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2018

Light-Addressable Potentiometric Sensors using ZnO Nanorods as the Sensor Substrate for Bioanalytical Applications.  

Surface modification and construction of LAPS towards biosensing applications.  

Photoelectrochemical response of carbon dots (CDs) derived from chitosan and their use in electrochemical imaging.  

Control of oxygen vacancies in ZnO nanorods by annealing and their influence on ZnO/PEDOT:PSS diode behaviour.  

2017

LAPS and SPIM imaging using ITO coated glass as the substrate material.  

Biological imaging using light-addressable potentiometric sensors and scanning photo-induced impedance microscopy.  

Copper Contamination of Self-Assembled Organic Monolayer Modified Silicon Surfaces Following a "Click" Reaction Characterized with LAPS and SPIM.  

2016

Image detection of yeast Saccharomyces cerevisiae by light-addressable potentiometric sensors (LAPS).  

The effect of gold nanoparticles on the impedance of microcapsules visualized by scanning photo-induced impedance microscopy.  

2015

Amylase sensor based on the degradation of oligosaccharide hydrogel films monitored with a quartz crystal sensor. 

Incorporation of Ag nanowires in CuWO4 for improved visible light-induced photoanode performance. 

Disposable MMP-9 sensor based on the degradation of peptide cross-linked hydrogel films using electrochemical impedance spectroscopy. 

High-sensitivity light-addressable potentiometric sensors using silicon on sapphire functionalized with self-assembled organic monolayers. 

Degradation behaviour of thin polymer films of poly (amide ester) hydrogel using quartz crystal microbalance. 

A label-free aptasensor for the sensitive and specific detection of cocaine using supramolecular aptamer fragments/target complex by electrochemical impedance spectroscopy. 

Generic protease detection technology for monitoring periodontal disease. 

High resolution LAPS and SPIM. 

A peptide cross-linked polyacrylamide hydrogel for the detection of human neutrophil elastase. 

Sensor materials for the detection of proteases. 


Editorial: Selected papers from the second international conference on optical, optoelectronic and photonic materials and applications, 2007. 

Repair of thin thermally grown silicon dioxide by anodic oxidation. 
2007

Biosensor arrays based on the degradation of thin polymer films interrogated by scanning photoinduced impedance microscopy.

Scanning photoinduced impedance microscopy using amorphous silicon photodiode structures.

2006

Scanning Photo-Induced Impedance Microscopy - Resolution studies and polymer characterization.

Sensors based on thin film degradation.

2004

High resolution LAPS using amorphous silicon as the semiconductor material.

2003

Impedance methods.

2002

Simultaneous quartz crystal microbalance impedance and electrochemical impedance measurements.
Investigation into the degradation of thin polymer films.

Scanning photo-induced impedance microscopy - an impedance based imaging technique.

2001

Biosensor based on enzyme-catalysed degradation of thin polymer films.

Re-activation of an all solid state oxygen sensor.

2000

A transducer based on enzyme-induced degradation of thin polymer films monitored by surface plasmon resonance.

Photocurrent measurements for laterally resolved interface characterization.

1999

Electrochemical sensor for measurement of urea and creatinine in serum based on ac impedance measurement of enzyme-catalyzed polymer transformation.
1998

Silicon-Based Sensor for Flourine Gas.

1995

Electrochemical Sensors Based on Impedance Measurement of Enzyme-Catalyzed Polymer Dissolution: Theory and Applications.

Monitoring of HF and F2 using a field-effect sensor.

1994

Improved long-term stability for an LaF3 based oxygen sensor.

1992

A low-temperature oxygen sensor based on the Si/LaF3/Pt capacitive structure.
Krause S, Moritz W and Grohmann I. Sensors and Actuators B: Chemical vol. 9, (3) 191-196.

1991

Chemical sensitivity of an ISFET with Ta2O5 membrane in strong acid and alkaline solutions.