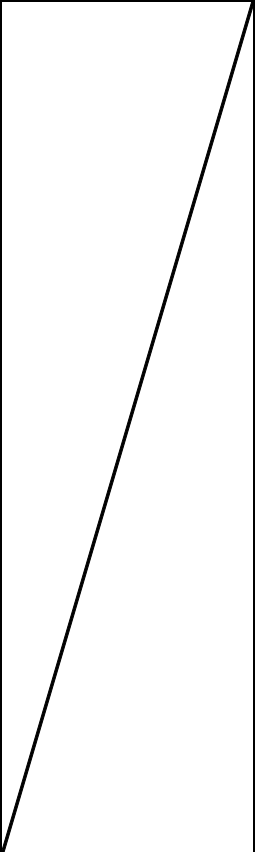


SYMPOSIUM L

NEMS/MEMS Technology and Devices

Symposium L: NEMS/MEMS Technology and Devices

Level 2, Room 208

Mon, 29-Jun-09	Tue, 30-Jun-09	Wed, 1-Jul-09	Thu, 2-Jul-09	Fri, 3-Jul-09
	(08:30 - 09:15) Plenary Lecture 2 Peter Doherty	(08:30 - 09:15) Plenary Lecture 4 John Pendry	(08:30 - 09:15) Plenary Lecture 6 Hartmut Michel	
(09:00 - 09:45) Opening Ceremony	(09:15 - 10:00) Plenary Lecture 3 Andrew Wee	(09:15 - 10:00) Plenary Lecture 5 Chad Mirkin	(09:15 - 10:00) Plenary Lecture 7 Akihisa Inoue	(09:00 - 09:45) Plenary Lecture 8 Jean-Marie Basset
(09:45 - 10:30) Plenary Lecture 1 Peter Gruenberg	(10:00 - 10:30) Coffee Break			(09:45 - 10:30) Plenary Lecture 9 Frederick Lange
(10:30 - 11:00) Coffee Break				(10:30 - 11:00) Coffee Break
(11:00 - 12:30) Session L-S1 Nanofabrication & Devices (I)	(10:30 - 12:30) Session L-S4 BioMEMS (I)	(10:30 - 12:30) Session L-S6 Microfluid	(10:30 - 12:30) Session L-S9 BioMEMS (II)	(11:00 - 13:00) Session L-S12 MEMS Modeling
(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture James L. Hedrick	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Martyn Poliakoff	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Karl U. Kainer	(12:30 - 14:00) Lunch (13:00 - 14:30) Panel Discussion	(13:00 - 14:30) Lunch Closing & Poster Ceremony
(14:00 - 16:15) Session L-S2 Nanofabrication & Devices (II)	(14:00 - 16:30) Session L-S5 POSTER SESSION	(14:00 - 15:30) Session L-S7 Biosensor & Bioapplication	(14:30 - 16:00) Session L-S10 MEMS	
(16:15 - 16:30) Break		(15:30 - 17:30) Session L-S8 Biosensor & Bioapplication	(16:00 - 18:00) Session L-S11 MEMS	
(16:30 - 18:00) Session L-S3 Photonic MEMS				
	(18:00 - 20:00) Public Lectures @ UCC Peter Doherty Peter Gruenberg	(19:00 - 20:00) Public Lecture @ UCC Hartmut Michel	(19:00 - 22:00) Conference Banquet @ Suntec	

L-S1: Nanofabrication & Devices (I)

Monday, 29 June 2009

11:00-12:30

Level 2, Room 208

Chairs: WU Jiuhui and WU Jian

11:00 L-S1.1-2(IN) A02892-04941 pg L55
S³ Micromachine as Multi-scale Interface for BME
Satoshi KONISHI

11:30 L-S1.3-4(IN) A02247-03832 pg L37
Micro and Nano Patterning on Phase Change Materials
Luping SHI, Tow Chong CHONG, Eng Keong CHUA, Rong ZHAO, Ming Hui HONG, Gaoqiang YUAN, Jia Yin SZE

12:00 L-S1.5(O) A01932-03336 pg L34
Fabrication of Mass Loaded MRFM Cantilever with Integrated Tip and Ultra-Low Spring Constant
Xiaosong TANG, Simon RAST, Ernst MEYER, Sujeet K. SINHA, Sean O'SHEA

12:15 L-S1.6(O) A00017-00538 pg L9
Supernatant Decanting on a Centrifugal Platform
Chih-Hsin SHIH, Wei-Ling CHIANG

L-S2: Nanofabrication & Devices (II)

Monday, 29 June 2009

14:00-16:15

Level 2, Room 208

Chairs: SHI LuPing and Vincent LEE

14:00 L-S2.1-2(IN) A02613-04466 pg L40
Micro/Nano Science Uncovering the Mysteries of Silicon Wet Etching for the Fabrication of MEMS Structures
Kazuo SATO, Mitsuhiro SHIKIDA, Miguel A. GOSALVEZ, Prem PAL

14:30 L-S2.3-4(IN) A00170-02217 pg L12
Nano-photonic & Electronic Structures Pattern and Fabrication
Selin H. G. TEO, Guo Qiang LO, Navab SINGH, Mingbin YU, Ai Qun LIU

15:00 L-S2.5(O) A01768-03147 pg L32
Manufacturing Issues and Considerations in the Thermal Bonding of Polymer Based Lab-on-a-chip
Sum Huan NG, Yuxin KOH, Zhiping WANG

15:15 L-S2.6(O) A01939-03346 pg L35
Design and Fabrication of Novel Compliant Electrostatically Actuated Microvalves
Qing ZHANG, Nikola PEKAS, David JUNCKER

15:30 L-S2.7(O) A02460-04197 pg L38
Fabrication of a Microfluidic Device with Locally Insulated Electrodes on both Top and Bottom Sides of the Channel
Lujun ZHANG, Andre BOSSCHE

15:45 L-S2.8(O) A01975-03414 pg L35
Flexible Micro-structured Mold for UV Micro-casting of Polymeric Microdevices
Lip Pin YEO, Lu WANG, Zhiping WANG, Yee Cheong LAM

16:00 L-S2.9(O) A00186-00475 pg L13
Use of Micro Synthetic Jet Actuators for Boundary Layer Flow Control
Jing-Chuen LIN, An-Shik YANG, Li-Yu TSENG

L-S3: Photonic MEMS

Monday, 29 June 2009

16:30-18:00

Level 2, Room 208

Chairs: Xiaohong TANG and TEO Selin H. G.

16:30 L-S3.1-2(IN) A00041-00064 pg L9
Fiber-top Micromachined Devices: Ideas on the Tip of Fiber
Davide IANNUZZI

17:00 L-S3.3-4(IN) A01231-04699 pg L26
NanoPlasmonic Sensor
Eng Huat KHOO, Erping LI

17:30 L-S3.5(O) A02886-04934 pg L55
Photothermal Imaging (PTI) System for the Imaging of Gold Nano-particles and Cellular Organelles
Chi Lok WONG, George C. K. CHEN, Teu Choon KIAT, Srivathsan VASUDEVAN, Pham Thuy ANH, Puhani Niladri BIHARI, Marta ANDIKA, Shu CHI, Lin ZHIPING, Peng CHEN

17:45 L-S3.6(O) A00079-02927 pg L10
Erectrophoretic Coulter Method for Analyzing Surface Properties of Particles Using a Micro-fluidic Device
Naohiro TAKAHASHI, Atushi AKI, Tomofumi UKAI, Yoshikata NAKAJIMA, Tatsuro HANAJIRI, Toru MAEKAWA

L-S4: BioMEMS (I)

Tuesday, 30 June 2009

10:30-12:30

Level 2, Room 208

Chairs: Kazuo SATO and George CHEN

10:30 L-S4.1-2(IN) A02623-04490 pg L41
Bioelectronics – The Next Wave
Levent YOBAS

11:00 L-S4.3-4(IN) A02750-04751 pg L49
The Design and Fabrication of Poly(dimethylsiloxane) Single Mode Rib Waveguides for Lab-on-a-chip Applications
Jack Sheng KEE, Daniel Puiu POENAR, Levent YOBAS

11:30 L-S4.5(O) A01863-03221 pg L34
Analysis of Novel Building Blocks for Photonic MEMS Using Deep 1D Photonic Crystals
Maurine MALAK, François DUPORT, Hong CAI, Bassam SAADANY, Pierre NICOLE, Jean-Luc POLLEUX, Frédéric MARTY, Stéphane FORMONT, Ai Qun LIU, Tarik BOUROUINA

11:45 L-S4.6(O) A02780-04753 pg L51
Bandstop Filters with Comb-like Electromagnetic Bandgap Structures on CPW Stubs
Zhongliang DENG, Jianming HUANG, Binghui DING

12:00 L-S4.7(O) A01598-02779 pg L31
Lab-On-A-Chip Technology for Single Molecule Detection Using Quantum Dots, Embedded Optical Fibres & Microchannels
Sook Fun CHAN, Chammika UDALAGAMA, Sureerat HOMHUAN, Andrew Anthony BETTIOL, Frank WATT, Thorsten WOHLAND

12:15 L-S4.8(O) A02825-04840 pg L53
A Micro-Fluidic Cell Culture Array for On-Chip Virus Infection
Jingjing GU, Ai-Qun LIU

L-S5: Poster Session

Tuesday, 30 June 2009

Level 3, Gallery

14:00 - 16:30

Chairs: LIU Ai Qun and YANG Yi

L-S5.01(P) A00017-00479 pg L9
Design and Analysis of Micromixers on a Centrifugal Platform
Chih-Hsin SHIH, Chia-Hui LIN, Hou-Jin WU

L-S5.02(P) A00045-01976 pg L10
A MEMS Pendulum-like Structure for Design of Oscillators
Venkatesh CHENNIAPPAN, Reza MOHEIMANI, Mehmet YUCE

L-S5.03(P) A00123-00735 pg L11
Design and Characterization of a Fourier Transform Micro-spectrometer
Shouhua WANG, Hongbin YU, Fook Siong CHAU, Xiaosong TANG

L-S5.04(P) A00131-00287 pg L11
Microstructure and Magnetic Properties of Rapidly Solidified Ni₂(Mn,Fe)Ga Heusler Alloys
Venkata Satya Prasad RAGHUPATRUNI, Raja MANIVEL, Phanikumar GANDHAM

L-S5.05(P) A00182-01985 pg L12
Separation and Manipulation of Particles using Traveling Wave Dielectrophoretic Force
Thitima MATUROS, Kata JARUWONGRANGSEE, Assawapong SAPPAT, Anurat WISITSORAAT, Tanom LOMAS, Pikul WANICHAPICHART, Adisorn TUANTRANONT

L-S5.06(P) A00185-00382 pg L12
Performance Characterization of a Piezoelectric Micro SJA
An-Shik YANG, Jeng-Jong RO, Wei-Han CHANG

L-S5.07(P) A00186-00544 pg L14
A Novel Piezoelectric Valveless Micropump with an Integrated Diffuser/Nozzle Bulge Piece Design
Tsung-Hsing CHAN, Chiang-Ho CHENG, An-Shik YANG, Li-Yu TSENG

L-S5.08(P) A00306-00573 pg L16
Characterization and Optimization of Seal-Off for Very Low Pressure Sensors (VLPS) Fabricated by CMOS MEMS Process
Muhamad Ramdzan BUYONG, Norazreen ABD AZIZ

L-S5.09(P) A00378-00696 pg L16
High Temperature Reliability Study of MEMS Capacitive Accelerometers
Nazman ZAIYADI

L-S5.10(P) A00387-00715 pg L17
Evolutionary Algorithm Based Feedforward Control for Contouring of a Biaxial Piezo-actuated Stage
Chih-Jer LIN, Shu-Yin CHEN

L-S5.11(P) A00602-01100 pg L18
Novel Design and Fabrication of High Sensitivity MEMS Capacitive Sensor Array for Fingerprint Imaging
Mitra DAMGHANIAN, Burhanuddin YEOP MAJLIS

L-S5.12(P) A00602-02142 pg L19
Design and Analysis of Low-Power MEMS Speaker using Magnrtic Actuation Technology
Fatima Lina AYATOLLAHI, Burhanuddin YEOP MAJLIS

- L-S5.13(P) A00604-01328** pg L19
Prediction of Burr Formation in Fabricating MEMS Components by Micro End Milling
Mohammad ALI, Nurul HAJAR, Aliff OMAR, Khairul IRMAN
- L-S5.14(P) A00633-02258** pg L20
Parametric Study of Hot Embossing on Micro-holes
Cheng-Hsien WU, Ya-Zhen HU
- L-S5.15(P) A00633-02308** pg L20
Closed-Die Compression Molding for Precision Optical Lenses
Cheng-Hsien WU, Siao-Yi LI, Chun-Yu LIU
- L-S5.16(P) A00736-01610** pg L21
Design and Fabricaiton of a MEMS-based Gas Sensor
Jin-Ho YOON, Jung-Sik KIM
- L-S5.17(P) A00749-01325** pg L21
Fabrication of Reliable RF MEMS Switches in CPW Configuration
Jaibir SHARMA
- L-S5.18(P) A00808-01418** pg L22
Exploring the Innovational Potential of Biomimetics for Novel 3D MEMS
Ille C. GEBESHUBER, Herbert STACHELBERGER, Burhanuddin Yeop MAJLIS
- L-S5.19(P) A00858-01626** pg L22
Compatibility Study of Diamond-like Nanocomposite Thin Films with Hydrazine Propellant for MEMS Microthruster
Pijus KUNDU, Ashesh RAY CHAUDHURI, Soumen DAS, Tarun Kanti BHATTACHARYYA
- L-S5.20(P) A00922-01616** pg L23
Parametric Study of Femtosecond Pulses Laser Hole Drilling of Silicon Wafer
Li Shi JIAO, Eddie Yin Kwee NG, Lee Mein WEE, Hong Yu ZHENG
- L-S5.21(P) A01092-01899** pg L24
Process Development of Sealing for Very Low Pressure Sensor
Muhamad Ramdzan BUYONG, Norazreen ABD. AZIZ, Burhanuddin YEOP MAJLIS
- L-S5.22(P) A01092-01907** pg L24
Process Characterization of Wet Etching for High Aspect Ratio Microneedles Development
Norazreen ABD. AZIZ, Muhamad Ramdzan BUYONG, Burhanuddin YEOP MAJLIS
- L-S5.23(P) A01149-02731** pg L25
Silicide Thin Films for Silicon Micro-Machining: Masking and Structural Layers
Madhu BHASKARAN, Sharath SRIRAM
- L-S5.24(P) A01216-02074** pg L25
Piezoelectric Micro-pump for Drug Delivery System Fabricated Using Two Optical Masks
Juliana JOHARI, Jumril YUNAS, Burhanuddin YEOP MAJLIS
- L-S5.25(P) A01232-02113** pg L26
Hybrid Simulation Approach on MEMS Piezoresistive Microcantilever-based Sensor for Biosensing Applications
Rosminazuin AB. RAHIM, Badariah BAIS, Burhanuddin YEOP MAJLIS
- L-S5.26(P) A01232-02121** pg L27
Fabrication of Glucose Sensitive Actuator for DDS Microvalve
Nur Azrina DZULKEFLI, Masoomah TEHRANIROKH, Badariah BAIS, Burhanuddin YEOP MAJLIS
- L-S5.27(P) A01245-02147** pg L27
Investigation of Sidewall Roughness of High-Aspect-Ratio Microstructures Manufactured via Synchrotron Deep X-ray Lithography Using Proton Beam Patterned Masks
Yaping REN, Herbert O. MOSER, Weisheng YUE, Thomas OSIPOWICZ, Francis, Eng Hock TAY, Linke JIAN, Ping YANG, Sivakumer MANIAM, Sher-Yi CHIAM, Jeroen Anton van KAN
- L-S5.28(P) A01245-02918** pg L28
A Novel Micro Multimirror System for Focusing X-Rays of a Synchrotron Radiation Source
Yaping REN, Herbert O. MOSER, Thomas OSIPOWICZ, Francis, Eng Hock TAY, Linke JIAN, Xiaojiang YU, Caozheng DIAO, Mohammed BAHOU
- L-S5.29(P) A01386-02416** pg L30
Study of a Hybrid Energy Harvesting Mechanism Based on Piezoelectric and Electromagnetic Schemes
Bin YANG, Chengkuo LEE, Wei Loon KEE, Siak Piang LIM
- L-S5.30(P) A01585-02792** pg L31
Contact Resistance Measurements of SAMs-Assisted Copper Thermo-compression Bonded Joints
Jia LI, Xiao Fang ANG, Jun WEI, Chee Cheong WONG
- L-S5.31(P) A01783-03870** pg L33
Joining-up Single-Walled Carbon Nanotubes by Ag Nanojunction
Guangxia SHEN, Yiqing LU, Shouwu GUO

- L-S5.32(P) A01823-03265** pg L34
Analysis of the Coupled Error and Q-factor in Vibratory MEMS Gyroscope with Various Air Pressure Points
Wenwen ZHOU, Rong ZHANG, Zhiyong CHEN, Bin ZHOU
- L-S5.33(P) A02117-04461** pg L37
Kinetics Analysis of UV-Curable Epoxy Resins for Micromachining Applications
Feng Lin NG, Vanda Yu VOYTEKUNAS, Chai Ling KOH, Marc J. M. ABADIE
- L-S5.34(P) A02349-04222** pg L38
Gray Scale Maskless Lithography for One Step Fabrication of 3-Dimensional Structures in SU-8
Amritha RAMMOHAN, Prabhat DWIVEDI, Ashutosh SHARMA
- L-S5.35(P) A02371-04058** pg L38
Study on Packing Experiment of Biodegradable Micro Drug Delivery System
Xiaopeng WANG, Tianning CHEN
- L-S5.36(P) A02471-04256** pg L39
Microfluidic Devices Fabricated by LTCC Combined with Thick Film Lithography
Young Joon YOON, Jaekyung CHOI, Jong-woo LIM, Hyo Tae KIM, Jihoon KIM, Youn-Suk CHOI, Jong-Heun LEE, Jong-hee KIM
- L-S5.37(P) A02551-04390** pg L39
A Release Mathematical Model and Manufacturing Process of a Novel Controlled Drug Delivery System with Micro-porous
Yang GAO, Tianning CHEN, Xiaopeng WANG
- L-S5.38(P) A02648-04876** pg L42
MEMS Optical Switches
Ramya RAJU, Shanmugapriya
- L-S5.39(P) A02667-04894** pg L42
Transfer Technology of Ferroelectric Films onto the Polymer Substrate for the Application of High Density Capacitor
Masaaki ICHIKI, Ryutaro MAEDA, Tadatomo SUGA
- L-S5.40(P) A02704-04698** pg L44
MEMS Tunable De-multiplexer Using FTIR Ring Down Resonators
Weiming ZHU, Wu ZHANG, Tarik BOUROUINA, Aiqun LIU
- L-S5.41(P) A02708-04667** pg L45
Tunable Optical Filter by Thermal Effect Based on MEMS Technology
Wu ZHANG, Jifang TAO, Weiming ZHU, Hong CAI, Aiqun LIU
- L-S5.42(P) A02714-04672** pg L45
Step & Stamp Imprinting Microlithography Studies of Chemical and Topographical Signaling on Osteoblast Cells
Somjai SANGYUENYONGPIPAT, Ananda SAGARI, Mikko LAITINEN, Timo SAJAVAARAA, Harry WHITLOW, Paavo RAHKILA, Sulin CHENG, Tomi HATAINEN
- L-S5.43(P) A02720-04677** pg L46
Thermal Management and Alignment Strategies in MEMS Tunable Laser Packaging
Jifang TAO, Jonathan TAMIL, Weiming ZHU, Jian WU, Kun XU, Jintong LIN, Aiqun LIU
- L-S5.44(P) A02745-04717** pg L47
UV-visible Spectra Character of Larger Diameter of Gold Nanoparticles (AuNPs)
Shaoli ZHU, Jingbo ZHANG, Lanry Yung Lin YUE, Dany HARTONO, Aiqun LIU
- L-S5.45(P) A02746-04718** pg L48
On-Chip Liquid Waveguide with Gold Nanoparticles Dispersion
Sha XIONG, Yi YANG, Ai-Qun LIU
- L-S5.46(P) A02749-04798** pg L49
An On-chip Michelson Interferometer Realized using Droplet Microfluidics
Lip Ket CHIN, Ai-Qun LIU
- L-S5.47(P) A02761-04728** pg L50
Modeling of Micro-Fluidic Droplet Resonator Based on Whisper Gallery Mode
Bin DONG, Ye Feng YU, Ai Qun LIU
- L-S5.48(P) A02771-04736** pg L50
Investigation on the Optimization of the Micro-mixing Process using Nature's Golden Spiral Ratio
Yongjun WEE, Ai Qun LIU
- L-S5.49(P) A02775-04743** pg L51
A Liquid Optical Tip via Control of Diffusion Coefficient and Flow Rate
Yi YANG, Sha XIONG, Ai Qun LIU
- L-S5.50(P) A02783-04754** pg L52
On-Chip Spherical Cavity for Fluorescence Emission Enhancement
Ye Feng YU, Tarik BOUROUINA, Ai Qun LIU

L-S6: Microfluid

Wednesday, 1 July 2009

10:30-12:30

Level 2, Room 208

Chairs: Eric YAP and ZHANG Jingbo

10:30 L-S6.1-2(IN) A02838-04860 pg L53
Flows in Micro-Channels and Cavities - Visco-Elastic, Faradaic Charging and Surface Roughness Effects
Yee Cheong LAM

11:00 L-S6.3(O) A00185-00384 pg L13
Mixing Enhancement of a Passive Micromixer by Applying Boundary Protrusion Structures
Chang-Yu HSIEH, An-Shik YANG

11:15 L-S6.4(O) A00214-01808 pg L15
Design and Characterization of a MEMS-microfluidic Sensor for Rheological Applications
Helene BERTHET, Howard STONE, Frederic MARTY, Bruno MERCIER, Jacques JUNDT, Dan ANGELESCU

11:30 L-S6.5(O) A00446-00836 pg L18
Microfluidic Sorting System Based on Optical Force Switching
Siew Kit HOI, Chamika UDALAGAMA, Chornng Haur SOW, Andrew A. BETTIOL

11:45 L-S6.6(O) A02707-04655 pg L44
Development of Liquid Tunable Diffractive/Refractive Hybrid Lens Based on Combination of Diamond Turning and Soft Lithography
Hui Min LEUNG, Hongbin YU, Guangya ZHOU, A. SENTHIL KUMAR, Fook Siong CHAU

12:00 L-S6.7(O) A02744-04716 pg L47
A Phase Shift Refractometer Based on Transmission Phase Grating Using Microfluidic Chip
Zhenguo LI, Bing LIU, Jingbo ZHANG, Ai-Qun LIU

12:15 L-S6.8(O) A02746-04787 pg L48
Liquid Prism with Tunable Transmission/Reflection
Sha XIONG, Yi YANG, Ai-Qun LIU

L-S7: Biosensor & Bioapplication

Wednesday, 1 July 2009

14:00-15:30

Level 2, Room 208

Chairs: CHEN Yu and POENAR Daniel Puiu

14:00 L-S7.1-2(IN) A02946-05035 pg L57
In/Ex-situ Detection of HBV DNA Using Dynamic Microcantilever
Tae Song KIM

14:30 L-S7.3-4(IN) A02781-04750 pg L52
Photothermal Technique for Materials Characterization and Live Cells Monitoring
George Chung Kit Chen CHEN, Srivathsan VASUDEVAN, Choon Kiat, Andass TEU, Balpreet Singh AHLUWALIA, Marta ANDIKA

15:00 L-S7.5(O) A00201-02560 pg L14
Kelvin Force Microscope Immunoassay for Electrical Label-free Characterization
Shinkichi NUMATA, Shigeru YAMASITA, Atsushi AKI, Atsumu SHOJI, Toru MIZUKI, Yoshikata NAKAJIMA, Toru MAEKAWA, Tatsuro HANAJIRI

15:15 L-S7.6(O) A01059-01839 pg L23
A Chip-level Disposable Optofluidic Device For Biosensing
Hong LIU, Nan ZHANG, Zi Chao SHIAH, Donna Xiao Dong ZHOU

L-S8: Biosensor & Bioapplication

Wednesday, 1 July 2009

15:30-17:30

Level 2, Room 208

Chairs: CHEN Yu and POENAR Daniel Puiu

15:30 L-S8.1(O) A01298-02263 pg L29
Single-cell Electroporation using Proton Beam Fabricated Biochips
Sureerat HOMHUAN, Hui Fang CUI, Binbin ZHANG, Fwu-Shan SHEU, Andrew A. BETTIOL, Frank WATT

15:45 L-S8.2(O) A02687-04621 pg L43
Label-free Protein Detection via Gold Nanoparticles and Localized Surface Plasmon Resonance
Shaoli ZHU, Jingbo ZHANG, Lanry Yung Lin YUE, Dany HARTONO, Aiqun LIU

16:00 L-S8.3(O) A00297-00734 pg L15
Gas Bubble Sizes Formed in Liquids at Different Resonant Frequencies
Chiang-Ho CHENG, Li-Yu TSENG, Tsung-Hsing CHIANG

16:15 L-S8.4(O) A02749-04719 pg L48
An Integrated Fabry-Pérot Resonator using Liquid Tunable Microlenses
Lip Ket CHIN, Ai-Qun LIU

16:30 L-S8.5(O) A01665-02952 pg L32
DC-biased AC-electrokinetic Mixing: A Mechanistic Investigation
Wee Yang NG, Isabel RODRIGUEZ, Yee Cheong LAM

16:45 L-S8.6(O) A02646-04541 pg L41
Gas Permeation in PDMS(polydimethylsiloxane) *in situ* Monitored by Silicon Pressure Sensors
Lung-Jieh YANG, Yu-Cheng OU

17:00 L-S8.7(O) A02988-05107 pg L58
Capacitively Coupled Contactless Conductivity Detection with Dual Top-Bottom Cell Configuration for Microchip Electrophoresis
Kambiz Ansari MAHABADI, Isabel RODRIGUEZ, Liu HONG, Peter C. HAUSER, Nico F. DE ROOIJ

17:15 L-S8.8(O) A02775-04742 pg L50
Dynamic Liquid Optical Splitters and Interferometers Integrated into Micro-Fluidic-Systems
Yi YANG, Sha XIONG, Ai Qun LIU

L-S9: BioMEMS (II)

Thursday, 2 July 2009
10:30-12:30

Level 2, Room 208

Chairs: ZHANG Xuming and TANG Min

10:30 L-S9.1-2(IN) A02621-04479 pg L40
Building a Lensless, High-resolution On-chip Microscope for \$10
Changhuei YANG

11:00 L-S9.3(IN) A02893-05065 pg L56
Metallic Nano Particles and Nano Structures for Bio-applications
Jingbo ZHANG, L. Y. L. YUNG, S. S. CHUA, J. Y. SZE, S. L. ZHU, T. C. AYI, R. JEEVANSWARAN

11:15 L-S9.4(O) A02783-04789 pg L52
An On-Chip Micro-Droplet Optical Filter Using Evanescent Wave Coupling
Ye Feng YU, Tarik BOUROUINA, Ai Qun LIU

11:30 L-S9.5(O) A00335-00623 pg L16
Analysis of Ionic Transport Interaction between Soft Smart Hydrogel and Solution in BioMEMS Channels
Rongmo LUO, Hua LI, Teng Yong NG, Khin Yong LAM

11:45 L-S9.6(O) A02738-04783 pg L46
Transport of Water and Biofluids in High Aspect Ratio Microfluidics Devices Lithographically Fabricated Using Proton Beam Writing (PBW)
Harry WHITLOW, Liping WANG, Leona GILBERT

12:00 L-S9.7(O) A01520-02651 pg L31
Enabling Low Temperature Copper Bonding With an Organic Monolayer
Xiao Fang ANG, Jun WEI, Zhong CHEN, Chee Cheong WONG

12:15 L-S9.8(O) A02776-04748 pg L51
Droplet-based Lattice as Diffraction Gratings for Cell Analysis
Jiaqing YU, Lip Ket CHIN, Ai-Qun LIU

L-S10: MEMS

Thursday, 2 July 2009
14:30-16:00

Level 2, Room 208

Chairs: Tarik BOUROUINA and YU Ai Bin

14:30 L-S10.1-2(IN) A02577-04710 pg L40
All-Optical Signal Processing Based on Nonlinear Effects in Semiconductor Optical Amplifiers
Jian WU, Minxue WANG, Bingbing WU

15:00 L-S10.3-4(IN) A02850-04879 pg L54
Micromachining Pressure Sensors on Optical Fiber tip
Xuming ZHANG, Miao YU, Hyungdae BAE, Christian ALTMAYER, Ai Qun LIU

15:30 L-S10.5(O) A02832-04853 pg L53
A Micromachined Thermo-optic Tunable Laser
Hong CAI, Weiming ZHU, Jifang TAO, Wu ZHANG, Qing Xin ZHANG, Ai Qun LIU

15:45 L-S10.6(O) A02708-04675 pg L45
High Accuracy Pressure Sensor Based on Optical MEMS Technology
Wu ZHANG, Jifang TAO, Weiming ZHU, Aiqun LIU

L-S11: MEMS

Thursday, 2 July 2009
16:00-18:00

Level 2, Room 208

Chairs: Tarik BOUROUINA and YU Ai Bin

16:00 L-S11.1(O) A02687-04633 pg L43
A THz-wave Photonic MEMS Generator
Ji Fang TAO, Bing LIU, Wei Ming ZHU, Hong CAI, Jonathan TAMIL, Jian WU, Kun XU, Jin Tong LIN, Ai Qun LIU

16:15 L-S11.2(O) A02704-04682 pg L43
A Photonic Mems Polarization Switch
Weiming ZHU, Wu ZHANG, Tarik BOUROUINA, Aiqun LIU

16:30 L-S11.3(O) A00392-00731 pg L17
Modeling of Cell Motion in Micro-scale Hydrodynamic-electrical Field
Ting YE, Hua LI, Khin Yong LAM

16:45 L-S11.4(O) A00918-01611 pg L23
Modeling of Performance of Single Elastic Capsule in Time-dependent two-dimensional Micro Channel Flow
Gang MA, Hua LI, Teng Yong NG, Khin Yong LAM

17:00 L-S11.5(O) A01248-02148 pg L28
Characterization of Heavily Doped Polysilicon Films for SiMEMS based Thermoelectric Power Generator
Jin XIE, Chengkuo LEE

17:15 L-S11.6(O) A01386-02415 pg L30
A Wideband Electromagnetic Energy Harvester for Random Vibration Sources
Bin YANG, Chengkuo LEE

17:30 L-S11.7(O) A01414-02452 pg L31
Designing High Frequency Microelectromechanical Resonators under Fabrication Uncertainty Using Methamodeling
Amir HEIDARI, Haejin CHOI, Jianmin MIAO

17:45 L-S11.8(O) A02948-05038 pg L57
Non-Negative Input Design Control Scheme to Solve “Pull-In” Instability of MEMS Parallel Plate Actuators
M. H. NIKPANAH, Youyi WANG, F. L. LEWIS, A. Q. LIU

12:45 L-S12.8(O) A01354-02363 pg L29
Computational Study of Nanoelectromechanical Device Using Bilayer Graphene Nanoribbon
Kai-Tak LAM, Vincent Chengkuo LEE, Gengchiao LIANG

L-S12: MEMS Modeling

Friday, 3 July 2009

11:00-13:00

Level 2, Room 208

Chairs: LI Hua and Faeyz Karim MUHAMMAD

11:00 L-S12.1-2(IN) A02069-03587 pg L36
Transmission Properties of Physical Waves in Photonic/Phonon Crystals
Jiu Hui WU, H. L. CHEN, Boris LUK'YANCHUK, A.Q. LIU

11:30 L-S12.3(O) A00405-00788 pg L17
A Continuum Theory for Simulation of Ionic-strength-sensitive Hydrogel for BioMEMS Application
Fukun LAI, Hua LI, Khin Yong LAM

11:45 L-S12.4(O) A00507-00931 pg L18
A Transient Simulation for Analysis of Volume Transition of pH-sensitive Hydrogel in Micro-channel
Hua ZOU, Hua LI, Khin Yong LAM

12:00 L-S12.5(O) A00732-01296 pg L20
Analysis of Microelectromechanical Systems Using the Meshless Random Differential Quadrature Method
Shantanu MULAY, Hua LI, Khin Yong LAM

12:15 L-S12.6(O) A01120-01995 pg L24
Mathematical Modeling of Hydrogels for Microfluidic Flow Control
Jundika Candra KURNIA, Erik BIRGERSSON, Arun Sadashiv MUJUMDAR, Lee Ching QUAH

12:30 L-S12.7(O) A02000-03451 pg L36
Numerical Simulation of Stretchable and Foldable Silicon Integrated Circuits
Zhuangjian LIU, YongWei ZHUANG, Yonggang HUANG