

IEEE MEMS 2013 Outstanding Paper Award Finalist

Oral

CONTROLLED DELIVERY OF ANTIANGIOGENIC DRUG TO HUMAN EYE TISSUE USING A MEMS DEVICE

Fateme Nazly Pirmoradi¹, Kevin Ou², John K. Jackson², Kevin Letchford², Jing Cui², Ki Tae Wolf¹, Florian Gräber², Tom Zhao², Joanne A. Matsubara², Helen Burt², Mu Chiao², and Liwei Lin¹

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MEMS STRUCTURE WITH TUNABLE STIFFNESS USING THE MAGNETORHEOLOGICAL EFFECT

Fu-Ming Hsu, Guang-Yu Liu and Weileun Fang

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MUSCLE BASED BIOACTUATOR DRIVEN IN AIR

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THE GROWTH OF 3D VA-CNTS STACKS BY PREDEFINING MULTILAYERED AL/FE CATALYST FILMS FOR MEMS FABRICATION

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CELLS ON ARRAYS OF MICROSPRINGS: AN APPROACH TO ACHIEVE TRI-AXIAL CONTROL OF SUBSTRATE STIFFNESS

Ryan D. Sochol^{1,2}, Yun Jung Heo¹, Shintaroh Iwanaga¹, Jonathan Lei², Ki Tae Wolf², Albert Lu², Makoto Kurihara¹, Saori Mori¹, Daniela Serien¹, Song Li², Liwei Lin² and Shoji Takeuchi¹

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A NEW PATHOGEN DETECTION SYSTEM BY UTILIZING NANOGOLD MODIFIED SPECIFIC PROBE AND VANCOMYCIN COATED MAGNETIC BEADS ON AN INTEGRATED MICROFLUIDIC DEVICE

Chih-Hung Wang¹, Chia-Jung Chang¹, Jiunn-Jong Wu² and Gwo-Bin Lee¹

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**AN ELECTROSTATIC SPRINGLESS INERTIAL HARVESTER FOR CONVERTING MULTI-DIMENSIONAL
LOW-FREQUENCY MOTION**

T. Galchev, R. Raz, and O. Paul

IMTEK, University of Freiburg, GERMANY

ENHANCEMENT OF MECHANICAL Q FOR LOW PHASE NOISE OPTOMECHANICAL OSCILLATORS

Tristan O. Rocheleau, Alejandro J. Grine, Karen E. Grutter, Robert A. Schneider, Niels Quack, Ming C. Wu, and Clark T.-C. Nguyen

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SPLIT-AND-CONTACT DEVICE TO FORM PLANAR LIPID BILAYERS

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EFFECT OF THICKNESS ANISOTROPY ON DEGENERATE MODES IN OXIDE MICRO-HEMISPERICAL SHELL RESONATORS

L. D. Sorenson, P. Shao, and F. Ayazi

Georgia Institute of Technology, USA

Poster

DNA ORIGAMI ASSEMBLY ON PATTERNED SILICON BY AFM BASED LITHOGRAPHY

T. Akishiba¹, N. Tamura¹, T. Ichii¹, Y. Hirai¹, K. Sugano¹, T. Tsuchiya¹, H. Sugimura¹, and O. Tabata^{1,2}

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SUSPENDED CNT-FET PIEZORESISTIVE STRAIN GAUGES: CHIRALITY ASSIGNMENT AND QUANTITATIVE ANALYSIS

Matthias Muoth, Kiran Chikkadi, Yu Liu, and Christofer Hierold

ETH Zurich, SWITZERLAND

MICRO ACTUATOR ARRAY ON A FLEXIBLE SHEET - SMART MEMS SHEET -

M Ataka and H. Fujita

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MEMS RESONANT MAGNETIC FIELD SENSOR BASED ON AN ALN/FEGAB BILAYER NANO-PLATE RESONATOR

Y. Hui, T. X. Nan, N. X. Sun and M. Rinaldi

Northeastern University, USA

**WIDEBAND MEMS ELECTROSTATIC VIBRATION ENERGY HARVESTERS BASED ON GAP-CLOSING
INTERDIGITATED COMBS WITH A TRAPEZOIDAL CROSS SECTION**

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A MICRO-SCALE MICROBIAL FULE CELL (MFC) HAVING ULTRAMICROELECTRODE (UME) ANODE

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**A HIGH DENSITY MONOLAYER CELLS SELF-ASSEMBLY CHIP FOR HIGH-THROUGHPUT RARE CELLS
DETECTION**

Tsung-Ju Chen¹, Jui-Chia Chang¹, Yu-Cheng Chang¹ and Fan-Gang Tseng^{1,2}

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**ELECTROKINETICALLY INTEGRATED MICROFLUIDIC ISOLATION AND AMPLIFICATION OF
BIOMOLECULE- AND CELL-BINDING NUCLEIC ACIDS**

J. Kim, J.P. Hilton, K.A. Yang, R. Pei, J. Zhu, M. Stojanovic, and Q. Lin

Columbia University, New York, USA

**HORIZONTAL LIPID BILAYERS FORMED BY DROPLETS CONTACT METHOD ON PATTERNED
MICRO-DROPLETS**

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**ULTRACOMPACT OPTRODE WITH INTEGRATED LASER DIODE CHIPS AND SU-8 WAVEGUIDES FOR
OPTOGENETIC APPLICATIONS**

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