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	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
2	Novel anchoring device for endoscopic ultrasoundâ€guided gallbladder drainage: Secondary publication. Journal of Hepato-Biliary-Pancreatic Sciences, 2022, , .	2.6	1
3	Efficient Illumination for a Light-Addressable Potentiometric Sensor. Sensors, 2022, 22, 4541.	3.8	0
4	Detection of Hydrogen Permeation through Pure Iron with Light-addressable Potentiometric Sensor. ISIJ International, 2021, 61, 1330-1332.	1.4	3
5	Estimation of Potential Distribution during Crevice Corrosion through Analysis of Iâ€"V Curves Obtained by LAPS. Sensors, 2020, 20, 2873.	3.8	4
6	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
7	Simulation and Experiment for Electrode Coverage Evaluation by Electrochemical Impedance Spectroscopy Using Parallel Facing Electrodes. Analytical Sciences, 2020, 36, 853-858.	1.6	1
8	A Gasâ€Sensitive SPIM Sensor for Detection of Ethanol Using SnO₂ as Sensing Element (Phys. Status Solidi A 12â^•2019). Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1970043.	1.8	0
9	Modeling of the Return Current in a Light-Addressable Potentiometric Sensor. Sensors, 2019, 19, 4566.	3.8	2
10	Sensors and techniques for visualization and characterization of local corrosion. Japanese Journal of Applied Physics, 2019, 58, SB0801.	1.5	3
11	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
12	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
13	Imaging detection of ethanol vapor by scanning photo-induced impedance microscopy with suspendedâ€"gate structure. , 2019, , .		0
14	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
15	(Bio-)chemical Sensing and Imaging by LAPS and SPIM. Springer Series on Chemical Sensors and Biosensors, 2018, , 103-132.	0.5	0
16	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
17	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
18	Lateral resolution enhancement of pulse-driven light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2017, 248, 961-965.	7.8	12

#	Article	IF	Citations
19	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
20	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
21	Light-Addressable Potentiometric Sensors for Quantitative Spatial Imaging of Chemical Species. Annual Review of Analytical Chemistry, 2017, 10, 225-246.	5.4	56
22	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
23	An on-chip electroosmotic micropump with a light- addressable potentiometric sensor. Optoelectronics Letters, 2017, 13, 113-115.	0.8	1
24	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
25	Restraining the Diffusion of Photocarriers to Improve the Spatial Resolution of the Chemical Imaging Sensor. Proceedings (mdpi), 2017, 1, 477.	0.2	1
26	A Novel Data Acquisition Method for Visualization of Large pH Changes by Chemical Imaging Sensor. ISIJ International, 2016, 56, 492-494.	1.4	7
27	Light-Addressable Potentiometric Sensor as a Sensing Element in Plug-Based Microfluidic Devices. Micromachines, 2016, 7, 111.	2.9	15
28	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
29	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
30	Light-addressable potentiometric sensor (LAPS) combined with magnetic beads for pharmaceutical screening. Physics in Medicine, 2016, 1, 2-7.	1.3	20
31	Visualization of Defects on a Cultured Cell Layer by Utilizing Chemical Imaging Sensor. Procedia Engineering, 2015, 120, 936-939.	1.2	2
32	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
33	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
34	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
35	Theoretical study and simulation of lightâ€addressable potentiometric sensors. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1467-1472.	1.8	20
36	Novel photoexcitation method for light-addressable potentiometric sensor with higher spatial resolution. Applied Physics Express, 2014, 7, 067301.	2.4	17

#	Article	IF	Citations
37	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
38	High-speed chemical imaging inside a microfluidic channel. Sensors and Actuators B: Chemical, 2014, 194, 521-527.	7.8	39
39	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
40	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
41	High-speed chemical imaging system based on front-side-illuminated LAPS. Sensors and Actuators B: Chemical, 2013, 182, 315-321.	7.8	17
42	Muscle Tissue Actuator Driven with Light-gated Ion Channels Channelrhodopsin. Procedia CIRP, 2013, 5, 169-174.	1.9	3
43	Visualization of enzymatic reaction in a microfluidic channel using chemical imaging sensor. Electrochimica Acta, 2013, 113, 768-772.	5.2	22
44	High-speed chemical imaging inside a microfluidic channel. , 2013, , .		0
45	Generation of spatial filters by ICA for detecting motor-related oscillatory EEG. , 2012, 2012, 1703-6.		3
46	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
47	Miniaturized chemical imaging sensor system using an OLED display panel. Sensors and Actuators B: Chemical, 2012, 170, 82-87.	7.8	30
48	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
49	Chemical Imaging of ion Diffusion in a Microfluidic Channel. Procedia Engineering, 2012, 47, 886-889.	1.2	0
50	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
51	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
52	Microfluidic systems with free definable sensor spots by an integrated light-addressable potentiometric sensor. Procedia Engineering, 2011, 25, 791-794.	1.2	1
53	Constant-phase-mode operation of the light-addressable potentiometric sensor. Sensors and Actuators B: Chemical, 2011, 154, 119-123.	7.8	12
54	Phase-mode LAPS and its application to chemical imaging. Sensors and Actuators B: Chemical, 2011, 154, 28-32.	7.8	23

#	Article	IF	Citations
55	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
56	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
57	Flexible electrochemical imaging with “zoom-in” functionality by using a new type of light-addressable potentiometric sensor. , 2011, , .		0
58	Multi-well structure for cell culture on the chemical imaging sensor. , 2011, , .		0
59	Phase-Mode Operation of FDM-LAPS. Sensor Letters, 2011, 9, 691-694.	0.4	1
60	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
61	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
62	A Brain-Computer Interface (BCI) System Based on Auditory Stream Segregation. Journal of Biomechanical Science and Engineering, 2010, 5, 32-40.	0.3	16
63	Miniaturized chemical imaging sensor system using an OLED display panel. Procedia Engineering, 2010, 5, 516-519.	1.2	7
64	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
65	Image correction method for the chemical imaging sensor. Sensors and Actuators B: Chemical, 2010, 144, 344-348.	7.8	24
66	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
67	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
68	In situreal-time monitoring of biomolecular interactions by using surface infrared spectroscopy. Journal of Applied Physics, 2009, 105, 102039.	2.5	16
69	Phase-mode LAPS and its application to chemical imaging. , 2009, , .		2
70	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
71	Chemical image scanner based on FDM-LAPSâ˜†. Sensors and Actuators B: Chemical, 2009, 137, 533-538.	7.8	31
72	A high-density multi-point LAPS set-up using a VCSEL array and FPGA control. Procedia Chemistry, 2009, 1, 1483-1486.	0.7	7

#	Article	IF	Citations
73	Constant-phase-mode operation of the light-addressable potentiometric sensor. Procedia Chemistry, 2009, 1, 1487-1490.	0.7	5
74	<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
75	VISUALIZATION OF ION DISTRIBUTION BY A CHEMICAL IMAGING SENSOR. , 2009, , .		0
76	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
77	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
78	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
79	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
80	In-Situ Observation of a Cell Growth Using Surface Infrared Spectroscopy. , 2008, , 53-58.		0
81	Real-time monitoring of cell death by surface infrared spectroscopy. Applied Physics Letters, 2007, 91, 203902.	3.3	15
82	DNA hybridization detection by porous silicon-based DNA microarray in conjugation with infrared microspectroscopy. Journal of Applied Physics, 2007, 102, 014303.	2.5	20
83	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
84	Hydration of single-stranded DNA in water studied by infrared spectroscopy. Chemical Physics Letters, 2007, 436, 233-238.	2.6	11
85	InÂsitu observation of a cell adhesion and metabolism using surface infrared spectroscopy. Cytotechnology, 2007, 55, 143-149.	1.6	18
86	In situobservation of DNA hybridization and denaturation by surface infrared spectroscopy. Journal of Applied Physics, 2006, 99, 094702.	2.5	21
87	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
88	Label-free detection and classification of DNA by surface vibration spectroscopy in conjugation with electrophoresis. Applied Physics Letters, 2005, 86, 053902.	3.3	31
89	Detection of DNA Molecules on Porous Si Surfaces by Infrared Spectromicroscopy. Hyomen Kagaku, 2005, 26, 537-541.	0.0	0