Ryuji Kawano

List of Publications by Year
in descending order

119	3,853	117571	133188
papers	citations	34 h-index	59 g-index

133	133	133	4026
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High performance dye-sensitized solar cells using ionic liquids as their electrolytes. Journal of Photochemistry and Photobiology A: Chemistry, 2004, 164, 87-92.	2.0	295
2	Dye-Sensitized TiO2Solar Cells Using Imidazolium-Type Ionic Liquid Crystal Systems as Effective Electrolytesâ€. Journal of Physical Chemistry B, 2007, 111, 4763-4769.	1.2	211
3	Ionic liquid crystal as a hole transport layer of dye-sensitized solar cells. Chemical Communications, 2005, , 740.	2.2	199
4	Rapid Detection of a Cocaine-Binding Aptamer Using Biological Nanopores on a Chip. Journal of the American Chemical Society, 2011, 133, 8474-8477.	6.6	187
5	Equilibrium potentials and charge transport of an Iâ€“/I3â€“ redox couple in an ionic liquid. Chemical Communications, 2003, , 330-331.	2.2	176
6	Anomaly of charge transport of an iodide/tri-iodide redox couple in an ionic liquid and its importance in dye-sensitized solar cells. Chemical Communications, 2005, , 2107.	2.2	148
7	Automated Parallel Recordings of Topologically Identified Single Ion Channels. Scientific Reports, 2013, 3, 1995.	1.6	123
8	Cell-sized asymmetric lipid vesicles facilitate the investigation of asymmetric membranes. Nature Chemistry, 2016, 8, 881-889.	6.6	119
9	Parylene-coating in PDMS microfluidic channels prevents the absorption of fluorescent dyes. Sensors and Actuators B: Chemical, 2010, 150, 478-482.	4.0	102
10	Rhodiumâ€“Organic Cuboctahedra as Porous Solids with Strong Binding Sites. Inorganic Chemistry, 2016, 55, 10843-10846.	1.9	97
11	Controlling the Translocation of Single-Stranded DNA through Î±-Hemolysin Ion Channels Using Viscosity. Langmuir, 2009, 25, 1233-1237.	1.6	91
12	Metal-Organic Cuboctahedra for Synthetic Ion Channels with Multiple Conductance States. CheM, 2017, 2, 393-403.	5.8	89
13	Monitoring the Escape of DNA from a Nanopore Using an Alternating Current Signal. Journal of the American Chemical Society, 2010, 132, 1878-1885.	6.6	86
14	A Polymerâ€Based Nanoporeâ€Integrated Microfluidic Device for Generating Stable Bilayer Lipid Membranes. Small, 2010, 6, 2100-2104.	5.2	74
15	Acceleration of Redox Diffusion and Charge-Transfer Rates in an Ionic Liquid with Nanoparticle Addition. Electrochemical and Solid-State Letters, 2007, 10, F23.	2.2	69
16	Solid-state dye-sensitized solar cells using polymerized ionic liquid electrolyte with platinum-free counter electrode. Physical Chemistry Chemical Physics, 2010, 12, 1916.	1.3	63
17	Preparation of structurally colored, monodisperse spherical assemblies composed of black and white colloidal particles using a micro-flow-focusing device. Journal of Materials Chemistry C, 2015, 3, 769-777.	2.7	58
18	Application of an ionic liquid-based electrolyte to a mm sized dye-sensitized solar cell. Journal of Photochemistry and Photobiology A: Chemistry, 2004, 164, 129-135.	2.0	57

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19	Stimuli-responsive hydrogel microfibers with controlled anisotropic shrinkage and cross-sectional geometries. Soft Matter, 2017, 13, 3710-3719.	1.2	54
20	Amphiphilic ruthenium dye as an ideal sensitizer in conversion of light to electricity using ionic liquid crystal electrolyte. Electrochemistry Communications, 2007, 9, 1134-1138.	2.3	53
21	Microfluidic Control of the Internal Morphology in Nanofiberâ€Based Macroscopic Cables. Angewandte Chemie - International Edition, 2012, 51, 7942-7947.	7.2	53
22	Single-cell RNA-seq analysis reveals penaeid shrimp hemocyte subpopulations and cell differentiation process. ELife, 2021, 10, .	2.8	53
23	Droplet Split-and-Contact Method for High-Throughput Transmembrane Electrical Recording. Analytical Chemistry, 2013, 85, 10913-10919.	3.2	49
24	Analytical Model for Particle Capture in Nanopores Elucidates Competition among Electrophoresis, Electroosmosis, and Dielectrophoresis. ACS Nano, 2020, 14, 15816-15828.	7.3	46
25	De novo design of a nanopore for single-molecule detection that incorporates a Î²-hairpin peptide. Nature Nanotechnology, 2022, 17, 67-75.	15.6	44
26	A Portable Lipid Bilayer System for Environmental Sensing with a Transmembrane Protein. PLoS ONE, 2014, 9, e102427.	1.1	43
27	Analysis of Pore Formation and Protein Translocation Using Large Biological Nanopores. Analytical Chemistry, 2017, 89, 11269-11277.	3.2	43
28	Droplet-based lipid bilayer system integrated with microfluidic channels for solution exchange. Lab on A Chip, 2013, 13, 1476.	3.1	40
29	Simultaneous Alternating and Direct Current Readout of Protein Ion Channel Blocking Events Using Glass Nanopore Membranes. Analytical Chemistry, 2008, 80, 2069-2076.	3.2	39
30	Spring-shaped stimuli-responsive hydrogel actuator with large deformation. Sensors and Actuators B: Chemical, 2018, 272, 361-368.	4.0	38
31	Quartz Nanopore Membranes for Suspended Bilayer Ion Channel Recordings. Analytical Chemistry, 2010, 82, 7259-7266.	3.2	37
32	Amplification and Quantification of an Antisense Oligonucleotide from Target microRNA Using Programmable DNA and a Biological Nanopore. Analytical Chemistry, 2017, 89, 2312-2317.	3.2	37
33	DNA Logic Operation with Nanopore Decoding To Recognize MicroRNA Patterns in Small Cell Lung Cancer. Analytical Chemistry, 2018, 90, 8531-8537.	3.2	37
34	Nanopore Logic Operation with DNA to RNA Transcription in a Droplet System. ACS Synthetic Biology, 2017, 6, 1427-1432.	1.9	36
35	Synthetic Ion Channels and DNA Logic Gates as Components of Molecular Robots. ChemPhysChem, 2018, 19, 359-366.	1.0	35
36	Towards combinatorial mixing devices without any pumps by open-capillary channels: fundamentals and applications. Scientific Reports, 2015, 5, 10263.	1.6	33

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37	Logic Gate Operation by DNA Translocation through Biological Nanopores. PLoS ONE, 2016, 11, e0149667.	1.1	33
38	MicroRNA detection at femtomolar concentrations with isothermal amplification and a biological nanopore. Nanoscale, 2017, 9, 16124-16127.	2.8	33
39	Lipid Bilayers on a Picoliter Microdroplet Array for Rapid Fluorescence Detection of Membrane Transport. Small, 2014, 10, 3275-3282.	5.2	31
40	Electrophysiological measurement of ion channels on plasma/organelle membranes using an on-chip lipid bilayer system. Scientific Reports, 2018, 8, 17498.	1.6	31
41	A glass fiber sheet-based electroosmotic lateral flow immunoassay for point-of-care testing. Lab on A Chip, 2012, 12, 5155.	3.1	29
42	Channel current analysis estimates the pore-formation and the penetration of transmembrane peptides. Analyst, The, 2018, 143, 3540-3543.	1.7	29
43	Scalable fabrication of microneedle arrays via spatially controlled UV exposure. Microsystems and Nanoengineering, 2016, 2, 16049.	3.4	28
44	pH regulates pore formation of a protease activated Vip3Aa from Bacillus thuringiensis. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 2234-2241.	1.4	28
45	Channel Current Analysis for Pore-forming Properties of an Antimicrobial Peptide, Magainin 1, Using the Droplet Contact Method. Analytical Sciences, 2016, 32, 57-60.	0.8	27
46	Development of Antimicrobial Stapled Peptides Based on Magainin 2 Sequence. Molecules, 2021, 26, 444.	1.7	26
47	Hairpin DNA Unzipping Analysis Using a Biological Nanopore Array. Electrochemistry, 2016, 84, 338-341.	0.6	25
48	Nanopore Decoding of Oligonucleotides in DNA Computing. Biotechnology Journal, 2018, 13, e1800091.	1.8	24
49	Expression and characterization of the Plasmodium translocon of the exported proteins component EXP2. Biochemical and Biophysical Research Communications, 2017, 482, 700-705.	1.0	23
50	Intramolecular Magnetic Interaction of Phenylene-Linked Bis-Î²-diketone Metal Complexes. Chemistry Letters, 2000, 29, 812-813.	0.7	22
51	Electrophysiological Analysis of Membrane Disruption by Bombinin and Its Isomer Using the Lipid Bilayer System. ACS Applied Bio Materials, 2019, 2, 1542-1548.	2.3	22
52	Lipid-Coated Microdroplet Array for in Vitro Protein Synthesis. Analytical Chemistry, 2011, 83, 3186-3191.	3.2	21
53	Round-tip dielectrophoresis-based tweezers for single micro-object manipulation. Biosensors and Bioelectronics, 2013, 47, 206-212.	5.3	21
54	Preparation of Molecule-Responsive Microsized Hydrogels via Photopolymerization for Smart Microchannel Microvalves. Macromolecular Rapid Communications, 2015, 36, 515-519.	2.0	20

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55	Electrophysiological Analysis of Antimicrobial Peptides in Diverse Species. ACS Omega, 2019, 4, 13124-13130.	1.6	20
56	Spatially Resolved Chemical Detection with a Nanoneedle-Probe-Supported Biological Nanopore. ACS Nano, 2019, 13, 2606-2614.	7.3	20
57	Recognition of Singleâ€Point Mutation Using a Biological Nanopore. Small Methods, 2020, 4, 2000101.	4.6	19
58	Recent Advances in Liposome-Based Molecular Robots. Micromachines, 2020, 11, 788.	1.4	18
59	Recessed Ag/AgCl Microelectrode-Supported Lipid Bilayer for Nanopore Sensing. Analytical Chemistry, 2020, 92, 10856-10862.	3.2	17
60	Enhancement of direct membrane penetration of arginine-rich peptides by polyproline II helix structure. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183403.	1.4	16
61	DNA Origami Nanoplateâ€Based Emulsion with Nanopore Function. Angewandte Chemie - International Edition, 2019, 58, 15299-15303.	7.2	15
62	Rational Design of Helixâ€Stabilized Antimicrobial Peptide Foldamers Containing Î±,Î±â€Disubstituted Amino Acids or Sideâ€Chain Stapling. ChemPlusChem, 2020, 85, 2731-2736.	1.3	15
63	Effect of hydrophobic moment on membrane interaction and cell penetration of apolipoprotein E-derived arginine-rich amphipathic Î±-helical peptides. Scientific Reports, 2022, 12, 4959.	1.6	15
64	Microfluidic Formation of Honeycomb-Patterned Droplets Bounded by Interface Bilayers via Bimodal Molecular Adsorption. Micromachines, 2020, 11, 701.	1.4	13
65	Pattern Recognition of microRNA Expression in Body Fluids Using Nanopore Decoding at Subfemtomolar Concentrations. Jacs Au, 2022, 2, 1829-1838.	3.6	13
66	Electrical Access to Lipid Bilayer Membrane Microchambers for Transmembrane Analysis. Journal of Microelectromechanical Systems, 2011, 20, 797-799.	1.7	12
67	Osmotic-engine-driven liposomes in microfluidic channels. Lab on A Chip, 2019, 19, 3472-3480.	3.1	12
68	Analysis of Membrane Protein Deinsertion-Associated Currents with Nanoneedle-Supported Bilayers to Discover Pore Formation Mechanisms. Langmuir, 2020, 36, 10012-10021.	1.6	12
69	Microfiber-Shaped Programmable Materials with Stimuli-Responsive Hydrogel. Soft Robotics, 2022, 9, 89-97.	4.6	11
70	Single polypeptide detection using a translocon EXP2 nanopore. Proteomics, 2022, 22, e2100070.	1.3	11
71	Uniformly-sized giant liposome formation with gentle hydration. , 2011, , .		10
72	Nanopore decoding for a Hamiltonian path problem. Nanoscale, 2021, 13, 6192-6200.	2.8	10

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73	Microfluidic Formation of Double-Stacked Planar Bilayer Lipid Membranes by Controlling the Water-Oil Interface. Micromachines, 2018, 9, 253.	1.4	9
74	Single-vesicle estimation of ATP-binding cassette transporters in microfluidic channels. Lab on A Chip, 2012, 12, 702-704.	3.1	8
75	Serial DNA relay in DNA logic gates by electrical fusion and mechanical splitting of droplets. PLoS ONE, 2017, 12, e0180876.	1.1	8
76	Specific Charge Transport in Ionic Liquids and Ion Gels and the Importance in Material Science. Kobunshi Ronbunshu, 2006, 63, 31-40.	0.2	7
77	Dynamic behavior of an artificial protein needle contacting a membrane observed by high-speed atomic force microscopy. Nanoscale, 2020, 12, 8166-8173.	2.8	6
78	Nonlinear concentration gradients regulated by the width of channels for observation of half maximal inhibitory concentration (IC50) of transporter proteins. Analyst, The, 2015, 140, 5557-5562.	1.7	5
79	Design of protein-responsive micro-sized hydrogels for self-regulating microfluidic systems. Journal of Micromechanics and Microengineering, 2018, 28, 034002.	1.5	5
80	Biological Nanopore Probe: Probing of Viscous Solutions in a Confined Nanospace. Journal of Physical Chemistry B, 2020, 124, 2410-2416.	1.2	5
81	Towards artificial cell array system: Encapsulation and hydration technologies integrated in liposome array. , 2012, , .		4
82	Stimuli-responsive hydrogel microsprings for multiple and complex actuation. , 2017, , .		4
83	Competing Roles of Two Kinds of Ligand during Nonclassical Crystallization of Pillaredâ€Layer Metalâ€Organic Frameworks Elucidated Using Microfluidic Systems. Chemistry - A European Journal, 2020, 26, 8889-8896.	1.7	3
84	Lipid bilayer on a microdroplet integrated with a patterned Ag/AgCl microelectrode for voltage-clamp fluorometry of membrane transport. Sensors and Actuators B: Chemical, 2021, 334, 129643.	4.0	3
85	Simple Fabrication of Solid-State Nanopores on a Carbon Film. Micromachines, 2021, 12, 1135.	1.4	3
86	A parylene nanopore for stable planar lipid bilayer membranes. , 2010, , .		2
87	Logic gate using artificial cell-membrane: NAND operation by transmembrane DNA via a biological nanopore. , 2013, , .		2
88	DNA Origami Nanoplateâ€Based Emulsion with Nanopore Function. Angewandte Chemie, 2019, 131, 15443-15447.	1.6	2
89	New Sensing Technologies: Microtas/NEMS/MEMS. , 2023, , 526-540.		2
90	Vesicles in a vesicle: Formation of a cell-sized vesicle containing small vesicles from two planar lipid bilayers using pulsed jet flow. , 2013, , .		1

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91	Contactless catch-and-release system for giant liposomes based on negative dielectrophoresis. , 2013, , .		1
92	Mechanical cell pairing system by sliding parylene rails. , 2014, , .		1
93	Batch release of monodisperse liposomes triggered by pulsed voltage stimulation. , 2014, , .		1
94	Planar Lipid Bilayer Formation Using Droplet Contact Method and Its Applications. Seibutsu Butsuri, 2015, 55, 077-080.	0.0	1
95	Well-Controlled Cell-Trapping Systems for Investigating Heterogeneous Cell-Cell Interactions. Advanced Healthcare Materials, 2018, 7, 1701208.	3.9	1
96	Editorial on the Special Issue on Recent Advances of Molecular Machines and Molecular Robots. Micromachines, 2020, 11, 1031.	1.4	1
97	Microfluidic Analysis of ATP-Binding Cassette Transporters at Single-Vesicle Level. Biophysical Journal, 2012, 102, 659a.	0.2	0
98	Solution exchange of droplet contacting lipid bilayer system. , 2012, , .		0
99	Dierectrophoresis-based tweezers for cell-sized liposome manipulation. , 2012, , .		0
100	Pendant liposome system to access the internal solution. , 2013, , .		0
101	Reconstitution and function of membrane proteins into asymmetric giant liposomes by using a pulsed jet flow. , 2014, , .		0
102	Vibration-triggered self-assembly of caged droplets to construct a droplet interface bilayer network. , 2016, , .		0
103	Stimuli-responsive microfiber-bundle actuator with hierarchical alignment. , 2017, , .		0
104	Decoding of DNA Computing by Using Nanopore Measurement. Seibutsu Butsuri, 2018, 58, 034-036.	0.0	0
105	Spring-shaped stimuli-responsive hydrogel actuator for magnifying compression and expansion motions. , 2018, , .		0
106	Direct Chemical Detection in a Microchannel with a Nanoneedle-Based Biological Nanopore Probe. , 2019, , .		0
107	Development of Simple and Rapid Fabrications for Solid-State Nanopores. Biophysical Journal, 2020, 118, 349a.	0.2	0
108	Analyzing Single-Molecule Behavior of a Small Protein in Confined Nanospace of a Biological Nanopore. Biophysical Journal, 2020, 118, 474a.	0.2	0

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109	Lipid Membrane Deformation Induced by Transmembrane Peptides. Biophysical Journal, 2020, 118, 231a.	0.2	0
110	Locally Bendable Stimuli-Responsive Hydrogel Actuator with Axially Patterned Functional Materials. , 2020, , .		0
111	3P2-F07 Construction and connecting logic gate using channel membrane proteins and DNA(Nano/Micro Fluid System). The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2014, 2014, _3P2-F07_1-_3P2-F07_2.	0.0	0
112	29pm3-PN-11 Fabrication method of micro-actuator with multiple hydrogel components. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2015, 2015.7, _29pm3-PN--_29pm3-PN-.	0.0	0
113	(Invited) Nanopore Sensing with a Stable Lipid Bilayer in Microfabricated Devices. ECS Meeting Abstracts, 2016, , .	0.0	0
114	A Single Protein Detection Using a Biological Nanopore Formed By Perforin. ECS Meeting Abstracts, 2016, , .	0.0	0
115	Stimuli-responsive hydrogel microfiber with internal patterns. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2017, 2017.8, PN-77.	0.0	0
116	Spring-shaped stimuli-responsive hydrogel microactuator with large deformation. The Proceedings of Mechanical Engineering Congress Japan, 2017, 2017, J0270103.	0.0	0
117	Preparation of Molecular Stimuli-Responsive Gel Valves That Regulate Microchannels Autonomously. ECS Meeting Abstracts, 2018, , .	0.0	0
118	Biological Nanopore Probes for Spatially-Resolved Chemical Sensing. The Proceedings of Conference of Kanto Branch, 2020, 2020, 17l16.	0.0	0
119	Biological Nanopore Probes Leading to Living Cell Monitoring. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2020, 2020, 1P1-P04.	0.0	0