

# Takahiro K Fujiwara

## List of Publications by Year in descending order

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84  
papers

9,744  
citations

87888

38  
h-index

123424

61  
g-index

93  
all docs

93  
docs citations

93  
times ranked

8513  
citing authors

#	ARTICLE	IF	CITATIONS
1	Paradigm Shift of the Plasma Membrane Concept from the Two-Dimensional Continuum Fluid to the Partitioned Fluid: High-Speed Single-Molecule Tracking of Membrane Molecules. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2005, 34, 351-378.	18.3	1,010
2	Phospholipids undergo hop diffusion in compartmentalized cell membrane. <i>Journal of Cell Biology</i> , 2002, 157, 1071-1082.	5.2	872
3	Oscillatory Control of Factors Determining Multipotency and Fate in Mouse Neural Progenitors. <i>Science</i> , 2013, 342, 1203-1208.	12.6	444
4	Relationship of Lipid Rafts to Transient Confinement Zones Detected by Single Particle Tracking. <i>Biophysical Journal</i> , 2002, 82, 274-284.	0.5	404
5	Ultrafine Membrane Compartments for Molecular Diffusion as Revealed by Single Molecule Techniques. <i>Biophysical Journal</i> , 2004, 86, 4075-4093.	0.5	400
6	Dynamic Organizing Principles of the Plasma Membrane that Regulate Signal Transduction: Commemorating the Fortieth Anniversary of Singer and Nicolson's Fluid-Mosaic Model. <i>Annual Review of Cell and Developmental Biology</i> , 2012, 28, 215-250.	9.4	394
7	Single-molecule imaging analysis of Ras activation in living cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 7317-7322.	7.1	359
8	Three-dimensional reconstruction of the membrane skeleton at the plasma membrane interface by electron tomography. <i>Journal of Cell Biology</i> , 2006, 174, 851-862.	5.2	343
9	Accumulation of anchored proteins forms membrane diffusion barriers during neuronal polarization. <i>Nature Cell Biology</i> , 2003, 5, 626-632.	10.3	324
10	Full characterization of GPCR monomer-dimer dynamic equilibrium by single molecule imaging. <i>Journal of Cell Biology</i> , 2011, 192, 463-480.	5.2	310
11	Hierarchical mesoscale domain organization of the plasma membrane. <i>Trends in Biochemical Sciences</i> , 2011, 36, 604-615.	7.5	299
12	GPI-anchored receptor clusters transiently recruit Lyn and G12 for temporary cluster immobilization and Lyn activation: single-molecule tracking study 1. <i>Journal of Cell Biology</i> , 2007, 177, 717-730.	5.2	292
13	Tracking single molecules at work in living cells. <i>Nature Chemical Biology</i> , 2014, 10, 524-532.	8.0	290
14	Membrane molecules mobile even after chemical fixation. <i>Nature Methods</i> , 2010, 7, 865-866.	19.0	287
15	Detection of Non-Brownian Diffusion in the Cell Membrane in Single Molecule Tracking. <i>Biophysical Journal</i> , 2005, 88, 2266-2277.	0.5	277
16	Rapid Hop Diffusion of a G-Protein-Coupled Receptor in the Plasma Membrane as Revealed by Single-Molecule Techniques. <i>Biophysical Journal</i> , 2005, 88, 3659-3680.	0.5	247
17	Transient GPI-anchored protein homodimers are units for raft organization and function. <i>Nature Chemical Biology</i> , 2012, 8, 774-783.	8.0	234
18	Single-molecule tracking of membrane molecules: plasma membrane compartmentalization and dynamic assembly of raft-philic signaling molecules. <i>Seminars in Immunology</i> , 2005, 17, 3-21.	5.6	211

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19	Dynamic recruitment of phospholipase C $\beta$ 3 at transiently immobilized GPI-anchored receptor clusters induces IP3 $\rightarrow$ Ca <sup>2+</sup> signaling: single-molecule tracking study 2. <i>Journal of Cell Biology</i> , 2007, 177, 731-742.	5.2	206
20	Temporal analysis of recruitment of mammalian ATG proteins to the autophagosome formation site. <i>Autophagy</i> , 2013, 9, 1491-1499.	9.1	196
21	The fence and picket structure of the plasma membrane of live cells as revealed by single molecule techniques (Review). <i>Molecular Membrane Biology</i> , 2003, 20, 13-18.	2.0	187
22	Raft-based interactions of gangliosides with a GPI-anchored receptor. <i>Nature Chemical Biology</i> , 2016, 12, 402-410.	8.0	165
23	Confined diffusion of transmembrane proteins and lipids induced by the same actin meshwork lining the plasma membrane. <i>Molecular Biology of the Cell</i> , 2016, 27, 1101-1119.	2.1	165
24	Hierarchical organization of the plasma membrane: Investigations by single-molecule tracking vs. fluorescence correlation spectroscopy. <i>FEBS Letters</i> , 2010, 584, 1814-1823.	2.8	157
25	Fluorescence Imaging for Monitoring the Colocalization of Two Single Molecules in Living Cells. <i>Biophysical Journal</i> , 2005, 88, 2126-2136.	0.5	154
26	Cholesterol modulates cell signaling and protein networking by specifically interacting with PDZ domain-containing scaffold proteins. <i>Nature Communications</i> , 2012, 3, 1249.	12.8	129
27	Membrane mechanisms for signal transduction: The coupling of the meso-scale raft domains to membrane-skeleton-induced compartments and dynamic protein complexes. <i>Seminars in Cell and Developmental Biology</i> , 2012, 23, 126-144.	5.0	127
28	Both MHC Class II and its GPI-Anchored Form Undergo Hop Diffusion as Observed by Single-Molecule Tracking. <i>Biophysical Journal</i> , 2008, 95, 435-450.	0.5	109
29	Raft-based sphingomyelin interactions revealed by new fluorescent sphingomyelin analogs. <i>Journal of Cell Biology</i> , 2017, 216, 1183-1204.	5.2	108
30	Defining raft domains in the plasma membrane. <i>Traffic</i> , 2020, 21, 106-137.	2.7	94
31	Super-long single-molecule tracking reveals dynamic-anchorage-induced integrin function. <i>Nature Chemical Biology</i> , 2018, 14, 497-506.	8.0	93
32	Ultrafast Diffusion of a Fluorescent Cholesterol Analog in Compartmentalized Plasma Membranes. <i>Traffic</i> , 2014, 15, 583-612.	2.7	77
33	Leader-Containing Uncapped Viral Transcript Activates RIG-I in Antiviral Stress Granules. <i>PLoS Pathogens</i> , 2016, 12, e1005444.	4.7	68
34	The Class-A GPCR Dopamine D2 Receptor Forms Transient Dimers Stabilized by Agonists: Detection by Single-Molecule Tracking. <i>Cell Biochemistry and Biophysics</i> , 2018, 76, 29-37.	1.8	67
35	Mechanism of Lck Recruitment to the T-Cell Receptor Cluster as Studied by Single-Molecule-Fluorescence Video Imaging. <i>ChemPhysChem</i> , 2003, 4, 620-626.	2.1	63
36	Archipelago architecture of the focal adhesion: Membrane molecules freely enter and exit from the focal adhesion zone. <i>Cytoskeleton</i> , 2012, 69, 380-392.	2.0	50

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37	Biocompatible fluorescent silicon nanocrystals for single-molecule tracking and fluorescence imaging. <i>Journal of Cell Biology</i> , 2013, 202, 967-983.	5.2	48
38	Confining Domains Lead to Reaction Bursts: Reaction Kinetics in the Plasma Membrane. <i>PLoS ONE</i> , 2012, 7, e32948.	2.5	48
39	Dynamic actin-mediated nano-scale clustering of CD44 regulates its meso-scale organization at the plasma membrane. <i>Molecular Biology of the Cell</i> , 2020, 31, 561-579.	2.1	38
40	Rac1 recruitment to the archipelago structure of the focal adhesion through the fluid membrane as revealed by single-molecule analysis. <i>Cytoskeleton</i> , 2013, 70, 161-177.	2.0	36
41	High-speed single-molecule imaging reveals signal transduction by induced transbilayer raft phases. <i>Journal of Cell Biology</i> , 2020, 219, .	5.2	35
42	Development of new ganglioside probes and unraveling of raft domain structure by single-molecule imaging. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2017, 1861, 2494-2506.	2.4	32
43	Chapter 10 Application of Laser Tweezers to Studies of the Fences and Tethers of the Membrane Skeleton that Regulate the Movements of Plasma Membrane Proteins. <i>Methods in Cell Biology</i> , 1997, 55, 173-194.	1.1	26
44	Spatiotemporal analysis with a genetically encoded fluorescent RNA probe reveals TERRA function around telomeres. <i>Scientific Reports</i> , 2016, 6, 38910.	3.3	26
45	Selective Labeling of Proteins on Living Cell Membranes Using Fluorescent Nanodiamond Probes. <i>Nanomaterials</i> , 2016, 6, 56.	4.1	24
46	HsSAS-6-dependent cartwheel assembly ensures stabilization of centriole intermediates. <i>Journal of Cell Science</i> , 2019, 132, .	2.0	24
47	Dynamic Contact Guidance of Myoblasts by Feature Size and Reversible Switching of Substrate Topography: Orchestration of Cell Shape, Orientation, and Nematic Ordering of Actin Cytoskeletons. <i>Langmuir</i> , 2019, 35, 7538-7551.	3.5	24
48	Functional Characterization of Domains of IPS-1 Using an Inducible Oligomerization System. <i>PLoS ONE</i> , 2013, 8, e53578.	2.5	22
49	Single-Molecule Imaging of Receptor-Receptor Interactions. <i>Methods in Cell Biology</i> , 2013, 117, 373-390.	1.1	20
50	Lateral diffusion in a discrete fluid membrane with immobile particles. <i>Physical Review E</i> , 2014, 89, 022724.	2.1	20
51	Revealing the Raft Domain Organization in the Plasma Membrane by Single-Molecule Imaging of Fluorescent Ganglioside Analogs. <i>Methods in Enzymology</i> , 2018, 598, 267-282.	1.0	19
52	Biexciton state causes photoluminescence fluctuations in CdSe/ZnS core/shell quantum dots at high photoexcitation densities. <i>Physical Review B</i> , 2013, 88, .	3.2	13
53	Synergetic Roles of Formyl Peptide Receptor 1 Oligomerization in Ligand-Induced Signal Transduction. <i>ACS Chemical Biology</i> , 2020, 15, 2577-2587.	3.4	11
54	Cortical actin nodes: Their dynamics and recruitment of podosomal proteins as revealed by super-resolution and single-molecule microscopy. <i>PLoS ONE</i> , 2017, 12, e0188778.	2.5	9

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55	Unraveling of Lipid Raft Organization in Cell Plasma Membranes by Single-Molecule Imaging of Ganglioside Probes. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1104, 41-58.	1.6	8
56	Paradigm Shift of the Molecular Dynamics Concept in the Cell Membrane: High-Speed Single-Molecule Tracking Revealed the Partitioning of the Cell Membrane. , 0, , 545-574.		7
57	The Effect of Lactoferrin and Pepsin-Treated Lactoferrin on IEC-6 Cell Damage Induced by Clostridium Difficile Toxin B. <i>Shock</i> , 2018, 50, 119-125.	2.1	7
58	Single-Molecule Imaging of Diffusion, Recruitment, and Activation of Signaling Molecules in Living Cells. , 2005, , 123-152.		6
59	Dynamic Meso-Scale Anchorage of GPI-Anchored Receptors in the Plasma Membrane: Prion Protein vs. Thy1. <i>Cell Biochemistry and Biophysics</i> , 2017, 75, 399-412.	1.8	5
60	Redox-Sensitive Cysteines Confer Proximal Control of the Molecular Crowding Barrier in the Nuclear Pore. <i>Cell Reports</i> , 2020, 33, 108484.	6.4	3
61	Single-Molecule Imaging Reveals Rapid Estradiol Action on the Surface Movement of AMPA Receptors in Live Neurons. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 708715.	3.7	3
62	Live-Cell Imaging of Single Neurotrophin Receptor Molecules on Human Neurons in Alzheimer's Disease. <i>International Journal of Molecular Sciences</i> , 2021, 22, 13260.	4.1	3
63	S1e1-5 Raft and non-raft molecules undergo very similar diffusion in the time scales between 25 microseconds and 2.5 seconds(S1-e1: "Unraveling the membrane microdomains using new biophysical) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 337		
64	2P241 Microdomains and compartments in the smooth-muscle cell membrane : single-molecule tracking of phospholipids(Cell biological problems-adhesion, motility, cytoskeleton, signaling, and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302		
65	2P310 Detectability of stimulation-induced transient arrest of lateral diffusion (STALL) of membrane molecules in single-molecule trajectories(Native and artificial biomembranes-signal) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 337		
66	2S2-2 Three dimensional interplay of the membrane skeleton with the plasma membrane as visualized by freeze-etch electron tomography(2S2 Interactions between the cell membrane and the actin) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Seibutsu Butsuri, 2008, 48, S8.		
67	2P-227 Direct observations of the recruitment of single Lyn kinase molecules to IgE receptor clusters by single fluorescent-molecule tracking(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S110.	0.1	0
68	3P-055 Detection of transient arrest of lateral diffusion of membrane molecules in single-molecule tracking trajectories 2(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S136.	0.1	0
69	2P-204 Chemical fixation fails to fix raft-associated molecules : a single-molecule tracking of their diffusion in the plasma membrane(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S106.	0.1	0
70	2P228 Dimer-monomer equilibrium of a GPCR : direct dimer detection by single-molecule bimolecular fluorescence complementation (SM-BiFC)(The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2010, 50, S122-S123.	0.1	0
71	1P223 1C1340 Mechanism of Lyn kinase recruitment to the IgE receptor cluster : dual-color single-molecule tracking study(Cell biology,Oral Presentations,The 48th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10		
72	2P235 1C1535 Direct observation of hop diffusion of membrane molecules by developing ultra high-speed single fluorescent-molecule imaging(The 48th Annual Meeting of the Biophysical Society of) Tj ETQq0 0 0 rgBT /Overlock 10		

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73	3P212 Single-molecule tracking of PKC recruited and transferred by diffusing small antennas of signal-induced diacylglycerol(Cell biology,The 48th Annual Meeting of the Biophysical Society of) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.784314	0
74	1P236 1I1340 Reexamining lipid microdomains and compartments in the plasma membrane by single lipid-molecule tracking(Biol & Artifi memb.:Structure & Property,Oral Presentations,The 48th) Tj ETQq0 0 0.1 rgBT /Overlock 10	0.1	0
75	3P199 NMDA receptor is recruited to the synapse by two parallel pathways : exocytosis and lateral diffusion in the plasma membrane.(Cell biology,The 48th Annual Meeting of the Biophysical Society of) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.784314	0
76	3A1458 Anomalous rapid diffusion of GPI-anchored proteins as detected by high-speed single fluorescent-molecule tracking(3A Biol & Artifi memb 4: Transport, Signal transduction,The 49th) Tj ETQq0 0 0.1 rgBT /Overlock 10	0.1	0
77	2K1512 Enhanced confinement of activated EGF receptor in the plasma membrane compartments revealed by ultra high-speed single-molecule tracking(Cell biology 2,The 48th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.784314	0
78	2K1524 Regulation mechanism for signal propagation along the plasma membrane : a single-molecule tracking study(Cell biology 2,The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsurei, 2011, 51, S93-S94.	0.1	0
79	2K1536 Raft mechanism for regulating Src-family kinases : detection of single-molecule recruitment of a scaffolding transmembrane protein Cbp(Cell biology 2,The 48th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.784314	0
80	1PT209 Rac1 recruitment to the archipelago structure of focal adhesion through the fluid membrane as revealed by single-molecule analysis(The 50th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsurei, 2012, 52, S103-S104.	0.1	0
81	3PT172 Dynamics of normal prion protein, a raft-associated GPI-anchored molecule, in the live neuronal plasma membrane(The 50th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsurei, 2012, 52, S170-S171.	0.1	0
82	GPI-anchored receptor clusters transiently recruit Lyn and G13 for temporary cluster immobilization and Lyn activation: single-molecule tracking study 1. Journal of Experimental Medicine, 2007, 204, i18-i18.	8.5	0
83	1P-149 Synaptic NMDA receptor recycling by the concerted actions of endocytosis/exocytosis and lateral diffusion in the plasma membrane(Cell biology, The 47th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.784314	0
84	Biocompatible fluorescent silicon nanocrystals for single-molecule tracking and fluorescence imaging. Journal of General Physiology, 2013, 142, 1424-1431.	1.9	0