Toshihisa Osaki

List of Publications by Year
in descending order

124	2,075	218592	254106
papers	citations	26 h-index	43 g-index

125	125	125	2249
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	3D printed microfluidic devices for lipid bilayer recordings. Lab on A Chip, 2022, 22, 890-898.	3.1	14
2	Artificial cell membrane sensor using mosquito olfactory receptor. Journal of Japan Association on Odor Environment, 2022, 53, 17-24.	0.1	0
3	Role of Negatively Charged Lipids Achieving Rapid Accumulation of Water-Soluble Molecules and Macromolecules into Cell-Sized Liposomes against a Concentration Gradient. Langmuir, 2022, 38, 112-121.	1.6	6
4	Formation of nano-sized lipid vesicles with asymmetric lipid components using a pulsed-jet flow method. Sensors and Actuators B: Chemical, 2021, 327, 128917.	4.0	14
5	Biohybrid sensor for odor detection. Lab on A Chip, 2021, 21, 2643-2657.	3.1	20
6	Highly sensitive VOC detectors using insect olfactory receptors reconstituted into lipid bilayers. Science Advances, 2021, 7, .	4.7	42
7	CYK4 relaxes the bias in the off-axis motion by MKLP1 kinesin-6. Communications Biology, 2021, 4, 180.	2.0	16
8	Fluid interfacial energy drives the emergence of three-dimensional periodic structures in micropillar scaffolds. Nature Physics, 2021, 17, 794-800.	6.5	17
9	Artificial Cell Membrane Sensors with Membrane Proteins. Vacuum and Surface Science, 2021, 64, 162-167.	0.0	0
10	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
11	Monolithic Fabrication of a Lipid Bilayer Device Using Stereolithography. , 2021, , .		0
12	Efficient Lipid Bilayer Formation by Dipping Lipid-Loaded Microperforated Sheet in Aqueous Solution. Micromachines, 2021, 12, 53.	1.4	2
13	Perfusion Chamber for Observing a Liposome-Based Cell Model Prepared by a Water-in-Oil Emulsion Transfer Method. ACS Omega, 2020, 5, 19429-19436.	1.6	5
14	Rapid and Resilient Detection of Toxin Pore Formation Using a Lipid Bilayer Array. Small, 2020, 16, e2005550.	5.2	7
15	Bubble-Assisted in-Situ Re-Formation of Artificial Bilayer. , 2020, , .		0
16	A Lipid-Bilayer-On-A-Cup Device for Pumpless Sample Exchange. Micromachines, 2020, 11, 1123.	1.4	2
17	Odorant Sensor Using Olfactory Receptor Reconstituted in a Lipid Bilayer Membrane with Gas Flow System. , 2020, , .		0
18	Hydrodynamic accumulation of small molecules and ions into cell-sized liposomes against a concentration gradient. Communications Chemistry, 2020, 3, .	2.0	11

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19	Dielecrophoretic introduction of the membrane proteins into the BLM platforms for the electrophygiological analysis systems. , 2020, , .		0
20	A pumpless solution exchange system for nanopore sensors. Biomicrofluidics, 2019, 13, 064104.	1.2	11
21	Stacking 2D Droplet Arrays for 3D Configurable Droplet Network. , 2019, , .		0
22	Pumpless Solution Exchange for Repeatable Nanopore Biosensor Driven by Superabsorbent Polymer and Hydrostatic Pressure. , 2019, , .		0
23	Artificial cell membrane system for odorant sensor: development of solution exchange driven by superabsorbent polymer for repeatable detection. , 2019, , .		0
24	Quad Lipid Bilayer Module with 1-Gâ„¦ Series Resistors Toward Quantitative Stochastic-Biosensors. , 2019, , .		0
25	Automatic generation system of cell-sized liposomes. Sensors and Actuators B: Chemical, 2019, 292, 57-63.	4.0	10
26	Construction of a Biohybrid Odorant Sensor Using Biological Olfactory Receptors Embedded into Bilayer Lipid Membrane on a Chip. ACS Sensors, 2019, 4, 711-716.	4.0	46
27	Formation of vesicles-in-a-vesicle with asymmetric lipid components using a pulsed-jet flow method. RSC Advances, 2019, 9, 30071-30075.	1.7	16
28	10.1063/1.5123316.1. , 2019, , .		0
29	Membrane protein-based biosensors. Journal of the Royal Society Interface, 2018, 15, 20170952.	1.5	53
30	Sequential generation of asymmetric lipid vesicles using a pulsed-jetting method in rotational wells. Sensors and Actuators B: Chemical, 2018, 261, 392-397.	4.0	16
31	Well-Controlled Cell-Trapping Systems for Investigating Heterogeneous Cell-Cell Interactions. Advanced Healthcare Materials, 2018, 7, 1701208.	3.9	1
32	Suppression of sloshing by utilizing surface energy and geometry in microliter cylindrical well. Sensors and Actuators B: Chemical, 2018, 258, 1036-1041.	4.0	6
33	Quantitative analysis of cell-free synthesized membrane proteins at the stabilized droplet interface bilayer. Chemical Communications, 2018, 54, 12226-12229.	2.2	13
34	Automatic Planar Asymmetric Lipid Bilayer Membrane Formation toward Biological High-Throughput Assay. , 2018, 2018, 4496-4499.		0
35	Electrophysiological measurement of ion channels on plasma/organelle membranes using an on-chip lipid bilayer system. Scientific Reports, 2018, 8, 17498.	1.6	31
36	Sidewall electrode-chamber for lipid bilayer formation suitable for rapid access of odors to lipid membrane. , 2018, , .		0

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37	Handheld nanopore-based biosensing device. , 2018, , .		1
38	Purification-Free MicroRNA Detection by Using Magnetically Immobilized Nanopores on Liposome Membrane. Analytical Chemistry, 2018, 90, 10217-10222.	3.2	17
39	Nano-sized asymmetric lipid vesicles for drug carrier applications. , 2018, , .		1
40	Spiral channel for fast and noise-free microrna detection. , 2017, , .		0
41	Electric stress produces bilayer lipid membranes by exclusion of excessive oil layer. , 2017, , .		0
42	Lipid bilayer at vertically aligned nanoliter droplets generated by two-layered microfluidic channels. , 2017, , .		0
43	Highly efficient formation of droplet interface bilayers by using a microperforated separator. , 2017, , .		0
44	Self-Propelled Motion of Monodisperse Underwater Oil Droplets Formed by a Microfluidic Device. Langmuir, 2017, 33, 5393-5397.	1.6	24
45	Artificial Cell Membrane Systems for Biosensing Applications. Analytical Chemistry, 2017, 89, 216-231.	3.2	97
46	Metal-Organic Cuboctahedra for Synthetic Ion Channels with Multiple Conductance States. CheM, 2017, 2, 393-403.	5.8	89
47	Pesticide vapor sensing using an aptamer, nanopore, and agarose gel on a chip. Lab on A Chip, 2017, 17, 2421-2425.	3.1	46
48	A sensitive point-of-care testing chip utilizing superabsorbent polymer for the early diagnosis of infectious disease. Sensors and Actuators B: Chemical, 2017, 240, 881-886.	4.0	12
49	Sequential production of various types of asymmetric lipid vesicles using pulse jet flow. , 2017, , .		2
50	Serial DNA relay in DNA logic gates by electrical fusion and mechanical splitting of droplets. PLoS ONE, 2017, 12, e0180876.	1.1	8
51	Logic Gate Operation by DNA Translocation through Biological Nanopores. PLoS ONE, 2016, 11, e0149667.	1.1	33
52	Stability of the microdroplets for portable biosensor. , 2016, 2016, 1918-1921.		0
53	Repetitive formation of optically-observable planar lipid bilayers by rotating chambers on a microaperture. Lab on A Chip, 2016, 16, 2423-2426.	3.1	11
54	Non-spherical liposome formation using 3D-laser-printed micro-cube structures. , 2016, , .		0

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55	Vibration-triggered self-assembly of caged droplets to construct a droplet interface bilayer network. , 2016, , .		0
56	Microrna diagnosis using complementary DNA that brakes transit events through a biological nanopore. , 2016, , .		1
57	Dynamics of Giant Vesicles and Their Application as Artificial Cell-based Sensor. Bunseki Kagaku, 2016, 65, 715-727.	0.1	0
58	Cell-sized asymmetric lipid vesicles facilitate the investigation of asymmetric membranes. Nature Chemistry, 2016, 8, 881-889.	6.6	119
59	Integrated Microfluidic System for Size-Based Selection and Trapping of Giant Vesicles. Analytical Chemistry, 2016, 88, 1111-1116.	3.2	40
60	Analysis and Application of Ion Channel Functions on Artificial Cell Membrane Using the Droplet Contact Method. Bunseki Kagaku, 2015, 64, 441-449.	0.1	0
61	Rotational chambers on fluidic channels for the repetitive formation of optically observable lipid-bilayer membranes. , 2015, , .		0
62	Electrical detection of pesticide vapors by biological nanopores with DNA aptamers. , 2015, , .		3
63	Liposome arrangement connected with avidin-biotin complex for constructing functional synthetic tissue. , 2015, , .		0
64	Connectable DNA-logic operation using droplets and rupture/reformation of bilayer lipid membranes. , 2015, , .		0
65	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
66	4ï¼Žäººå·¥ç´°èƒžè†œä½œè£½ã•ã‚·ãƒ³ã‚°ãƒ«ã‚ãƒ³ãƒãƒ£ãƒãƒ«è¨˜æ¸¬. Electrochemistry, 2015, 83, 1096-1100.	0.6	0
67	A Portable Lipid Bilayer System for Environmental Sensing with a Transmembrane Protein. PLoS ONE, 2014, 9, e102427.	1.1	43
68	Mechanical cell pairing system by sliding parylene rails. , 2014, , .		1
69	Reconstitution and function of membrane proteins into asymmetric giant liposomes by using a pulsed jet flow. , 2014, , .		0
70	Batch release of monodisperse liposomes triggered by pulsed voltage stimulation. , 2014, , .		1
71	Highly packed liposome assemblies toward synthetic tissue. , 2014, , .		0
72	pH-Induced Motion Control of Self-Propelled Oil Droplets Using a Hydrolyzable Gemini Cationic Surfactant. Langmuir, 2014, 30, 7977-7985.	1.6	42

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73	Lipid Bilayers on a Picoliter Microdroplet Array for Rapid Fluorescence Detection of Membrane Transport. Small, 2014, 10, 3275-3282.	5.2	31
74	Nano bioresearch approach by microtechnology. Drug Discovery Today, 2013, 18, 552-559.	3.2	2
75	Droplet Split-and-Contact Method for High-Throughput Transmembrane Electrical Recording. Analytical Chemistry, 2013, 85, 10913-10919.	3.2	49
76	Intra/extracellular investigation for ion channels with lipid bilayer array at the single molecule level. , 2013, , .		0
77	Split-and-contact device to form planar lipid bilayers. , 2013, , .		0
78	Pendant liposome system to access the internal solution. , 2013, , .		0
79	Vesicles in a vesicle: Formation of a cell-sized vesicle containing small vesicles from two planar lipid bilayers using pulsed jet flow. , 2013, , .		1
80	Mechanical pumpless giant liposome trapping system using parylene micro filter for biological assay. , 2013, , .		1
81	Horizontal lipid bilayers formed by droplets contact method on patterned micro-droplets. , 2013, , .		0
82	Logic gate using artificial cell-membrane: NAND operation by transmembrane DNA via a biological nanopore. , 2013, , .		2
83	Contactless catch-and-release system for giant liposomes based on negative dielectrophoresis. , 2013, , .		1
84	Round-tip dielectrophoresis-based tweezers for single micro-object manipulation. Biosensors and Bioelectronics, 2013, 47, 206-212.	5.3	21
85	Droplet-based lipid bilayer system integrated with microfluidic channels for solution exchange. Lab on A Chip, 2013, 13, 1476.	3.1	40
86	Confocal laser scanning microscopic observation of deformation, biological reaction, and contact of cells using mechanical trapping system with parylene micro filter. , 2013, , .		1
87	Droplet network connected by biological nanopores for DNA computing. , 2013, , .		3
88	Synthetic nanocage formed by rhodium-organic cuboctahedra: For single molecule detection in lipid bilayer. , 2013, , .		1
89	Automated Parallel Recordings of Topologically Identified Single Ion Channels. Scientific Reports, 2013, 3, 1995.	1.6	123
90	Molecular resolution of a dioleoyl-Sn-glycero-phosphocholine lipid bilayer in liquid by phase modulation atomic force microscopy. Applied Physics Letters, 2012, 101, 063117.	1.5	2

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91	Towards artificial cell array system: Encapsulation and hydration technologies integrated in liposome array. , 2012, , .		4
92	Solution exchange of droplet contacting lipid bilayer system. , 2012, , .		0
93	Dierectrophoresis-based tweezers for cell-sized liposome manipulation. , 2012, , .		0
94	A glass fiber sheet-based electroosmotic lateral flow immunoassay for point-of-care testing. Lab on A Chip, 2012, 12, 5155.	3.1	29
95	Single-vesicle estimation of ATP-binding cassette transporters in microfluidic channels. Lab on A Chip, 2012, 12, 702-704.	3.1	8
96	Lipid-Coated Microdroplet Array for in Vitro Protein Synthesis. Analytical Chemistry, 2011, 83, 3186-3191.	3.2	21
97	25 second cocaine sensing by membrane protein channel integrated in a microfluidic device. , 2011, , .		0
98	Uniformly-sized giant liposome formation with gentle hydration. , 2011, , .		10
99	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
100	Electrical Access to Lipid Bilayer Membrane Microchambers for Transmembrane Analysis. Journal of Microelectromechanical Systems, 2011, 20, 797-799.	1.7	12
101	Simple and Stable Lipid Bilayer Formation: A Droplets Contacting Method using Parylene Micro-pores for Multiple Ion Channel Recordings. IEEJ Transactions on Sensors and Micromachines, 2011, 131, 419-424.	0.0	2
102	A rupture detection algorithm for the DNA translocation detection though biological nanopore. Procedia Engineering, 2010, 5, 796-799.	1.2	3
103	Parylene-coating in PDMS microfluidic channels prevents the absorption of fluorescent dyes. Sensors and Actuators B: Chemical, 2010, 150, 478-482.	4.0	102
104	A Polymerâ€Based Nanoporeâ€Integrated Microfluidic Device for Generating Stable Bilayer Lipid Membranes. Small, 2010, 6, 2100-2104.	5.2	74
105	A parylene nanopore for stable planar lipid bilayer membranes. , 2010, , .		2
106	Dielectrophoresis-based liposome delivery to a planar lipid membrane for efficient membrane protein reconstitution. , 2010, , .		1
107	Electro-optical imaging microscopy of dye doped lipid membrane. , 2009, , .		0
108	Multichannel Simultaneous Measurements of Single-Molecule Translocation in Î±-Hemolysin Nanopore Array. Analytical Chemistry, 2009, 81, 9866-9870.	3.2	103

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109	Electro-Optical Imaging Microscopy of Dye-Doped Artificial Lipidic Membranes. Biophysical Journal, 2009, 97, 2913-2921.	0.2	13
110	Electrical recording of lipid membrane in a microfluidic device. , 2009, , .		0
111	Electro-Optical Imaging Microscopy of Dye Doped Lipid Bilayer. , 2009, , .		0
112	Supported Lipid Bilayers on Spacious and pH-Responsive Polymer Cushions with Varied Hydrophilicity. Journal of Physical Chemistry B, 2008, 112, 6373-6378.	1.2	41
113	Combined microslit electrokinetic measurements and reflectometric interference spectroscopy to study protein adsorption processes. Biointerphases, 2007, 2, 159-164.	0.6	14
114	Hydrophobic and Electrostatic Interactions in the Adsorption of Fibronectin at Maleic Acid Copolymer Films. Journal of Physical Chemistry B, 2006, 110, 12119-12124.	1.2	37
115	Electrostatic Switching of Biopolymer Layers. Insights from Combined Electrokinetics and Reflectometric Interference. Analytical Chemistry, 2006, 78, 5851-5857.	3.2	13
116	Electrokinetic microslit experiments to analyse the charge formation at solid/liquid interfaces. Microfluidics and Nanofluidics, 2006, 2, 367-379.	1.0	51
117	Polyanion Protection of Silane Bonds to Silicon Oxide Revealed by Electrokinetic Measurements. Langmuir, 2004, 20, 524-527.	1.6	6
118	Ionization Characteristics and Structural Transitions of Alternating Maleic Acid Copolymer Films. Langmuir, 2003, 19, 5787-5793.	1.6	43
119	Dielectric Relaxation on the Intermediate Layer in a Bipolar Membrane under the Water Splitting Phenomenon. Journal of Colloid and Interface Science, 2002, 253, 88-93.	5.0	3
120	Dielectric Relaxation on the Intermediate Layer in a Bipolar Membrane under the Water Splitting Phenomenon. Journal of Colloid and Interface Science, 2002, 253, 94-102.	5.0	10
121	Ionic Environmental Effect on the Time-Dependent Characteristics of Membrane Potential in a Bipolar Membrane. Journal of Colloid and Interface Science, 2001, 240, 162-171.	5.0	2
122	Alcohol splitting in a bipolar membrane and analysis of the product. Journal of Electroanalytical Chemistry, 2001, 506, 34-41.	1.9	17
123	Effects of pH on the Transport of 5-Fluorouracil across a Fibroin Membrane.. Journal of Fiber Science and Technology, 2000, 56, 302-308.	0.0	1
124	Effect of interfacial state in bipolar membrane on rectification and water splitting. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1999, 159, 395-404.	2.3	28