Research outputs

Phase-based Quantification of Sports Performance Metrics Using a Smart IoT Sensor

AI-Enabled Micro Motion Sensors for Revealing the Random Daily Activities of Caged Mice

Mapping of Spatiotemporal Auricular Electrophysiological Signals Reveals Human Biometric Clusters

Wide-Bandwidth Nanocomposite-Sensor Integrated Smart Mask for Tracking Multiphase Respiratory Activities

Wireless AI-Powered IoT Sensors for Laboratory Mice Behavior Recognition

Sphygmopalpation using Tactile Robotic Fingers Reveals Fundamental Arterial Pulse Patterns

Wearable Three-dimensional Auricular Multi-point Acquisition, Health Status Monitoring, And Bio-stimulation Device
CHAN, H. Y., HUANG, Q. & LI, W. J., 28 Oct 2021, (Accepted/In press/Filed) Priority No. 17/512,672

Artificial intelligence meets traditional Chinese medicine: a bridge to opening the magic box of sphygmopalpation for pulse pattern recognition

Rapid nanomolding of nanotopography on flexible substrates to control muscle cell growth with enhanced maturation

Determination of Microsphere-Lens Magnification Using Micro-Robotic Scanning Superlens Nanoscopy

Nanomaterials for Flexible Arterial Pulse Sensors

Nanotopography-induced Cell Growth with Enhanced Maturation on Polymer Substrates

In situ printing of liquid superlenses for subdiffraction-limited color imaging of nanobiostuctures in nature
Micro-Dispensing of Graphene Oxide based Capacitive Tactile Sensors for Human Pressure-Pulse Detection

Robust control of dielectric elastomer diaphragm actuator for human pulse signal tracking

A low-cost reusable micro-Newton scale micro-thruster

3D Bio-printing of Cell-embedded Gelatin Methacrylate Hydrogel Micro-actuators

Atomization of High-Viscosity Fluids for Aromatherapy Using Micro-heaters for Heterogeneous Bubble Nucleation

Micro bubble generation using monolayer graphene heating elements

Robust control of dielectric elastomer diaphragm actuator for replicating human pulse

A pulse-sensing robotic hand for tactile arterial palpation

Improving atomic force microscopy imaging by a direct inverse asymmetric PI hysteresis model

Towards High Resolution Pico-Projector Applications: Design Improvements on MEMS Scanning Mirror

Design and Fabrication of a MEMS Scanning Mirror with and without Comb Offset

DESIGN OPTIMIZATION OF MEMS 2D SCANNING MIRRORS WITH HIGH RESONANT FREQUENCIES
Identify the model of micro robotic gripper using the sequence of microscopic images

A biomimetic flying silicon microchip: feasibility study

Modeling the Micro Robotic Gripper Using Microscopic Images Sequence for Manipulation of Biological Cells

Structural and thermal analysis of a thermally actuated polymer micro robotic gripper

Displacement Measurement of A Thermally Actuated Polymer Micro Robotic Gripper Using The Optical Focus Method

Finite element modeling of a thermally actuated polymer micro robotic gripper

Measurement the Displacement of the Micro Robotic Gripper Using Microscopic Images

Polymer MEMS actuators for underwater micromanipulation

Design and fabrication of a micro thermal actuator for cellular grasping

Micromachined polymer actuators as tactors for tactile display

A thermally actuated polymer micro robotic gripper for manipulation of biological cells

A polymer-based micro thermal actuator for micromanipulations in aqueous environment
Grants

Projects

ITF: A MEMS-based Light Detection and Ranging (LiDAR) System with Super-resolution Microlens for Enhanced Structured-light 3D Imaging and Mapping
LI, W. J., CHAN, H. Y., CHEUNG, N. & Wang, Z.
15/07/19 → 14/07/21

ITF: An Implantable Micro-Sensing System for Tracking Animal Motion Behaviors
LI, W. J., CHAN, H. Y., CHAN, H. M. & CHAN, C. S.
1/11/17 → 30/09/19

ITF: A Pen-sized Biocompatible MEMS Atomizer for Aromatherapy and Wellbeing Applications
LI, W. J., CHAN, H. Y. & CHAU, B. F.
1/11/14 → 31/10/16

HMRF: Artificial Intelligence Recognitions for Traditional Chinese Medicine Pulse Patterns and its Correlation Study with Body Constitution Types in Healthy Human Subjects
LI, W. J., CHAN, H. Y., SHEN, J. & Siu, C. W.
1/07/20 → …

ITF: Audio-Fingerprint Activated Scent Releasing Platform
LI, W. J., CHAN, H. Y. & CHAN, K. M.
15/01/18 → 14/01/19

ITF: Eco-Cosmetic Intelligent Packaging System Based on Industrial IoT
1/05/21 → …