Nano Bio Integrated Systems - DTU Orbit (23/04/2018)

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

Publications:

**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 sundhedsteknologi: 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
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 › Poster – Annual report year: 2014

A novel single-step, multipoint calibration method for instrumented Lab-on-Chip systems
Publication: Research - peer-review › Poster – 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
Electrochemical detection of chromosome translocation

Electrochemistry in a centrifugal microfluidic system: Towards a novel point-of-care technology platform

Finger prick blood plasma separation using a standard lab equipment

Label-free protein detection using a microfluidic Coulter-counter device

Multifunctional sensing membrane-based platform for tissue or cell culturing and monitoring

Nanoscaled biological gated field effect transistors for cytogenetic analysis

New approach of long-term modification of Topas® to acquire surface hydrophilicity for chromosome spreading

Novel electrochemical sensor for lab-on-a-chip and biomedical technology

Novel membrane-based electrochemical sensor for real-time bio-applications.

Real-time multiparameter monitoring of cellular dynamics: an automated microfluidic electrochemical analysis platform
Silicon as an anisotropic mechanical material: Deflection of thin crystalline plates

Study of Paclitaxel-Treated HeLa Cells by Differential Electrical Impedance Flow Cytometry

Synthesis and characterization of covalent diphenylalanine nanotube-folic acid conjugates

Synthesis of amphiphilic diblock copolymer for surface modification of Ethylene-Norbornene copolymers

Versatile electrochemical sensor for tissue culturing and sample handling

Versatile electrochemical sensor for cell culturing

Bioprocessing in Microreactors

Centrifugal microfluidic platform with real-time electrochemical detection

Combined Cell Culture-Biosensing Platform Using Vertically Aligned Patterned Peptide Nanofibers for Cellular Studies

Computational and experimental studies of the interaction between single-walled carbon nanotubes and folic acid

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
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 › Journal article – 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
Publication: Research - peer-review › Journal article – Annual report year: 2014

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 › Poster – 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 cytogenetic 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., Frehling, 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:

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)
25 Jun 2012 → 26 Jun 2012
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