

Katsuhiko Ajito

List of Publications by Year in descending order

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91
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159525

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docs citations

92
times ranked

3141
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of a Small Number of Molecules at a Metal Nanogap Arrayed on a Solid Surface Using Surface-Enhanced Raman Scattering. <i>Journal of the American Chemical Society</i> , 2007, 129, 1658-1662.	6.6	190
2	24 Gbit/s data transmission in 300 GHz band for future terahertz communications. <i>Electronics Letters</i> , 2012, 48, 953.	0.5	183
3	50-Gb/s Direct Conversion QPSK Modulator and Demodulator MMICs for Terahertz Communications at 300 GHz. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014, 62, 600-609.	2.9	165
4	Uni-Travelling-Carrier Photodiode Module Generating 300 GHz Power Greater Than 1 mW. <i>IEEE Microwave and Wireless Components Letters</i> , 2012, 22, 363-365.	2.0	149
5	300-GHz Step-Profiled Corrugated Horn Antennas Integrated in LTCC. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 5437-5444.	3.1	134
6	THz Chemical Imaging for Biological Applications. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2011, 1, 293-300.	2.0	133
7	Study of the Photochromic Properties of Amorphous MoO ₃ Films Using Raman Microscopy. <i>The Journal of Physical Chemistry</i> , 1995, 99, 16383-16388.	2.9	125
8	Quantitative Measurements of Amino Acids by Terahertz Time-Domain Transmission Spectroscopy. <i>Analytical Chemistry</i> , 2006, 78, 5424-5428.	3.2	117
9	Fully Integrated ASK Receiver MMIC for Terahertz Communications at 300 GHz. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2013, 3, 445-452.	2.0	81
10	8 Gbit/s wireless data transmission at 250 GHz. <i>Electronics Letters</i> , 2009, 45, 1121.	0.5	80
11	Terahertz wireless communication link at 300 GHz. , 2010, , .		79
12	A Self-Assembled Nano Optical Switch and Transistor Based on a Rigid Conjugated Polymer, Thioacetyl-End-Functionalized Poly(para-phenylene ethynylene). <i>Journal of the American Chemical Society</i> , 2005, 127, 2804-2805.	6.6	76
13	Analytical Terahertz Spectroscopy. <i>Analytical Sciences</i> , 2008, 24, 185-192.	0.8	73
14	Broadband dielectric spectroscopy of glucose aqueous solution: Analysis of the hydration state and the hydrogen bond network. <i>Journal of Chemical Physics</i> , 2015, 142, 234504.	1.2	70
15	Terahertz-wave generation from quasi-phase-matched GaP for 1.55 μm pumping. <i>Applied Physics Letters</i> , 2006, 88, 071118.	1.5	67
16	Characterization of the hydrogen-bond network of water around sucrose and trehalose: Microwave and terahertz spectroscopic study. <i>Journal of Chemical Physics</i> , 2017, 146, 105102.	1.2	66
17	Chemical Mapping of Pharmaceutical Cocrystals Using Terahertz Spectroscopic Imaging. <i>Analytical Chemistry</i> , 2013, 85, 1980-1984.	3.2	65
18	Phase-Sensitive Terahertz Self-Heterodyne System Based on Photodiode and Low-Temperature-Grown GaAs Photoconductor at 1.55 μm . <i>IEEE Sensors Journal</i> , 2013, 13, 31-36.	2.4	62

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19	Laser trapping and Raman spectroscopy of single cellular organelles in the nanometer range. <i>Lab on a Chip</i> , 2002, 2, 11-14.	3.1	61
20	Angle-Dependent Terahertz Time-Domain Spectroscopy of Amino Acid Single Crystals. <i>Journal of Physical Chemistry B</i> , 2006, 110, 21259-21263.	1.2	61
21	Characterization of dye-doped TiO ₂ films prepared by spray-pyrolysis. <i>Applied Surface Science</i> , 1997, 113-114, 426-431.	3.1	58
22	Surface-Enhanced Raman Scattering Imaging of Photopatterned Self-Assembled Monolayers. <i>Langmuir</i> , 1996, 12, 5525-5527.	1.6	47
23	Microscopic Observation of TiO ₂ Photocatalysis Using Scanning Electrochemical Microscopy. <i>Journal of Physical Chemistry B</i> , 1999, 103, 3213-3217.	1.2	42
24	Detection of Glutamate in Optically Trapped Single Nerve Terminals by Raman Spectroscopy. <i>Analytical Chemistry</i> , 2004, 76, 2506-2510.	3.2	42
25	Selective Chemisorption of End-Functionalized Conjugated Polymer on Macro- and Nanoscale Surfaces. <i>Langmuir</i> , 2005, 21, 511-515.	1.6	41
26	Combined Near-Infrared Raman Microprobe and Laser Trapping System: Application to the Analysis of a Single Organic Microdroplet in Water. <i>Applied Spectroscopy</i> , 1998, 52, 339-342.	1.2	38
27	Self-assembled rigid conjugated polymer nanojunction and its nonlinear current-voltage characteristics at room temperature. <i>Applied Physics Letters</i> , 2004, 85, 115-117.	1.5	37
28	Two-Dimensional Surface-Enhanced Raman Imaging of a Roughened Silver Electrode Surface with Adsorbed Pyridine and Comparison with AFM Images. <i>The Journal of Physical Chemistry</i> , 1996, 100, 7293-7297.	2.9	34
29	Near-infrared Raman spectroscopy of single particles. <i>TrAC - Trends in Analytical Chemistry</i> , 2001, 20, 255-262.	5.8	33
30	Self-Heterodyne Spectrometer Using Uni-Traveling-Carrier Photodiodes for Terahertz-Wave Generators and Optoelectronic Mixers. <i>Journal of Lightwave Technology</i> , 2014, 32, 3683-3689.	2.7	32
31	Strain imaging analysis of Si using Raman microscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995, 13, 1234-1238.	0.9	29
32	Investigation of the Molecular Extraction Process in Single Subpicoliter Droplets Using a Near-Infrared Laser Raman Trapping System. <i>Analytical Chemistry</i> , 2000, 72, 4721-4725.	3.2	29
33	Tomographic Imaging Using Photonically Generated Low-Coherence Terahertz Noise Sources. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2012, 2, 485-492.	2.0	26
34	Vibrational frequency shift induced by protonation on pyridine studied by ab initio molecular orbital calculation. <i>Chemical Physics Letters</i> , 1989, 158, 193-198.	1.2	24
35	Quantitative Analysis of Amino Acids in Dietary Supplements Using Terahertz Time-domain Spectroscopy. <i>Analytical Sciences</i> , 2011, 27, 351-356.	0.8	23
36	Multi-gigabit wireless data transmission at over 200-GHz. , 2009, , .		22

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37	Continuous-Wave THz Homodyne Spectroscopy and Imaging System With Electro-Optical Phase Modulation for High Dynamic Range. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 158-164.	2.0	21
38	CW-THz vector spectroscopy and imaging system based on 155-Åm fiber-optics. Optics Express, 2014, 22, 1735.	1.7	21
39	Terahertz notch filter using intermolecular hydrogen bonds in a sucrose crystal. Optics Express, 2006, 14, 5765.	1.7	20
40	Terahertz Spectroscopic Imaging of Polymorphic Forms in Pharmaceutical Crystals. Molecular Crystals and Liquid Crystals, 2011, 538, 33-38.	0.4	20
41	Nondestructive Multicomponent Terahertz Chemical Imaging of Medicine in Tablets. Journal of the Electrochemical Society, 2014, 161, B171-B175.	1.3	20
42	Carrier injection from gold electrodes into thioacetyl-end-functionalized poly(para-phenyleneethynylene)s. Physical Review B, 2004, 69, .	1.1	19
43	Millimeter- and THz-wave photonics towards 100-Gbit/s wireless transmission. , 2010, , .		19
44	Terahertz Time-domain Spectra of Aromatic Carboxylic Acids Incorporated in Nano-sized Pores of Mesoporous Silicate. Analytical Sciences, 2007, 23, 803-807.	0.8	18
45	Compact and stable THz vector spectroscopy using silicon photonics technology. Optics Express, 2014, 22, 7178.	1.7	18
46	Continuous-wave Terahertz Spectroscopy System Based on Photodiodes. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2010, 6, 390-394.	0.4	18
47	Thin semiconductor films: photoeffects and new applications. Electrochimica Acta, 1994, 39, 1229-1236.	2.6	17
48	Raman, hyper-Raman, hyper-Rayleigh, two-photon luminescence and morphology-dependent resonance modes in a single optical tweezers system. Physical Review E, 2005, 72, 012903.	0.8	17
49	Control of near-infrared optical response of metal nano-structured film on glass substrate for intense Raman scattering. Faraday Discussions, 2006, 132, 179-190.	1.6	17
50	A 325 GHz Quadrature Voltage Controlled Oscillator With Superharmonic-Coupling. IEEE Microwave and Wireless Components Letters, 2013, 23, 430-432.	2.0	17
51	Coexistence of Kosmotropic and Chaotropic Impacts of Urea on Water As Revealed by Terahertz Spectroscopy. Journal of Physical Chemistry B, 2018, 122, 1268-1277.	1.2	16
52	InP HBT voltage controlled oscillator for 300-GHz-band wireless communications. , 2012, , .		15
53	Capturing the Freeze-Drying Dynamics of NaCl Nanoparticles Using THz Spectroscopy. Journal of the American Chemical Society, 2018, 140, 13793-13797.	6.6	15
54	Combined Raman and photoelectrochemical imaging system. Application to TiO ₂ films grown anodically on Ti–Ag alloy. Journal of Electroanalytical Chemistry, 1995, 386, 229-233.	1.9	14

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55	10-Gbit/s close-proximity wireless system meeting the regulation for extremely low-power radio stations. <i>IEICE Electronics Express</i> , 2014, 11, 20130989-20130989.	0.3	14
56	Imaging and spectroscopic analysis of single microdroplets containing p-cresol using the near-infrared laser tweezers/Raman microprobe system. <i>Surface Science</i> , 1999, 427-428, 141-146.	0.8	13
57	Terahertz Time-domain Spectra of Inter- and Intramolecular Hydrogen Bonds of Fumaric and Maleic Acids. <i>Chemistry Letters</i> , 2006, 35, 1128-1129.	0.7	13
58	Detecting a Sodium Chloride Ion Pair in Ice Using Terahertz Time-domain Spectroscopy. <i>Analytical Sciences</i> , 2007, 23, 917-920.	0.8	13
59	Millimeter-wave imaging using photonics-based noise source. , 2009, , .		13
60	Quantitative Mapping of Pharmaceutical Cocrystals Within Cellulose by Terahertz Spectroscopy. <i>Journal of Lightwave Technology</i> , 2014, 32, 3768-3773.	2.7	13
61	Direct structural observation of liquid molecules in single picoliter microdroplets using near-infrared Raman microprobe spectroscopy combined with laser trapping and chemical-tomographic imaging techniques. <i>Thin Solid Films</i> , 1998, 331, 181-188.	0.8	12
62	Continuous-wave terahertz spectroscopic imaging at over 1 THz for pharmaceutical applications. , 2010, , .		10
63	SERS and FT-IR studies of CO adsorbed on underpotential deposited Ag/Pt electrodes. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1990, 280, 415-423.	0.3	9
64	Three-Dimensional Molecular Imaging of p-Cresol in a Micro-Capillary Cell using Near-Infrared Raman Microprobe Chemical Tomography. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 314, 191-196.	0.3	6
65	Terahertz Images of Biological Molecules: Frequency Dependence of Spatial Resolution Using a Tunable Terahertz Laser Source. <i>Japanese Journal of Applied Physics</i> , 2008, 47, 1315-1320.	0.8	6
66	Terahertz imaging using swept source optical-coherence-tomography techniques. , 2012, , .		6
67	Study of reactor-NO ₂ -gas diffusion in a porous glass chip by near-infrared Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 2341-2345.	1.3	5
68	Observation and Manipulation of Nanostructures Formed by Rigid Rodlike Polymers. <i>Japanese Journal of Applied Physics</i> , 2004, 43, 4521-4524.	0.8	5
69	Terahertz Chemical Imaging of Molecular Networks for Pharmaceutical Applications. <i>ECS Transactions</i> , 2011, 35, 157-165.	0.3	5
70	Near-Infrared Raman Spectra of Azo Dye Produced by a Nitrogen-Dioxide-Gas-Selective Coloration Reaction in a Porous Glass Chip. <i>Applied Spectroscopy</i> , 2001, 55, 1151-1154.	1.2	4
71	Double-beam CW THz system with photonic phase modulator for sub-THz glucose hydration sensing. , 2016, , .		4
72	Raman Spectroscopy of Pharmaceutical Cocrystals in Nanosized Pores of Mesoporous Silica. <i>Analytical Sciences</i> , 2017, 33, 47-52.	0.8	4

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73	Analysis of power enhancement of terahertz waves in periodically inverted GaP pumped at 1.55 μm . Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 1221-1226.	0.8	3
74	Homodyne detection of microwaves using low-temperature-grown GaAs at 1.55 μm . , 2011, , .		2
75	Tomographic imaging using photonically generated low-coherence terahertz sources. , 2011, , .		2
76	Continuous-wave coherent homodyne detection with balanced electro-optical phase modulation. , 2012, , .		2
77	Dynamic range criterion of THz spectrum for amino acids measurements. Frontiers of Optoelectronics in China, 2009, 2, 239-243.	0.2	1
78	A 3-Dimensional display and process software for THz spectrum. Journal of Physics: Conference Series, 2011, 276, 012210.	0.3	1
79	Terahertz wave applications using photonic technologies. , 2011, , .		1
80	Self-heterodyne terahertz spectrometer based on photodiodes. , 2013, , .		1
81	Terahertz Chemical Imaging of a Multicomponent Tablet in Pharmaceutical Applications. ECS Transactions, 2013, 50, 109-116.	0.3	1
82	Stable CW THz spectroscopy with PLC-LN hybrid phase modulator. , 2015, , .		1
83	Nanometer-scale Raman Spectroscopy of Neurons. Microscopy and Microanalysis, 2003, 9, 1062-1063.	0.2	0
84	Linear and non-linear microspectroscopy in an optical tweezers system. , 2005, 5700, 28.		0
85	Terahertz-wave generation from periodically-inverted GaP pumped at 1.55 μm . , 2005, , .		0
86	Microspectroscopy and scanning microscopy in an optical tweezers system. , 2005, , .		0
87	Force spectroscopy and two photon excited luminescence in an optical tweezers system. , 2005, , .		0
88	Electrochemistry, 2006, 74, 506-511.	0.6	0
89	Terahertz tomographic imaging with sub-millimeter depth resolution. , 2013, , .		0
90	Complex-permittivity measurement with phase-sensitive continuous-wave THz homodyne spectroscopy. , 2013, , .		0

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91	Terahertz homodyne spectroscopy system based silicon photonic integrated circuit. , 2014, , .		0