Pneumatically actuated elastomeric device for simultaneous mechanobiological studies & live-cell fluorescent microscopy
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The effect of equiaxial stretching on the osteogenic differentiation and mechanical properties of human adipose stem cells
Research output: Contribution to journal › Article › Scientific › peer-review

A durable and biocompatible ascorbic acid-based covalent coating method of polydimethylsiloxane for dynamic cell culture
Research output: Contribution to journal › Article › Scientific › peer-review

Cell culture chamber with gas supply for prolonged recording of human neuronal cells on microelectrode array
Research output: Contribution to journal › Article › Scientific › peer-review

Computer Vision Measurements for Automated Microrobotic Paper Fiber Studies
Hirvonen, J., 10 Feb 2017, Tampere University of Technology. 90 p. (Tampere University of Technology. Publication; vol. 1456)
Research output: Book/Report › Doctoral thesis › Collection of Articles

Automated high-throughput microbond tester for interfacial shear strength studies
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Dispenser system for nanocellulose 3D printing
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Professional

Engineering and Characterization of Bacterial Nanocellulose Films as Low Cost and Flexible Sensor Material
Research output: Contribution to journal › Article › Scientific › peer-review

Mini-incubator For Prolonged Cell Culture, MEA, And Hypoxia Studies Outside An Incubator
Research output: Other conference contribution › Paper, poster or abstract › Scientific

Challenges and capabilities of conductive polymeric materials for electromechanical stimulation of stem cells: A case study
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review
Nanocellulose based piezoelectric sensors
Research output: Other conference contribution › Paper, poster or abstract › Scientific

Cell Stretching Device for Live-Cell Confocal Microscopy
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Automated Estimation of Contact Angle on Hydrophobic Fibers using a Microrobotic Platform
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Study of Adhesion Force between Cellulose Micro-sphere and Cellulose Membrane
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Nanocellulose based piezoelectric sensors
Research output: Other conference contribution › Paper, poster or abstract › Scientific

A novel micro-robotic approach to study the environmental degradation of matrix and fibre materials
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Design and simulation of a thermal flow sensor for gravity-driven microfluidic applications
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Determination of environmental degradation of matrix and fibre materials with a novel, statistically reliable micro-robotic approach
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

CytoSpectre: A tool for spectral analysis of oriented structures on cellular and subcellular levels
Research output: Contribution to journal › Article › Scientific › peer-review

Adhesive Behavior Study Between Cellulose and Borosilicate Glass Using Colloidal Probe Technique
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Automated Microrobotic Manipulation of Paper Fiber Bonds
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review
Pneumatic cell stretching system for cardiac differentiation and culture
Research output: Contribution to journal › Article › Scientific › peer-review

Releasing tool-adhered natural fibrous microscale objects with vacuum system
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Robotic software frameworks and software component models in the development of automated handling of individual natural fibers
Research output: Contribution to journal › Article › Scientific › peer-review

Semi-automatic Measurement of Microfibril Angle on a Microrobotic Platform
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The Effect of Refining on Z-directional Strength of Bleached Softwood Kraft Pulp Fibre Bonds using Microrobotics
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Integration of Microfluidic System with Silicon Nanowires Biosensor for Multiplexed Detection
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Kohdi automaattista yksittäisten paperikuitujen manipulointia
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Method for Investigations of Aged Fibre-Fibre Bonds with Micro and Nanorobotic Tools
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Scale and Rotation Invariant Two View Microgripper Detection that Uses a Planar Pattern
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Three-dimensional calibration of micromanipulators using stereo vision
Research output: Contribution to journal › Article › Scientific › peer-review
Towards Fully Automated Pick and Place Operations of Individual Natural Fibers
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Washing Durability of Embroidered Polymer Coated RFID Tags
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A flexible microrobotic platform for handling microscale specimens of fibrous materials for microscopic studies
Research output: Contribution to journal › Article › Scientific › peer-review

Characterizing leakage current in silicon nanowire-based field-effect transistors by applying pseudo-random sequences
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Digital Imaging and Piezo-dispenser Actuator in Automatic Flocculation Control
Research output: Contribution to journal › Article › Scientific › peer-review

Integration of microfluidic sample delivery system on silicon nanowire-based biosensor
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Pseudo-random sequences in analysis of polyvinylidene fluoride piezoelectric sensors
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Rapid, simple, and cost-effective treatments to achieve long-term hydrophilic PDMS surfaces
Research output: Contribution to journal › Article › Scientific › peer-review

Small and Flexible Metal Mountable Passive UHF RFID Tag on High-Dielectric Polymer-Ceramic Composite Substrate
Research output: Contribution to journal › Article › Scientific › peer-review

Structured PDMS chambers for enhanced human neuronal cell activity on MEA platforms
Research output: Contribution to journal › Article › Scientific › peer-review
Vision based 3D calibration of micromanipulator in microrobotic fiber characterization platform
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Automated Grasping in Manipulation of Individual Paper Fibers
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Automatic image-based detection of paper fiber ends
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Displacement control of piezoelectric actuators using current and voltage
Research output: Contribution to journal › Article › Scientific › peer-review

Fine Structure of Papermaking Fibres: The Final Report of COST Action E54 "Characterization of the fine structure and properties of papermaking fibres using new technologies"
Research output: Book/Report › Anthology › Scientific › peer-review

Konenäköalgoritmi käyttö mikrosysteemiteknikan tutkimuksessa
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Measuring bond strengths of individual paper fibers using microrobotics
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Microrobotic platform for making, manipulating and breaking individual paper fibre bonds
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Microrobotic platform for manipulation and mechanical characterization of Individual paper fibres
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific

The Effects of Laser Welding on the Heterogeneous Immunoassay Performance in a Microfluidic Cartridge
Research output: Contribution to journal › Article › Scientific › peer-review
Towards automated manipulation and characterization of paper-making fibres and its components
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific

Automated handling of bio-nanowires for nanopackaging
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Compensation of detent torque in microstepping of linear permanent magnet stepping motors
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Control software for automated microrobotic paper fiber characterization
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Dried nanoparticle label reagents for microfluidic immunoassays
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Flexibility measurement of individual paper fibers using microrobotics platform
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Microrobotic platform for manipulation and flexibility measurement of individual paper fibres
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Modeling continuous optoelectrowetting device
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

New pneumatically actuated PDMS system for liquid handling in SPR devices
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Perfusion characterization using flow simulations and pIV measurements
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Sample volume metering in a disposable microfluidic cartridge
Solubility of dried nanoparticles and their nonspecific binding in microfluidic polystyrene channels

Tekesin rahoitussella kehitetään analytiikkaa myrkyllisten sinilevien tunnistamiseen

The effects of laser welding on the heterogeneous immunoassay performance in a microfluidic cartridge

Volume estimation of a liquid plug in a microchannel using a machine vision system

Microrobotics platform for characterization and treatment of single paper fibres

Development of a Parallel Composite-Joint Piezohydraulic Micromanipulator
Kallio, P., 19 Dec 2002, Tampere University of Technology. 156 p. (Tampere University of Technology. Publications; vol. 405)

Research output: Book/Report > Doctoral thesis > Collection of Articles