Helping Each Other To Modulate Ionic Transport in Nanoconfined Environments. An Interesting Example of Synergism in Functional Hybrid Assemblies. Journal of the American Chemical Society, 2009, 131, 10866-10868.	6.6	135
61	Investigation of Zone Migration in a Current Rectifying Nanofluidic/Microfluidic Analyte Concentrator. Analytical Chemistry, 2009, 81, 732-738.	3.2	23
62	A Biomimetic Potassium Responsive Nanochannel: G-Quadruplex DNA Conformational Switching in a Synthetic Nanopore. Journal of the American Chemical Society, 2009, 131, 7800-7805.	6.6	316
63	Pressure-induced water flow through model nanopores. Physical Chemistry Chemical Physics, 2009, 11, 528-533.	1.3	40
64	Single Conical Nanopores Displaying pH-Tunable Rectifying Characteristics. Manipulating Ionic Transport With Zwitterionic Polymer Brushes. Journal of the American Chemical Society, 2009, 131, 2070-2071.	6.6	341
65	Biosensing with Nanofluidic Diodes. Journal of the American Chemical Society, 2009, 131, 8211-8220.	6.6	360
66	lonic Current Rectification through Silica Nanopores. Journal of Physical Chemistry C, 2009, 113, 1850-1862.	1.5	86
67	Tuning Transport Properties of Nanofluidic Devices with Local Charge Inversion. Journal of the American Chemical Society, 2009, 131, 5194-5202.	6.6	246
68	Synthetic Proton-Gated Ion Channels via Single Solid-State Nanochannels Modified with Responsive Polymer Brushes. Nano Letters, 2009, 9, 2788-2793.	4.5	299
69	Handbook of Single-Molecule Biophysics. , 2009, , .		70
70	Effect of Conical Nanopore Diameter on Ion Current Rectification. Journal of Physical Chemistry B, 2009, 113, 15960-15966.	1.2	161
71	Nanopore DNA sensors based on dendrimer-modified nanopipettes. Chemical Communications, 2009, , 4877.	2.2	105
72	Molecular control of ionic conduction in polymer nanopores. Faraday Discussions, 2009, 143, 47.	1.6	45
73	Nanopore analytics: sensing of single molecules. Chemical Society Reviews, 2009, 38, 2360.	18.7	1,035

		CITATION R	EPORT	
#	Article		IF	CITATIONS
74	Poly(l-alanine)-modified nanoporous colloidal films. Soft Matter, 2009, 5, 457-462.		1.2	23
75	Particle-Based Simulation of Conductance of Solid-State Nanopores and Ion Channels.	, 2009, , .		1
76	Squeezing Ionic Liquids through Nanopores. Nano Letters, 2009, 9, 2125-2128.		4.5	78
77	Rectification of the Ionic Current through Carbon Nanotubes by Electrostatic Assembly Polyelectrolytes. Nano Letters, 2009, 9, 3853-3859.	v of	4.5	24
78	Localized Joule heating produced by ion current focusing through micron-size holes. Ap Letters, 2010, 96, .	plied Physics	1.5	9
79	Controlled fabrication of ion track nanowires and channels. Nuclear Instruments & Met Physics Research B, 2010, 268, 676-686.	thods in	0.6	29
80	Current Rectification in Temperatureâ€Responsive Single Nanopores. ChemPhysChem,	2010, 11, 859-864.	1.0	174
81	Energy Harvesting with Singleâ€Ionâ€Selective Nanopores: A Concentrationâ€Gradien Power Source. Advanced Functional Materials, 2010, 20, 1339-1344.	tâ€Driven Nanofluidic	7.8	419
82	Integrating Ionic Gate and Rectifier Within One Solidâ€State Nanopore via Modificatio Dualâ€Responsive Copolymer Brushes. Advanced Functional Materials, 2010, 20, 3561		7.8	108
84	Biosensing with Functionalized Single Asymmetric Polymer Nanochannels. Macromole Bioscience, 2010, 10, 28-32.	cular	2.1	85
85	Covalent modification of single glass conical nanopore channel with 6-carboxymethyl- pH modulated ion current rectification. Electrochemistry Communications, 2010, 12, 1		2.3	42
86	Asymmetric properties of ion current 1/f noise in conically shaped nanopores. Chemica 375, 529-535.	l Physics, 2010,	0.9	21
87	Fabrication of Stable Single Nanochannels with Controllable Ionic Rectification. Small, 361-365.	2010, 6,	5.2	97
88	Ion urrent Diode with Aqueous Gel/SiO ₂ Nanofilm Interfaces. Small, 20	010, 6, 1393-1397.	5.2	32
89	Electroosmotic Flow Rectification in Pyramidal-Pore Mica Membranes. ECS Meeting Ab	stracts, 2010, , .	0.0	0
90	Nanofluidic diode generated by pH gradient inside track-etched conical nanopore. , 20	10, , .		0
91	Theory of capture rate in polymer translocation. Journal of Chemical Physics, 2010, 132	2, 195101.	1.2	134
92	Comparison of bipolar and unipolar ionic diodes. Nanotechnology, 2010, 21, 265301.		1.3	68

#	Article	IF	CITATIONS
93	Electrical characterization of DNA-functionalized solid state nanopores for bio-sensing. Journal of Physics Condensed Matter, 2010, 22, 454104.	0.7	8
94	Fabrication and electrical characterization of a pore–cavity–pore device. Journal of Physics Condensed Matter, 2010, 22, 454115.	0.7	31
95	Current oscillations generated by precipitate formation in the mixing zone between two solutions inside a nanopore. Journal of Physics Condensed Matter, 2010, 22, 454127.	0.7	8
96	Ion Rejection Properties of Nanopores with Bipolar Fixed Charge Distributions. Journal of Physical Chemistry B, 2010, 114, 10143-10150.	1.2	46
97	Molecular Dynamics Simulation of Salt Rejection in Model Surface-Modified Nanopores. Journal of Physical Chemistry Letters, 2010, 1, 528-535.	2.1	93
98	Limiting and overlimiting conductance in field-effect gated nanopores. Applied Physics Letters, 2010, 96, .	1.5	17
99	Polyelectrolyte junction field effect transistor based on microfluidic chip. Applied Physics Letters, 2010, 96, .	1.5	32
100	Effects of Electroosmotic Flow on Ionic Current Rectification in Conical Nanopores. Journal of Physical Chemistry C, 2010, 114, 3883-3890.	1.5	164
101	Layer-by-Layer Assembly of Polyelectrolytes into Ionic Current Rectifying Solid-State Nanopores: Insights from Theory and Experiment. Journal of the American Chemical Society, 2010, 132, 8338-8348.	6.6	265
102	DNA-functionalized solid state nanopore for biosensing. Nanotechnology, 2010, 21, 145102.	1.3	42
103	Sequence-Specific Recognition of DNA Oligomer Using Peptide Nucleic Acid (PNA)-Modified Synthetic Ion Channels: PNA/DNA Hybridization in Nanoconfined Environment. ACS Nano, 2010, 4, 7267-7274.	7.3	161
104	Responsive Polymers End-Tethered in Solid-State Nanochannels: When Nanoconfinement Really Matters. Journal of the American Chemical Society, 2010, 132, 12404-12411.	6.6	171
105	Scan-Rate-Dependent Current Rectification of Cone-Shaped Silica Nanopores in Quartz Nanopipettes. Journal of the American Chemical Society, 2010, 132, 17088-17091.	6.6	72
106	A Biomimetic Asymmetric Responsive Single Nanochannel. Journal of the American Chemical Society, 2010, 132, 11736-11742.	6.6	227
107	Photo-Pens: A Simple and Versatile Tool for Maskless Photolithography. Langmuir, 2010, 26, 17726-17732.	1.6	10
108	Computational Microscopy of the Role of Protonable Surface Residues in Nanoprecipitation Oscillations. ACS Nano, 2010, 4, 4463-4474.	7.3	13
109	Impedance Characteristics of Amine Modified Single Glass Nanopores. Analytical Chemistry, 2010, 82, 4520-4528.	3.2	48
110	DNA capture into a nanopore: Interplay of diffusion and electrohydrodynamics. Journal of Chemical Physics, 2010, 133, 165102.	1.2	127

#	Article	IF	CITATIONS
111	Nanofluidic diodes. Chemical Society Reviews, 2010, 39, 923-938.	18.7	297
112	Reconstructing solid state nanopore shape from electrical measurements. Applied Physics Letters, 2010, 97, .	1.5	27
113	Ion Transport in Nanofluidic Funnels. ACS Nano, 2010, 4, 3897-3902.	7.3	113
114	Nanofluidic technology for biomolecule applications: a critical review. Lab on A Chip, 2010, 10, 957.	3.1	214
115	Proton-regulated rectified ionic transport through solid-state conical nanopores modified with phosphate-bearing polymer brushes. Chemical Communications, 2010, 46, 1908-1910.	2.2	111
116	Electroosmotic Flow Can Generate Ion Current Rectification in Nano- and Micropores. ACS Nano, 2010, 4, 477-487.	7.3	133
117	A biomimetic zinc activated ion channel. Chemical Communications, 2010, 46, 1682.	2.2	138
118	ATP-modulated ionic transport through synthetic nanochannels. Chemical Communications, 2010, 46, 6690.	2.2	40
119	Engineered voltage-responsive nanopores. Chemical Society Reviews, 2010, 39, 1115-1132.	18.7	436
120	Electroosmotic Flow Rectification in Pyramidal-Pore Mica Membranes. Journal of the American Chemical Society, 2010, 132, 2118-2119.	6.6	64
121	Deciphering ionic current signatures of DNA transport through a nanopore. Nanoscale, 2010, 2, 468.	2.8	156
122	Nanofluidic Pulser Based on Polymer Conical Nanopores. Journal of Physical Chemistry C, 2011, 115, 22736-22741.	1.5	7
123	lon current rectification and rectification inversion in conical nanopores: a perm-selective view. Physical Chemistry Chemical Physics, 2011, 13, 5430.	1.3	74
124	Biomimetic smart nanopores and nanochannels. Chemical Society Reviews, 2011, 40, 2385.	18.7	632
125	A method to tune the ionic current rectification of track-etched nanopores by using surfactant. Physical Chemistry Chemical Physics, 2011, 13, 576-581.	1.3	25
126	pH-Reversed ionic current rectification displayed by conically shaped nanochannel without any modification. Nanoscale, 2011, 3, 3767.	2.8	31
127	The Role of Nanopore Geometry for the Rectification of Ionic Currents. Journal of Physical Chemistry C, 2011, 115, 7866-7873.	1.5	98
128	Rectification of Nanopores at Surfaces. Journal of the American Chemical Society, 2011, 133, 10398-10401.	6.6	80

#	Article	IF	CITATIONS
129	Manipulation of Molecular Transport into Mesoporous Silica Thin Films by the Infiltration of Polyelectrolytes. Langmuir, 2011, 27, 4328-4333.	1.6	45
130	Hydrogen Peroxide Sensing with Horseradish Peroxidase-Modified Polymer Single Conical Nanochannels. Analytical Chemistry, 2011, 83, 1673-1680.	3.2	168
131	Pressure-Dependent Ion Current Rectification in Conical-Shaped Glass Nanopores. Journal of the American Chemical Society, 2011, 133, 13300-13303.	6.6	202
132	Pressure-Driven Nanoparticle Transport across Glass Membranes Containing a Conical-Shaped Nanopore. Journal of Physical Chemistry C, 2011, 115, 18445-18452.	1.5	90
133	Nanoparticle Transport in Conical-Shaped Nanopores. Analytical Chemistry, 2011, 83, 3840-3847.	3.2	209
134	Effect of nanopore geometry on ion current rectification. Nanotechnology, 2011, 22, 175302.	1.3	118
135	Metal Ion Affinity-based Biomolecular Recognition and Conjugation inside Synthetic Polymer Nanopores Modified with Iron–Terpyridine Complexes. Journal of the American Chemical Society, 2011, 133, 17307-17314.	6.6	120
136	Biomolecular conjugation inside synthetic polymer nanopores via glycoprotein–lectin interactions. Nanoscale, 2011, 3, 1894.	2.8	78
137	Polarization Effect of a Dielectric Membrane on the Ionic Current Rectification in a Conical Nanopore. Journal of Physical Chemistry C, 2011, 115, 24951-24959.	1.5	29
138	Effect of Nanochannel Diameter and Debye Length on Ion Current Rectification in a Fluidic Bipolar Diode. Journal of Physical Chemistry C, 2011, 115, 22917-22924.	1.5	23
139	Solid-State Nanopore Sensors for Nucleic Acid Analysis. , 2011, , 1-33.		8
140	How to Understand and Interpret Current Flow in Nanopore/Electrode Devices. ACS Nano, 2011, 5, 6714-6725.	7.3	30
141	Nanopores. , 2011, , .		32
142	Transport and Sensing in Nanofluidic Devices. Annual Review of Analytical Chemistry, 2011, 4, 321-341.	2.8	46
143	Characterization of Hepatitis B Virus Capsids by Resistive-Pulse Sensing. Journal of the American Chemical Society, 2011, 133, 1618-1621.	6.6	121
144	Biomimetic nanopores: learning from and about nature. Trends in Biotechnology, 2011, 29, 607-614.	4.9	162
145	Asymmetric track membranes: Relationship between nanopore geometry and ionic conductivity. Petroleum Chemistry, 2011, 51, 555-567.	0.4	23
146	Biomimetic ionic rectifier systems: Asymmetric modification of single nanochannels by ion sputtering technology. Journal of Electroanalytical Chemistry, 2011, 656, 231-236.	1.9	51

#	Article	IF	CITATIONS
147	Bio-inspired smart gating nanochannels based on polymer films. Science China Chemistry, 2011, 54, 1537-1546.	4.2	13
148	Smart Homopolymer Modification to Single Glass Conical Nanopore Channels: Dualâ€Stimuliâ€Actuated Highly Efficient Ion Gating. Advanced Functional Materials, 2011, 21, 2103-2107.	7.8	70
149	lonic current rectification in a conical nanofluidic field effect transistor. Sensors and Actuators B: Chemical, 2011, 157, 742-751.	4.0	44
150	Ag nanotubes and Ag/AgCl electrodes in nanoporous membranes. Nanotechnology, 2011, 22, 155301.	1.3	10
151	Tailoring of keV-Ion Beams by Image Charge when Transmitting through Rhombic and Rectangular Shaped Nanocapillaries. Physical Review Letters, 2012, 108, 193202.	2.9	32
152	Nanopore-Based Technology. Methods in Molecular Biology, 2012, , .	0.4	3
153	Signal-On Architecture for Electrochemical Aptasensors Based on Multiple Ion Channels. Analytical Chemistry, 2012, 84, 10554-10559.	3.2	14
154	Advances in electrokinetics and their applications in micro/nano fluidics. Microfluidics and Nanofluidics, 2012, 13, 179-203.	1.0	115
155	Concentration-Gradient-Dependent Ion Current Rectification in Charged Conical Nanopores. Langmuir, 2012, 28, 2194-2199.	1.6	127
156	Transmembrane Potential across Single Conical Nanopores and Resulting Memristive and Memcapacitive Ion Transport. Journal of the American Chemical Society, 2012, 134, 3651-3654.	6.6	70
157	Voltage-Gated Ion Transport through Semiconducting Conical Nanopores Formed by Metal Nanoparticle-Assisted Plasma Etching. Nano Letters, 2012, 12, 3437-3442.	4.5	55
158	Studies of Ionic Current Rectification Using Polyethyleneimines Coated Glass Nanopipettes. Analytical Chemistry, 2012, 84, 5565-5573.	3.2	75
159	Modeling Elastic Pore Sensors for Quantitative Single Particle Sizing. Journal of Physical Chemistry C, 2012, 116, 8554-8561.	1.5	39
160	Propagating Concentration Polarization and Ionic Current Rectification in a Nanochannel–Nanofunnel Device. Analytical Chemistry, 2012, 84, 267-274.	3.2	41
161	Selective discrimination of small hydrophobic biomolecules based on ion-current rectification in conically shaped nanochannel. Talanta, 2012, 89, 253-257.	2.9	16
162	Malachite Green Derivative–Functionalized Single Nanochannel: Lightâ€andâ€pH Dualâ€Driven Ionic Gating. Advanced Materials, 2012, 24, 6193-6198.	11.1	75
163	Scanning Ion Conductance Microscopy. Annual Review of Analytical Chemistry, 2012, 5, 207-228.	2.8	179
164	Asymmetric ion track nanopores for sensor technology. Reconstruction of pore profile from conductometric measurements. Nanotechnology, 2012, 23, 225503.	1.3	39

ARTICLE IF CITATIONS # Tunable Negative Differential Electrolyte Resistance in a Conical Nanopore in Glass. ACS Nano, 2012, 6, 165 7.3 41 6507-6514. Chaotic motion of ions in polymer gel electrolytes: First observations. Solid State Ionics, 2012, 225, 1.3 751-754. Analyzing Single DNA Molecules by Nanopore Translocation. Methods in Molecular Biology, 2012, 870, 167 0.4 5 135-145. Construction of biomimetic smart nanochannels with polymer membranes and application in energy conversion systems. Physical Chemistry Chemical Physics, 2012, 14, 4027. Heterogeneity of Multiple-Pore Membranes Investigated with Ion Conductance Microscopy. Analytical 169 3.2 34 Chemistry, 2012, 84, 3003-3009. Surface Charge Density Determination of Single Conical Nanopores Based on Normalized Ion Current Rectification. Langmuir, 2012, 28, 1588-1595. 1.6 Thermally controlled permeation of ionic molecules through synthetic nanopores functionalized 171 1.3 53 with amine-terminated polymer brushes. Nanotechnology, 2012, 23, 225502. DNA Origami Nanopores. Nano Letters, 2012, 12, 512-517. 4.5 267 Voltage-Driven Translocation of DNA through a High Throughput Conical Solid-State Nanopore. PLoS 173 1.1 45 ONE, 2012, 7, e46014. 174 3D Nanofluidic Channels Shaped by Electronâ€Beamâ€Induced Etching. Small, 2012, 8, 1521-1526. 5.2 Light and pH Cooperative Nanofluidic Diode Using a Spiropyranâ€Functionalized Single Nanochannel. 175 11.1 158 Advanced Materials, 2012, 24, 2424-2428. Bioinspired Ionâ€Transport Properties of Solidâ€State Single Nanochannels and Their Applications in 1.0 69 Sensing. ChemPhysChem, 2012, 13, 2455-2470. Field effect control of electrokinetic transport in micro/nanofluidics. Sensors and Actuators B: 177 4.0 43 Chemical, 2012, 161, 1150-1167. Modulating molecular and nanoparticle transport in flexible polydimethylsiloxane membranes. 178 4.1 Journal of Membrane Science, 2012, 401-402, 25-32. Saccharide/glycoprotein recognition inside synthetic ion channels modified with boronic acid. 179 4.0 38 Sensors and Actuators B: Chemical, 2012, 162, 216-222. Chaotic behavior of ion exchange phenomena in polymer gel electrolytes through irradiated polymeric membrane. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 1915-1918. Optical Gating of Photosensitive Synthetic Ion Channels. Advanced Functional Materials, 2012, 22, 181 7.8 65 390-396. Layer-by-layer removal of insulating few-layer mica flakes for asymmetric ultra-thin nanopore 5.8 fabrication. Nano Research, 2012, 5, 99-108.

#	Article	IF	CITATIONS
183	Nanofluidic Diode Based on Branched Alumina Nanochannels with Tunable Ionic Rectification. ACS Applied Materials & Interfaces, 2013, 5, 7931-7936.	4.0	52
184	Carbohydrate-Mediated Biomolecular Recognition and Gating of Synthetic Ion Channels. Journal of Physical Chemistry C, 2013, 117, 18234-18242.	1.5	59
185	lonic current devices—Recent progress in the merging of electronic, microfluidic, and biomimetic structures. Biomicrofluidics, 2013, 7, 31501.	1.2	35
186	From symmetric to asymmetric design of bio-inspired smart single nanochannels. Chemical Communications, 2013, 49, 10048.	2.2	83
187	Electro-Induced Dewetting and Concomitant Ionic Current Avalanche in Nanopores. Journal of Physical Chemistry Letters, 2013, 4, 3120-3126.	2.1	13
188	A Landau–Squire Nanojet. Nano Letters, 2013, 13, 5141-5146.	4.5	40
189	Double layer effects at nanosized electrodesâ€. Faraday Discussions, 2013, 164, 339.	1.6	4
190	Numerical study of ionic current rectification through non-uniformly charged micro/nanochannel systems. Journal of Applied Electrochemistry, 2013, 43, 1197-1206.	1.5	16
191	Mapping the Ion Current Distribution in Nanopore/Electrode Devices. ACS Nano, 2013, 7, 547-555.	7.3	13
192	Electrokinetics of non-Newtonian fluids: A review. Advances in Colloid and Interface Science, 2013, 201-202, 94-108.	7.0	131
193	A biomimetic mercury(ii)-gated single nanochannel. Chemical Communications, 2013, 49, 10679.	2.2	86
194	Elastomeric microvalves as tunable nanochannels for concentration polarization. Lab on A Chip, 2013, 13, 4810.	3.1	16
195	Al <inf>2</inf> O <inf>3</inf> /W hetero-structured nanopore membranes: From native to tunable nanofluidic diodes. , 2013, , .		1
196	Net currents obtained from zero-average potentials in single amphoteric nanopores. Electrochemistry Communications, 2013, 31, 137-140.	2.3	19
197	Label-free electrical quantification of amplified nucleic acids through nanofluidic diodes. Biosensors and Bioelectronics, 2013, 50, 78-83.	5.3	21
198	Photo-induced current amplification in l-histidine modified nanochannels based on a highly charged photoacid in solution. Chemical Communications, 2013, 49, 2284.	2.2	16
199	Asymmetric Ion Transport through Ion-Channel-Mimetic Solid-State Nanopores. Accounts of Chemical Research, 2013, 46, 2834-2846.	7.6	369
200	Ion Transport in a pH-Regulated Nanopore. Analytical Chemistry, 2013, 85, 7527-7534.	3.2	140

#	Article	IF	CITATIONS
201	Field effect modulated nanofluidic diode membrane based on Al2O3/W heterogeneous nanopore arrays. Applied Physics Letters, 2013, 102, 213108.	1.5	37
202	Quantification of Steady-State Ion Transport through Single Conical Nanopores and a Nonuniform Distribution of Surface Charges. Langmuir, 2013, 29, 8743-8752.	1.6	35
203	Tuning nanopore surface polarity and rectification properties through enzymatic hydrolysis inside nanoconfined geometries. Chemical Communications, 2013, 49, 8770.	2.2	19
204	Probing Porous Structure of Single Manganese Oxide Mesorods with Ionic Current. Journal of Physical Chemistry C, 2013, 117, 24836-24842.	1.5	7
205	Photocatalysis-Triggered Ion Rectification in Artificial Nanochannels Based on Chemically Modified Asymmetric TiO2 Nanotubes. Langmuir, 2013, 29, 4806-4812.	1.6	34
206	Sensitive Nanochannel Biosensor for T4 Polynucleotide Kinase Activity and Inhibition Detection. Analytical Chemistry, 2013, 85, 334-340.	3.2	92
207	Tailoring Hexagonally Packed Metal Hollow-Nanocones and Taper-Nanotubes by Template-Induced Preferential Electrodeposition. ACS Applied Materials & Interfaces, 2013, 5, 10376-10380.	4.0	19
208	Bio-inspired Asymmetric Design and Building of Biomimetic Smart Single Nanochannels. Springer Theses, 2013, , .	0.0	10
210	Conversion of Light to Electricity by Photoinduced Reversible pH Changes and Biomimetic Nanofluidic Channels. Advanced Functional Materials, 2013, 23, 2887-2893.	7.8	37
211	Coupled chemical reactions in dynamic nanometric confinement: Ag ₂ O membrane formation during ion track etching. Radiation Effects and Defects in Solids, 2013, 168, 675-695.	0.4	4
212	The effects of the electrical double layer on giant ionic currents through single-walled carbon nanotubes. Nanotechnology, 2013, 24, 125204.	1.3	6
213	Ionic Rectification through the Formation of Complexes or Precipitation in Carbon Nanotube Membranes. Chemistry Letters, 2013, 42, 1173-1175.	0.7	0
214	Fabrication of Al2O3 Nanopore Sensors for DNA Detection. , 2013, , .		0
215	Coupled chemical reactions in dynamic nanometric confinement: V. The influence of Li ⁺ and F ^{â^'} ions on etching of nuclear tracks in polymers. Radiation Effects and Defects in Solids, 2014, 169, 396-417.	0.4	6
216	Alumina Membrane with Hour-Glass Shaped Nanochannels: Tunable Ionic Current Rectification Device Modulated by Ions Gradient. Journal of Nanomaterials, 2014, 2014, 1-10.	1.5	12
217	Graphene-based ion rectifier using macroscale geometric asymmetry. APL Materials, 2014, 2, 092803.	2.2	10
218	A Fluoride-Driven Ionic Gate Based on a 4-Aminophenylboronic Acid-Functionalized Asymmetric Single Nanochannel. ACS Nano, 2014, 8, 12292-12299.	7.3	95
219	Artificial Ion Channels Regulating Lightâ€Induced Ionic Currents in Photoelectrical Conversion Systems. Advanced Materials, 2014, 26, 2329-2334.	11.1	46

#	Article	IF	CITATIONS
220	Fabrication of nanofluidic diodes with polymer nanopores modified by atomic layer deposition. Biomicrofluidics, 2014, 8, 052111.	1.2	15
221	Lightâ€Gating Titania/Alumina Heterogeneous Nanochannels with Regulatable Ion Rectification Characteristic. Advanced Functional Materials, 2014, 24, 424-431.	7.8	60
222	Feature scale modeling of pulsed plasma-enhanced chemical vapor deposition. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	4
223	Electro-osmotic flow through a nanopore. Journal of Fluid Mechanics, 2014, 749, 167-183.	1.4	42
224	Construction of biomimetic smart nanochannels for confined water. National Science Review, 2014, 1, 144-156.	4.6	58
225	Tunable Ionic Transport Control inside a Bioâ€Inspired Constructive Biâ€Channel Nanofluidic Device. Small, 2014, 10, 793-801.	5.2	37
226	The effect of surface charge regulation on conductivity in fluidic nanochannels. Journal of Colloid and Interface Science, 2014, 416, 105-111.	5.0	9
227	Nanoparticle-induced rectification in a single cylindrical nanopore: Net currents from zero time-average potentials. Applied Physics Letters, 2014, 104, 043703.	1.5	16
228	Radiation effects of swift heavy ions in polymers: Determination of nanoshapes from electro-conductivity. Nuclear Instruments & Methods in Physics Research B, 2014, 326, 158-162.	0.6	8
229	Electroosmotic Flow in Nanofluidic Channels. Analytical Chemistry, 2014, 86, 11174-11180.	3.2	77
230	Ion Transport in Subâ€10 nm Nanofluidic Channels: Synthesis, Measurement, and Modeling. Israel Journal of Chemistry, 2014, 54, 1509-1518.	1.0	3
231	A method of rectifying current at microscales. Journal of Applied Mechanics and Technical Physics, 2014, 55, 727-735.	0.1	2
232	Theoretical simulation of the ion current rectification (ICR) in nano-pores based on the Poisson–Nernst–Planck (PNP) model. Physical Chemistry Chemical Physics, 2014, 16, 23-32.	1.3	42
233	Amplification of Single Molecule Translocation Signal Using β-Strand Peptide Functionalized Nanopores. ACS Nano, 2014, 8, 6822-6832.	7.3	24
234	DNA-Modified Polymer Pores Allow pH- and Voltage-Gated Control of Channel Flux. Journal of the American Chemical Society, 2014, 136, 9902-9905.	6.6	160
235	Physical origin of dynamic ion transport features through single conical nanopores at different bias frequencies. Chemical Science, 2014, 5, 1827.	3.7	22
236	Biomimetic nanopore for sensitive and selective detection of Hg(<scp>ii</scp>) in conjunction with single-walled carbon nanotubes. Journal of Materials Chemistry B, 2014, 2, 6371-6377.	2.9	25
237	Effect of Surface Charge on the Resistive Pulse Waveshape during Particle Translocation through Glass Nanopores. Journal of Physical Chemistry C, 2014, 118, 2726-2734.	1.5	114

CITATION REPORT ARTICLE IF CITATIONS Small-Molecule Triggered Cascade Enzymatic Catalysis in Hour-Glass Shaped Nanochannel Reactor for 3.2 81 Glucose Monitoring. Analytical Chemistry, 2014, 86, 10546-10551. Fabrication of Single Cylindrical Au-Coated Nanopores with Non-Homogeneous Fixed Charge Distribution Exhibiting High Current Rectifications. ACS Applied Materials & amp; Interfaces, 2014, 6, 12486-12494. Wet-Chemical Enzymatic Preparation and Characterization of Ultrathin Gold-Decorated Single Glass 3.2 35 Nanopore. Analytical Chemistry, 2014, 86, 4815-4821. Calcein-Modified Multinanochannels on PET Films for Calcium-Responsive Nanogating. ACS Applied 4.0 Materials & amp; Interfaces, 2014, 6, 3794-3798. High-Performance Ionic Diode Membrane for Salinity Gradient Power Generation. Journal of the 6.6 462 American Chemical Society, 2014, 136, 12265-12272. Tuning Ion Transport and Selectivity by a Salt Gradient in a Charged Nanopore. Analytical Chemistry, 3.2 2014, 86, 2681-2686. Novel PMMA Polymer-Based Nanopores Capable of Detection and Discrimination Between Structurally 2.4 5 Different Biomolécules. IEEE Sensors Journal, 2014, 14, 3292-3309. Negative Differential Electrolyte Resistance in a Solid-State Nanopore Resulting from Electroosmotic 7.3 34 Flow Bistability. ACS Nano, 2014, 8, 3023-3030. Antigen Detection via the Rate of Ion Current Rectification Change of the Antibody-Modified Glass 1.6 17 Nanopore Membrane. Langmuir, 2014, 30, 11248-11256. Microfluidic Systems with Ion-Selective Membranes. Annual Review of Analytical Chemistry, 2014, 7, 2.8 317-335. Electrochemical mechanism of ion current rectification of polyelectrolyte gel diodes. Nature 5.829 Communications, 2014, 5, 4162. Ultrathin Suspended Nanopores with Surface Plasmon Resonance Fabricated by Combined Colloidal 28 Lithography and Film Transfer. ACS Applied Materials & amp; Interfaces, 2014, 6, 6322-6331. pH-regulated ionic conductance in a nanopore. Electrochemistry Communications, 2014, 43, 91-94. 2.3 27 Supramolecular Gating of Ion Transport in Nanochannels. Angewandte Chemie - International Edition, 7.2 2014, 53, 13073-13077. Ion current behaviors of mesoporous zeolite–polymer composite nanochannels prepared by 2.2 11 water-assisted self-assembly. Chemical Communications, 2014, 50, 3552. Tunable Streaming Current in a pH-Regulated Nanochannel by a Field Effect Transistor. Journal of 34 Physical Chemistry C, 2014, 118, 6090-6099. Rectification of Ion Current in Nanopores Depends on the Type of Monovalent Cations: Experiments

Modeling of Charge Transport in Ion Bipolar Junction Transistors. Langmuir, 2014, 30, 6999-7005. 1.6 18

and Modeling. Journal of Physical Chemistry C, 2014, 118, 9809-9819.

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242

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#	Article	IF	CITATIONS
257	Enhanced Ion Current Rectification in 2D Grapheneâ€Based Nanofluidic Devices. Advanced Science, 2015, 2, 1500062.	5.6	28
258	Electro-osmotic pumping and ion-concentration polarization based on conical nanopores. Physical Review E, 2015, 91, 062302.	0.8	17
259	Ion current rectification in funnel-shaped nanochannels: Hysteresis and inversion effects. Journal of Chemical Physics, 2015, 143, 224706.	1.2	24
260	Transmission of Hundred-keV Protons through Insulating Nanocapillaries: Charge-patch-assisted Specular Reflections. Scientific Reports, 2015, 5, 15169.	1.6	16
261	Fabrication of Biomimetic Polymer Nanocone Films with Condensate Microdrop Selfâ€Removal Function. Advanced Materials Interfaces, 2015, 2, 1500238.	1.9	33
263	Lightâ€Induced Ion Rectification in Zigzag Nanochannels. Chemistry - an Asian Journal, 2015, 10, 2733-2737.	1.7	24
265	A Bioinspired Switchable and Tunable Carbonateâ€Activated Nanofluidic Diode Based on a Single Nanochannel. Angewandte Chemie - International Edition, 2015, 54, 13664-13668.	7.2	85
266	Dual-response for Hg ²⁺ and Ag ⁺ ions based on biomimetic funnel-shaped alumina nanochannels. Journal of Materials Chemistry B, 2015, 3, 1699-1705.	2.9	37
267	Iontronics. Annual Review of Analytical Chemistry, 2015, 8, 441-462.	2.8	159
268	Mimicking how plants control CO2 influx: CO2 activation of ion current rectification in nanochannels. NPG Asia Materials, 2015, 7, e215-e215.	3.8	11
269	Synthetic Asymmetric‧haped Nanodevices with Symmetric pHâ€Gating Characteristics. Advanced Functional Materials, 2015, 25, 1102-1110.	7.8	83
270	Presence of electrolyte promotes wetting and hydrophobic gating in nanopores with residual surface charges. Analyst, The, 2015, 140, 4804-4812.	1.7	16
271	A simple electrochemical methodology for evaluation of the velocity of electroosmotic flow at the tip of polarized microcapillary. Electrochimica Acta, 2015, 156, 316-320.	2.6	5
272	Electroosmotic Flow Reversal Outside Glass Nanopores. Nano Letters, 2015, 15, 695-702.	4.5	49
273	Photoresistance Switching of Plasmonic Nanopores. Nano Letters, 2015, 15, 776-782.	4.5	38
274	Electrodeposition and Bipolar Effects in Metallized Nanopores and Their Use in the Detection of Insulin. Analytical Chemistry, 2015, 87, 2337-2344.	3.2	27
275	Bioconjugation-induced ionic current rectification in aptamer-modified single cylindrical nanopores. Chemical Communications, 2015, 51, 3454-3457.	2.2	78
276	Fabrication of hydrogel-coated single conical nanochannels exhibiting controllable ion rectification characteristics. Physical Chemistry Chemical Physics, 2015, 17, 6367-6373.	1.3	15

#	Article	IF	CITATIONS
277	Bioinspired Superâ€Wettability from Fundamental Research to Practical Applications. Angewandte Chemie - International Edition, 2015, 54, 3387-3399.	7.2	611
278	Pressure-dependent electrolytic conduction of track-etched single conical nanopore. Applied Surface Science, 2015, 353, 574-579.	3.1	2
279	Atomic Layer Deposition Modified Track-Etched Conical Nanochannels for Protein Sensing. Analytical Chemistry, 2015, 87, 8227-8233.	3.2	56
280	Influence of electroosmotic flow on the ionic current rectification in a pH-regulated, conical nanopore. Nanoscale, 2015, 7, 14023-14031.	2.8	54
281	Ion track symmetric and asymmetric nanopores in polyethylene terephthalate foils for versatile applications. Nuclear Instruments & Methods in Physics Research B, 2015, 365, 409-413.	0.6	13
282	Electroosmotic Flow Rectification in Membranes with Asymmetrically Shaped Pores: Effects of Current and Pore Density. Journal of Physical Chemistry C, 2015, 119, 16633-16638.	1.5	34
283	Decreasing the Limits of Detection and Analysis Time of Ion Current Rectification Biosensing Measurements via a Mechanically Applied Pressure Differential. Analytical Chemistry, 2015, 87, 6646-6653.	3.2	10
284	Nanopipette delivery: influence of surface charge. Analyst, The, 2015, 140, 4835-4842.	1.7	33
285	Active current gating in electrically biased conical nanopores. Nanotechnology, 2015, 26, 185502.	1.3	8
286	Electroosmotic flow rectification in conical nanopores. Nanotechnology, 2015, 26, 275202.	1.3	54
287	Cooperative Effect of pH-Dependent Ion Transport within Two Symmetric-Structured Nanochannels. ACS Applied Materials & Interfaces, 2015, 7, 7709-7716.	4.0	24
288	Bare conical nanopore embedded in polymer membrane for Cr(III) sensing. Talanta, 2015, 140, 219-225.	2.9	18
289	Transport mechanisms in nanopores and nanochannels: can we mimic nature?. Materials Today, 2015, 18, 131-142.	8.3	206
290	Formation of Nanotunnels Inside a Resist Film in Laser Interference Lithography. Langmuir, 2015, 31, 5464-5468.	1.6	9
291	Nanopore Current Oscillations: Nonlinear Dynamics on the Nanoscale. Journal of Physical Chemistry Letters, 2015, 6, 1800-1806.	2.1	16
292	Polydopamine Meets Solid-State Nanopores: A Bioinspired Integrative Surface Chemistry Approach To Tailor the Functional Properties of Nanofluidic Diodes. Journal of the American Chemical Society, 2015, 137, 6011-6017.	6.6	131
293	Conductive and Biphasic Pulses in Tunable Resistive Pulse Sensing. Journal of Physical Chemistry B, 2015, 119, 5328-5335.	1.2	25
294	DNAzyme tunable lead(<scp>ii</scp>) gating based on ion-track etched conical nanochannels. Chemical Communications, 2015, 51, 5979-5981.	2.2	50

#	Article	IF	CITATIONS
295	Kinetics of nanopore fabrication during controlled breakdown of dielectric membranes in solution. Nanotechnology, 2015, 26, 084004.	1.3	84
296	Effect of the Electric Double Layer on the Activation Energy of Ion Transport in Conical Nanopores. Journal of Physical Chemistry C, 2015, 119, 24299-24306.	1.5	43
297	Scaling Laws and Ionic Current Inversion in Polyelectrolyte-Grafted Nanochannels. Journal of Physical Chemistry B, 2015, 119, 12714-12726.	1.2	19
298	Ion transport and selectivity in biomimetic nanopores with pH-tunable zwitterionic polyelectrolyte brushes. Nanoscale, 2015, 7, 17020-17029.	2.8	74
299	Rectification of nanopores in aprotic solvents – transport properties of nanopores with surface dipoles. Nanoscale, 2015, 7, 19080-19091.	2.8	40
300	Engineered Asymmetric Heterogeneous Membrane: A Concentration-Gradient-Driven Energy Harvesting Device. Journal of the American Chemical Society, 2015, 137, 14765-14772.	6.6	299
301	Converting external potential fluctuations into nonzero time-average electric currents using a single nanopore. Applied Physics Letters, 2015, 106, .	1.5	9
302	Doping electrolyte by charged nanoparticles. Applied Physics Letters, 2015, 106, .	1.5	5
303	Variation in geometry and electrical conductance properties of asymmetric track-etched single nanopores: How uniform are they?. Nuclear Instruments & Methods in Physics Research B, 2015, 365, 646-650.	0.6	6
304	Host–guest supramolecular chemistry in solid-state nanopores: potassium-driven modulation of ionic transport in nanofluidic diodes. Nanoscale, 2015, 7, 15594-15598.	2.8	82
305	Synthesis, Characterization, and Applications of Nanoporous Materials for Sensing and Separation. , 2015, , 1-21.		1
306	Surface Enrichment in Au–Ag Alloy Nanowires and Investigation of the Dealloying Process. Journal of Physical Chemistry C, 2015, 119, 20949-20956.	1.5	30
307	Engineered Ionic Gates for Ion Conduction Based on Sodium and Potassium Activated Nanochannels. Journal of the American Chemical Society, 2015, 137, 11976-11983.	6.6	184
308	Polyelectrolyte brushes: theory, modelling, synthesis and applications. Soft Matter, 2015, 11, 8550-8583.	1.2	131
309	Ionic Transport through Chemically Functionalized Hydrogen Peroxide-Sensitive Asymmetric Nanopores. ACS Applied Materials & Interfaces, 2015, 7, 19541-19545.	4.0	47
310	Ionic conductivity of a single porous MnO2 mesorod at controlled oxidation states. Journal of Materials Chemistry A, 2015, 3, 12858-12863.	5.2	4
311	Asymmetric conduction in biological nanopores created by high-intensity, nanosecond pulsing: Inference on internal charge lining the membrane based on a model study. Journal of Applied Physics, 2015, 118, 094701.	1.1	8
312	DNA-Modified Polymer Pores Enable Ph- and Voltage-Gated Control of Channel Flux. Biophysical Journal, 2015, 108, 176a.	0.2	16

	CITATION RE	PORT	
#	Article	IF	CITATIONS
313	Modulating ion current rectification generating high energy output in a single glass conical nanopore channel by concentration gradient. Chinese Chemical Letters, 2015, 26, 43-46.	4.8	5
314	Computer modeling of ion current pulsations in track-containing foils. Journal of Computational Science, 2015, 6, 34-39.	1.5	3
315	Labelâ€Free Pyrophosphate Recognition with Functionalized Asymmetric Nanopores. Small, 2016, 12, 2014-2021.	5.2	49
316	Biomimetic Solid-State Nanochannels: From Fundamental Research to Practical Applications. Small, 2016, 12, 2810-2831.	5.2	150
317	Adenosineâ€Activated Nanochannels Inspired by Gâ€Proteinâ€Coupled Receptors. Small, 2016, 12, 1854-1858.	5.2	26
318	Observing single nanoparticle events at the orifice of a nanopipet. Chemical Science, 2016, 7, 6365-6368.	3.7	40
319	A Biomimetic Voltageâ€Gated Chloride Nanochannel. Advanced Materials, 2016, 28, 3181-3186.	11.1	77
320	Enhanced Stability and Controllability of an Ionic Diode Based on Funnelâ€Shaped Nanochannels with an Extended Critical Region. Advanced Materials, 2016, 28, 3345-3350.	11.1	109
321	3D nanopore shape control by current-stimulus dielectric breakdown. Applied Physics Letters, 2016, 109, .	1.5	35
322	The concept of entropic rectifier facing experiments. Scientific Reports, 2016, 6, 38966.	1.6	13
323	Influence of Biofluids Rheological Behavior on Electroosmotic Flow and Ionic Current Rectification in Conical Nanopores. Journal of Physical Chemistry C, 2016, 120, 28832-28843.	1.5	15
324	Geometrical control of ionic current rectification in a configurable nanofluidic diode. Biomicrofluidics, 2016, 10, 054102.	1.2	9
325	AC Electroosmotic Pumping in Nanofluidic Funnels. Analytical Chemistry, 2016, 88, 6390-6394.	3.2	26
326	Current Rectification for Transport of Room-Temperature Ionic Liquids through Conical Nanopores. Journal of Physical Chemistry C, 2016, 120, 4629-4637.	1.5	20
327	Direction Dependence of Resistive-Pulse Amplitude in Conically Shaped Mesopores. Analytical Chemistry, 2016, 88, 4917-4925.	3.2	42
328	pH-Dependent ionic-current-rectification in nanopipettes modified with glutaraldehyde cross-linked protein membranes. RSC Advances, 2016, 6, 86334-86339.	1.7	11
329	Polarization of Gold in Nanopores Leads to Ion Current Rectification. Journal of Physical Chemistry Letters, 2016, 7, 4152-4158.	2.1	38
330	Protein detection using tunable pores: resistive pulses and current rectification. Faraday Discussions, 2016, 193, 487-505.	1.6	25

#	Article	IF	CITATIONS
331	Probing driving forces in aerolysin and α-hemolysin biological nanopores: electrophoresis versus electroosmosis. Nanoscale, 2016, 8, 18352-18359.	2.8	78
332	A three-ions model of electrodiffusion kinetics in a nanochannel. Chemical Physics Letters, 2016, 663, 33-39.	1.2	7
333	Biomimic Redox Driven Ion Transportation in Smart Nanochannels. Journal of Physical Chemistry C, 2016, 120, 17342-17347.	1.5	12
334	Stereoselective detection of amino acids with protein-modified single asymmetric nanopores. Electrochimica Acta, 2016, 215, 231-237.	2.6	35
335	An ion-gating multinanochannel system based on a copper-responsive self-cleaving DNAzyme. Chemical Communications, 2016, 52, 10020-10023.	2.2	27
336	Salt gradient driven ion transport in solid-state nanopores: the crucial role of reservoir geometry and size. Physical Chemistry Chemical Physics, 2016, 18, 30160-30165.	1.3	55
337	"Uphill―cation transport: A bioinspired photo-driven ion pump. Science Advances, 2016, 2, e1600689.	4.7	71
338	A tunable nanopore sensor for the detection of metal ions using translocation velocity and biphasic pulses. Nanoscale, 2016, 8, 19139-19147.	2.8	35
339	Influences of Cone Angle and Surface Charge Density on the Ion Current Rectification Behavior of a Conical Nanopore. Journal of Physical Chemistry C, 2016, 120, 25620-25627.	1.5	63
340	Nonlinear dependence of the ion current rectification factor on bias voltage in conical nanopipettes. Journal of Electroanalytical Chemistry, 2016, 779, 106-111.	1.9	3
341	Zn ²⁺ and EDTA Cooperative Switchable Nanofluidic Diode Based on Asymmetric Modification of Single Nanochannel. Chemistry - A European Journal, 2016, 22, 4355-4358.	1.7	17
342	Noncovalent functionalization of solid-state nanopores via self-assembly of amphipols. Nanoscale, 2016, 8, 1470-1478.	2.8	47
343	High Current Ionic Diode Using Homogeneously Charged Asymmetric Nanochannel Network Membrane. Nano Letters, 2016, 16, 2189-2197.	4.5	60
344	Fluoride-induced modulation of ionic transport in asymmetric nanopores functionalized with "caged―fluorescein moieties. Nanoscale, 2016, 8, 8583-8590.	2.8	18
345	Gate modulation of proton transport in a nanopore. Physical Chemistry Chemical Physics, 2016, 18, 7449-7458.	1.3	26
346	Detecting and identifying small molecules in a nanopore flux capacitor. Nanotechnology, 2016, 27, 075503.	1.3	2
347	Ionic Conductance of Polyelectrolyte-Modified Nanochannels: Nanoconfinement Effects on the Coupled Protonation Equilibria of Polyprotic Brushes. Journal of Physical Chemistry C, 2016, 120, 4789-4798.	1.5	52
348	Effect of ion current rectification on energy harvesting by reverse electrodialysis. , 2016, , .		1

#	Article	IF	CITATIONS
349	Fundamental studies and practical applications of bio-inspired smart solid-state nanopores and nanochannels. Nano Today, 2016, 11, 61-81.	6.2	261
350	Fabrication of nanopores in multi-layered silicon-based membranes using focused electron beam induced etching with XeF2 gas. Mikrochimica Acta, 2016, 183, 987-994.	2.5	10
351	A single glass conical nanopore channel modified with 6-carboxymethyl-chitosan to study the binding of bovine serum albumin due to hydrophobic and hydrophilic interactions. Mikrochimica Acta, 2016, 183, 981-986.	2.5	8
352	Fabrication of "Plug and Play―Channels with Dual Responses by Host–Guest Interactions. Small, 2017, 13, 1600287.	5.2	25
353	Micrometer-Scale Ion Current Rectification at Polyelectrolyte Brush-Modified Micropipets. Journal of the American Chemical Society, 2017, 139, 1396-1399.	6.6	106
354	Importance of polyelectrolyte modification for rectifying the ionic current in conically shaped nanochannels. Physical Chemistry Chemical Physics, 2017, 19, 5351-5360.	1.3	45
355	Ionic Diodes Based on Regenerated α ellulose Films Deposited Asymmetrically onto a Microhole. ChemistrySelect, 2017, 2, 871-875.	0.7	7
356	Resistive-pulse and rectification sensing with glass and carbon nanopipettes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160931.	1.0	42
357	Solid-State Ionic Diodes Demonstrated in Conical Nanopores. Journal of Physical Chemistry C, 2017, 121, 6170-6176.	1.5	36
358	Direction- and Salt-Dependent Ionic Current Signatures for DNA Sensing with Asymmetric Nanopores. Biophysical Journal, 2017, 112, 674-682.	0.2	39
359	Asymmetrical nanopores in track membranes: Fabrication, the effect of nanopore shape and electric charge of pore walls, promising applications. Russian Journal of Electrochemistry, 2017, 53, 58-69.	0.3	7
360	Sequential Recognition of Zinc and Pyrophosphate lons in a Terpyridineâ€Functionalized Single Nanochannel. ChemPhysChem, 2017, 18, 253-259.	1.0	15
361	A temperature, pH and sugar triple-stimuli-responsive nanofluidic diode. Nanoscale, 2017, 9, 433-439.	2.8	59
362	Label-free histamine detection with nanofluidic diodes through metal ion displacement mechanism. Colloids and Surfaces B: Biointerfaces, 2017, 150, 201-208.	2.5	38
363	A Tunable Ionic Diode Based on a Biomimetic Structureâ€Tailorable Nanochannel. Angewandte Chemie - International Edition, 2017, 56, 8168-8172.	7.2	72
364	A Tunable Ionic Diode Based on a Biomimetic Structureâ€⊺ailorable Nanochannel. Angewandte Chemie, 2017, 129, 8280-8284.	1.6	7
365	Programmable Electrochemical Rectifier Based on a Thin-Layer Cell. ACS Applied Materials & Interfaces, 2017, 9, 20955-20962.	4.0	6
366	Conical Nanopores for Efficient Ion Pumping and Desalination. Journal of Physical Chemistry Letters, 2017, 8, 2842-2848.	2.1	39

#	Article	IF	CITATIONS
367	Ion Current Rectification Behavior of Bioinspired Nanopores Having a pH-Tunable Zwitterionic Surface. Analytical Chemistry, 2017, 89, 3952-3958.	3.2	62
368	A Cationic Diode Based on Asymmetric Nafion Film Deposits. ACS Applied Materials & Interfaces, 2017, 9, 11272-11278.	4.0	42
369	Modulation of Molecular Flux Using a Graphene Nanopore Capacitor. Journal of Physical Chemistry B, 2017, 121, 3724-3733.	1.2	14
370	The rectification of mono- and bivalent ions in single conical nanopores. Nuclear Instruments & Methods in Physics Research B, 2017, 404, 219-223.	0.6	17
371	Correlated Rectification Transport in Ultranarrow Charged Nanocones. Journal of Physical Chemistry Letters, 2017, 8, 435-439.	2.1	28
372	Potentiometric sensing of nucleic acids using chemically modified nanopores. Nanoscale, 2017, 9, 739-747.	2.8	20
373	Advantages of Conical Pores for Ion Pumps. Journal of Physical Chemistry C, 2017, 121, 161-168.	1.5	23
374	Covalent Modification of Silicon Nitride Nanopore by Amphoteric Polylysine for Short DNA Detection. ACS Omega, 2017, 2, 7127-7135.	1.6	20
375	Ionic Circuits Powered by Reverse Electrodialysis for an Ultimate Iontronic System. Scientific Reports, 2017, 7, 14068.	1.6	23
376	Salt-Dependent Ion Current Rectification in Conical Nanopores: Impact of Salt Concentration and Cone Angle. Journal of Physical Chemistry C, 2017, 121, 28139-28147.	1.5	33
377	Correlation of Ion Transport Hysteresis with the Nanogeometry and Surface Factors in Single Conical Nanopores. Analytical Chemistry, 2017, 89, 11811-11817.	3.2	13
378	lon transport in gel and gel–liquid systems for LiClO ₄ -doped PMMA at the meso- and nanoscales. Nanoscale, 2017, 9, 16232-16243.	2.8	18
379	3D Porous Hydrogel/Conducting Polymer Heterogeneous Membranes with Electroâ€∤pHâ€Modulated Ionic Rectification. Advanced Materials, 2017, 29, 1702926.	11.1	74
380	Anomalous pHâ€Đependent Nanofluidic Salinity Gradient Power. Small, 2017, 13, 1702691.	5.2	57
381	N3/Al2O3 composite nanochannels: photoelectric and photoelectric-and-pH cooperatively controlled ion gating. Journal of Materials Chemistry A, 2017, 5, 19220-19226.	5.2	20
382	Tetraalkylammonium Cations Conduction through a Single Nanofluidic Diode: Experimental and Theoretical Studies. Electrochimica Acta, 2017, 250, 302-308.	2.6	6
383	Cesium-Induced Ionic Conduction through a Single Nanofluidic Pore Modified with Calixcrown Moieties. Langmuir, 2017, 33, 9170-9177.	1.6	32
384	Smart Bioinspired Nanochannels and their Applications in Energyâ€Conversion Systems. Advanced Materials, 2017, 29, 1702983.	11.1	56

#	Article	IF	CITATIONS
385	Probing charges on solid–liquid interfaces with the resistive-pulse technique. Nanoscale, 2017, 9, 13527-13537.	2.8	13
386	Size-Controllable Gold Nanopores with High SERS Activity. Analytical Chemistry, 2017, 89, 10407-10413.	3.2	42
387	Functionalization of single solid state nanopores to mimic biological ion channels: A review. Advances in Colloid and Interface Science, 2017, 250, 195-213.	7.0	125
388	Scanning ion conductance microscopy mapping of tunable nanopore membranes. Biomicrofluidics, 2017, 11, 054102.	1.2	4
389	Nanoparticle Translocation through Conical Nanopores: A Finite Element Study of Electrokinetic Transport. Macromolecular Theory and Simulations, 2017, 26, 1600051.	0.6	13
390	Viscosity and Conductivity Tunable Diode-like Behavior for Meso- and Micropores. Journal of Physical Chemistry Letters, 2017, 8, 3846-3852.	2.1	34
391	Bioinspired Energy Conversion in Nanofluidics: A Paradigm of Material Evolution. Advanced Materials, 2017, 29, 1702773.	11.1	103
392	Biomimetic Voltage-Gated Ultrasensitive Potassium-Activated Nanofluidic Based on a Solid-State Nanochannel. Langmuir, 2017, 33, 8463-8467.	1.6	25
393	On the Origin of Ionic Rectification in DNA-Stuffed Nanopores: The Breaking and Retrieving Symmetry. Journal of the American Chemical Society, 2017, 139, 18739-18746.	6.6	92
394	An Artificial CO ₂ â€Driven Ionic Gate Inspired by Olfactory Sensory Neurons in Mosquitoes. Advanced Materials, 2017, 29, 1603884.	11.1	61
395	Bioinspired integrated nanosystems based on solid-state nanopores: "iontronic―transduction of biological, chemical and physical stimuli. Chemical Science, 2017, 8, 890-913.	3.7	136
396	A redox-sensitive nanofluidic diode based on nicotinamide-modified asymmetric nanopores. Sensors and Actuators B: Chemical, 2017, 240, 895-902.	4.0	16
397	Incorporating Born solvation energy into the three-dimensional Poisson-Nernst-Planck model to study ion selectivity in KcsA K+ channels. Physical Review E, 2017, 96, 062416.	0.8	25
398	From Ion Current to Electroosmotic Flow Rectification in Asymmetric Nanopore Membranes. Nanomaterials, 2017, 7, 445.	1.9	32
399	Biomimetic Smart Nanopores and Nanochannels. , 2017, , 85-102.		4
400	A Pb ²⁺ ionic gate with enhanced stability and improved sensitivity based on a 4′-aminobenzo-18-crown-6 modified funnel-shaped nanochannel. Faraday Discussions, 2018, 210, 101-111.	1.6	23
401	Tunable Resistive Pulse Sensing: Better Size and Charge Measurements for Submicrometer Colloids. Analytical Chemistry, 2018, 90, 2987-2995.	3.2	29
402	Solid-state nanopore fabrication in LiCl by controlled dielectric breakdown. Biomedical Microdevices, 2018, 20, 38.	1.4	9

#	Article	IF	CITATIONS
403	Analysis of the Mean Field Free Energy Functional of Electrolyte Solution with Nonhomogenous Boundary Conditions and the Generalized PB/PNP Equations with Inhomogeneous Dielectric Permittivity. SIAM Journal on Applied Mathematics, 2018, 78, 1131-1154.	0.8	11
404	Osmotic Effects in Trackâ€Etched Nanopores. Small, 2018, 14, e1703327.	5.2	19
405	Nanofiltration performance of conical and hourglass nanopores. Journal of Membrane Science, 2018, 552, 336-340.	4.1	32
406	Highly rectified ion transport through 2D WSe2/MoS2 bi-layered membranes. Chinese Chemical Letters, 2018, 29, 892-894.	4.8	29
407	Magnetic Gated Biomimetic Artificial Nanochannels for Controllable Ion Transportation Inspired by Homing Pigeon. Small, 2018, 14, e1703369.	5.2	15
408	Protonâ€Gated Rectification Regimes in Nanofluidic Diodes Switched by Chemical Effectors. Small, 2018, 14, e1703144.	5.2	34
409	Development of Pipettes as Mobile Nanofluidic Devices for Mass Spectrometric Analysis. , 2018, , 273-293.		0
410	Voltageâ€Gated Nanoparticle Transport and Collisions in Attoliterâ€Volume Nanopore Electrode Arrays. Small, 2018, 14, e1703248.	5.2	17
411	Concentration-Polarization-Induced Precipitation and Ionic Current Oscillations with Tunable Frequency. Journal of Physical Chemistry C, 2018, 122, 3648-3654.	1.5	15
412	Investigation of Ionic Transport Through Track-Etched Conical Nanopores of PET Membrane. Nano, 2018, 13, 1850011.	0.5	4
413	Bioinspired smart asymmetric nanochannel membranes. Chemical Society Reviews, 2018, 47, 322-356.	18.7	372
414	Voltage-Induced Modulation of Ionic Concentrations and Ion Current Rectification in Mesopores with Highly Charged Pore Walls. Journal of Physical Chemistry Letters, 2018, 9, 393-398.	2.1	90
415	Chemiresistive nanosensors with convex/concave structures. Nano Today, 2018, 20, 84-100.	6.2	63
416	Highly Sensitive Biosensing with Solid-State Nanopores Displaying Enzymatically Reconfigurable Rectification Properties. Nano Letters, 2018, 18, 3303-3310.	4.5	91
417	Electrokinetic ion transport in nanofluidics and membranes with applications in bioanalysis and beyond. Biomicrofluidics, 2018, 12, 021502.	1.2	14
418	Probing ion current in solid-electrolytes at the meso- and nanoscale. Faraday Discussions, 2018, 210, 55-67.	1.6	4
419	3D computer-aided nanoprinting for solid-state nanopores. Nanoscale Horizons, 2018, 3, 312-316.	4.1	10
420	Simple functionalization method for single conical pores with a polydopamine layer. Applied Physics	1.1	2

#	Article	IF	CITATIONS
421	Ultrathin nanoporous membranes for insulator-based dielectrophoresis. Nanotechnology, 2018, 29, 235704.	1.3	8
422	A bio-inspired dumbbell-shaped nanochannel with a controllable structure and ionic rectification. Nanoscale, 2018, 10, 6850-6854.	2.8	25
423	A Multiparameter pH‣ensitive Nanodevice Based on Plasmonic Nanopores. Advanced Functional Materials, 2018, 28, 1703847.	7.8	43
424	Alternating electric field-induced ion current rectification and electroosmotic pump in ultranarrow charged carbon nanocones. Physical Chemistry Chemical Physics, 2018, 20, 27910-27916.	1.3	7
425	pH-modulated ion-current rectification in a cysteine-functionalized glass nanopipette. Electrochemistry Communications, 2018, 97, 6-10.	2.3	19
426	Asymmetric-Fluidic-Reservoirs Induced High Rectification Nanofluidic Diode. Scientific Reports, 2018, 8, 13941.	1.6	23
427	Ultralarge Single-Layer Porous Protein Nanosheet for Precise Nanosize Separation. Nano Letters, 2018, 18, 6563-6569.	4.5	44
428	A universal tunable nanofluidic diode via photoresponsive host–guest interactions. NPG Asia Materials, 2018, 10, 849-857.	3.8	30
429	Skinâ€Inspired Lowâ€Grade Heat Energy Harvesting Using Directed Ionic Flow through Conical Nanochannels. Advanced Energy Materials, 2018, 8, 1800459.	10.2	47
430	Chemoresponsive Nanofluidic Pump That Turns Off in the Presence of Lead Ion. Analytical Chemistry, 2018, 90, 7715-7720.	3.2	21
431	Amplification-free, sequence-specific 16S rRNA detection at 1 aM. Lab on A Chip, 2018, 18, 2291-2299.	3.1	15
432	Electrical characteristics of etched ion-tracks in polyimide filled with silver nanoparticles. Radiation Effects and Defects in Solids, 2018, 173, 617-628.	0.4	0
433	Potassium-induced ionic conduction through a single nanofluidic pore modified with acyclic polyether derivative. Analytica Chimica Acta, 2018, 1039, 132-139.	2.6	17
434	Influence of salt valence on the rectification behavior of nanochannels. Journal of Colloid and Interface Science, 2018, 531, 483-492.	5.0	31
435	Lithium Ion Recognition with Nanofluidic Diodes through Host–Guest Complexation in Confined Geometries. Analytical Chemistry, 2018, 90, 6820-6826.	3.2	56
436	Engineered Artificial Nanochannels for Nitrite Ion Harmless Conversion. ACS Applied Materials & Interfaces, 2018, 10, 30852-30859.	4.0	17
437	Hysteresis Charges in the Dynamic Enrichment and Depletion of Ions in Single Conical Nanopores. ChemElectroChem, 2018, 5, 3089-3095.	1.7	24
438	Positivity preserving finite difference methods for Poisson–Nernst–Planck equations with steric interactions: Application to slit-shaped nanopore conductance. Journal of Computational Physics, 2019, 397, 108864.	1.9	20

#	Article	IF	CITATIONS
439	Monitoring Hydrogen Evolution Reaction Catalyzed by MoS ₂ Quantum Dots on a Single Nanoparticle Electrode. Analytical Chemistry, 2019, 91, 10361-10365.	3.2	25
440	Confinement-controlled rectification in a geometric nanofluidic diode. Journal of Chemical Physics, 2019, 151, 044707.	1.2	13
441	Chaotic Behavior of Ionic Transportation Through Synthetic Ion Channels. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950107.	0.7	2
442	Photoâ€Driven Ion Transport for a Photodetector Based on an Asymmetric Carbon Nitride Nanotube Membrane. Angewandte Chemie - International Edition, 2019, 58, 12574-12579.	7.2	75
443	A biomimetic nanofluidic diode based on surface-modified polymeric carbon nitride nanotubes. Beilstein Journal of Nanotechnology, 2019, 10, 1316-1323.	1.5	16
444	Photoâ€Driven Ion Transport for a Photodetector Based on an Asymmetric Carbon Nitride Nanotube Membrane. Angewandte Chemie, 2019, 131, 12704-12709.	1.6	8
445	Using Smart Nanochannels as a Power Switch in Salinity Gradient Batteries. ChemNanoMat, 2019, 5, 1182-1187.	1.5	17
446	Interfacial and Nanoconfinement Effects Decrease the Excited-State Acidity of Polymer-Bound Photoacids. CheM, 2019, 5, 1648-1670.	5.8	20
447	Selective-area ALD for positively and negatively charged layers into the ion-beam track-etched conical pores in polyethylene terephthalate. AIP Advances, 2019, 9, .	0.6	1
448	Electrokinetic Phenomena in Organic Solvents. Journal of Physical Chemistry B, 2019, 123, 6123-6131.	1.2	17
449	Amine-Phosphate Specific Interactions within Nanochannels: Binding Behavior and Nanoconfinement Effects. Journal of Physical Chemistry C, 2019, 123, 28997-29007.	1.5	39
450	Devices for promising applications. , 2019, , 247-314.		0
451	Unraveling the Anomalous Surface-Charge-Dependent Osmotic Power Using a Single Funnel-Shaped Nanochannel. ACS Nano, 2019, 13, 13374-13381.	7.3	86
452	Tunable Electrorheological Fluid Microfluidic Rectifier: Irreversibility of Viscous Flow Due to Spatial Asymmetry Induced Memory Effects. Physical Review Letters, 2019, 123, 194502.	2.9	21
453	Transport Properties of Nanoporous, Chemically Forced Biological Lattices. Journal of Physical Chemistry B, 2019, 123, 10331-10342.	1.2	0
454	Strong, Water-Stable Ionic Cable from Bio-Hydrogel. Chemistry of Materials, 2019, 31, 9288-9294.	3.2	24
455	Fault detection in flotation processes based on deep learning and support vector machine. Journal of Central South University, 2019, 26, 2504-2515.	1.2	31
456	Dynamic Curvature Nanochannelâ€Based Membrane with Anomalous Ionic Transport Behaviors and Reversible Rectification Switch. Advanced Materials, 2019, 31, e1805130.	11.1	114

	CITATION	REPORT	
#	Article	IF	CITATIONS
457	Ion current rectification: from nanoscale to microscale. Science China Chemistry, 2019, 62, 1346-1359.	4.2	35
458	Ion Current Rectification Behavior of Conical Nanopores Filled with Spatially Distributed Fixed Charges. Journal of Physical Chemistry C, 2019, 123, 26299-26308.	1.5	15
459	Electrical Field Regulation of Ion Transport in Polyethylene Terephthalate Nanochannels. ACS Applied Materials & Interfaces, 2019, 11, 38055-38060.	4.0	18
460	Detection of alkaline phosphatase activity with a functionalized nanopipette. Electrochemistry Communications, 2019, 99, 71-74.	2.3	27
461	Rectification of Concentration Polarization in Mesopores Leads To High Conductance Ionic Diodes and High Performance Osmotic Power. Journal of the American Chemical Society, 2019, 141, 3691-3698.	6.6	187
462	Electro-Mechanical Conductance Modulation of a Nanopore Using a Removable Gate. ACS Nano, 2019, 13, 2398-2409.	7.3	16
463	Additively Manufactured Flow-Resistive Pulse Sensors. Analytical Chemistry, 2019, 91, 2947-2954.	3.2	6
464	An ultrathin and highly porous silica nanochannel membrane: toward highly efficient salinity energy conversion. Journal of Materials Chemistry A, 2019, 7, 2385-2391.	5.2	68
465	Ion Transport Behaviors of Nanofluidic Diode Bichannel Systems in the Independent and Synergistic Cascade Mode. ACS Applied Materials & Interfaces, 2019, 11, 26467-26473.	4.0	7
466	The effects of electrostatic correlations on the ionic current rectification in conical nanopores. Electrophoresis, 2019, 40, 2655-2661.	1.3	3
467	Solid-state nanopores for ion and small molecule analysis. Chinese Chemical Letters, 2019, 30, 1607-1617.	4.8	16
468	Effects of Surface Trapping and Contact Ion Pairing on Ion Transport in Nanopores. Journal of Physical Chemistry C, 2019, 123, 15314-15322.	1.5	17
469	In Situ Growth of Ultrasmall Nanochannels in Porous Anodized Aluminum Membrane and Applied in Detection of Lead Ion. Analytical Chemistry, 2019, 91, 8184-8191.	3.2	22
470	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. Journal of Physical Chemistry C, 2019, 123, 21309-21326.	1.5	234
471	Osmosis, from molecular insights to large-scale applications. Chemical Society Reviews, 2019, 48, 3102-3144.	18.7	177
472	Prospects of Membrane Science Development. Membranes and Membrane Technologies, 2019, 1, 45-63.	0.6	111
473	Fabrication and Applications of Solid-State Nanopores. Sensors, 2019, 19, 1886.	2.1	42
474	Asymmetric heterostructured SiO2/Al2O3 nanofluidic diodes modulating ionic transport for highly efficient light-gating device. Electrochimica Acta, 2019, 316, 266-272.	2.6	15

#	Article	IF	CITATIONS
475	Influence of Transmembrane Ionic Current Based on PNIPAM-Modified Nanochannels. Journal of Physical Chemistry C, 2019, 123, 12500-12504.	1.5	6
476	Reversing current rectification to improve DNAâ€sensing sensitivity in conical nanopores. Electrophoresis, 2019, 40, 2098-2103.	1.3	4
477	Nanopore Functionalized by Highly Charged Hydrogels for Osmotic Energy Harvesting. ACS Applied Materials & Interfaces, 2019, 11, 12578-12585.	4.0	66
478	Solid-state nanopore hydrodynamics and transport. Biomicrofluidics, 2019, 13, 011301.	1.2	32
479	Electrokinetic ion transport in an asymmetric double-gated nanochannel with a pH-tunable zwitterionic surface. Physical Chemistry Chemical Physics, 2019, 21, 7773-7780.	1.3	12
480	Tuning Ion Transport through a Nanopore by Self-Oscillating Chemical Reactions. Analytical Chemistry, 2019, 91, 4600-4607.	3.2	12
481	Mechanical properties of bovine erythrocytes derived from ion current measurements using micropipettes. Bioelectrochemistry, 2019, 128, 204-210.	2.4	10
482	The Pathway to Intelligence: Using Stimuliâ€Responsive Materials as Building Blocks for Constructing Smart and Functional Systems. Advanced Materials, 2019, 31, e1804540.	11.1	169
483	Fabrication of functional micro- and nanoporous materials from polymers modified by swift heavy ions. Radiation Physics and Chemistry, 2019, 159, 25-34.	1.4	45
484	Engineered Smart Gating Nanochannels for High Performance in Formaldehyde Detection and Removal. Advanced Functional Materials, 2019, 29, 1807953.	7.8	53
485	Biomoleculeâ€Functionalized Solid‣tate Ion Nanochannels/Nanopores: Features and Techniques. Small, 2019, 15, e1804878.	5.2	115
486	A pyrophosphate-activated nanochannel inspired by a TRP ion channel. Chemical Communications, 2019, 55, 12833-12836.	2.2	17
487	A nanofluidic osmotic power generator demonstrated in polymer gel electrolytes with substantially enhanced performance. Journal of Materials Chemistry A, 2019, 7, 26791-26796.	5.2	44
488	Ionic circuitry with nanofluidic diodes. Soft Matter, 2019, 15, 9682-9689.	1.2	30
489	Surface coatings for solid-state nanopores. Nanoscale, 2019, 11, 19636-19657.	2.8	75
490	Bioinspired Selfâ€Gating Nanofluidic Devices for Autonomous and Periodic Ion Transport and Cargo Release. Advanced Functional Materials, 2019, 29, 1806416.	7.8	26
491	Ionic Current Rectification by Laminated Bipolar Silica Isoporous Membrane. Analytical Chemistry, 2019, 91, 1227-1231.	3.2	28
492	Fabrication and application of nanoporous polymer ion-track membranes. Nanotechnology, 2019, 30, 052001.	1.3	33

#	Article	IF	CITATIONS
493	Cationic Rectifier Based on a Graphene Oxide-Covered Microhole: Theory and Experiment. Langmuir, 2019, 35, 2055-2065.	1.6	25
494	Abnormal Ionic-Current Rectification Caused by Reversed Electroosmotic Flow under Viscosity Gradients across Thin Nanopores. Analytical Chemistry, 2019, 91, 996-1004.	3.2	32
495	Controlled Microstructural Architectures Based on Smart Fabrication Strategies. Advanced Functional Materials, 2020, 30, 1901760.	7.8	36
496	Ultrasensitive and regenerable nanopore sensing based on target induced aptamer dissociation. Biosensors and Bioelectronics, 2020, 152, 112011.	5.3	8
497	Regulating Ion Transport in a Nanochannel with Tandem and Parallel Structures via Concentration Polarization. Journal of Physical Chemistry Letters, 2020, 11, 524-529.	2.1	20
498	In Situ Growth Visualization Nanochannel Membrane for Ultrasensitive Copper Ion Detection under the Electric Field Enrichment. ACS Applied Materials & Interfaces, 2020, 12, 4849-4858.	4.0	19
499	Tunable Current Rectification and Selectivity Demonstrated in Nanofluidic Diodes through Kinetic Functionalization. Journal of Physical Chemistry Letters, 2020, 11, 60-66.	2.1	42
500	Electrodiffusioosmosis-Induced Negative Differential Resistance in pH-Regulated Mesopores Containing Purely Monovalent Solutions. ACS Applied Materials & Interfaces, 2020, 12, 3198-3204.	4.0	27
501	Pressure-Induced Enlargement and Ionic Current Rectification in Symmetric Nanopores. Nano Letters, 2020, 20, 8089-8095.	4.5	13
502	Resistive amplitude fingerprints during translocation of linear molecules through charged solid-state nanopores. Journal of Chemical Physics, 2020, 153, 035102.	1.2	4
503	pH-regulated thermo-driven nanofluidics for nanoconfined mass transport and energy conversion. Nanoscale Advances, 2020, 2, 4070-4076.	2.2	6
504	Geometrical Characterization of Class Nanopipettes with Sub-10 nm Pore Diameter by Transmission Electron Microscopy. Analytical Chemistry, 2020, 92, 15388-15393.	3.2	13
505	Modulation of Ionic Current Rectification in Ultrashort Conical Nanopores. Analytical Chemistry, 2020, 92, 16188-16196.	3.2	48
506	Transport Phenomena in Nano/Molecular Confinements. ACS Nano, 2020, 14, 16348-16391.	7.3	55
507	Nonlinear Ion Transport through Ultrathin Metal–Organic Framework Nanosheet. Advanced Functional Materials, 2020, 30, 2004854.	7.8	22
508	Electroosmosis-Driven Nanofluidic Diodes. Journal of Physical Chemistry B, 2020, 124, 7086-7092.	1.2	12
509	High-sensitivity detection of dopamine by biomimetic nanofluidic diodes derivatized with poly(3-aminobenzylamine). Nanoscale, 2020, 12, 18390-18399.	2.8	20
510	Nanopore Fabrication via Transient High Electric Field Controlled Breakdown and Detection of Single RNA Molecules. ACS Applied Bio Materials, 2020, 3, 6368-6375.	2.3	6

#	Article	IF	CITATIONS
511	Ionic current conduction at low voltage of track-etched double conical nanopores modified by surfactant CTAB. Journal of Polymer Research, 2020, 27, 1.	1.2	1
512	Construction of a Smart Nanofluidic Sensor through a Redox Reaction Strategy for High-Performance Carbon Monoxide Sensing. Analytical Chemistry, 2020, 92, 14947-14952.	3.2	22
513	Gated thermoelectric sensation by nanochannels grafted with thermally responsive polymers. Chemical Communications, 2020, 56, 14291-14294.	2.2	3
514	A novel dielectric breakdown apparatus for solid-state nanopore fabrication with transient high electric field. Review of Scientific Instruments, 2020, 91, 093203.	0.6	9
515	Ionic Current Rectification of Porous Anodic Aluminum Oxide (AAO) with a Barrier Oxide Layer. ACS Nano, 2020, 14, 13727-13738.	7.3	22
516	Force-Controlled Formation of Dynamic Nanopores for Single-Biomolecule Sensing and Single-Cell Secretomics. ACS Nano, 2020, 14, 12993-13003.	7.3	9
517	100th Anniversary of Macromolecular Science Viewpoint: Integrated Membrane Systems. ACS Macro Letters, 2020, 9, 1267-1279.	2.3	19
518	Scanning Ion Conductance Microscopy. Chemical Reviews, 2021, 121, 11726-11768.	23.0	67
519	Quasi-Stable Salt Gradient and Resistive Switching in Solid-State Nanopores. ACS Applied Materials & Interfaces, 2020, 12, 52175-52181.	4.0	12
520	Single Mesopores with High Surface Charges as Ultrahigh Performance Osmotic Power Generators. Small, 2020, 16, e2006013.	5.2	37
521	Improved Rectification and Osmotic Power in Polyelectrolyte-Filled Mesopores. Micromachines, 2020, 11, 949.	1.4	10
522	Investigation of the Structural Changes and Catalytic Properties of FeNi Nanostructures as a Result of Exposure to Gamma Radiation. Crystals, 2020, 10, 254.	1.0	0
523	Rectified Ion Transport in Ultraâ€ŧhin Membrane Governed by Outer Membrane Electric Double Layer. Chinese Journal of Chemistry, 2020, 38, 1757-1761.	2.6	8
524	Effect of Anion Species on Ion Current Rectification Properties of Positively Charged Nanochannels. ACS Applied Materials & Interfaces, 2020, 12, 28915-28922.	4.0	21
525	A selective ionic rectifier. Nature Materials, 2020, 19, 701-702.	13.3	16
526	Bioinspired Ionic Sensory Systems: The Successor of Electronics. Advanced Materials, 2020, 32, e2000218.	11.1	99
527	<i>In situ</i> synthesis of a MOFs/PAA hybrid with ultrahigh ionic current rectification. Nanoscale, 2020, 12, 11899-11907.	2.8	13
528	Thermal Dependence of the Mesoscale Ionic Diode: Modeling and Experimental Verification. ACS Applied Materials & Interfaces, 2020, 12, 17139-17146.	4.0	18

#	Article	IF	CITATIONS
529	Pressure-driven ion separation through a pH-regulated cylindrical nanopore. Journal of Membrane Science, 2020, 604, 118073.	4.1	17
530	Voltage-Triggered Structural Switching of Polyelectrolyte-Modified Nanochannels. Macromolecules, 2020, 53, 2616-2626.	2.2	16
531	Ion Current Rectification in Extra-Long Nanofunnels. Applied Sciences (Switzerland), 2020, 10, 3749.	1.3	2
532	On Induced Surface Charge in Solid-State Nanopores. Langmuir, 2020, 36, 8874-8882.	1.6	23
533	Zinc ion driven ionic conduction through single asymmetric nanochannels functionalized with nanocomposites. Electrochimica Acta, 2020, 337, 135810.	2.6	22
534	Fabrication and functionalization of nanochannels for sensing applications. , 2020, , 157-169.		2
535	lon current rectification behavior of a nanochannel having nonuniform crossâ€section. Electrophoresis, 2020, 41, 802-810.	1.3	15
536	Phosphoprotein Detection with a Single Nanofluidic Diode Decorated with Zinc Chelates. ChemPlusChem, 2020, 85, 587-594.	1.3	12
537	Shape matters: Enhanced osmotic energy harvesting in bullet-shaped nanochannels. Nano Energy, 2020, 71, 104612.	8.2	80
538	Optoelectronic modulation of ionic conductance and rectification through a heterogeneous 1D/2D nanofluidic membrane. Chemical Communications, 2020, 56, 3508-3511.	2.2	21
539	Transport and Structure of Room-Temperature Ionic Liquids in Conical Nanopores under External Electric Fields. Journal of Physical Chemistry C, 2020, 124, 5817-5828.	1.5	3
540	A high rectification ratio nanofluidic diode induced by an "ion pool― RSC Advances, 2020, 10, 7377-7383.	1.7	15
541	Bioinspired Dual-Responsive Nanofluidic Diodes by Poly- <scp>l</scp> -lysine Modification. ACS Omega, 2020, 5, 4501-4506.	1.6	11
542	Electrochemically addressable nanofluidic devices based on PET nanochannels modified with electropolymerized poly- <i>o</i>	2.8	22
543	Detection and FEM studies of dichromate (Cr2O72â^') by allyltriethoxysilane modified nanochannel. Journal of Electroanalytical Chemistry, 2020, 858, 113818.	1.9	7
544	Transport in nanopores and nanochannels: some fundamental challenges and nature-inspired solutions. Materials Today Advances, 2020, 5, 100047.	2.5	34
545	Direct Fabrication of Freestanding and Patterned Nanoporous Junctions in a 3D Microâ€Nanofluidic Device for Ionâ€Selective Transport. Small, 2020, 16, 2000998.	5.2	7
546	Grazing-incidence transmission SAXS investigation of conical etched ion tracks in SiO2. Nuclear Instruments & Methods in Physics Research B, 2020, 465, 62-66.	0.6	0

#	Article	IF	CITATIONS
547	Chemical Sensing and Chemoresponsive Pumping with Conical-Pore Polymeric Membranes. Nanomaterials, 2020, 10, 571.	1.9	15
548	Review—Track-Etched Nanoporous Polymer Membranes as Sensors: A Review. Journal of the Electrochemical Society, 2020, 167, 037543.	1.3	38
549	TEMPO oxidized cellulose nanofibers-based heterogenous membrane employed for concentration-gradient-driven energy harvesting. Nano Energy, 2021, 79, 105468.	8.2	64
550	Bioinspired redox-driven NAD+ pump membranes with composition of annulated and cylindrical channel. Electrochimica Acta, 2021, 367, 137504.	2.6	3
551	Characterization of positively charged polyplexes by tunable resistive pulse sensing. European Journal of Pharmaceutics and Biopharmaceutics, 2021, 158, 359-364.	2.0	2
552	Electrohydrodynamic and Hydroelectric Effects at the Water–Solid Interface: from Fundamentals to Applications. Advanced Materials Interfaces, 2021, 8, 2000670.	1.9	32
553	Performance Maximization of Bipolar Ionic Diodes Through Geometry Optimization of Multi-Layered Microchannel and Its Appplications. , 2021, , .		0
554	Realization of robust mesoscale ionic diodes for ultrahigh osmotic energy generation at mild neutral pH. Journal of Materials Chemistry A, 2021, 9, 20502-20509.	5.2	21
555	Advances in nanofluidics for water purification and filtration: molecular dynamics (MD) perspective. Environmental Science: Nano, 2021, 8, 2120-2151.	2.2	9
556	Bioinspired nanochannels based on polymeric membranes. Science China Materials, 2021, 64, 1320-1342.	3.5	21
557	Nanofluidic osmotic power generators – advanced nanoporous membranes and nanochannels for blue energy harvesting. Chemical Science, 2021, 12, 12874-12910.	3.7	60
558	Highly Rectifying Fluidic Diodes Based on Asymmetric Layer-by-Layer Nanofilms on Nanochannel Membranes. Analytical Chemistry, 2021, 93, 4291-4298.	3.2	11
559	Towards explicit regulating-ion-transport: nanochannels with only function-elements at outer-surface. Nature Communications, 2021, 12, 1573.	5.8	74
560	Competition between electroosmotic and chemiosmotic flow in charged nanofluidics. Physics of Fluids, 2021, 33, .	1.6	16
561	Nanofluidic Membranes to Address the Challenges of Salinity Gradient Power Harvesting. ACS Nano, 2021, 15, 5838-5860.	7.3	97
562	Nanofluidics for osmotic energy conversion. Nature Reviews Materials, 2021, 6, 622-639.	23.3	288
563	Counterion Gradients around Charged Metal Nanoparticles Enabling Basic Electronics without Semiconductors. Journal of Physical Chemistry Letters, 2021, 12, 6102-6110.	2.1	2
564	Unraveling the anomalous channel-length-dependent blue energy conversion using engineered alumina nanochannels. Nano Energy, 2021, 84, 105930.	8.2	52

#	Article	IF	Citations
565	Layer-selective functionalisation in mesoporous double layer via iniferter initiated polymerisation for nanoscale step gradient formation. European Polymer Journal, 2021, 156, 110604.	2.6	6
566	Anomalous mechanosensitive ion transport in nanoparticle-blocked nanopores. Journal of Chemical Physics, 2021, 154, 224702.	1.2	5
567	Graphene Oxide Membrane/Conical Nanoporous Polyimide Composites for Regulating Ion Transport. ACS Applied Nano Materials, 2021, 4, 6964-6973.	2.4	3
568	Inverted Ion Current Rectification-Based Chemical Delivery Probes for Stimulation of Neurons. ACS Applied Materials & Interfaces, 2021, 13, 26748-26758.	4.0	9
569	Solid-state nanopore systems: from materials to applications. NPG Asia Materials, 2021, 13, .	3.8	47
570	Enantioselective Antiport in Asymmetric Nanochannels. ACS Nano, 2021, 15, 13148-13154.	7.3	24
571	Unidirectional ion transport in nanoporous carbon membranes with a hierarchical pore architecture. Nature Communications, 2021, 12, 4650.	5.8	28
572	Mass transport through a sub-10Ânm single gold nanopore: SERS and ionic current measurement. Journal of Electroanalytical Chemistry, 2021, 894, 115373.	1.9	6
573	"Ion Pool―Structural Ion Storage Device: A New Strategy to Collect Ions by Nanoconfinement Effects. Small, 2021, 17, e2102880.	5.2	8
574	Simple Fabrication of Solid-State Nanopores on a Carbon Film. Micromachines, 2021, 12, 1135.	1.4	3
575	Quantification of Asymmetric Ion Transport in Glass Nanopipettes near Charged Substrates. ChemElectroChem, 2021, 8, 3917.	1.7	2
576	Electroosmotic Flow in Polarizable Charged Cylindrical Nanopores. Journal of Physical Chemistry B, 2021, 125, 11091-11098.	1.2	7
577	Electro-osmotic diode based on colloidal nano-valves between double membranes. Physical Review Research, 2021, 3, .	1.3	2
578	Rectification Correlation between Water and Ions through Asymmetric Graphene Channels. Journal of Physical Chemistry B, 2021, 125, 11232-11241.	1.2	12
579	Recent advances in ionic current rectification based nanopore sensing: a mini-review. Sensors and Actuators Reports, 2021, 3, 100042.	2.3	16
580	Biomimetic solid-state nanochannels for chemical and biological sensing applications. TrAC - Trends in Analytical Chemistry, 2021, 144, 116425.	5.8	47
581	Nanofiltration through pH-regulated bipolar cylindrical nanopores for solution containing symmetric, asymmetric, and mixed salts. Journal of Membrane Science, 2022, 641, 119869.	4.1	4
582	Space charge modulation and ion current rectification of a cylindrical nanopore functionalized with polyelectrolyte brushes subject to an applied pH-gradient. Journal of Colloid and Interface Science, 2022, 605, 571-581.	5.0	10

#	Article	IF	CITATIONS
583	Pressure-driven power generation and ion separation using a non-uniformly charged nanopore. Journal of Colloid and Interface Science, 2022, 607, 1120-1130.	5.0	5
584	Biomimetic calcium-inactivated ion/molecular channel. Chemical Communications, 2021, 57, 7914-7917.	2.2	11
585	Nanopores: Generation, Engineering, and Single-Molecule Applications. , 2009, , 293-339.		11
586	Nanopore Recordings to Quantify Activity-Related Properties of Proteins. , 2011, , 203-225.		4
587	Synthesis, Characterization, and Applications of Nanoporous Materials for Sensing and Separation. , 2016, , 429-454.		6
588	Polyaniline for Improved Blue Energy Harvesting: Highly Rectifying Nanofluidic Diodes Operating in Hypersaline Conditions via One-Step Functionalization. ACS Applied Materials & Interfaces, 2020, 12, 28148-28157.	4.0	39
589	Active control of dispersion within a channel with flow and pulsating walls. Physical Review Fluids, 2019, 4, .	1.0	28
590	Analysis of nanometer-sized aligned conical pores using small-angle x-ray scattering. Physical Review Materials, 2020, 4, .	0.9	6
591	Electrical Double-Layer Effects on Electron Transfer and Ion Transport at the Nanoscale. , 2015, , 29-70.		4
592	Electrochemical Applications of Scanning Ion Conductance Microscopy. Electroanalytical Chemistry, A Series of Advances, 2015, , 73-114.	1.7	2
593	lon Current Rectification, Limiting and Overlimiting Conductances in Nanopores. PLoS ONE, 2015, 10, e0124171.	1.1	15
594	Fabrication and Ionic Current Rectification Characteristics of Biomimetic Aluminum Oxide Membrane. Membrane Journal, 2020, 30, 181-189.	0.2	1
595	Aptamer Self-Assembly-Functionalized Nanochannels for Sensitive and Precise Detection of Chloramphenicol. Analytical Chemistry, 2021, 93, 14287-14292.	3.2	21
596	Axial forces at disk surfaces in a cylindrical nanopore. Biomedical Microdevices, 2021, 23, 54.	1.4	1
598	Ion-Selective Biomimetic Membranes. Biological and Medical Physics Series, 2011, , 63-86.	0.3	0
599	Asymmetric Conical Shaped Single Composite Nanochannel Materials. Springer Theses, 2013, , 113-127.	0.0	0
600	Asymmetric Temperature/pH Dual-Responsive Symmetric Hour-Glass Shaped Single Nanochannel. Springer Theses, 2013, , 95-111.	0.0	0
601	Ions Responsive Asymmetric Conical Shaped Single Nanochannel. Springer Theses, 2013, , 61-81.	0.0	ο

#	Article	IF	Citations
603	Template-Directed Controlled Electrodeposition of Nanostructure and Composition. , 2015, , 372-409.		0
604	Field Effect Control of Ion, Fluid, and Particle Transport in Micro/Nanofluidics. , 0, , 2688-2704.		0
605	Ionic Current Rectification in Track-Etched Single Conical Nanopores. Hacettepe Journal of Biology and Chemistry, 0, , 225-234.	0.3	0
606	Influence of Asymmetric Geometry on the Ion Transport of Tandem Nanochannels. Journal of Physical Chemistry C, 2021, 125, 24622-24629.	1.5	8
607	Renewable Power Generation by Reverse Electrodialysis Using an Ion Exchange Membrane. Membranes, 2021, 11, 830.	1.4	4
608	Design of Multifunctional Nanopore Using Polyampholyte Brush with Composition Gradient. ACS Nano, 2021, 15, 17678-17688.	7.3	14
609	Solid-state and polymer nanopores for protein sensing: A review. Advances in Colloid and Interface Science, 2021, 298, 102561.	7.0	25
610	Discerning Tyrosine Phosphorylation from Multiple Phosphorylations Using a Nanofluidic Logic Platform. Analytical Chemistry, 2021, 93, 16113-16122.	3.2	8
611	Bio-inspired Track-Etched Polymeric Nanochannels: Steady-State Biosensors for Detection of Analytes. ACS Nano, 2021, 15, 18974-19013.	7.3	44
612	Ferrofluids transport in bioinspired nanochannels: Application to electrochemical biosensing with magnetic-controlled detection. Biosensors and Bioelectronics, 2022, 201, 113963.	5.3	6
613	Polydopamine-Induced Modification on the Highly Charged Surface of Asymmetric Nanofluidics: A Strategy for Adjustable Ion Current Rectification Properties. Analytical Chemistry, 2022, 94, 2493-2501.	3.2	9
614	Space charge enhanced ion transport in heterogeneous polyelectrolyte/alumina nanochannel membranes for high-performance osmotic energy conversion. Journal of Materials Chemistry A, 2022, 10, 2867-2875.	5.2	40
615	Modulation of ionic current behaviors based on a dual-channel micro/nano-pipette with ternary-form-charged model. Journal of Electroanalytical Chemistry, 2022, 908, 116089.	1.9	1
616	Designing Angstromâ€5cale Asymmetric MOFâ€onâ€MOF Cavities for High Monovalent Ion Selectivity. Advanced Materials, 2022, 34, e2107878.	11.1	47
617	Tree-inspired lignin microrods-based composite heterogeneous nanochannels for ion transport and osmotic energy harvesting. Energy Conversion and Management, 2022, 255, 115321.	4.4	12
618	An Experimental and Numerical Study of Polyelectrolyte Hydrogel Ionic Diodes: Towards Electrical Detection of Charged Biomolecules. Sensors, 2021, 21, 8279.	2.1	2
619	Pushing the limits of nanopore transport performance by polymer functionalization. Chemical Communications, 2022, 58, 5188-5204.	2.2	18
620	Asymmetric heterojunctions between size different 2D flakes intensify the ionic diode behaviour. Chemical Communications, 2022, 58, 5626-5629.	2.2	1

#	Article	IF	Citations
621	Biomimetic Nanochannels: From Fabrication Principles to Theoretical Insights. Small Methods, 2022, 6, e2101255.	4.6	18
622	Probing and Visualizing Interfacial Charge at Surfaces in Aqueous Solution. Annual Review of Analytical Chemistry, 2022, 15, 247-267.	2.8	9
623	Artificial Monovalent Metal Ion-Selective Fluidic Devices Based on Crown Ether@Metal–Organic Frameworks with Subnanochannels. ACS Applied Materials & Interfaces, 2022, 14, 13611-13621.	4.0	9
624	Reversal of Electroosmotic Flow in Charged Nanopores with Multivalent Electrolyte. Langmuir, 2022, 38, 3817-3823.	1.6	9
625	Estimation of the nano-pores diameter by conductometric measurements. IOP Conference Series: Materials Science and Engineering, 2022, 1221, 012050.	0.3	1
626	Ionic Transport in Electrostatic Janus Membranes. An Explicit Solvent Molecular Dynamic Simulation. ACS Nano, 2022, 16, 3768-3775.	7.3	9
627	Modulation of ionic current rectification direction for biomimetic aluminum oxide membrane by surface modification. AIP Advances, 2022, 12, 035141.	0.6	3
628	Biomimetic ion nanochannels for sensing umami substances. Biomaterials, 2022, 282, 121418.	5.7	14
629	Light-Regulated Nanofluidic Ionic Diodes with Heterogeneous Channels Stemming from Asymmetric Growth of Metal–Organic Frameworks. Analytical Chemistry, 2022, 94, 4328-4334.	3.2	10
630	Asymmetric Electrokinetic Energy Conversion in Slip Conical Nanopores. Nanomaterials, 2022, 12, 1100.	1.9	6
631	Membranotronics: Bioinspired Nonlinear Ion Transport with Negative Differential Resistance Based on Elastomeric Membrane System. Advanced Functional Materials, 2022, 32, .	7.8	5
632	Combining ionic diode, resistive pulse and membrane for detection and separation of anti-CD44 antibody. Journal of Membrane Science, 2022, 649, 120391.	4.1	2
634	Methodology to Detect Biological Particles Using a Biosensing Surface Integrated in Resistive Pulse Sensing. ACS Applied Materials & Interfaces, 2022, 14, 20168-20178.	4.0	2
636	Effect of Electrolyte Concentration and Pore Size on Ion Current Rectification Inversion. ACS Measurement Science Au, 2022, 2, 271-277.	1.9	12
637	Numerical Investigation of Diffusioosmotic Flow in a Tapered Nanochannel. Membranes, 2022, 12, 481.	1.4	0
638	Geometrically Induced Selectivity and Unidirectional Electroosmosis in Uncharged Nanopores. ACS Nano, 2022, 16, 8716-8728.	7.3	14
639	Fabrication of double conical PET nanochannel for molecular detection. Vacuum, 2022, 202, 111198.	1.6	3
640	Current Flow in a Cylindrical Nanopore with an Object–Implications for Virus Sensing. BioNanoScience, 0, , .	1.5	0

#	Article	IF	CITATIONS
641	Gold nanoparticle functionalized nanopipette sensors for electrochemical paraquat detection. Mikrochimica Acta, 2022, 189, .	2.5	14
642	Nanoionics from Biological to Artificial Systems: An Alternative Beyond Nanoelectronics. Advanced Science, 2022, 9, .	5.6	13
643	Angstrofluidics: Walking to the Limit. Annual Review of Materials Research, 2022, 52, 189-218.	4.3	16
644	Aprotic Solvent Accumulation Amplifies Ion Current Rectification in Conical Nanopores. Journal of Physical Chemistry B, 2022, 126, 5689-5694.	1.2	1
646	Engineered subnanochannel ionic diode membranes based on metal–organic frameworks for boosted lithium ion transport and osmotic energy conversion in organic solution. Chemical Engineering Journal, 2023, 452, 139244.	6.6	21
647	Highly sensitive acetylcholine biosensing <i>via</i> chemical amplification of enzymatic processes in nanochannels. Chemical Communications, 2022, 58, 10166-10169.	2.2	10
648	Influence of Shape and Charged Conditions of Nanopores on Their Ionic Current Rectification, Selectivity, and Electroosmotic Flow. SSRN Electronic Journal, 0, , .	0.4	0
649	Visible light induced RAFT for asymmetric functionalization of silica mesopores. RSC Advances, 2022, 12, 27109-27113.	1.7	8
650	Nanopore-Based Detection of Trace Concentrations of Multivalent Ions When Impurity Ions Are Present. Langmuir, 2022, 38, 11022-11032.	1.6	3
651	Bioinspired Artificial Ion Pumps. ACS Nano, 2022, 16, 13323-13338.	7.3	19
652	lontronics: Aqueous ion-based engineering for bioinspired functionalities and applications. Chemical Physics Reviews, 2022, 3, .	2.6	6
653	Functionalized silica nanoparticles coupled with nanoporous membrane for efficient ionic current rectification. Nanotechnology, 2023, 34, 015707.	1.3	1
654	Recent advances in properties and applications of nanoporous materials and porous carbons. Carbon Letters, 2022, 32, 1645-1669.	3.3	20
655	Electrodiffusioosmosis induced negative differential resistance in micro-to-millimeter size pores through a graphene/copper membrane. Nanoscale Advances, 2022, 4, 5123-5131.	2.2	1
656	Electrokinetic behavior of conical nanopores functionalized with two polyelectrolyte layers: effect of pH gradient. Soft Matter, 2022, 18, 8427-8435.	1.2	2
657	Switchable Ion Current Saturation Regimes Enabled via Heterostructured Nanofluidic Devices Based on Metal–Organic Frameworks. Advanced Materials, 2022, 34, .	11.1	13
658			
038	Triazol–Methanaminium–Pillar[5]arene-Functionalized Single Nanochannel for Quantitative Analysis of Pyrophosphate in Water. Analytical Chemistry, 2022, 94, 14889-14897.	3.2	1

#	Article	IF	CITATIONS
660	Nanochannels and nanoporous membranes in reverse electrodialysis for harvesting osmotic energy. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	2
661	Multiâ€Control of Ion Transport in a Fieldâ€Effect Iontronic Device based on Sandwichâ€Structured Nanochannels. Advanced Functional Materials, 2023, 33, .	7.8	6
662	Electrochemically addressed FET-like nanofluidic channels with dynamic ion-transport regimes. Nanoscale, 2023, 15, 1782-1793.	2.8	3
663	A pH gradient induced rectification inversion in asymmetric nanochannels leads to remarkably improved osmotic power. Chemical Engineering Journal, 2023, 456, 141064.	6.6	21
664	An ultrasensitive aptasensor of SARS-CoV-2ÂN protein based on ion current rectification with nanopipettes. Sensors and Actuators B: Chemical, 2023, 377, 133075.	4.0	9
665	Influence of shape and charged conditions of nanopores on their ionic current rectification, electroosmotic flow, and selectivity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 658, 130696.	2.3	5
666	Gating with Charge Inversion to Control Ionic Transport in Nanopores. ACS Applied Nano Materials, 2022, 5, 17682-17692.	2.4	4
667	Discrimination of Short ssDNA Using Nanopore-Fabricated Self-Assembled Metal–Organic Framework Membranes. ACS Applied Nano Materials, 2022, 5, 18581-18590.	2.4	3
668	Ion Current Rectification and Long-Range Interference in Conical Silicon Micropores. ACS Applied Materials & Interfaces, 2022, 14, 56226-56236.	4.0	3
669	Onset of Nonlinear Electroosmotic Flow under an AC Electric Field. Analytical Chemistry, 2022, 94, 17913-17921.	3.2	2
670	Mechanistic Study of the Conductance and Enhanced Single-Molecule Detection in a Polymer–Electrolyte Nanopore. ACS Nanoscience Au, 2023, 3, 172-181.	2.0	6
671	Glass Capillary-Based Nanopores for Single Molecule/Single Cell Detection. ACS Sensors, 2023, 8, 427-442.	4.0	8
672	Membranes for Osmotic Power Generation by Reverse Electrodialysis. Membranes, 2023, 13, 164.	1.4	3
673	Learning from the Brain: Bioinspired Nanofluidics. Journal of Physical Chemistry Letters, 2023, 14, 2891-2900.	2.1	13
674	Detection and Discrimination of nanoparticles using bullet shape nanopores coated with PEG. Journal of Electroanalytical Chemistry, 2023, , 117447.	1.9	1
675	Optimizing Membranes for Osmotic Power Generation. Angewandte Chemie, 2023, 135, .	1.6	1
676	Zwitterionic Gradient Doubleâ€Network Hydrogel Membranes with Superior Biofouling Resistance for Sustainable Osmotic Energy Harvesting. Advanced Functional Materials, 2023, 33, .	7.8	25
677	Current oscillations from bipolar nanopores for statistical monitoring of hydrogen evolution on a confined electrochemical catalyst. Physical Chemistry Chemical Physics, 2023, 25, 7629-7633.	1.3	1

#	Article	IF	CITATIONS
678	Fluids and Electrolytes under Confinement in Single-Digit Nanopores. Chemical Reviews, 2023, 123, 2737-2831.	23.0	32
680	lon current rectification in asymmetric nanochannels: effects of nanochannel shape and surface charge. International Journal of Heat and Mass Transfer, 2023, 208, 124038.	2.5	6
681	Cold Nanotriangle-Assembled Nanoporous Structures for Electric Field-Assisted Surface-Enhanced Raman Scattering Detection of Adenosine Triphosphate. ACS Sensors, 2023, 8, 1280-1286.	4.0	5
682	Optimizing Membranes for Osmotic Power Generation. Angewandte Chemie - International Edition, 2023, 62, .	7.2	20
683	Effects of Ion Concentration on Ion Current Rectification Using a Glass Nanocapillary. Bunseki Kagaku, 2023, 72, 117-123.	0.1	0
695	Iontronic components: From liquid- to solid-states. Nano Research, 0, , .	5.8	0
719	Nanoarchitectonics of Metal–Organic Frameworks (MOFs) for energy and sensing applications. , 2024, , 387-428.		0
721	Solid-State Nanopores for Biomolecular Analysis and Detection. Advances in Biochemical Engineering/Biotechnology, 2023, , .	0.6	0
722	Ionic nanoarchitectonics for nanochannel-based biosensing devices. , 2024, , 429-452.		0
724	Ion transport in nanofluidics under external fields. Chemical Society Reviews, 2024, 53, 2972-3001.	18.7	Ο