Ko-Ichiro Miyamoto

List of Publications by Year
in descending order

89 papers	1,005 citations	394421 19 h-index	526287 27 g-index
90 all docs	90 docs citations	90 times ranked	628 citing authors

#	Article	IF	Citations
1	Light-Addressable Potentiometric Sensors for Quantitative Spatial Imaging of Chemical Species. Annual Review of Analytical Chemistry, 2017, 10, 225-246.	5.4	56
2	Recent developments of chemical imaging sensor systems based on the principle of the light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2015, 207, 926-932.	7.8	52
3	Development and characterisation of a compact light-addressable potentiometric sensor (LAPS) based on the digital light processing (DLP) technology for flexible chemical imaging. Sensors and Actuators B: Chemical, 2012, 170, 34-39.	7.8	45
4	High-speed chemical imaging inside a microfluidic channel. Sensors and Actuators B: Chemical, 2014, 194, 521-527.	7.8	39
5	Device simulation of the light-addressable potentiometric sensor for the investigation of the spatial resolution. Sensors and Actuators B: Chemical, 2014, 204, 659-665.	7.8	32
6	Label-free detection and classification of DNA by surface vibration spectroscopy in conjugation with electrophoresis. Applied Physics Letters, 2005, 86, 053902.	3.3	31
7	Chemical image scanner based on FDM-LAPSâ˜†. Sensors and Actuators B: Chemical, 2009, 137, 533-538.	7.8	31
8	Miniaturized chemical imaging sensor system using an OLED display panel. Sensors and Actuators B: Chemical, 2012, 170, 82-87.	7.8	30
9	Chemical imaging of the concentration profile of ion diffusion in a microfluidic channel. Sensors and Actuators B: Chemical, 2013, 189, 240-245.	7.8	30
10	Label-Free Detection of Proteinâ^’Protein Interactions at the GaAs/Water Interface through Surface Infrared Spectroscopy:â€‰ Discrimination between Specific and Nonspecific Interactions by Using Secondary Structure Analysis. Langmuir, 2007, 23, 12287-12292.	3.5	28
11	Image correction method for the chemical imaging sensor. Sensors and Actuators B: Chemical, 2010, 144, 344-348.	7.8	24
12	Phase-mode LAPS and its application to chemical imaging. Sensors and Actuators B: Chemical, 2011, 154, 28-32.	7.8	23
13	<i>In situ</i> real-time monitoring of apoptosis on leukemia cells by surface infrared spectroscopy. Journal of Applied Physics, 2009, 105, .	2.5	22
14	Visualization of enzymatic reaction in a microfluidic channel using chemical imaging sensor. Electrochimica Acta, 2013, 113, 768-772.	5.2	22
15	In situobservation of DNA hybridization and denaturation by surface infrared spectroscopy. Journal of Applied Physics, 2006, 99, 094702.	2.5	21
16	A high-density multi-point LAPS set-up using a VCSEL array and FPGA control. Sensors and Actuators B: Chemical, 2011, 154, 124-128.	7.8	21
17	High speed and high resolution chemical imaging based on a new type of OLED-LAPS set-up. Sensors and Actuators B: Chemical, 2012, 175, 118-122.	7.8	21
18	Application of chemical imaging sensor to in-situ pH imaging in the vicinity of a corroding metal surface. Electrochimica Acta, 2015, 183, 137-142.	5.2	21

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19	DNA hybridization detection by porous silicon-based DNA microarray in conjugation with infrared microspectroscopy. Journal of Applied Physics, 2007, 102, 014303.	2.5	20
20	Theoretical study and simulation of lightâ€addressable potentiometric sensors. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1467-1472.	1.8	20
21	Light-addressable potentiometric sensor (LAPS) combined with magnetic beads for pharmaceutical screening. Physics in Medicine, 2016, 1, 2-7.	1.3	20
22	InÂsitu observation of a cell adhesion and metabolism using surface infrared spectroscopy. Cytotechnology, 2007, 55, 143-149.	1.6	18
23	A bubble-assisted electroosmotic micropump for a delivery of a droplet in a microfluidic channel combined with a light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2017, 248, 993-997.	7.8	18
24	High-speed chemical imaging system based on front-side-illuminated LAPS. Sensors and Actuators B: Chemical, 2013, 182, 315-321.	7.8	17
25	Novel photoexcitation method for light-addressable potentiometric sensor with higher spatial resolution. Applied Physics Express, 2014, 7, 067301.	2.4	17
26	In situreal-time monitoring of biomolecular interactions by using surface infrared spectroscopy. Journal of Applied Physics, 2009, 105, 102039.	2.5	16
27	A Brain-Computer Interface (BCI) System Based on Auditory Stream Segregation. Journal of Biomechanical Science and Engineering, 2010, 5, 32-40.	0.3	16
28	Towards addressability of light-addressable potentiometric sensors: Shunting effect of non-illuminated region and cross-talk. Sensors and Actuators B: Chemical, 2017, 244, 1071-1079.	7.8	16
29	Real-time monitoring of cell death by surface infrared spectroscopy. Applied Physics Letters, 2007, 91, 203902.	3.3	15
30	Light-Addressable Potentiometric Sensor as a Sensing Element in Plug-Based Microfluidic Devices. Micromachines, 2016, 7, 111.	2.9	15
31	xBCI: A Generic Platform for Development of an Online BCI System. IEEJ Transactions on Electrical and Electronic Engineering, 2010, 5, 467-473.	1.4	14
32	Constant-phase-mode operation of the light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2011, 154, 119-123.	7.8	12
33	Lateral resolution enhancement of pulse-driven light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2017, 248, 961-965.	7.8	12
34	Hydration of single-stranded DNA in water studied by infrared spectroscopy. Chemical Physics Letters, 2007, 436, 233-238.	2.6	11
35	In situStudy of DNA Attachment and Hybridization at Silicon Surfaces by Infrared Absorption Spectroscopy. Japanese Journal of Applied Physics, 2008, 47, 3204-3208.	1.5	11
36	Enhancement of the Spatial Resolution of the Chemical Imaging Sensor by a Hybrid Fiber-Optic Illumination. Procedia Engineering, 2014, 87, 612-615.	1.2	11

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37	Visualization of the recovery process of defects in a cultured cell layer by chemical imaging sensor. Sensors and Actuators B: Chemical, 2016, 236, 965-969.	7.8	11
38	Utilising Digital Micro-Mirror Device (DMD) as Scanning Light Source for Light-Addressable Potentiometric Sensors (LAPS). Sensor Letters, 2011, 9, 812-815.	0.4	11
39	Improved spatial resolution of the chemical imaging sensor with a hybrid illumination that suppresses lateral diffusion of photocarriers. Sensors and Actuators B: Chemical, 2018, 273, 1328-1333.	7.8	10
40	A high-Q resonance-mode measurement of EIS capacitive sensor by elimination of series resistance. Sensors and Actuators B: Chemical, 2017, 248, 1006-1010.	7.8	9
41	A Partially Etched Structure of Lightâ€Addressable Potentiometric Sensor for Highâ€Spatialâ€Resolution and Highâ€Speed Chemical Imaging. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700964.	1.8	9
42	Differential Setup of Light-Addressable Potentiometric Sensor with an Enzyme Reactor in a Flow Channel. Japanese Journal of Applied Physics, 2011, 50, 04DL08.	1.5	9
43	FPGAâ€based LAPS device for the flexible design of sensing sites on functional interfaces. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 844-849.	1.8	8
44	Application of electroosmotic micropumps to a microfluidic system combined with a lightâ€addressable potentiometric sensor. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1500-1504.	1.8	8
45	A high-density multi-point LAPS set-up using a VCSEL array and FPGA control. Procedia Chemistry, 2009, 1, 1483-1486.	0.7	7
46	Miniaturized chemical imaging sensor system using an OLED display panel. Procedia Engineering, 2010, 5, 516-519.	1.2	7
47	Differential Setup of Light-Addressable Potentiometric Sensor with an Enzyme Reactor in a Flow Channel. Japanese Journal of Applied Physics, 2011, 50, 04DL08.	1.5	7
48	A Novel Data Acquisition Method for Visualization of Large pH Changes by Chemical Imaging Sensor. ISIJ International, 2016, 56, 492-494.	1.4	7
49	Device Simulation of the Light-addressable Potentiometric Sensor with a Novel Photoexcitation Method for a Higher Spatial Resolution. Procedia Engineering, 2014, 87, 456-459.	1.2	6
50	A Modified Chemical Imaging Sensor System for Realâ€Time pH Imaging of Accelerated Crevice Corrosion of Stainless Steel. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700963.	1.8	6
51	Constant-phase-mode operation of the light-addressable potentiometric sensor. Procedia Chemistry, 2009, 1, 1487-1490.	0.7	5
52	The pH in Crevice Measured by a Semiconductor Chemical Sensor and Relationship with Crevice Corrosion Behavior of Stainless Steel. Zairyo To Kankyo/ Corrosion Engineering, 2020, 69, 40-48.	0.2	5
53	Light-addressable Potentiometric Sensors and Lightâ€"addressable Electrodes as a Combined Sensor-and-manipulator Microsystem with High Flexibility. Procedia Engineering, 2012, 47, 890-893.	1.2	4
54	Estimation of Potential Distribution during Crevice Corrosion through Analysis of Iâ€"V Curves Obtained by LAPS. Sensors, 2020, 20, 2873.	3.8	4

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55	Simultaneous In Situ Imaging of pH and Surface Roughening during the Progress of Crevice Corrosion of Stainless Steel. Sensors, 2022, 22, 2246.	3.8	4
56	Novel combination of digital light processing (DLP) and light-addressable potentiometric sensors (LAPS) for flexible chemical imaging. Procedia Engineering, 2010, 5, 520-523.	1.2	3
57	High speed and high resolution chemical imaging based on a new type of OLED-LAPS set-up. Procedia Engineering, 2011, 25, 346-349.	1.2	3
58	Generation of spatial filters by ICA for detecting motor-related oscillatory EEG. , 2012, 2012, 1703-6.		3
59	Muscle Tissue Actuator Driven with Light-gated Ion Channels Channelrhodopsin. Procedia CIRP, 2013, 5, 169-174.	1.9	3
60	Label-free detection of DNA molecules moving in micro-fluidic channels by infrared absorption spectroscopy. Sensors and Actuators B: Chemical, 2017, 238, 917-922.	7.8	3
61	Sensors and techniques for visualization and characterization of local corrosion. Japanese Journal of Applied Physics, 2019, 58, SB0801.	1.5	3
62	Detection of Hydrogen Permeation through Pure Iron with Light-addressable Potentiometric Sensor. ISIJ International, 2021, 61, 1330-1332.	1.4	3
63	Peptide Immobilization on GaAs Surfaces and the Application to Label-Free Detection of Antigen-Antibody Interactions Using Multiple Internal Reflection Infrared Spectroscopy. Sensor Letters, 2008, 6, 613-617.	0.4	3
64	Phase-mode LAPS and its application to chemical imaging. , 2009, , .		2
65	In situSurface Infrared Study of DNA Hybridization on Au Island Films Evaporated on Silicon Surfaces. Japanese Journal of Applied Physics, 2009, 48, 04C186.	1.5	2
66	Visualization of Defects on a Cultured Cell Layer by Utilizing Chemical Imaging Sensor. Procedia Engineering, 2015, 120, 936-939.	1.2	2
67	Modeling of the Return Current in a Light-Addressable Potentiometric Sensor. Sensors, 2019, 19, 4566.	3.8	2
68	Multiâ€Well Sensor Platform Based on a Partially Etched Structure of a Lightâ€Addressable Potentiometric Sensor. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800764.	1.8	2
69	Microfluidic systems with free definable sensor spots by an integrated light-addressable potentiometric sensor. Procedia Engineering, 2011, 25, 791-794.	1.2	1
70	An on-chip electroosmotic micropump with a light- addressable potentiometric sensor. Optoelectronics Letters, 2017, 13, 113-115.	0.8	1
71	Restraining the Diffusion of Photocarriers to Improve the Spatial Resolution of the Chemical Imaging Sensor. Proceedings (mdpi), 2017, 1, 477.	0.2	1
72	Phase-Mode Operation of FDM-LAPS. Sensor Letters, 2011, 9, 691-694.	0.4	1

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73	Simulation and Experiment for Electrode Coverage Evaluation by Electrochemical Impedance Spectroscopy Using Parallel Facing Electrodes. Analytical Sciences, 2020, 36, 853-858.	1.6	1
74	Novel anchoring device for endoscopic ultrasoundâ€guided gallbladder drainage: Secondary publication. Journal of Hepato-Biliary-Pancreatic Sciences, 2022, , .	2.6	1
75	In-situ Observation of DNA Hybridization in Aqueous Solution by Multiple Internal Reflection Infrared Absorption Spectroscopy. Hyomen Kagaku, 2005, 26, 553-558.	0.0	0
76	VISUALIZATION OF ION DISTRIBUTION BY A CHEMICAL IMAGING SENSOR. , 2009, , .		0
77	Flexible electrochemical imaging with “zoom-in” functionality by using a new type of light-addressable potentiometric sensor. , 2011, , .		0
78	Multi-well structure for cell culture on the chemical imaging sensor. , 2011, , .		0
79	Chemical Imaging of ion Diffusion in a Microfluidic Channel. Procedia Engineering, 2012, 47, 886-889.	1.2	0
80	High-speed chemical imaging inside a microfluidic channel. , 2013, , .		0
81	(Bio-)chemical Sensing and Imaging by LAPS and SPIM. Springer Series on Chemical Sensors and Biosensors, 2018, , 103-132.	0.5	0
82	A Gasâ€Sensitive SPIM Sensor for Detection of Ethanol Using SnO₂ as Sensing Element (Phys. Status Solidi A 12âˆ•2019). Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1970043.	1.8	0
83	A Gasâ€Sensitive SPIM Sensor for Detection of Ethanol Using SnO 2 as Sensing Element. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800766.	1.8	0
84	Imaging detection of ethanol vapor by scanning photo-induced impedance microscopy with suspendedâ€“gate structure. , 2019, , .		0
85	Detection of DNA Molecules on Porous Si Surfaces by Infrared Spectromicroscopy. Hyomen Kagaku, 2005, 26, 537-541.	0.0	0
86	Surface Infrared Spectroscopic Study on Label-Free Detection of Antigen-Antibody Interactions: Discrimination between Specific and Nonspecific Signals using Protein Secondary Structure Analysis. Hyomen Kagaku, 2008, 29, 558-563.	0.0	0
87	In-Situ Observation of a Cell Growth Using Surface Infrared Spectroscopy. , 2008, , 53-58.		0
88	Investigation of Methods for Extracting Features Related to Motor Imagery and Resting States in EEG-Based BCI System. IEEJ Transactions on Electronics, Information and Systems, 2009, 129, 1828-1833.	0.2	0
89	Efficient Illumination for a Light-Addressable Potentiometric Sensor. Sensors, 2022, 22, 4541.	3.8	0