Hiroaki Suzuki

List of Publications by Citations

115 papers	2,853 citations	29 h-index	51 g-index
143 ext. papers	3,244 ext. citations	4.2 avg, IF	5.04 L-index

#	Paper	IF	Citations
115	Lipid bilayer formation by contacting monolayers in a microfluidic device for membrane protein analysis. *Analytical Chemistry*, **2006**, 78, 8169-74	7.8	337
114	Formation of giant lipid vesiclelike compartments from a planar lipid membrane by a pulsed jet flow. *Journal of the American Chemical Society*, **2007**, 129, 12608-9	16.4	144
113	Coupling of the fusion and budding of giant phospholipid vesicles containing macromolecules. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 5942-7	11.5	121
112	A chaotic mixer for magnetic bead-based micro cell sorter. *Journal of Microelectromechanical Systems*, **2004**, 13, 779-790	2.5	108
111	Cell-free protein synthesis inside giant unilamellar vesicles analyzed by flow cytometry. *Langmuir*, **2012**, 28, 8426-32	4	93
110	Multichannel simultaneous measurements of single-molecule translocation in alpha-hemolysin nanopore array. *Analytical Chemistry*, **2009**, 81, 9866-70	7.8	90
109	Lipid bilayer microarray for parallel recording of transmembrane ion currents. *Analytical Chemistry*, **2008**, 80, 328-32	7.8	90
108	Highly reproducible method of planar lipid bilayer reconstitution in polymethyl methacrylate microfluidic chip. *Langmuir*, **2006**, 22, 1937-42	4	83
107	Extrinsic spin Hall effects measured with lateral spin valve structures. *Physical Review B*, **2014**, 89,	3.3	82
106	Quantitative study of the structure of multilamellar giant liposomes as a container of protein synthesis reaction. *Langmuir*, **2008**, 24, 13540-8	4	79
105	Population analysis of structural properties of giant liposomes by flow cytometry. *Langmuir*, **2009**, 25, 10439-43	4	78
104	Planar lipid bilayer reconstitution with a micro-fluidic system. *Lab on A Chip*, **2004**, 4, 502-5	7.2	73
103	Size control of giant unilamellar vesicles prepared from inverted emulsion droplets. *Journal of Colloid and Interface Science*, **2012**, 376, 119-25	9.3	72
102	Active control of an axisymmetric jet with distributed electromagnetic flap actuators. *Experiments in Fluids*, **2004**, 36, 498-509	2.5	67
101	Electrophysiological recordings of single ion channels in planar lipid bilayers using a polymethyl methacrylate microfluidic chip. *Biosensors and Bioelectronics*, **2007**, 22, 1111-5	11.8	57
100	Chaperone properties of mammalian mitochondrial translation elongation factor Tu. *Journal of Biological Chemistry*, **2007**, 282, 4076-84	5.4	56
99	Cellular compartment model for exploring the effect of the lipidic membrane on the kinetics of encapsulated biochemical reactions. *Langmuir*, **2010**, 26, 8544-51	4	54

98	Programmed vesicle fusion triggers gene expression. *Langmuir*, **2011**, 27, 13082-90	4	52
97	In-source and postsource decay in negative-ion matrix-assisted laser desorption/ionization time-of-flight mass spectrometry of neutral oligosaccharides. *Analytical Chemistry*, **2005**, 77, 1701-7	7.8	47
96	Importance of parasite RNA species repression for prolonged translation-coupled RNA self-replication. *Chemistry and Biology*, **2012**, 19, 478-87		45
95	Detection of association and fusion of giant vesicles using a fluorescence-activated cell sorter. *Langmuir*, **2010**, 26, 15098-103	4	45
94	Microfluidic lipid membrane formation on microchamber arrays. *Lab on A Chip*, **2011**, 11, 2485-7	7.2	42
93	Microtechnologies for membrane protein studies. *Analytical and Bioanalytical Chemistry*, **2008**, 391, 2695-702	4.4	41
92	Stochasticity in gene expression in a cell-sized compartment. *ACS Synthetic Biology*, **2015**, 4, 566-76	5.7	40
91	N-terminal labeling of proteins by the Pictet-Spengler reaction. *Bioorganic and Medicinal Chemistry Letters*, **2008**, 18, 4550-3	2.9	40
90	Impurity-induced gap renormalization in anisotropic superconductors: Mixed-state specific heat of La2□Srx(Cu1□Zny)O4 and Y(Ni1□Ptx)2B2C. *Physica C: Superconductivity and Its Applications*, **2000**, 341-348, 2177-2180	1.3	36
89	A comparative study of the fragmentation of neutral lactooligosaccharides in negative-ion mode by UV-MALDI-TOF and UV-MALDI ion-trap/TOF mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **2006**, 17, 67-74	3.5	35
88	Ninety-six-well planar lipid bilayer chip for ion channel recording fabricated by hybrid stereolithography. *Biomedical Microdevices*, **2009**, 11, 17-22	3.7	34
87	Constructing partial models of cells. *Cold Spring Harbor Perspectives in Biology*, **2010**, 2, a004945	10.2	33
86	Hydrodynamic trapping of Tetrahymena thermophila for the long-term monitoring of cell behaviors. *Lab on A Chip*, **2012**, 12, 3451-7	7.2	26
85	Semiquantitative analysis of isomeric oligosaccharides by negative-ion mode UV-MALDI TOF postsource decay mass spectrometry and their fragmentation mechanism study at N-acetyl hexosamine moiety. *Journal of Mass Spectrometry*, **2006**, 41, 454-62	2.2	26
84	Nonlocal effects and shrinkage of the vortex core radius in YNi2B2C probed by muon spin rotation. *Physical Review B*, **2002**, 65,	3.3	26
83	Cell-free protein synthesis from a single copy of DNA in a glass microchamber. *Lab on A Chip*, **2012**, 12, 2704-11	7.2	25
82	Computationally and experimentally derived general rules for fragmentation of various glycosyl bonds in sodium adduct oligosaccharides. *Analytical Chemistry*, **2009**, 81, 1108-20	7.8	25
81	Quasiparticle Density of States of Clean and Dirtyd-Wave Superconductors: Mixed-State Specific Heat of La2-xSrxCuO4Single Crystals. *Journal of the Physical Society of Japan*, **2000**, 69, 1602-1605	1.5	25

80	Effects of compartment size on the kinetics of intracompartmental multimeric protein synthesis. *ACS Synthetic Biology*, **2012**, 1, 431-7	5.7	24
79	Synthesis of functional proteins within liposomes. *Methods in Molecular Biology*, **2010**, 607, 243-56	1.4	23
78	A parylene lift-off process with microfluidic channels for selective protein patterning. *Journal of Micromechanics and Microengineering*, **2007**, 17, 496-500	2	23
77	Biomolecular linear motors confined to move upon micro-patterns on glass. *Journal of Micromechanics and Microengineering*, **2006**, 16, 1550-1554	2	21
76	Reverse Transcription Polymerase Chain Reaction in Giant Unilamellar Vesicles. *Scientific Reports*, **2018**, 8, 9214	4.9	20
75	Cell-free protein synthesis in a microchamber revealed the presence of an optimum compartment volume for high-order reactions. *ACS Synthetic Biology*, **2014**, 3, 347-52	5.7	20
74	Origin of lognormal-like distributions with a common width in a growth and division process. *Physical Review E*, **2011**, 83, 031118	2.4	20
73	Shrunk to femtolitre: Tuning high-throughput monodisperse water-in-oil droplet arrays for ultra-small micro-reactors. *Applied Physics Letters*, **2012**, 101, 074108	3.4	19
72	Liposome-based liquid handling platform featuring addition, mixing, and aliquoting of femtoliter volumes. *PLoS ONE*, **2014**, 9, e101820	3.7	18
71	Search for H7 in H2+He8 collisions. *Physical Review C*, **2010**, 81,	2.7	17
70	Specific heat study of SrCu2(BO3)2. *Physica B: Condensed Matter*, **2000**, 281-282, 667-668	2.8	17
69	Low-temperature specific heat study of SrCu2(BO3)2 with an exactly solvable ground state. *Journal of Experimental and Theoretical Physics*, **2000**, 90, 129-132	1	17
68	Deformation Modes of Giant Unilamellar Vesicles Encapsulating Biopolymers. *ACS Synthetic Biology* , **2018**, 7, 739-747	5.7	16
67	Identification of giant unilamellar vesicles with permeability to small charged molecules. *RSC Advances*, **2014**, 4, 35224	3.7	16
66	Solid-phase fluorescence and ionization efficiency in negative-ion matrix-assisted laser desorption/ionization of neutral oligosaccharides: interaction between beta-carboline matrix and ammonium salt. *Journal of the American Society for Mass Spectrometry*, **2007**, 18, 714-23	3.5	15
65	Single-cell RNA-seq analysis reveals penaeid shrimp hemocyte subpopulations and cell differentiation process. *ELife*, **2021**, 10,	8.9	15
64	decay of the proton-rich nucleus Si24 and its mirror asymmetry. *Physical Review C*, **2009**, 80,	2.7	14
63	A magnetic force driven chaotic micro-mixer		14

62	Optimization of Matrix and Amount of Ammonium Chloride Additive for Effective Ionization of Neutral Oligosaccharides as Chloride Ion Adducts in Negative-Mode MALDI-TOF Mass Spectrometry. *Journal of the Mass Spectrometry Society of Japan*, **2005**, 53, 227-229	0.2	13
61	Statistical analysis of discrete encapsulation of nanomaterials in colloidal capsules. *Analytical Methods*, **2012**, 4, 1648	3.2	12
60	Shape Transformations of Lipid Vesicles by Insertion of Bulky-Head Lipids. *PLoS ONE*, **2015**, 10, e0132963	3.7	11
59	Active Control of Axisymmetric Jet with an Array of Micro Electro-Magnetic Flap Actuators.. *880-02 Nihon Kikai Gakkai Ronbunsh□Transactions of the Japan Society of Mechanical Engineers Series B B-hen*, **1999**, 65, 3644-3651		11
58	Breakup process for 100 MeV 3He interacting with 165Ho and 166, 167Er nuclei. *Nuclear Physics A*, **1984**, 413, 290-310	1.3	11
57	Bio-inspired three-dimensional self-patterning of functional coatings for PDMS microfluidics. *Soft Matter*, **2013**, 9, 3473	3.6	10
56	Electro-optical imaging microscopy of dye-doped artificial lipidic membranes. *Biophysical Journal*, **2009**, 97, 2913-21	2.9	9
55	Anomalous quasiparticle excitations in Y(Ni1□Ptx)2B2C. *Physica B: Condensed Matter*, **2003**, 326, 364-368	2.8	9
54	Self-assembly of artificially manufactured microcomponents using the entropic effect. *Sensors and Actuators A: Physical*, **2017**, 254, 43-53	3.9	8
53	Chapter 2 - Detection and analysis of protein synthesis and RNA replication in giant liposomes. *Methods in Enzymology*, **2009**, 464, 19-30	1.7	8
52	Energy and angular momentum transfers in equilibrium and pre-equilibrium 158Gd(□xn) reactions. *Nuclear Physics A*, **1982**, 379, 160-172	1.3	8
51	Fractal-shaped microchannel design for a kinetic analysis of biochemical reaction in a delay line. *Microfluidics and Nanofluidics*, **2012**, 13, 273-278	2.8	7
50	Anomalous field dependence of the vortex-core radius and magnetic penetration depth in YNi2B2C probed by □R. *Physica B: Condensed Matter*, **2000**, 289-290, 377-380	2.8	7
49	Proton-rich nuclear structure and mirror asymmetry investigated by□decay spectroscopy of24Si. *Journal of Physics: Conference Series*, **2011**, 312, 092031	0.3	5
48	Micro-droplet model for recursive growth and division dynamics of the cell. *Europhysics Letters*, **2011**, 96, 48006	1.6	5
47	Fragmentation of Lewis-type trisaccharides in the gas phase: Experimental and theoretical studies. *International Journal of Mass Spectrometry*, **2008**, 278, 1-9	1.9	5
46	One-step micromolding of complex 3D microchambers for single-cell analysis. *Lab on A Chip*, **2017**, 17, 647-652	7.2	4
45	Experimental study of the knockout reaction mechanism using O14 at 60 MeV/nucleon. *Physical Review C*, **2016**, 93,	2.7	4

44	Statistical analysis of vesicle morphology dynamics based on a free energy landscape. *Soft Matter*, **2014**, 10, 6038-46	3.6	4
43	Deformation Dynamics of Giant Unilamellar Vesicles in the Large Surface-to-Volume Ratio Regime: The Emergence of Neuron-like Morphology. *Langmuir*, **2020**, 36, 6238-6244	4	3
42	Beta-decay study of Tz = - 2 proton-rich nucleus 24Si. *European Physical Journal A*, **2009**, 42, 375	2.5	3
41	A Chaotic Micro-Mixer Using Magnetic Beads. *880-02 Nihon Kikai Gakkai Ronbunsh□Transactions of the Japan Society of Mechanical Engineers Series B B-hen*, **2003**, 69, 2626-2632		3
40	Plug-and-play microfluidic production of monodisperse giant unilamellar vesicles using droplet transfer across Water□il interface. *Sensors and Actuators B: Chemical*, **2022**, 355, 131281	8.5	3
39	Fragmentation of Neutral Oligosaccharides in Negative-ion MALDI Mass Spectrometry. *Trends in Glycoscience and Glycotechnology*, **2006**, 18, 277-292	0.1	3
38	A simple microfluidic device for live-imaging of the vertical section of epithelial cells. *Analyst, The*, **2020**, 145, 667-674	5	3
37	Usefulness of cell-penetrating peptides and penetration accelerating sequence for nose-to-brain delivery of glucagon-like peptide-2. *Journal of Controlled Release*, **2021**, 335, 575-583	11.7	3
36	Ejection of Large Particulate Materials from Giant Unilamellar Vesicles Induced by Electropulsation. *Langmuir*, **2019**, 35, 13196-13204	4	2
35	Modification of an amplification reaction in recursively dynamic compartments driven by stirring. *Analytical Chemistry*, **2013**, 85, 12002-10	7.8	2
34	Impurity-induced gap modification in anisotropic superconductors: mixed-state specific heat of La2□Srx(Cu1□Zny)O4 and Y(Ni1□Ptx)2B2C. *Physica C: Superconductivity and Its Applications*, **2001**, 357-360, 42-45	1.3	2
33	Triple focussing electron spectrum selector (TESS-II) with a pair of sector magnets. *Nuclear Instruments & Methods in Physics Research*, **1982**, 204, 101-108		2
32	Evolvability and Self-Replication of Genetic Information in Liposomes **2011**, 275-287		2
31	Fracture characterization of inhomogeneous wrinkled metallic films deposited on soft substrates. *Journal Physics D: Applied Physics*, **2017**, 50, 495301	3	1
30	Selective bonding method for self-assembly of heterogeneous components using patterned surfaces. *Sensors and Actuators A: Physical*, **2018**, 279, 306-312	3.9	1
29	Polymer-Induced Self-Assembly of a Three-Dimensional Mesoscale Structure. *Journal of Microelectromechanical Systems*, **2019**, 28, 678-684	2.5	1
28	Assembly of Microparticles to Patterned Trenches Using the Depletion Volume Effect. *Micromachines*, **2019**, 10,	3.3	1
27	Microchamber device for detection of transporter activity of adherent cells. *Frontiers in Bioengineering and Biotechnology*, **2015**, 3, 32	5.8	1

26	A microwell device for measurement of membrane transport of adherent cells **2015**,		1
25	Constructive Approaches for the Origin of Life. *Cellular Origin and Life in Extreme Habitats*, **2012**, 289-303		1
24	Bio-inspired 3D self-patterning of functional coatings for PDMS microfluidics **2011**,		1
23	Excess quasiparticles outside the vortex cores in Y(Ni1−xPtx)2B2C. *Physica C: Superconductivity and Its Applications*, **2003**, 388-389, 197-198	1.3	1
22	Controlled formation of topological defects of liquid crystals in micro-wells. *Liquid Crystals*,1-9	2.3	1
21	Assignments of B-Type Fragments in Post-Source Decay of Negative-Ion Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry of Neutral Lactooligosaccharides. *Journal of the Mass Spectrometry Society of Japan*, **2006**, 54, 251-254	0.2	1
20	Numerical and Experimental Analyses of Three- Dimensional Unsteady Flow around a Micro-Pillar Subjected to Rotational Vibration. *Micromachines*, **2018**, 9,	3.3	1
19	Sizing of giant unilamellar vesicles using a metal mesh with a high opening ratio. *Chemistry and Physics of Lipids*, **2021**, 241, 105148	3.7	1
18	Elucidating the Membrane Dynamics and Encapsulation Mechanism of Large DNA Molecules Under Molecular Crowding Conditions Using Giant Unilamellar Vesicles. *ACS Synthetic Biology*, **2020**, 9, 2819-2827	5.7	0
17	Applying deterministic lateral displacement cell separation on immune cells of Marine shrimp. *Sensors and Actuators B: Chemical*, **2021**, 347, 130587	8.5	0
16	Liposome-Mediated Material Transfer in Single Cells **2019**, 1-14		
15	Selective self-assembly of three-component system based on hydrophilic/hydrophobic patterning. *Sensors and Actuators A: Physical*, **2020**, 312, 112143	3.9	
14	A fluidics-based impact sensor. *PLoS ONE*, **2018**, 13, e0195741	3.7	
13	Origin of Cell Scenarios Supported by Dynamics of Lipid Membranes. *Seibutsu Butsuri*, **2013**, 53, 134-139	0	
12	1P-183 Size control of uniamellar giantvesicle using microfluidics(Biol & Artifi memb.:Structure & Property, The 47th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2009**, 49, S91	0	
11	1P342 1J1520 Diffusion Modeling of Controlled Shrinkage for Femtoliter Water-in-oil Emulsion(Bioengineering,Oral Presentations,The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2010**, 50, S80	0	
10	1P070 Co-translational folding of beta-galactosidase and beta-glucuronidase in an in vitro translation system(Protein:Property,The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2010**, 50, S31	0	
9	2P250 Detection of association and fusion of giant vesicles using fluorescence-activated cell sorter(The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2010**, 50, S126-S127	0	

8	3P-275 Quantitative analysis of interactions between the phospholipid membrane and encapsulated reaction systems in cell-sized liposomes(The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S170	o
7	2S8-6 Dynamics of structure and internal reactions in liposomes explored by fluorescence-activated cell sorter(2S8 Giant Liposome Research Front Line,The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S13	o
6	3P-277 Platform for controlling micro-emulsions as a model of growth and division cycle of the cell(The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S170	o
5	Dividing Small Numbers: The Discreteness and Distribution of Molecules in the Cell Membrane **2018**, 69-78	
4	Liposome-Mediated Material Transfer in Single Cells **2022**, 435-448	
3	Reconstruction and Functional Measurement of Artificial Lipid Membranes using Micro-Technologies. *Seibutsu Butsuri*, **2009**, 49, 086-087	o
2	Coarse View of Life from Physics. *Seibutsu Butsuri*, **2012**, 52, 098-099	o
1	1C33 Volume Dependence of Cell-free Protein Synthesis Using a Glass Microchamber. *The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME*, **2014**, 2014.26, 91-92	o