

Ryohei Yasuda

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130
papers

13,275
citations

54
h-index

115
g-index

148
ext. papers

15,292
ext. citations

12.8
avg, IF

6.68
L-index

#	Paper	IF	Citations
130	Direct observation of the rotation of F1-ATPase. <i>Nature</i> , 1997 , 386, 299-302	50.4	1936
129	Principles of two-photon excitation microscopy and its applications to neuroscience. <i>Neuron</i> , 2006 , 50, 823-39	13.9	737
128	F1-ATPase is a highly efficient molecular motor that rotates with discrete 120 degree steps. <i>Cell</i> , 1998 , 93, 1117-24	56.2	720
127	Resolution of distinct rotational substeps by submillisecond kinetic analysis of F1-ATPase. <i>Nature</i> , 2001 , 410, 898-904	50.4	717
126	Mechanisms of CaMKII action in long-term potentiation. <i>Nature Reviews Neuroscience</i> , 2012 , 13, 169-82	13.5	672
125	Activation of CaMKII in single dendritic spines during long-term potentiation. <i>Nature</i> , 2009 , 458, 299-304	50.4	489
124	Mechanically driven ATP synthesis by F1-ATPase. <i>Nature</i> , 2004 , 427, 465-8	50.4	455
123	Local, persistent activation of Rho GTPases during plasticity of single dendritic spines. <i>Nature</i> , 2011 , 472, 100-4	50.4	391
122	The spread of Ras activity triggered by activation of a single dendritic spine. <i>Science</i> , 2008 , 321, 136-40	33.3	314
121	Tying a molecular knot with optical tweezers. <i>Nature</i> , 1999 , 399, 446-8	50.4	257
120	A genetically encoded fluorescent sensor of ERK activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 19264-9	11.5	252
119	Catalysis and rotation of F1 motor: cleavage of ATP at the catalytic site occurs in 1 ms before 40 degree substep rotation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 14731-6	11.5	217
118	Plasticity of calcium channels in dendritic spines. <i>Nature Neuroscience</i> , 2003 , 6, 948-55	25.5	213
117	Supersensitive Ras activation in dendrites and spines revealed by two-photon fluorescence lifetime imaging. <i>Nature Neuroscience</i> , 2006 , 9, 283-91	25.5	210
116	Imaging calcium concentration dynamics in small neuronal compartments. <i>Science Signaling</i> , 2004 , 2004, p15	8.8	195
115	Monitoring neural activity and [Ca ²⁺] with genetically encoded Ca ²⁺ indicators. <i>Journal of Neuroscience</i> , 2004 , 24, 9572-9	6.6	192
114	Stepping rotation of F1-ATPase visualized through angle-resolved single-fluorophore imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000 , 97, 7243-7	11.5	190

113	A rotary molecular motor that can work at near 100% efficiency. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2000 , 355, 473-89	5.8	184
112	AMPA receptors are exocytosed in stimulated spines and adjacent dendrites in a Ras-ERK-dependent manner during long-term potentiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 15951-6	11.5	176
111	Autocrine BDNF-TrkB signalling within a single dendritic spine. <i>Nature</i> , 2016 , 538, 99-103	50.4	171
110	Imaging neural activity using Thy1-GCaMP transgenic mice. <i>Neuron</i> , 2012 , 76, 297-308	13.9	168
109	The number of glutamate receptors opened by synaptic stimulation in single hippocampal spines. <i>Journal of Neuroscience</i> , 2004 , 24, 2054-64	6.6	165
108	Pause and rotation of F(1)-ATPase during catalysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 13649-54	11.5	158
107	F1-ATPase: a rotary motor made of a single molecule. <i>Cell</i> , 1998 , 93, 21-4	56.2	150
106	Metaplasticity at single glutamatergic synapses. <i>Neuron</i> , 2010 , 66, 859-70	13.9	149
105	Direct observation of the rotation of epsilon subunit in F1-ATPase. <i>Journal of Biological Chemistry</i> , 1998 , 273, 19375-7	5.4	149
104	A bright cyan-excitable orange fluorescent protein facilitates dual-emission microscopy and enhances bioluminescence imaging in vivo. <i>Nature Biotechnology</i> , 2016 , 34, 760-7	44.5	143
103	High-Throughput, High-Resolution Mapping of Protein Localization in Mammalian Brain by In Vivo Genome Editing. <i>Cell</i> , 2016 , 165, 1803-1817	56.2	136
102	Biochemical Computation for Spine Structural Plasticity. <i>Neuron</i> , 2015 , 87, 63-75	13.9	129
101	Rho GTPase complementation underlies BDNF-dependent homo- and heterosynaptic plasticity. <i>Nature</i> , 2016 , 538, 104-108	50.4	128
100	Virus-Mediated Genome Editing via Homology-Directed Repair in Mitotic and Postmitotic Cells in Mammalian Brain. <i>Neuron</i> , 2017 , 96, 755-768.e5	13.9	127
99	Precise small-molecule recognition of a toxic CUG RNA repeat expansion. <i>Nature Chemical Biology</i> , 2017 , 13, 188-193	11.7	119
98	Direct measurement of the torsional rigidity of single actin filaments. <i>Journal of Molecular Biology</i> , 1996 , 263, 227-36	6.5	117
97	Disruption of Arp2/3 results in asymmetric structural plasticity of dendritic spines and progressive synaptic and behavioral abnormalities. <i>Journal of Neuroscience</i> , 2013 , 33, 6081-92	6.6	116
96	Highly sensitive and quantitative FRET-FLIM imaging in single dendritic spines using improved non-radiative YFP. <i>Brain Cell Biology</i> , 2008 , 36, 31-42		116

95	Postsynaptic signaling during plasticity of dendritic spines. <i>Trends in Neurosciences</i> , 2012 , 35, 135-43	13.3	115
94	Imaging spatiotemporal dynamics of neuronal signaling using fluorescence resonance energy transfer and fluorescence lifetime imaging microscopy. <i>Current Opinion in Neurobiology</i> , 2006 , 16, 551-61	7.6	112
93	The ATP-waiting conformation of rotating F1-ATPase revealed by single-pair fluorescence resonance energy transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 9314-8	11.5	93
92	TRPV4-mediated calcium influx into human bronchial epithelia upon exposure to diesel exhaust particles. <i>Environmental Health Perspectives</i> , 2011 , 119, 784-93	8.4	92
91	Nonlinear [Ca ²⁺] signaling in dendrites and spines caused by activity-dependent depression of Ca ²⁺ extrusion. <i>Journal of Neuroscience</i> , 2006 , 26, 8183-94	6.6	89
90	Plasticity of Spine Structure: Local Signaling, Translation and Cytoskeletal Reorganization. <i>Frontiers in Synaptic Neuroscience</i> , 2018 , 10, 29	3.5	89
89	Regional differences in hippocampal calcium handling provide a cellular mechanism for limiting plasticity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 14080-4	11.5	86
88	Long-distance integration of nuclear ERK signaling triggered by activation of a few dendritic spines. <i>Science</i> , 2013 , 342, 1107-11	33.3	84
87	Plasticity of dendritic spines: subcompartmentalization of signaling. <i>Annual Review of Physiology</i> , 2014 , 76, 365-85	23.1	82
86	Wide-area scanner for high-speed atomic force microscopy. <i>Review of Scientific Instruments</i> , 2013 , 84, 053702	1.7	75
85	CaMKII Autophosphorylation Is Necessary for Optimal Integration of Ca Signals during LTP Induction, but Not Maintenance. <i>Neuron</i> , 2017 , 94, 800-808.e4	13.9	72
84	Long-tip high-speed atomic force microscopy for nanometer-scale imaging in live cells. <i>Scientific Reports</i> , 2015 , 5, 8724	4.9	71
83	Loss of Cdc42 leads to defects in synaptic plasticity and remote memory recall. <i>ELife</i> , 2014 , 3,	8.9	67
82	The effect of substrate topography on direct reprogramming of fibroblasts to induced neurons. <i>Biomaterials</i> , 2014 , 35, 5327-5336	15.6	66
81	Imaging ERK and PKA Activation in Single Dendritic Spines during Structural Plasticity. <i>Neuron</i> , 2017 , 93, 1315-1324.e3	13.9	65
80	Simultaneous dual-color fluorescence lifetime imaging with novel red-shifted fluorescent proteins. <i>Nature Methods</i> , 2016 , 13, 989-992	21.6	62
79	Impaired NMDA receptor transmission alters striatal synapses and DISC1 protein in an age-dependent manner. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 5795-800	11.5	58
78	Kinetics of Endogenous CaMKII Required for Synaptic Plasticity Revealed by Optogenetic Kinase Inhibitor. <i>Neuron</i> , 2017 , 94, 37-47.e5	13.9	55

77	Somatostatin-Expressing Interneurons Enable and Maintain Learning-Dependent Sequential Activation of Pyramidal Neurons. <i>Neuron</i> , 2019 , 102, 202-216.e7	13.9	54
76	The role of the DELSEED motif of the beta subunit in rotation of F1-ATPase. <i>Journal of Biological Chemistry</i> , 2000 , 275, 14260-3	5.4	54
75	Regulation of the postsynaptic cytoskeleton: roles in development, plasticity, and disorders. <i>Journal of Neuroscience</i> , 2010 , 30, 14937-42	6.6	51
74	Biophysics of Biochemical Signaling in Dendritic Spines: Implications in Synaptic Plasticity. <i>Biophysical Journal</i> , 2017 , 113, 2152-2159	2.9	49
73	Nonviral direct conversion of primary mouse embryonic fibroblasts to neuronal cells. <i>Molecular Therapy - Nucleic Acids</i> , 2012 , 1, e32	10.7	49
72	Purine but not pyrimidine nucleotides support rotation of F(1)-ATPase. <i>Journal of Biological Chemistry</i> , 2001 , 276, 25480-6	5.4	49
71	PKC ζ integrates spatiotemporally distinct Ca and autocrine BDNF signaling to facilitate synaptic plasticity. <i>Nature Neuroscience</i> , 2018 , 21, 1027-1037	25.5	45
70	Signalling pathways underlying structural plasticity of dendritic spines. <i>British Journal of Pharmacology</i> , 2011 , 163, 1626-38	8.6	41
69	Reciprocal Activation within a Kinase-Effector Complex Underlying Persistence of Structural LTP. <i>Neuron</i> , 2019 , 102, 1199-1210.e6	13.9	37
68	F1-ATPase: a highly efficient rotary ATP machine. <i>Essays in Biochemistry</i> , 2000 , 35, 3-18	7.6	35
67	Regulation of Rho GTPase proteins during spine structural plasticity for the control of local dendritic plasticity. <i>Current Opinion in Neurobiology</i> , 2017 , 45, 193-201	7.6	34
66	The mechanisms underlying the spatial spreading of signaling activity. <i>Current Opinion in Neurobiology</i> , 2011 , 21, 313-21	7.6	34
65	Deletion of the myopathy loop of Dictyostelium myosin II and its impact on motor functions. <i>Journal of Biological Chemistry</i> , 1999 , 274, 37840-4	5.4	34
64	A Dendritic Guidance Receptor Complex Brings Together Distinct Actin Regulators to Drive Efficient F-Actin Assembly and Branching. <i>Developmental Cell</i> , 2018 , 45, 362-375.e3	10.2	30
63	Neurofibromin is the major ras inactivator in dendritic spines. <i>Journal of Neuroscience</i> , 2014 , 34, 776-83	6.6	29
62	Rotation of the gamma subunit in F1-ATPase; evidence that ATP synthase is a rotary motor enzyme. <i>Journal of Bioenergetics and Biomembranes</i> , 1997 , 29, 207-9	3.7	25
61	Studying signal transduction in single dendritic spines. <i>Cold Spring Harbor Perspectives in Biology</i> , 2012 , 4,	10.2	24
60	High-speed atomic force microscopy imaging of live mammalian cells. <i>Biophysics and Physicobiology</i> , 2017 , 14, 127-135	1.4	23

59	Modified SH2 domain to phototrap and identify phosphotyrosine proteins from subcellular sites within cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, E2929-38	11.5	23
58	An improved Ras sensor for highly sensitive and quantitative FRET-FLIM imaging. <i>PLoS ONE</i> , 2013 , 8, e52874	3.7	23
57	In Vivo Imaging of the Coupling between Neuronal and CREB Activity in the Mouse Brain. <i>Neuron</i> , 2020 , 105, 799-812.e5	13.9	22
56	Self-phase modulation signatures of neuronal activity. <i>Optics Letters</i> , 2008 , 33, 219-21	3	21
55	NF1 Is a Direct G Protein Effector Essential for Opioid Signaling to Ras in the Striatum. <i>Current Biology</i> , 2016 , 26, 2992-3003	6.3	19
54	RGS14 Restricts Plasticity in Hippocampal CA2 by Limiting Postsynaptic Calcium Signaling. <i>ENeuro</i> , 2018 , 5,	3.9	19
53	Centaurin- β -Ras-Elk-1 signaling at mitochondria mediates β amyloid-induced synaptic dysfunction. <i>Journal of Neuroscience</i> , 2013 , 33, 5367-74	6.6	18
52	PAM forms an atypical SCF ubiquitin ligase complex that ubiquitinates and degrades NMNAT2. <i>Journal of Biological Chemistry</i> , 2018 , 293, 13897-13909	5.4	17
51	Spatiotemporal Regulation of Signaling in and out of Dendritic Spines: CaMKII and Ras. <i>The Open Neuroscience Journal</i> , 2009 , 3, 117-127		16
50	Mechanisms of Ca/calmodulin-dependent kinase II activation in single dendritic spines. <i>Nature Communications</i> , 2019 , 10, 2784	17.4	15
49	Correlative Ultrastructural Analysis of Functionally Modulated Synapses Using Automatic Tape-Collecting Ultramicrotome - SEM Array Tomography. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1271-1272	9.5	14
48	Fluorescent sensors for neuronal signaling. <i>Current Opinion in Neurobiology</i> , 2020 , 63, 31-41	7.6	12
47	Automated Remote Focusing, Drift Correction, and Photostimulation to Evaluate Structural Plasticity in Dendritic Spines. <i>PLoS ONE</i> , 2017 , 12, e0170586	3.7	12
46	Modulation of actin filament sliding by mutations of the SH2 cysteine in Dictyostelium myosin II. <i>Biochemical and Biophysical Research Communications</i> , 1997 , 234, 701-6	3.4	12
45	Activity-regulated synaptic targeting of lncRNA ADEPTR mediates structural plasticity by localizing Sptn1 and AnkB in dendrites. <i>Science Advances</i> , 2021 , 7,	14.3	12
44	Imaging intracellular signaling using two-photon fluorescent lifetime imaging microscopy. <i>Cold Spring Harbor Protocols</i> , 2012 , 2012, 1121-8	1.2	11
43	An open-source tool for analysis and automatic identification of dendritic spines using machine learning. <i>PLoS ONE</i> , 2018 , 13, e0199589	3.7	10
42	Rac1 is a downstream effector of PKC β in structural synaptic plasticity. <i>Scientific Reports</i> , 2020 , 10, 1777	4.9	8

41	Methodologies and Challenges for CRISPR/Cas9 Mediated Genome Editing of the Mammalian Brain. <i>Frontiers in Genome Editing</i> , 2020 , 2, 602970	2.5	7
40	GIT1 regulates synaptic structural plasticity underlying learning. <i>PLoS ONE</i> , 2018 , 13, e0194350	3.7	6
39	Excitotoxic insult results in a long-lasting activation of CaMKII α and mitochondrial damage in living hippocampal neurons. <i>PLoS ONE</i> , 2015 , 10, e0120881	3.7	6
38	Glycine receptor β subunit facilitates the early embryonic development in mice. <i>Reproduction</i> , 2020 , 159, 41	3.8	6
37	Longitudinal Two-Photon Imaging of Dorsal Hippocampal CA1 in Live Mice. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	5
36	The NMDA receptor subunit GluN3A regulates synaptic activity-induced and myocyte enhancer factor 2C (MEF2C)-dependent transcription. <i>Journal of Biological Chemistry</i> , 2020 , 295, 8613-8627	5.4	4
35	A distinct talin2 structure directs isoform specificity in cell adhesion. <i>Journal of Biological Chemistry</i> , 2020 , 295, 12885-12899	5.4	4
34	Imaging the activity of Ras superfamily GTPase proteins in small subcellular compartments in neurons. <i>Methods in Molecular Biology</i> , 2014 , 1071, 109-28	1.4	4
33	Principle and Application of Fluorescence Lifetime Imaging for Neuroscience 2019 , 53-64		3
32	Rapid Ultrastructural Changes of PSD and Extrasynaptic Axon-spine Interface Membrane during LTP Induced in Single Dendritic Spine		3
31	Rapid Ultrastructural Changes in the PSD and Surrounding Membrane after Induction of Structural LTP in Single Dendritic Spines. <i>Journal of Neuroscience</i> , 2021 , 41, 7003-7014	6.6	3
30	Imaging neuronal protein signaling dynamics in vivo. <i>Current Opinion in Neurobiology</i> , 2021 , 69, 68-75	7.6	3
29	Rapid generation of conditional knockout mice using the CRISPR-Cas9 system and electroporation for neuroscience research. <i>Molecular Brain</i> , 2021 , 14, 148	4.5	3
28	Extracellular Remodeling by Lysosomes: An Inside-Out Mechanism of Spine Plasticity. <i>Neuron</i> , 2017 , 93, 6-8	13.9	2
27	Use of Freeze-thawed Embryos for High-efficiency Production of Genetically Modified Mice. <i>Journal of Visualized Experiments</i> , 2020 ,	1.6	2
26	Self-phase modulation and two-photon absorption imaging of cells and active neurons 2007 ,		2
25	RGS14 restricts plasticity in hippocampal CA2 by limiting postsynaptic calcium signaling		2
24	Automated remote focusing, drift correction, and photostimulation to evaluate structural plasticity in dendritic spines		2

23	Action potential-coupled Rho GTPase signaling drives presynaptic plasticity		2
22	Action potential-coupled Rho GTPase signaling drives presynaptic plasticity. <i>ELife</i> , 2021 , 10,	8.9	2
21	Correlative Fluorescence and Scanning Electron Microscope Imaging of Cultured Neurons Pretreated with Ionic Liquid. <i>Microscopy and Microanalysis</i> , 2016 , 22, 232-233	0.5	2
20	Imaging Signaling Transduction in Single Dendritic Spines. <i>Neuromethods</i> , 2014 , 145-159	0.4	2
19	Imaging Signal Transduction in Dendrites Using Genetically Encoded Biosensors 2016 , 139-154		1
18	Attempts to Visualize Conformational Changes in a Single Protein Molecule During Function. <i>Microscopy and Microanalysis</i> , 1997 , 3, 799-800	0.5	1
17	Optogenetic probes. <i>Brain Cell Biology</i> , 2008 , 36, 1-2		1
16	ADAP1/Centaurin- β Negatively Regulates Dendritic Spine Function and Memory Formation in the Hippocampus. <i>ENeuro</i> , 2021 , 8,	3.9	1
15	Imaging Neuronal Signal Transduction Using Multiphoton FRET-FLIM. <i>Neuromethods</i> , 2019 , 111-130	0.4	1
14	Local autocrine signaling of IGF1 synthesized and released by CA1 pyramidal neurons regulates plasticity of dendritic spines		1
13	An optical probe of synaptic plasticity. <i>Nature Biotechnology</i> , 2017 , 35, 26-27	44.5	0
12	Visualization of Living Cells by High-speed Atomic Force Microscopy. <i>Seibutsu Butsuri</i> , 2016 , 56, 159-161	0	0
11	Visualization of AMPA Receptor Distribution during Long Term Potentiation with Correlative Light and Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2019 , 25, 476-477	0.5	
10	3K1522 Imaging Rho GTPases activation in single dendritic spines by 2-photon fluorescence lifetime imaging microscopy(Cell biology 4,The 49th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2011 , 51, S147	0	
9	1PT207 Duration of CaMKII activation required for plasticity of dendritic spines revealed by photo-activatable CaMKII inhibitor(The 50th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2012 , 52, S103	0	
8	1TA5-03 Imaging Rho GTPases activation in single dendritic spines by 2-photon fluorescence lifetime imaging microscopy(The 47th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2009 , 49, S31	0	
7	FRET Imaging of Rho GTPase Activity with Red Fluorescent Protein-Based FRET Pairs.. <i>Methods in Molecular Biology</i> , 2022 , 2438, 31-43	1.4	
6	Correlative Ultrastructural Analysis of Functionally Modulated Synapses Using Automated Tape-Collecting Ultramicrotome and SEM Array Tomography. <i>Neuromethods</i> , 2020 , 121-149	0.4	

- 5 PAM forms an atypical SCF ubiquitin ligase complex that ubiquitinates and degrades NMNAT2. *FASEB Journal*, **2019**, 33, 465.1 0.9
- 4 F1-ATPase: A Rotary Motor Made of a Single Molecule.. *Seibutsu Butsuri*, **1999**, 39, 361-366 0
- 3 Two-Photon Lifetime Imaging of Signal Transduction in Neurons. *Seibutsu Butsuri*, **2010**, 50, 023-026 0
- 2 Analysis of TrkB Receptor Activity Using FRET Sensors. *Neuromethods*, **2018**, 149-157 0.4
- 1 Cryo-Confocal Imaging for CLEM Mapping in Brain Tissues. *Microscopy Today*, **2021**, 29, 34-39 0.4