Taro Toyota

List of Publications by Year in descending order

99 papers	2,868 citations	236912 25 h-index	182417 51 g-index
99 all docs	99 docs citations	99 times ranked	2441 citing authors

#	Article	IF	Citations
1	Self-reproduction of supramolecular giant vesicles combined with the amplification of encapsulated DNA. Nature Chemistry, 2011, 3, 775-781.	13.6	456
2	Fatty Acid Chemistry at the Oilâ^'Water Interface:â€‰ Self-Propelled Oil Droplets. Journal of the American Chemical Society, 2007, 129, 9386-9391.	13.7	271
3	Self-Propelled Oil Droplets Consuming â€œFuelâ€•Surfactant. Journal of the American Chemical Society, 2009, 131, 5012-5013.	13.7	229
4	A recursive vesicle-based model protocell with a primitive model cell cycle. Nature Communications, 2015, 6, 8352.	12.8	166
5	A Novel System of Self-Reproducing Giant Vesicles. Journal of the American Chemical Society, 2003, 125, 8134-8140.	13.7	143
6	Population Analysis of Structural Properties of Giant Liposomes by Flow Cytometry. Langmuir, 2009, 25, 10439-10443.	3.5	89
7	Preparation of BODIPY probes for multicolor fluorescence imaging studies of membrane dynamics. New Journal of Chemistry, 2001, 25, 667-669.	2.8	85
8	Size control of giant unilamellar vesicles prepared from inverted emulsion droplets. Journal of Colloid and Interface Science, 2012, 376, 119-125.	9.4	78
9	pH-Sensitive Self-Propelled Motion of Oil Droplets in the Presence of Cationic Surfactants Containing Hydrolyzable Ester Linkages. Langmuir, 2012, 28, 1190-1195.	3.5	62
10	Detection of Association and Fusion of Giant Vesicles Using a Fluorescence-Activated Cell Sorter. Langmuir, 2010, 26, 15098-15103.	3.5	54
11	Photo-triggered solvent-free metamorphosis of polymeric materials. Nature Communications, 2017, 8, 502.	12.8	51
12	Tip-enhanced Raman Spectroscopy of Lipid Bilayers in Water with an Alumina- and Silver-coated Tungsten Tip. Analytical Sciences, 2013, 29, 865-869.	1.6	50
13	Reversible Morphological Control of Tubulin-Encapsulating Giant Liposomes by Hydrostatic Pressure. Langmuir, 2016, 32, 3794-3802.	3.5	50
14	Near-infrared-fluorescence imaging of lymph nodes by using liposomally formulated indocyanine green derivatives. Bioorganic and Medicinal Chemistry, 2014, 22, 721-727.	3.0	49
15	Listeria-like Motion of Oil Droplets. Chemistry Letters, 2006, 35, 708-709.	1.3	45
16	Population Study of Sizes and Components of Self-Reproducing Giant Multilamellar Vesicles. Langmuir, 2008, 24, 3037-3044.	3.5	43
17	pH-Induced Motion Control of Self-Propelled Oil Droplets Using a Hydrolyzable Gemini Cationic Surfactant. Langmuir, 2014, 30, 7977-7985.	3.5	42
18	Integrated Microfluidic System for Size-Based Selection and Trapping of Giant Vesicles. Analytical Chemistry, 2016, 88, 1111-1116.	6.5	40

#	Article	IF	Citations
19	Preparation and characterization of phospholipid-conjugated indocyanine green as a near-infrared probe. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 7481-7485.	2.2	35
20	Spontaneous transformation from micelles to vesicles associated with sequential conversions of comprising amphiphiles within assemblies. Chemical Communications, 2014, 50, 2190-2192.	4.1	35
21	Simultaneous Measurement of Surface Tension and Its Gradient around Moving Camphor Boat on Water Surface. Chemistry Letters, 2014, 43, 1002-1004.	1.3	32
22	Budding and Division of Giant Vesicles Linked to Phospholipid Production. Scientific Reports, 2019, 9, 165.	3.3	29
23	Giant Vesicles Containing Microspheres with High Volume Fraction Prepared by Water-in-oil Emulsion Centrifugation. Chemistry Letters, 2013, 42, 295-297.	1.3	28
24	Sparkling Morphological Changes and Spontaneous Movements of Self-assemblies in Water Induced by Chemical Reactions. Chemistry Letters, 2009, 38, 1010-1015.	1.3	26
25	Mode Changes Associated with Oil Droplet Movement in Solutions of Gemini Cationic Surfactants. Langmuir, 2013, 29, 7689-7696.	3.5	26
26	Deformable Self-Propelled Micro-Object Comprising Underwater Oil Droplets. Scientific Reports, 2016, 6, 31292.	3.3	26
27	Topologyâ€Reset Execution: Repeatable Postcyclization Recyclization of Cyclic Polymers. Angewandte Chemie - International Edition, 2019, 58, 144-148.	13.8	25
28	Helical Aggregate of Oleic Acid and Its Dynamics in Water at pH 8. Chemistry Letters, 2005, 34, 46-47.	1.3	24
29	Fluorescence Microscopic Investigation on Morphological Changes of Giant Multilamellar Vesicles Induced by Amphiphilic Additives. Langmuir, 2006, 22, 1976-1981.	3.5	24
30	Self-Propelled Motion of Monodisperse Underwater Oil Droplets Formed by a Microfluidic Device. Langmuir, 2017, 33, 5393-5397.	3.5	24
31	DNA Length-dependent Division of a Giant Vesicle-based Model Protocell. Scientific Reports, 2019, 9, 6916.	3.3	24
32	Giant Vesicles Containing Superparamagnetic Iron Oxide as Biodegradable Cell-Tracking MRI Probes. Analytical Chemistry, 2012, 84, 3952-3957.	6.5	23
33	Direct Visualization of DNA Duplex Formation on the Surface of a Giant Liposome. ChemBioChem, 2003, 4, 778-781.	2.6	22
34	Surface Tension Gradient around an Alcohol Droplet Moving Spontaneously on a Water Surface. Analytical Sciences, 2014, 30, 441-444.	1.6	21
35	Formation of Monodisperse Hierarchical Lipid Particles Utilizing Microfluidic Droplets in a Nonequilibrium State. Langmuir, 2015, 31, 2334-2341.	3.5	21
36	Motion modes of two self-propelled camphor boats on the surface of a surfactant-containing solution. Journal of Colloid and Interface Science, 2018, 511, 184-192.	9.4	20

#	Article	IF	Citations
37	A sustainable self-reproducing liposome consisting of a synthetic phospholipid. Chemistry and Physics of Lipids, 2019, 222, 1-7.	3.2	19
38	Measurement of membrane tension of free standing lipid bilayers via laser-induced surface deformation spectroscopy. Soft Matter, 2015, 11, 8641-8647.	2.7	18
39	Multiple-division of self-propelled oil droplets through acetal formation. Soft Matter, 2015, 11, 1459-1463.	2.7	16
40	Self-Propelled Oil Droplets and Their Morphological Change to Giant Vesicles Induced by a Surfactant Solution at Low pH. Langmuir, 2016, 32, 9591-9597.	3.5	16
41	Construction of a chemical motor-movable frame assembly based on camphor grains using water-floating 3D-printed models. Chemical Physics Letters, 2019, 721, 104-110.	2.6	15
42	Treatment of Near-Infrared Photodynamic Therapy Using a Liposomally Formulated Indocyanine Green Derivative for Squamous Cell Carcinoma. PLoS ONE, 2015, 10, e0122849.	2.5	14
43	Molecular System for the Division of Self-Propelled Oil Droplets by Component Feeding. Langmuir, 2015, 31, 6943-6947.	3.5	14
44	Characteristic curved structure derived from collagen-containing tubular giant vesicles under static magnetic field. Chemical Physics Letters, 2007, 440, 286-290.	2.6	13
45	Cell-sorting of robust self-reproducing giant vesicles tolerant to a highly ionic medium. Soft Matter, 2010, 6, 1888.	2.7	13
46	Quasi-elastic Laser Scattering for Measuring Inhomogeneous Interfacial Tension in Non-equilibrium Phenomena with Convective Flows. Analytical Sciences, 2014, 30, 707-716.	1.6	13
47	Application of a Novel Near Infrared-Fluorescence Giant Vesicle-and Polymerasome-based Tissue Marker for Endoscopic and Laparoscopic Navigation. Analytical Sciences, 2014, 30, 225-230.	1.6	12
48	Development of a non-blurring, dual-imaging tissue marker for gastrointestinal tumor localization. Surgical Endoscopy and Other Interventional Techniques, 2015, 29, 1445-1451.	2.4	12
49	Environment-Sensitive Intelligent Self-Reproducing Artificial Cell with a Modification-Active Lipo-Deoxyribozyme. Micromachines, 2020, 11, 606.	2.9	12
50	Locomotion Mode of Micrometer-Sized Oil Droplets in Solutions of Cationic Surfactants Having Ester or Ether Linkages. Langmuir, 2018, 34, 7821-7826.	3.5	11
51	Hydrodynamic accumulation of small molecules and ions into cell-sized liposomes against a concentration gradient. Communications Chemistry, 2020, 3, .	4.5	11
52	Time-resolved quasi-elastic laser scattering study demonstrating heterogeneity of interfacial tension at the water/nitrobenzene interface after introduction of sodium alkylsulfate. Journal of Colloid and Interface Science, 2010, 349, 632-636.	9.4	10
53	Effects of Surfactants and Electrolytes on Chemical Oscillation at a Water/Nitrobenzene Interface Investigated by Quasi-elastic Laser Scattering Method. Analytical Sciences, 2013, 29, 911-917.	1.6	10
54	Design of Reactive Surfactants that Control the Locomotion Mode of Cell-Sized Oil Droplets. Current Physical Chemistry, 2015, 5, 37-51.	0.2	10

#	Article	IF	Citations
55	Detection of peritoneal dissemination with near-infrared fluorescence laparoscopic imaging using a liposomal formulation of a synthesized indocyanine green liposomal derivative. Anticancer Research, 2015, 35, 1353-9.	1.1	10
56	Morphological Change of Giant Vesicles Triggered by Dehydrocondensation Reaction. Chemistry Letters, 2002, 31, 404-405.	1.3	9
57	Chemically artificial rovers based on self-propelled droplets in micrometer-scale environment. Current Opinion in Colloid and Interface Science, 2020, 49, 60-68.	7.4	9
58	Temporal Emergence of Giant Vesicles Accompanied by Hydrolysis of Ammonium Amphiphiles with a Schiff-base Segment. Chemistry Letters, 2004, 33, 1442-1443.	1.3	8
59	Delayed Response of Interfacial Tension in Propagating Chemical Waves of the Belousovâ€“Zhabotinsky Reaction without Stirring. Journal of Physical Chemistry B, 2013, 117, 13893-13898.	2.6	8
60	Spontaneous Oscillation Mechanism by Simultaneous Time-resolved Measurements of Interfacial Tensions of Both the Donor/Membrane and Membrane/Acceptor Phases. Analytical Sciences, 2014, 30, 463-469.	1.6	8
61	Study on structural changes in supramolecular assemblies composed of amphiphilic nicotinamide and its dihydronicotinamide derivative by flow cytometry. Soft Matter, 2007, 3, 699.	2.7	7
62	Experimental Investigation of the Self-Propelled Motion of a Sodium Oleate Tablet and Boat at an Oilâ€“Water Interface. Langmuir, 2018, 34, 5487-5494.	3.5	7
63	Toward Experimental Evolution with Giant Vesicles. Life, 2018, 8, 53.	2.4	7
64	Asymmetrical Polyhedral Configuration of Giant Vesicles Induced by Orderly Array of Encapsulated Colloidal Particles. PLoS ONE, 2016, 11, e0146683.	2.5	7
65	Identifying and Manipulating Giant Vesicles: Review of Recent Approaches. Micromachines, 2022, 13, 644.	2.9	7
66	Assemblies of molecular aggregates in the blebbing motion of an oil droplet on an aqueous solution containing surfactant. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 529, 373-379.	4.7	6
67	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.	3.5	6
68	pH-Induced Switchable Vesicular Aggregation of Zwitterionic and Anionic Phospholipids. Chemistry Letters, 2012, 41, 1084-1086.	1.3	5
69	Giant Vesicle Formation of Novel Polymerizable Amphiphile Associated with Its Polymerization and Hydrolysis in Water. Chemistry Letters, 2014, 43, 1707-1709.	1.3	5
70	Interfacial tension in adsorption of lysozyme onto a lipid monolayer formed at a water/chloroform interface. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 480, 85-90.	4.7	5
71	Temperature-Dependent Dynamics of Giant Vesicles Composed of Hydrolysable Lipids Having an Amide Linkage. Langmuir, 2019, 35, 17075-17081.	3.5	5
72	Perfusion Chamber for Observing a Liposome-Based Cell Model Prepared by a Water-in-Oil Emulsion Transfer Method. ACS Omega, 2020, 5, 19429-19436.	3.5	5

#	Article	IF	Citations
73	Locomotion and Transformation of Underwater Micrometer-Sized Molecular Aggregates under Chemical Stimuli. Journal of the Physical Society of Japan, 2017, 86, 101006.	1.6	4
74	Synthesis of starâ€shaped poly(nâ€butyl acrylate) oligomers with coumarin end groups and their networks for a <scp>UV</scp>â€tunable viscoelastic material. Journal of Polymer Science Part A, 2018, 56, 9-15.	2.3	4
75	Changes in Interfacial Tension of a Lipid Membrane Formed at the Water/Chloroform Interface upon DNA Complex Formation. Analytical Sciences, 2015, 31, 979-986.	1.6	3
76	Micrometer-sized network structure of novel DNAâ€“lipid conjugates induced by heat stimulation. Soft Matter, 2015, 11, 7053-7058.	2.7	3
77	Photocontrolled network formation and dissociation with coumarin end-functionalized branched poly(dimethyl siloxane)s. Polymer, 2018, 148, 211-216.	3.8	3
78	Hysteretic behavior of diamagnetic molecular assembly: Magnetic field-induced deformation of tubular self-assemblies composed of amphiphilic molecules. Polyhedron, 2009, 28, 253-256.	2.2	2
79	Molecular Building Blocks and Their Architecture in Biologically/Environmentally Compatible Soft Matter Chemical Machinery. Journal of Oleo Science, 2014, 63, 1085-1098.	1.4	2
80	Autonomous buckling of micrometer-sized lipid-protein membrane patches constructed by Dictyostelium discoideum. Journal of Biological Engineering, 2015, 9, 3.	4.7	2
81	Effects of halide ions on the acceptor phase in spontaneous chemical oscillations in donor/membrane/acceptor systems. Journal of Colloid and Interface Science, 2016, 462, 351-358.	9.4	2
82	Micrometer-Scale Membrane Transition of Supported Lipid Bilayer Membrane Reconstituted with Cytosol of Dictyostelium discoideum. Life, 2017, 7, 11.	2.4	2
83	Topologyâ€Reset Execution: Repeatable Postcyclization Recyclization of Cyclic Polymers. Angewandte Chemie, 2019, 131, 150-154.	2.0	2
84	Construction of Supramolecular Systems That Achieve Lifelike Functions. Materials, 2022, 15, 2391.	2.9	2
85	Appearance of Crystalline Pattern for Colloidal Particles Encapsulated in Giant Vesicles. Transactions of the Materials Research Society of Japan, 2016, 41, 147-149.	0.2	1
86	Cycle of charge carrier states with formation and extinction of a floating gate in an ambipolar tetracyanoquaterthienoquinoid-based field-effect transistor. Chemical Physics Letters, 2017, 671, 71-77.	2.6	1
87	Morphological Control of Microtubule-Encapsulating Giant Vesicles by Changing Hydrostatic Pressure. Biological and Pharmaceutical Bulletin, 2018, 41, 288-293.	1.4	1
88	Irreversible aggregation of alternating tetra-block-like amphiphile in water. PLoS ONE, 2018, 13, e0202816.	2.5	1
89	The Use of Giant Vesicles for Medical Applications: A Trend in the Last Decade. Sensors and Materials, 2021, 33, 261.	0.5	1
90	Effect of an Oil Medium on Giant Vesicles Prepared with Water-in-Oil Emulsion. Bunseki Kagaku, 2022, 71, 83-89.	0.2	1

#	Article	IF	Citations
91	2P279 Flow cytometric analysis and sorting on a self-reproducing system of giant vesicles(Native and) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
92	1P-181 Oscillatory Reaction of Catalase Encapsulated in Giant Vesicles Prepared by W/O Emulsion Centrifugation Method(Biol & Artifi memb.:Structure & Property, The 47th Annual Meeting of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.1	0
93	1P-180 Fusion of Giant Vesicles Induced by Centrifugation(Biol & Artifi memb.:Structure &) Tj ETQq1 1 0.784314 rgBT /Overlo	0.1	0
94	1P-183 Size control of uniamellar giantvesicle using microfluidics(Biol & Artifi memb.:Structure &) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.1	0
95	2P-139 Micro-interferometric Imaging on Cell Motion Directed by Anisotropic and Periodic Micropattern(Cell biology,The 47th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2009, 49, S128.	0.1	0
96	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.	0.1	0
97	Self-Propelled Motion of Micrometer-Sized Oil Droplets in Aqueous Solution of Surfactant. , 2017, , .		0
98	Molecular Transformation for Self-reproducing Vesicles and Underlying Analysis Methods. Chemical and Pharmaceutical Bulletin, 2021, 69, 947-952.	1.3	0
99	Direct causality between film formation and water-retaining effect of surfactant-based film-forming curing compound for concrete. Journal of Building Engineering, 2021, 43, 102930.	3.4	0