Nano Bio Integrated Systems - DTU Orbit (06/08/2018)

Nano Bio Integrated Systems
Department of Micro- and Nanotechnology
Organisational unit: Section

Publications:

A modular reconfigurable digital microfluidics platform
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Direct detection of candida albicans with a membrane based electrochemical impedance spectroscopy sensor
Publication: Research - peer-review › Journal article – Annual report year: 2018

Model-Based Systems Engineering for Life-Sciences Instrumentation Development
Publication: Research - peer-review › Journal article – Annual report year: 2018

Paper-based sensors for rapid detection of virulence factor produced by Pseudomonas aeruginosa
Publication: Research - peer-review › Journal article – Annual report year: 2018

ELECTROCHEMICAL DEVICE FOR DETECTION OF SELECTED QUORUM SENSING SIGNALS
Publication: Research › Patent – Annual report year: 2017

Concentration of nanoparticles and/or microparticles in flow conditions by dielectrophoresis
Rozlosnik, N., Dimaki, M., Olsen, M. H. & Svendsen, W. E. 8 Sep 2017
Publication: Research › Patent – Annual report year: 2017

Helbredstjek af dansk sundhedssteknologi: Sektorudviklingsrapport
Publication: Commissioned › Report – Annual report year: 2017

In-situ doped junctionless polysilicon nanowires field effect transistors for low-cost biosensors
Publication: Research - peer-review › Journal article – Annual report year: 2017

System-Level Sensitivity Analysis of SiNW-bioFET-Based Biosensing Using Lockin Amplification
Publication: Research - peer-review › Journal article – Annual report year: 2017

Algal toxicity of platinum nanoparticles - Implications of NP aggregation, dissolution and shading
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016
A new application of plant virus nanoparticles as drug delivery in breast cancer
Publication: Research › peer-review › Journal article – Annual report year: 2015

Aptasensor development for detection of virus in water
Publication: Research › Ph.D. thesis – Annual report year: 2017

Electrochemical sensing of biomarker for diagnostics of bacteria-specific infections
Publication: Research › peer-review › Journal article – Annual report year: 2016

Evolvable Smartphone-Based Platforms for Point-Of-Care In-Vitro Diagnostics Applications
Publication: Research › peer-review › Journal article – Annual report year: 2016

Evolvable Smartphone-Based Point-of-Care Systems For In-Vitro Diagnostics
Publication: Research › Ph.D. thesis – Annual report year: 2016

Fast Selective Detection of Pyocyanin Using Cyclic Voltammetry
Publication: Research › peer-review › Journal article – Annual report year: 2016

Functionalization and microfluidic integration of silicon nanowire biologically gated field effect transistors
Publication: Research › Ph.D. thesis – Annual report year: 2016

Micro fluidic System for Culturing and Monitoring of Neuronal Cells and Tissue
Publication: Research › Ph.D. thesis – Annual report year: 2016

Model-Based Evaluation Of System Scalability: Bandwidth Analysis For Smartphone-Based Biosensing Applications
Publication: Research › peer-review › Article in proceedings – Annual report year: 2016

Smartphone-based biosensing platform evolution: implementation of electrochemical analysis capabilities
Publication: Research › peer-review › Article in proceedings – Annual report year: 2016

A Lab-on-a-disc platform for trapping of cells, monitoring of cell behaviour and evaluation of redox metabolism
Publication: Research › peer-review › Conference abstract in proceedings – Annual report year: 2015

All Polymer Lab-on-a-chip System for Virus Detection in Water
Publication: Research › peer-review › Poster – Annual report year: 2015
Micro and Nanofabrication Using Self-Assembled Biological Nanostructures
Publication: Research - peer-review › Book – Annual report year: 2015

Novel culturing platform for brain slices and neuronal cells
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Novel Diagnostic Method for Personalized Treatment of Cancer
Publication: Research › Ph.D. thesis – Annual report year: 2015

Self-assembled peptide nanostructures for the development of electrochemical biosensors
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Sub 100 nm particle upconcentration in flow using electrical forces
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

A compact microelectrode array chip with multiple measuring sites for electrochemical applications
Publication: Research - peer-review › Journal article – Annual report year: 2014

A compact multifunctional microfluidic platform for exploring cellular dynamics in real-time using electrochemical detection
Publication: Research - peer-review › Journal article – Annual report year: 2014

A flexible mobile-device biosensing instrumentation platform for point-of-care medical diagnostics applications
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

A flexible mobile-device biosensing instrumentation platform for point-of-care medical diagnostics applications
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

A novel single-step, multipoint calibration method for instrumented Lab-on-Chip systems
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Application of versatile electrochemical sensor in cell culturing
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014
**AquaVir- Portable Analyzer for Water Borne Infectious Viruses**  
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

**A Semi-Closed Device for Chromosome Spreading for Cytogenetic Analysis**  
Publication: Research - peer-review › Journal article – Annual report year: 2014

**Electrochemical detection of chromosome translocation**  
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

**Electrochemistry in a centrifugal microfluidic system: Towards a novel point-of-care technology platform**  
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

**Finger prick blood plasma separation using standard lab equipment**  
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

**Label-free protein detection using a microfluidic Coulter-counter device**  
Publication: Research - peer-review › Journal article – Annual report year: 2014

**Multifunctional sensing membrane-based platform for tissue or cell culturing and monitoring**  
Publication: Research › Patent – Annual report year: 2014

**Nanoscaled biological gated field effect transistors for cytogenetic analysis**  
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

**New approach of long-term modification of Topas® to acquire surface hydrophilicity for chromosome spreading**  
Publication: Research - peer-review › Journal article – Annual report year: 2014

**Novel electrochemical sensor for lab-on-a-chip and biomedical technology**  
Publication: Research - peer-review › Poster – Annual report year: 2014
Novel membrane-based electrochemical sensor for real-time bio-applications.
Publication: Research - peer-review » Journal article – Annual report year: 2014

Real-time multiparameter monitoring of cellular dynamics: an automated microfluidic electrochemical analysis platform
Publication: Research - peer-review » Conference abstract in proceedings – Annual report year: 2014

Silicon as an anisotropic mechanical material: Deflection of thin crystalline plates
Publication: Research - peer-review » Journal article – Annual report year: 2014

Study of Paclitaxel-Treated HeLa Cells by Differential Electrical Impedance Flow Cytometry
Publication: Research - peer-review » Journal article – Annual report year: 2014

Synthesis and characterization of covalent diphenylalanine nanotube-folic acid conjugates
Publication: Research - peer-review » Journal article – Annual report year: 2014

Synthesis of amphiphilic diblock copolymer for surface modification of Ethylene-Norbornene copolymers
BAPS.2014.MAR.W21.2
Publication: Research - peer-review » Conference abstract in proceedings – Annual report year: 2014

Versatile electrochemical sensor for tissue culturing and sample handling
Publication: Research - peer-review » Conference abstract in proceedings – Annual report year: 2014

Versatile electrochemical sensor for cell culturing
Publication: Research - peer-review » Poster – Annual report year: 2014

Bioprocessing in Microreactors
Publication: Research - peer-review » Book chapter – Annual report year: 2014

Centrifugal microfluidic platform with real-time electrochemical detection
Publication: Research - peer-review » Conference abstract in journal – Annual report year: 2013

Combined Cell Culture-Biosensing Platform Using Vertically Aligned Patterned Peptide Nanofibers for Cellular Studies
Publication: Research - peer-review » Journal article – Annual report year: 2013
Computational and experimental studies of the interaction between single-walled carbon nanotubes and folic acid
In : Chemical Physics Letters. 564, p. 60-64
Publication: Research - peer-review › Journal article – Annual report year: 2013

Culturing of PC12 Cells, Neuronal Cells, Astrocytes Cultures and Brain Slices in an Open Microfluidic System
Al Atrakchi, F. A-Z., Bakmand, T., Rømer Sørensen, A. & Svendsen, W. E. 2013
Publication: Research - peer-review › Poster – Annual report year: 2013

Detection of cancer cells using a peptide nanotube-folic acid modified graphene electrode
Publication: Research - peer-review › Journal article – Annual report year: 2012

Dielectrophoretic manipulation and solubility of protein nanofibrils formed from crude crystallins
Publication: Research - peer-review › Journal article – Annual report year: 2013

DNA hybridization sensing for cytogenetic analysis
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Doped Overoxidized Polypyrrole Microelectrodes as Sensors for the Detection of Dopamine Released from Cell Populations
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Exploring the properties and possibilities of self-assembling
Publication: Research › Ph.D. thesis – Annual report year: 2013

Fabrication and characterization of PEDOT nanowires based on self-assembled peptide nanotube lithography
Publication: Research - peer-review › Journal article – Annual report year: 2013

Microfluidic System for Long Term Culturing and Monitoring of Organotypic Brain Tissue and Cells
Publication: Research - peer-review › Poster – Annual report year: 2014

Microfluidic System for Long Term Culturing of Organotypic Brain Tissue
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

NanoKaryotyping: Application of Micro- and Nanotechnologies in Cytogenetics
Publication: Research › Ph.D. thesis – Annual report year: 2013

Non-covalent conjugates of single-walled carbon nanotubes and folic acid for interaction with cells overexpressing folate receptors
Novel fabrication method of conductive polymer nanowires for sensor applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Translating silicon nanowire BioFET sensor-technology to embedded point-of-care medical diagnostics
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Alignment and Use of Self-Assembled Peptide Nanotubes as Dry-Etching Mask
Publication: Research - peer-review › Journal article – Annual report year: 2012

Advanced microtechnologies for cytogeneric analysis
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2012

All-polymer microfluidic device for metaphase FISH on chip
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Centrifugally driven microfluidic disc for detection of chromosomal translocations
Publication: Research - peer-review › Journal article – Annual report year: 2012

Compact potentiostat for cellular electrochemical imaging with 54 parallel channels
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Electrochemical evaluation of dopamine detection on pyrolysed carbon and gold electrodes
Publication: Research - peer-review › Poster – Annual report year: 2013

Fabrication of 3D nano/microelectrodes via two-photon-polymerization
Publication: Research - peer-review › Journal article – Annual report year: 2012

Fabrication of high-aspect ratio SU-8 micropillar arrays
Publication: Research - peer-review › Journal article – Annual report year: 2012
Fabrication of single vertically aligned carbon nanotubes for cellular electrochemistry
Publication: Research - peer-review › Poster – Annual report year: 2013

Label Free Chromosome Translocation Detection with Silicon nanowires
Publication: Research - peer-review › Poster – Annual report year: 2012

Lab-on-Chip Silicon nanowire biosensors, for biomedical applications
Publication: Research - peer-review › Poster – Annual report year: 2012

Lab-on-Chip Silicon nanowire biosensors, for biomedical applications
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Micro device for multiple disease diagnostic and monitoring
Publication: Research - peer-review › Poster – Annual report year: 2012

Microfluidic System for Long Term Culturing of Organotypic Brain Tissue
Publication: Research - peer-review › Poster – Annual report year: 2012

Microfluidic System for Long Term Culturing of Organotypic Brain Tissue
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Microfluidic System With Capillary Burst Valves For Detection Of Chromosomal Translocations
Publication: Research - peer-review › Poster – Annual report year: 2012

Microtechnologies Enable Cytogenetics
Publication: Research - peer-review › Book chapter – Annual report year: 2013

Monitoring The Functionalization Of Single Walled Carbon Nanotubes With Chitosan And Folic Acid By Two Dimensional Diffusion Ordered NMR Spectroscopy
Publication: Research - peer-review › Poster – Annual report year: 2012

Multichannel Bipotentiostat Integrated With a Microfluidic Platform for Electrochemical Real-Time Monitoring of Cell Cultures
Publication: Research - peer-review › Journal article – Annual report year: 2012

Novel 3D microelectrodes and pipettes by wet and dry etching
Publication: Research - peer-review › Journal article – Annual report year: 2012
On-chip cell viability studies using label-free impedance detection
Publication: Research - peer-review › Poster – Annual report year: 2012

Rapid Fabrication of Silicon Nanowires Using Self-Assembled Diphenylalanine Peptide Nanostructures
Kwasny, D., Frøhling, K. B. & Andersen, K. B. 2012
Publication: Research - peer-review › Poster – Annual report year: 2012

Reactive ion etching of polymer materials for an energy harvesting device
Publication: Research - peer-review › Journal article – Annual report year: 2012

Size matters
Castillo, J. 2012 5, Pan European Networks: Science
Publication: Communication › Newspaper article – Annual report year: 2012

Vertically aligned patterned peptide nanowires for cellulars studies
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Activities:

Detection of Glyphosate Using Disposable Sensors for Fast, Inexpensive and Reliable Measurements by Electrochemical Technique
Noori, J. S. (Other), Jan Romano-deGea (Other), Dimaki, M. (Guest lecturer), John Mortensen (Other), Svendsen, W. E. (Guest lecturer)
16 Apr 2018
Activity: Talks and presentations › Conference presentations

Microfluidics Congress 2015
Dimaki, M. (Participant)
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

A Smart Mobile Lab-on-Chip-Based Medical Diagnostics System Architecture Designed For Evolvability
Patou, F. (Speaker)
27 Aug 2015
Activity: Talks and presentations › Conference presentations

4th International Workshop on Analytical Miniaturization and NANOtechnologies
Dimaki, M. (Participant)
23 Jun 2014 – 24 Jun 2014
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

3rd Symposium on Graphene and Carbon Nanotubes
Castillo, J. (Participant)
Activity: Attending an event › Participating in or organising a conference

Personalised Medicine
Castillo, J. (Participant)
18 Jun 2012
Activity: Attending an event › Participating in or organising a conference
III International Workshop on Analytical Miniaturization and NANOtechnologies
Castillo, J. (Participant)
11 Jun 2012 → 12 Jun 2012
Activity: Attending an event › Participating in or organising a conference

Peptide nanostructures as scaffold for a SERS-based DNA biosensor
Castillo, J. (Speaker)
15 May 2012 → 18 May 2012
Activity: Talks and presentations › Conference presentations

Self-assembled peptide nanostructures: A new alternative for the development of biosensors
Castillo, J. (Speaker)
15 May 2012 → 18 May 2012
Activity: Talks and presentations › Conference presentations

Low Cost and Fast Clean Room Fabrication Techniques using Peptide Nanotubes
Castillo, J. (Speaker)
11 Dec 2011 → 15 Dec 2011
Activity: Talks and presentations › Conference presentations

Self-assembled peptide nanowires as multifunctional sensing platform for cellular studies
Castillo, J. (Speaker)
11 Dec 2011 → 15 Dec 2011
Activity: Talks and presentations › Conference presentations