Katsumasa Fujita

List of Publications by Citations

130 papers	4,015 citations	33 h-index	60 g-index
157 ext. papers	4,838 ext. citations	5.5 avg, IF	5.33 L-index

#	Paper	IF	Citations
130	Label-free Raman observation of cytochrome c dynamics during apoptosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 28-32	11.5	306
129	Alkyne-tag Raman imaging for visualization of mobile small molecules in live cells. *Journal of the American Chemical Society*, **2012**, 134, 20681-9	16.4	267
128	Raman and SERS microscopy for molecular imaging of live cells. *Nature Protocols*, **2013**, 8, 677-92	18.8	238
127	Imaging of EdU, an alkyne-tagged cell proliferation probe, by Raman microscopy. *Journal of the American Chemical Society*, **2011**, 133, 6102-5	16.4	238
126	Raman microscopy for dynamic molecular imaging of living cells. *Journal of Biomedical Optics*, **2008**, 13, 044027	3.5	191
125	Dynamic SERS imaging of cellular transport pathways with endocytosed gold nanoparticles. *Nano Letters*, **2011**, 11, 5344-8	11.5	185
124	High-resolution confocal microscopy by saturated excitation of fluorescence. *Physical Review Letters*, **2007**, 99, 228105	7.4	148
123	Molecular imaging of live cells by Raman microscopy. *Current Opinion in Chemical Biology*, **2013**, 17, 708-15	7.7	126
122	Sphingomyelin distribution in lipid rafts of artificial monolayer membranes visualized by Raman microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 4558-63	11.5	85
121	Introduction to super-resolution microscopy. *Microscopy (Oxford, England)*, **2014**, 63, 177-92	1.3	75
120	Measurement of a saturated emission of optical radiation from gold nanoparticles: application to an ultrahigh resolution microscope. *Physical Review Letters*, **2014**, 112, 017402	7.4	71
119	Label-free biochemical imaging of heart tissue with high-speed spontaneous Raman microscopy. *Biochemical and Biophysical Research Communications*, **2009**, 382, 370-4	3.4	71
118	Second-harmonic-generation microscope with a microlens array scanner. *Optics Letters*, **2002**, 27, 1324-6	3	67
117	Generation of calcium waves in living cells by pulsed-laser-induced photodisruption. *Applied Physics Letters*, **2001**, 79, 1208-1210	3.4	66
116	High-Speed and Scalable Whole-Brain Imaging in Rodents and Primates. *Neuron*, **2017**, 94, 1085-1100.e6	13.9	65
115	Visualizing cell state transition using Raman spectroscopy. *PLoS ONE*, **2014**, 9, e84478	3.7	63
114	Nanoscale heating of laser irradiated single gold nanoparticles in liquid. *Optics Express*, **2011**, 19, 12375-83	3	63

113	Structured line illumination Raman microscopy. *Nature Communications*, **2015**, 6, 10095	17.4	62
112	Time-resolved observation of surface-enhanced Raman scattering from gold nanoparticles during transport through a living cell. *Journal of Biomedical Optics*, **2009**, 14, 024038	3.5	62
111	Improving spinning disk confocal microscopy by preventing pinhole cross-talk for intravital imaging. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 3399-404	11.5	61
110	Multiphoton excitation-evoked chromophore-assisted laser inactivation using green fluorescent protein. *Nature Methods*, **2005**, 2, 503-5	21.6	59
109	A fast- and positively photoswitchable fluorescent protein for ultralow-laser-power RESOLFT nanoscopy. *Nature Methods*, **2015**, 12, 515-8	21.6	58
108	Alkyne-Tag SERS Screening and Identification of Small-Molecule-Binding Sites in Protein. *Journal of the American Chemical Society*, **2016**, 138, 13901-13910	16.4	52
107	Multi-focus excitation coherent anti-Stokes Raman scattering (CARS) microscopy and its applications for real-time imaging. *Optics Express*, **2009**, 17, 9526-36	3.3	44
106	Metal nanoparticles for nano-imaging and nano-analysis. *Physical Chemistry Chemical Physics*, **2013**, 15, 13713-22	3.6	43
105	Quantitative Evaluation of Surface-Enhanced Raman Scattering Nanoparticles for Intracellular pH Sensing at a Single Particle Level. *Analytical Chemistry*, **2019**, 91, 3254-3262	7.8	41
104	Saturation and Reverse Saturation of Scattering in a Single Plasmonic Nanoparticle. *ACS Photonics*, **2014**, 1, 32-37	6.3	39
103	The molecular chaperone Hsp47 is essential for cartilage and endochondral bone formation. *Journal of Cell Science*, **2012**, 125, 1118-28	5.3	38
102	Optical trapping and surgery of living yeast cells using a single laser. *Review of Scientific Instruments* , **2008**, 79, 103705	1.7	37
101	Confocal multipoint multiphoton excitation microscope with microlens and pinhole arrays. *Optics Communications*, **2000**, 174, 7-12	2	37
100	Two-Photon Excited Fluorescence and Second-Harmonic Generation of the DAST Organic Nanocrystals. *Journal of Physical Chemistry C*, **2011**, 115, 8988-8993	3.8	36
99	Ultrasmall all-optical plasmonic switch and its application to superresolution imaging. *Scientific Reports*, **2016**, 6, 24293	4.9	34
98	3D SERS (surface enhanced Raman scattering) imaging of intracellular pathways. *Methods*, **2014**, 68, 348-53	4.8	34
97	Simultaneous imaging of protonated and deprotonated carbonylcyanide p-trifluoromethoxyphenylhydrazone in live cells by Raman microscopy. *Chemical Communications*, **2014**, 50, 1341-3	5.8	33
96	High-speed Raman imaging of cellular processes. *Current Opinion in Chemical Biology*, **2016**, 33, 16-24	9.7	32

95	Location-dependent photogeneration of calcium waves in HeLa cells. *Cell Biochemistry and Biophysics*, **2006**, 45, 167-76	3.2	32
94	Time-lapse Raman imaging of osteoblast differentiation. *Scientific Reports*, **2015**, 5, 12529	4.9	31
93	Non-label immune cell state prediction using Raman spectroscopy. *Scientific Reports*, **2016**, 6, 37562	4.9	31
92	A sensitive and specific Raman probe based on bisarylbutadiyne for live cell imaging of mitochondria. *Bioorganic and Medicinal Chemistry Letters*, **2015**, 25, 664-7	2.9	29
91	Label-free molecular imaging of living cells. *Molecules and Cells*, **2008**, 26, 530-5	3.5	29
90	Beyond the diffraction-limit biological imaging by saturated excitation microscopy. *Journal of Biomedical Optics*, **2008**, 13, 050507	3.5	28
89	SAX microscopy with fluorescent nanodiamond probes for high-resolution fluorescence imaging. *Biomedical Optics Express*, **2011**, 2, 1946-54	3.5	26
88	Photogeneration of membrane potential hyperpolarization and depolarization in non-excitable cells. *European Biophysics Journal*, **2009**, 38, 255-62	1.9	25
87	Comparison of staining selectivity for subcellular structures by carbazole-based cyanine probes in nonlinear optical microscopy. *ChemBioChem*, **2011**, 12, 52-5	3.8	24
86	Deep-UV biological imaging by lanthanide ion molecular protection. *Biomedical Optics Express*, **2016**, 7, 158-70	3.5	23
85	Three-dimensional subsurface microprocessing of collagen by ultrashort laser pulses. *Applied Physics Letters*, **2001**, 78, 999-1001	3.4	23
84	Nonlinear plasmonic imaging techniques and their biological applications. *Nanophotonics*, **2017**, 6, 31-49	6.3	20
83	Super-Spatial- and -Spectral-Resolution in Vibrational Imaging via Saturated Coherent Anti-Stokes Raman Scattering. *Physical Review Applied*, **2015**, 4,	4.3	20
82	Using redox-sensitive mitochondrial cytochrome Raman bands for label-free detection of mitochondrial dysfunction. *Analyst, The*, **2019**, 144, 2531-2540	5	20
81	Study of Nonlinear Plasmonic Scattering in Metallic Nanoparticles. *ACS Photonics*, **2016**, 3, 1432-1439	6.3	19
80	Analysis of dynamic SERS spectra measured with a nanoparticle during intracellular transportation in 3D. *Journal of Optics (United Kingdom)*, **2015**, 17, 114023	1.7	18
79	Saturated excitation microscopy for sub-diffraction-limited imaging of cell clusters. *Journal of Biomedical Optics*, **2013**, 18, 126002	3.5	18
78	High-resolution imaging in two-photon excitation microscopy using estimations of the point spread function. *Biomedical Optics Express*, **2018**, 9, 202-213	3.5	17

77	Saturated two-photon excitation fluorescence microscopy with core-ring illumination. *Optics Letters*, **2017**, 42, 571-574	3	17
76	In situ visualization of the intracellular Ca2+ dynamics at the border of the acute myocardial infarct. *Molecular and Cellular Biochemistry*, **2003**, 248, 135-9	4.2	17
75	An enzyme-responsive metal-enhanced near-infrared fluorescence sensor based on functionalized gold nanoparticles. *Chemical Science*, **2015**, 6, 4934-4939	9.4	16
74	Visible-wavelength two-photon excitation microscopy for fluorescent protein imaging. *Journal of Biomedical Optics*, **2015**, 20, 101202	3.5	16
73	Feature-based recognition of surface-enhanced Raman spectra for biological targets. *Journal of Biophotonics*, **2013**, 6, 587-97	3.1	16
72	Multimodal label-free microscopy. *Journal of Innovative Optical Health Sciences*, **2014**, 07, 1330009	1.2	15
71	Point spread function analysis with saturable and reverse saturable scattering. *Optics Express*, **2014**, 22, 26016-22	3.3	15
70	Dendrimer adjusted nanocrystals of DAST: organic crystal with enhanced nonlinear optical properties. *Nanoscale*, **2010**, 2, 913-6	7.7	15
69	Giant photothermal nonlinearity in a single silicon nanostructure. *Nature Communications*, **2020**, 11, 4101	17.4	15
68	Label-free Raman imaging of the macrophage response to the malaria pigment hemozoin. *Analyst, The*, **2015**, 140, 2350-9	5	14
67	Dual-polarization Raman spectral imaging to extract overlapping molecular fingerprints of living cells. *Journal of Biophotonics*, **2015**, 8, 546-54	3.1	14
66	On fluorescence blinking of single molecules in polymers. *Chemical Physics Letters*, **2009**, 468, 234-238	2.5	14
65	Au-Protected Ag Core/Satellite Nanoassemblies for Excellent Extra-/Intracellular Surface-Enhanced Raman Scattering Activity. *ACS Applied Materials & Interfaces*, **2017**, 9, 44027-44037	9.5	13
64	Visualizing the appearance and disappearance of the attractor of differentiation using Raman spectral imaging. *Scientific Reports*, **2015**, 5, 11358	4.9	13
63	High-Resolution Raman Microscopic Detection of Follicular Thyroid Cancer Cells with Unsupervised Machine Learning. *Journal of Physical Chemistry B*, **2019**, 123, 4358-4372	3.4	11
62	In situ Raman imaging of osteoblastic mineralization. *Journal of Raman Spectroscopy*, **2014**, 45, 157-161	2.3	11
61	Laser-targeted photofabrication of gold nanoparticles inside cells. *Nature Communications*, **2014**, 5, 5144	17.4	11
60	Determination of the Expanded Optical Transfer Function in Saturated Excitation Imaging and High Harmonic Demodulation. *Applied Physics Express*, **2011**, 4, 042401	2.4	11

59	Temporal coherence behavior of a semiconductor laser under strong optical feedback. *Optics Communications*, **1999**, 161, 123-131	2	11
58	Protein expression guided chemical profiling of living cells by the simultaneous observation of Raman scattering and anti-Stokes fluorescence emission. *Scientific Reports*, **2017**, 7, 43569	4.9	10
57	Resolution enhancement in deep-tissue nanoparticle imaging based on plasmonic saturated excitation microscopy. *APL Photonics*, **2018**, 3, 031301	5.2	10
56	Saturated excitation microscopy with optimized excitation modulation. *ChemPhysChem*, **2014**, 15, 743-9	3.2	10
55	Real-Time Two-Photon Microscopy and Its Application for In Situ Imaging.. *Acta Histochemica Et Cytochemica*, **2001**, 34, 399-403	1.9	10
54	Saturated excitation microscopy using differential excitation for efficient detection of nonlinear fluorescence signals. *APL Photonics*, **2018**, 3, 080805	5.2	10
53	Quantitative Drug Dynamics Visualized by Alkyne-Tagged Plasmonic-Enhanced Raman Microscopy. *ACS Nano*, **2020**, 14, 15032-15041	16.7	9
52	Dynamic pH measurements of intracellular pathways using nano-plasmonic assemblies. *Analyst, The* , **2020**, 145, 5768-5775	5	9
51	High-Throughput Cell Imaging and Classification by Narrowband and Low-Spectral-Resolution Raman Microscopy. *Journal of Physical Chemistry B*, **2019**, 123, 2654-2661	3.4	8
50	Raman spectroscopic histology using machine learning for nonalcoholic fatty liver disease. *FEBS Letters*, **2019**, 593, 2535-2544	3.8	8
49	Saturated excitation of fluorescent proteins for subdiffraction-limited imaging of living cells in three dimensions. *Interface Focus*, **2013**, 3, 20130007	3.9	8
48	Direct visualization of an antidepressant analog using surface-enhanced Raman scattering in the brain. *JCI Insight*, **2020**, 5,	9.9	8
47	Nonlinear fluorescence imaging by photoinduced charge separation. *Japanese Journal of Applied Physics*, **2015**, 54, 042403	1.4	7
46	Wavefront-sensorless adaptive optics with a laser-free spinning disk confocal microscope. *Journal of Microscopy*, **2020**,	1.9	7
45	Multiphoton-Excited Deep-Ultraviolet Photolithography for 3D Nanofabrication. *ACS Applied Nano Materials*, **2020**, 3, 11434-11441	5.6	6
44	Surface Plasmon Localization-Based Super-resolved Raman Microscopy. *Nano Letters*, **2020**, 20, 8951-8958	11.5	6
43	Follow-up review: recent progress in the development of super-resolution optical microscopy. *Microscopy (Oxford, England)*, **2016**, 65, 275-81	1.3	6
42	Cell type discrimination based on image features of molecular component distribution. *Scientific Reports*, **2018**, 8, 11726	4.9	5

41	Single-pulse cell stimulation with a near-infrared picosecond laser. *Applied Physics Letters*, **2005**, 87, 243901	3.4	5
40	Nonlinear Scattering of Near-Infrared Light for Imaging Plasmonic Nanoparticles in Deep Tissue. *ACS Photonics*, **2020**, 7, 2139-2146	6.3	5
39	Metallic nanoparticles as SERS agents for biomolecular imaging. *Current Pharmaceutical Biotechnology*, **2013**, 14, 141-9	2.6	5
38	Adaptive printing using VO2 optical antennas with subwavelength resolution. *Applied Physics Letters*, **2019**, 115, 161105	3.4	4
37	Double-Pass Confocal Absorption Microscope with a Phase Conjugation Mirror. *Japanese Journal of Applied Physics*, **1996**, 35, L852-L853	1.4	4
36	Time-gated imaging for multifocus second-harmonic generation microscopy. *Review of Scientific Instruments*, **2005**, 76, 073704	1.7	4
35	Visible-wavelength two-photon excitation microscopy with multifocus scanning for volumetric live-cell imaging. *Journal of Biomedical Optics*, **2019**, 25, 1-5	3.5	3
34	Hot Carrier Generation in Two-Dimensional Silver Nanoparticle Arrays at Different Excitation Wavelengths under On-Resonant Conditions. *Journal of Physical Chemistry C*, **2020**, 124, 13936-13941	3.8	2
33	Measurement of Scattering Nonlinearities from a Single Plasmonic Nanoparticle. *Journal of Visualized Experiments*, **2016**,	1.6	2
32	1N1312 Time-resolved Raman imaging of malarial hemozoin(Bioimaging 1,The 49th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2011**, 51, S66	0	2
31	Hyperspectral two-photon excitation microscopy using visible wavelength. *Optics Letters*, **2021**, 46, 37-40	3	2
30	Super-Resolution Imaging in Raman Microscopy **2019**, 195-211		2
29	Mie-enhanced photothermal/thermo-optical nonlinearity and applications on all-optical switch and super-resolution imaging. *Optical Materials Express*,	2.6	2
28	Raman microscopy: Chemical and analytical imaging of biomolecules **2015**,		1
27	Spectral focusing in picosecond pulsed stimulated Raman scattering microscopy.. *Biomedical Optics Express*, **2022**, 13, 995-1004	3.5	1
26	Laser Feedback Microscopy Controlling the Laser Oscillation of Semiconductor Laser by Reentered Light.. *The Review of Laser Engineering*, **1996**, 24, 1084-1090	0	1
25	Super-resolved Raman microscopy using random structured light illumination: Concept and feasibility. *Journal of Chemical Physics*, **2021**, 155, 144202	3.9	1
24	Recent Developments in Super Resolution Fluorescence Microscopy. *Seibutsu Butsuri*, **2010**, 50, 174-179	0	1

23	Raman Microscopy **2018**,		1
22	Label-free monitoring of crystalline chitin hydrolysis by chitinase based on Raman spectroscopy. *Analyst, The*, **2021**, 146, 4087-4094	5	0
21	Detecting nitrile-containing small molecules by infrared photothermal microscopy. *Analyst, The*, **2021**, 146, 2307-2312	5	0
20	Multiwell Raman plate reader for high-throughput biochemical screening. *Scientific Reports*, **2021**, 11, 15742	4.9	0
19	Bessel-beam illumination Raman microscopy. *Biomedical Optics Express*, **2022**, 13, 3161	3.5	0
18	Micro-Raman Spectroscopy **2018**, 375-379		
17	CARS Microscopy: Implementation of Nonlinear Vibrational Spectroscopy for Far-Field and Near-Field Imaging. *Springer Series in Optical Sciences*, **2012**, 317-346	0.5	
16	Imaging Small Molecules in Living Cells with a Tiny Tag and Raman Microscopy. *Seibutsu Butsuri*, **2012**, 52, 034-035	0	
15	3PS037 Ranian microscopy distinguishes the status of differentiating cell(The 50th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2012**, 52, S152	0	
14	Metallic Nanoparticles for Enhanced Raman Imaging of Living Cells. *The Review of Laser Engineering* , **2010**, 38, 427-432	0	
13	1P-335 An optical pacemaker for heart muscle cells(The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S74	0	
12	1P-340 An optical pacemaker for heart muscle cells : the laser irradiation power, phase, frequency dependencies(The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S74-S75	0	
11	2P-325 Formation of gold nanoparticles in living cells by reduction of gold ion solution(The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S125	0	
10	3P304 Surface enhanced Raman spectroscopy of living cells with gold nanoparticles(Bioimaging. The genesis of life, and biological evolution,Oral Presentations). *Seibutsu Butsuri*, **2007**, 47, S279	0	
9	Spontaneous Raman and SERS microscopy for Raman tag imaging **2022**, 275-287		
8	Realtime Nonlinear-Optical Microscopy for Observing Biological Cells. *The Review of Laser Engineering*, **2003**, 31, 370-374	0	
7	New Development in Nonlinear Optical Microscopy. *The Review of Laser Engineering*, **2006**, 34, 818-821	0	
6	Structured Illumination Raman Microscopy for High-Resolution Label-Free Imaging. *The Review of Laser Engineering*, **2016**, 44, 648	0	

List of Publications

5	High-Resolution Fluorescence Imaging by Saturated Excitation (SAX): Its Principle and Imaging Properties in Biology. *The Review of Laser Engineering*, **2013**, 41, 113	0
4	Visualizing Bioactive Small Molecules by Alkyne Tagging and Slit-Scanning Raman Microscopy. *Methods in Molecular Biology*, **2019**, 1888, 99-114	1.4
3	Visible-Wavelength Multiphoton Activation Confocal Microscopy. *ACS Photonics*, **2021**, 8, 2666-2673	6.3
2	Saturated-excitation image scanning microscopy.. *Optics Express*, **2022**, 30, 13825-13838	3.3
1	Deep Tissue High-resolution and Background-free Imaging with Plasmonic SAX Microscopy. *Lecture Notes in Nanoscale Science and Technology*, **2022**, 419-435	0.3