

Yasushi Sako

List of Publications by Year in descending order

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119
papers

5,657
citations

94433

37
h-index

82547

72
g-index

132
all docs

132
docs citations

132
times ranked

5897
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-molecule imaging of EGFR signalling on the surface of living cells. <i>Nature Cell Biology</i> , 2000, 2, 168-172.	10.3	816
2	Cell surface organization by the membrane skeleton. <i>Current Opinion in Cell Biology</i> , 1996, 8, 566-574.	5.4	365
3	Single-Molecule Analysis of Chemotactic Signaling in Dictyostelium Cells. <i>Science</i> , 2001, 294, 864-867.	12.6	316
4	Compartmentalized structure of the plasma membrane for receptor movements as revealed by a nanometer-level motion analysis.. <i>Journal of Cell Biology</i> , 1994, 125, 1251-1264.	5.2	258
5	Cytoplasmic Regulation of the Movement of E-Cadherin on the Free Cell Surface as Studied by Optical Tweezers and Single Particle Tracking: Corralling and Tethering by the Membrane Skeleton. <i>Journal of Cell Biology</i> , 1998, 140, 1227-1240.	5.2	221
6	Barriers for lateral diffusion of transferrin receptor in the plasma membrane as characterized by receptor dragging by laser tweezers: fence versus tether.. <i>Journal of Cell Biology</i> , 1995, 129, 1559-1574.	5.2	199
7	Regulation Mechanism of the Lateral Diffusion of Band 3 in Erythrocyte Membranes by the Membrane Skeleton. <i>Journal of Cell Biology</i> , 1998, 142, 989-1000.	5.2	195
8	Local Nucleosome Dynamics Facilitate Chromatin Accessibility in Living Mammalian Cells. <i>Cell Reports</i> , 2012, 2, 1645-1656.	6.4	175
9	Single-molecule analysis of epidermal growth factor binding on the surface of living cells. <i>EMBO Journal</i> , 2006, 25, 4215-4222.	7.8	133
10	Engagement of CD44 Promotes Rac Activation and CD44 Cleavage during Tumor Cell Migration. <i>Journal of Biological Chemistry</i> , 2004, 279, 4541-4550.	3.4	130
11	Structure of the Erythrocyte Membrane Skeleton as Observed by Atomic Force Microscopy. <i>Biophysical Journal</i> , 1998, 74, 2171-2183.	0.5	123
12	Quantitative live-cell imaging reveals spatio-temporal dynamics and cytoplasmic assembly of the 26S proteasome. <i>Nature Communications</i> , 2014, 5, 3396.	12.8	111
13	Visualizing specific protein glycoforms by transmembrane fluorescence resonance energy transfer. <i>Nature Communications</i> , 2012, 3, 907.	12.8	103
14	EGF signalling amplification induced by dynamic clustering of EGFR. <i>Biochemical and Biophysical Research Communications</i> , 2004, 324, 1143-1149.	2.1	95
15	Total Internal Reflection Fluorescence Microscopy for Single-molecule Imaging in Living Cells.. <i>Cell Structure and Function</i> , 2002, 27, 357-365.	1.1	88
16	Positive Feedback Within a Kinase Signaling Complex Functions as a Switch Mechanism for NF- κ B Activation. <i>Science</i> , 2014, 344, 760-764.	12.6	87
17	Reduction-Triggered Fluorescent Amplification Probe for the Detection of Endogenous RNAs in Living Human Cells. <i>Bioconjugate Chemistry</i> , 2009, 20, 1026-1036.	3.6	80
18	Recent advances in FRET for the study of protein interactions and dynamics. <i>Current Opinion in Structural Biology</i> , 2017, 46, 16-23.	5.7	80

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19	Rolling Circle Amplification in a Prokaryotic Translation System Using Small Circular RNA. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 7004-7008.	13.8	75
20	Single-molecule diffusion-based estimation of ligand effects on G protein-coupled receptors. <i>Science Signaling</i> , 2018, 11, .	3.6	74
21	Comparison of two-photon excitation laser scanning microscopy with UV-confocal laser scanning microscopy in three-dimensional calcium imaging using the fluorescence indicator Indo-1. <i>Journal of Microscopy</i> , 1997, 185, 9-20.	1.8	67
22	Single- and Multiple-Molecule Dynamics of the Signaling from H-Ras to cRaf-1 Visualized on the Plasma Membrane of Living Cells. <i>ChemPhysChem</i> , 2003, 4, 748-753.	2.1	66
23	Multiple-state reactions between the epidermal growth factor receptor and Grb2 as observed by using single-molecule analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18013-18018.	7.1	65
24	Trafficking of a Ligand-Receptor Complex on the Growth Cones as an Essential Step for the Uptake of Nerve Growth Factor at the Distal End of the Axon: A Single-Molecule Analysis. <i>Journal of Neuroscience</i> , 2005, 25, 2181-2191.	3.6	60
25	Single-Molecule Analysis of Epidermal Growth Factor Signaling that Leads to Ultrasensitive Calcium Response. <i>Biophysical Journal</i> , 2005, 88, 3720-3730.	0.5	60
26	Epidermal growth factor-regulated activation of Rac GTPase enhances CD44 cleavage by metalloproteinase disintegrin ADAM10. <i>Biochemical Journal</i> , 2006, 395, 65-71.	3.7	55
27	Automated single-molecule imaging in living cells. <i>Nature Communications</i> , 2018, 9, 3061.	12.8	55
28	Imaging single molecules in living cells for systems biology. <i>Molecular Systems Biology</i> , 2006, 2, 56.	7.2	54
29	Multiple Mechanisms for Accumulation of Myosin II Filaments at the Equator During Cytokinesis. <i>Traffic</i> , 2008, 9, 2089-2099.	2.7	54
30	Conversion of graded phosphorylation into switch-like nuclear translocation via autoregulatory mechanisms in ERK signalling. <i>Nature Communications</i> , 2016, 7, 10485.	12.8	54
31	Heterotrimeric Gq proteins act as a switch for GRK5/6 selectivity underlying β^2 -arrestin transducer bias. <i>Nature Communications</i> , 2022, 13, 487.	12.8	53
32	Variational Bayes Analysis of a Photon-Based Hidden Markov Model for Single-Molecule FRET Trajectories. <i>Biophysical Journal</i> , 2012, 103, 1315-1324.	0.5	51
33	Origin of the low thermal isomerization rate of rhodopsin chromophore. <i>Scientific Reports</i> , 2015, 5, 11081.	3.3	45
34	Single-molecule visualization in cell biology. <i>Nature Reviews Molecular Cell Biology</i> , 2003, Suppl, S51-5.	37.0	45
35	Reconstitution of Brefeldin A-induced Golgi Tubulation and Fusion with the Endoplasmic Reticulum in Semi-Intact Chinese Hamster Ovary Cells. <i>Molecular Biology of the Cell</i> , 2000, 11, 3073-3087.	2.1	43
36	Activation Kinetics of RAF Protein in the Ternary Complex of RAF, RAS-GTP, and Kinase on the Plasma Membrane of Living Cells. <i>Journal of Biological Chemistry</i> , 2011, 286, 36460-36468.	3.4	43

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37	Dynamically varying interactions between heregulin and ErbB proteins detected by single-molecule analysis in living cells. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13984-13989.	7.1	42
38	Single-Molecule Imaging of Signaling Molecules in Living Cells. Single Molecules, 2000, 1, 159-163.	0.9	39
39	Power law relationship between cell cycle duration and cell volume in the early embryonic development of Caenorhabditis elegans. Frontiers in Physiology, 2014, 5, 529.	2.8	39
40	A RasGTP-Induced Conformational Change in C-RAF Is Essential for Accurate Molecular Recognition. Biophysical Journal, 2009, 97, 1277-1287.	0.5	35
41	Formation of signal transduction complexes during immobile phase of NGFR movements. Biochemical and Biophysical Research Communications, 2006, 342, 316-322.	2.1	34
42	A novel sphingomyelin/cholesterol domain-specific probe reveals the dynamics of the membrane domains during virus release and in Niemann-Pick type C. FASEB Journal, 2017, 31, 1301-1322.	0.5	34
43	Transient Acceleration of Epidermal Growth Factor Receptor Dynamics Produces Higher-Order Signaling Clusters. Journal of Molecular Biology, 2018, 430, 1386-1401.	4.2	34
44	Covalent immobilization of epidermal growth factor molecules for single-molecule imaging analysis of intracellular signaling. Biomaterials, 2006, 27, 3343-3350.	11.4	33
45	Lipid-Protein Interplay in Dimerization of Juxtamembrane Domains of Epidermal Growth Factor Receptor. Biophysical Journal, 2018, 114, 893-903.	0.5	33
46	Resolvin E3 attenuates allergic airway inflammation via the interleukin-23-interleukin-17A pathway. FASEB Journal, 2019, 33, 12750-12759.	0.5	31
47	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. Methods in Cell Biology, 1997, 55, 173-194.	1.1	26
48	The significance of membrane fluidity of feeder cell-derived substrates for maintenance of iPS cell stemness. Scientific Reports, 2015, 5, 11386.	3.3	25
49	Cortical Polarity of the RING Protein PAR-2 Is Maintained by Exchange Rate Kinetics at the Cortical-Cytoplasmic Boundary. Cell Reports, 2016, 16, 2156-2168.	6.4	25
50	Assembly of protein complexes restricts diffusion of Wnt3a proteins. Communications Biology, 2018, 1, 165.	4.4	23
51	PMP2/FABP8 induces PI(4,5)P2-dependent transbilayer reorganization of sphingomyelin in the plasma membrane. Cell Reports, 2021, 37, 109935.	6.4	22
52	Development of a streak-camera-based time-resolved microscope fluorometer and its application to studies of membrane fusion in single cells. Biochemistry, 1991, 30, 6517-6527.	2.5	21
53	Live cell single-molecule detection in systems biology. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2012, 4, 183-192.	6.6	21
54	Photosystem II antenna phosphorylation-dependent protein diffusion determined by fluorescence correlation spectroscopy. Scientific Reports, 2013, 3, 2833.	3.3	20

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55	Raman and Autofluorescence Spectrum Dynamics along the HRG-Induced Differentiation Pathway of MCF-7 Cells. <i>Biophysical Journal</i> , 2014, 107, 2221-2229.	0.5	19
56	Dynamic and unique nucleolar microenvironment revealed by fluorescence correlation spectroscopy. <i>FASEB Journal</i> , 2015, 29, 837-848.	0.5	19
57	Characterization of the Triplet State of Hybridization-Sensitive DNA Probe by Using Fluorescence Correlation Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2013, 117, 27-33.	2.5	18
58	Single-molecule fluorescence imaging of RalGDS on cell surfaces during signal transduction from Ras to Ral. <i>Biophysics and Physicobiology</i> , 2017, 14, 75-84.	1.0	18
59	Amyloid conformation-dependent disaggregation in a reconstituted yeast prion system. <i>Nature Chemical Biology</i> , 2022, 18, 321-331.	8.0	18
60	Optical Bioimaging: From Living Tissue to a Single Molecule: Single-Molecule Visualization of Cell Signaling Processes of Epidermal Growth Factor Receptor. <i>Journal of Pharmacological Sciences</i> , 2003, 93, 253-258.	2.5	17
61	Universal Caging Group for the in-Cell Detection of Glutathione Transferase Applied to ¹⁹ F NMR and Bioluminescent Probes. <i>ChemBioChem</i> , 2012, 13, 1428-1432.	2.6	17
62	Single-molecule fluorescence-based analysis of protein conformation, interaction, and oligomerization in cellular systems. <i>Biophysical Reviews</i> , 2018, 10, 317-326.	3.2	17
63	A Role for the Anti-Viral Host Defense Mechanism in the Phylogenetic Divergence in Baculovirus Evolution. <i>PLoS ONE</i> , 2016, 11, e0156394.	2.5	17
64	A Novel Method for Isolating Specific Endocytic Vesicles Using Very Fine Ferrite Particles Coated with Biological Ligands and the High-Gradient Magnetic Separation Technique. <i>Journal of Biochemistry</i> , 1986, 100, 1481-1492.	1.7	16
65	Single-Molecule Observation of the Ligand-Induced Population Shift of Rhodopsin, A G-Protein-Coupled Receptor. <i>Biophysical Journal</i> , 2014, 106, 915-924.	0.5	16
66	Raman Spectral Dynamics of Single Cells in the Early Stages of Growth Factor Stimulation. <i>Biophysical Journal</i> , 2015, 108, 2148-2157.	0.5	16
67	State transition analysis of spontaneous branch migration of the Holliday junction by photon-based single-molecule fluorescence resonance energy transfer. <i>Biophysical Chemistry</i> , 2016, 209, 21-27.	2.8	16
68	In-cell single-molecule FRET measurements reveal three conformational state changes in RAF protein. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2020, 1864, 129358.	2.4	16
69	[PSI ⁺] aggregate enlargement in r _{nq1} nonprion domain mutants, leading to a loss of prion in yeast. <i>Genes To Cells</i> , 2011, 16, 576-589.	1.2	15
70	Microenvironments and different nanoparticle dynamics in living cells revealed by a standard nanoparticle. <i>Journal of Controlled Release</i> , 2012, 163, 315-321.	9.9	14
71	Quantitative analyses reveal extracellular dynamics of Wnt ligands in <i>Xenopus</i> embryos. <i>ELife</i> , 2021, 10, .	6.0	14
72	Single-Molecule Imaging of Fluorescent Proteins Expressed in Living Cells. <i>Methods in Molecular Biology</i> , 2009, 544, 451-460.	0.9	14

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73	Inferring a nonlinear biochemical network model from a heterogeneous single-cell time course data. <i>Scientific Reports</i> , 2018, 8, 6790.	3.3	13
74	Optimality Conditions for Cell-Fate Heterogeneity That Maximize the Effects of Growth Factors in PC12 Cells. <i>PLoS Computational Biology</i> , 2013, 9, e1003320.	3.2	12
75	Switching of the positive feedback for RAS activation by a concerted function of SOS membrane association domains. <i>Biophysics and Physicobiology</i> , 2016, 13, 1-11.	1.0	12
76	Single-molecule imaging and manipulation of biomolecular machines and systems. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2018, 1862, 241-252.	2.4	12
77	A nuclear envelop-associated baculovirus protein promotes intranuclear lipid accumulation during infection. <i>Virology</i> , 2019, 532, 108-117.	2.4	12
78	Single-Molecule Förster Resonance Energy Transfer Measurement Reveals the Dynamic Partially Ordered Structure of the Epidermal Growth Factor Receptor C-Tail Domain. <i>Journal of Physical Chemistry B</i> , 2019, 123, 571-581.	2.6	10
79	Workflows of the Single-Molecule Imaging Analysis in Living Cells: Tutorial Guidance to the Measurement of the Drug Effects on a GPCR. <i>Methods in Molecular Biology</i> , 2021, 2274, 391-441.	0.9	10
80	Single-molecule measurement in living cells. <i>TrAC - Trends in Analytical Chemistry</i> , 2004, 23, 587-594.	11.4	9
81	Mutation-Specific Mechanisms of Hyperactivation of Noonan Syndrome SOS Molecules Detected with Single-molecule Imaging in Living Cells. <i>Scientific Reports</i> , 2017, 7, 14153.	3.3	9
82	Shift in Conformational Equilibrium Induces Constitutive Activity of G-Protein-Coupled Receptor, Rhodopsin. <i>Journal of Physical Chemistry B</i> , 2018, 122, 4838-4843.	2.6	9
83	Transcriptionally inducible Pleckstrin homology-like domain, family A, member 1, attenuates ErbB receptor activity by inhibiting receptor oligomerization. <i>Journal of Biological Chemistry</i> , 2018, 293, 2206-2218.	3.4	9
84	Subpopulations of Endosomes Generated at Sequential Stages in the Endocytic Pathway of Asialoganglioside-Containing Ferrite Ligands in Rat Liver1. <i>Journal of Biochemistry</i> , 1990, 107, 846-853.	1.7	8
85	A bipolar functionality of Q/N-rich proteins: Lsm4 amyloid causes clearance of yeast prions. <i>MicrobiologyOpen</i> , 2013, 2, 415-430.	3.0	7
86	Non-Markovian properties and multiscale hidden Markovian network buried in single molecule time series. <i>Journal of Chemical Physics</i> , 2013, 139, 245101.	3.0	7
87	Biphasic spatiotemporal regulation of GRB2 dynamics by p52SHC for transient RAS activation. <i>Biophysics and Physicobiology</i> , 2021, 18, 1-12.	1.0	7
88	Enhanced transcriptional heterogeneity mediated by NF- κ B super-enhancers. <i>PLoS Genetics</i> , 2022, 18, e1010235.	3.5	7
89	TspMI, a thermostable isoschizomer of XmaI (5'-C/CCGGG3'): characterization and single molecule imaging with DNA. <i>Applied Microbiology and Biotechnology</i> , 2006, 72, 917-923.	3.6	6
90	Radiationless deactivation of hybridization-sensitive DNA probe. <i>Journal of Luminescence</i> , 2012, 132, 2566-2571.	3.1	6

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91	Synthesis of Long-template DNA Using Enzymatic Reaction for Regular Alignment of Au-nanoparticles. Chemistry Letters, 2006, 35, 1290-1291.	1.3	5
92	Cell-to-cell diversification in ERBB-RAS-MAPK signal transduction that produces cell-type specific growth factor responses. BioSystems, 2021, 199, 104293.	2.0	4
93	Development Of A Time-Resolved Microfluorimeter With A Synchroscan Streak Camera And Its Application To Studies Of Cell Membranes. , 1988, 0909, 350.		3
94	A protein switch with tunable steepness reconstructed in Escherichia coli cells with eukaryotic signaling proteins. Biochemical and Biophysical Research Communications, 2012, 421, 731-735.	2.1	3
95	SEIBUTSU BUTSURI, the official Japanese journal of the Biophysical Society of Japan. Biophysical Reviews, 2020, 12, 215-216.	3.2	3
96	Comparative Analysis of Single-Molecule Dynamics of TRPV1 and TRPV4 Channels in Living Cells. International Journal of Molecular Sciences, 2021, 22, 8473.	4.1	3
97	p52Shc regulates the sustainability of ERK activation in a RAF-independent manner. Molecular Biology of the Cell, 2021, 32, 1838-1848.	2.1	3
98	Regulation Mechanism of ErbB-Hergulin Interaction Shown by Single-molecule Kinetic Analysis in Living Cells. Seibutsu Butsuri, 2013, 53, 317-318.	0.1	3
99	A novel sterol-binding protein reveals heterogeneous cholesterol distribution in neurite outgrowth and in late endosomes/lysosomes. Cellular and Molecular Life Sciences, 2022, 79, .	5.4	3
100	How to make FRET biosensors for Rab family GTPases. , 0, , .		2
101	Raman Spectroscopic Analysis of H ₂ O ₂ -Stimulated Three-Dimensional Human Skin Models Containing Asian, Black, and Caucasian Melanocytes. Journal of Spectroscopy, 2013, 2013, 1-6.	1.3	2
102	Use of Engineered Nanoparticle-Based Fluorescence Methods for Live-Cell Phenomena. , 2014, , 153-169.		2
103	Interaction of a novel fluorescent GTP analogue with the small G-protein K-Ras. Journal of Biochemistry, 2016, 159, 41-48.	1.7	2
104	Development of time-resolved microfluorimetry and its application to studies of cellular membranes. , 1990, 1204, 776.		1
105	Clearance of yeast eRF-3 prion [<i>PSI⁺</i>] by amyloid enlargement due to the imbalance between chaperone Ssa1 and cochaperone Sgt2. Translation, 2013, 1, e26574.	2.9	1
106	Single-Molecule Imaging Measurements of Protein-Protein Interactions in Living Cells. , 2013, , .		1
107	Single-Molecule Imaging of Signaling Molecules in Living Cells. , 2000, 1, 159.		1
108	Single-Molecule Imaging of Signaling Molecules in Living Cells. Single Molecules, 2000, 1, 159-163.	0.9	1

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109	Single-Molecule Kinetic Analysis of Receptor Protein Tyrosine Kinases. , 2011, , 1-32.		1
110	Rho small GTPase regulates the stability of individual focal adhesions: a FRET-based visualization of GDP/GTP exchange on small GTPases. Biophysics (Nagoya-shi, Japan), 2007, 3, 63-73.	0.4	1
111	Assessing transfer entropy from biochemical data. Physical Review E, 2022, 105, 034403.	2.1	1
112	Construction of Two Color Semiconductor Quantum Dots Wire by utilizing the complementarity of DNA. AIP Conference Proceedings, 2008, , .	0.4	0
113	Signal Transduction across the Plasma Membrane. , 0, , 99-116.		0
114	In-Cell Single-Molecule Analysis of Molecular State and Reaction Kinetics Coupling. Advances in Experimental Medicine and Biology, 2021, 1310, 59-80.	1.6	0
115	Single-Molecule Analysis of Intracellular Signal Processing. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2001, 2001.13, 30-31.	0.0	0
116	Single-Molecule Kinetics of Cell Signaling Reactions. Seibutsu Butsuri, 2009, 49, 187-191.	0.1	0
117	Single-Molecule Analysis of Molecular Recognition Between Signaling Proteins RAS and RAF. , 2011, , 59-78.		0
118	Cytoplasmic Regulation of the Movement of the Plasma Membrane Proteins by the Membrane-Skelton Network.. Seibutsu Butsuri, 1999, 39, 10-13.	0.1	0
119	Single-molecule Imaging of GPCRs: An Application to the Drug Evaluation and Pharmacology. Seibutsu Butsuri, 2021, 61, 366-369.	0.1	0