

AMN 2012 Lecture Program

Registration

23 May, 2012, Wednesday	10:00-22:00	Bayshore Hotel / Dalian Air China Hotel
24 May, 2012, Thursday	8:00-8:30	Energy Building

24 May 2012, Thursday

8:30-8:50	Opening Ceremony	Chair: Jianhua Qin	Hall1: Energy Building
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Session 1

Chair: Hsueh-Chia Chang

Hall1: Energy Building

8:50-9:30	David A. Weitz Harvard University, USA New Developments in Drop-Based Microfluidics	IL1
9:30-10:00	Takehiko Kitamori The University of Tokyo, Japan Extended-Nano Fluidics on Glass Fabricated Microchip	IL2
10:00-10:30	Jing Cheng Tsinghua University, China Biochips: From Biomarker Discovery to Clinical Applications	IL3

10:30-10:50 *Coffee Break*

Session 2

Chair: Yoshinobu Baba

Hall1: Energy Building

10:50-11:20	Hsueh-Chia Chang University of Notre Dame, USA A New Nanoporous Membrane Molecular Sensing Platform	IL4
11:20-11:50	James L. Lee The Ohio State University, USA Nanofluidics Electroporation for Gene Delivery	IL5

12:00-13:00 *Lunch*

13:00-15:00	Poster Session and Exhibitions	Hall3: Biotechnology Building
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Session 3

Chair: Dong-Pyo Kim / Leidong Mao

Hall2: Chemical Engineering Building

15:00-15:20	Dong-Pyo Kim Pohang University of Science and Technology, Korea Lab-on-a-Chip Systems for Microchemical Synthetic Applications	IL6
15:20-15:40	Weijia Wen HKUST, Hongkong, China Logic Control of Microfluidic Droplets	IL7

15:40-15:55	Kristelle Bougot-Robin HKUST, Hongkong, China Resonant Grating Biochips Imaging for the Detection of Single Point Mutation in the Framework of Resistance to Antibiotics	O1
15:55-16:10	Leidong Mao University of Georgia, USA Ferrofluidic Platform for Cell and Droplet Manipulation	O2
16:10-16:25	Zhike He Wuhan University, China Determination Trace Amount of DNA and Protein on a Luminescence-based Colorimetric Droplet Platform	O3
16:25-16:45	<i>Coffee Break</i>	

Session 4

Chair: Shau-Chun Wang / Chang-Hwan Choi

Hall2: Chemical Engineering Building

16:45-17:05	Chang-Hwan Choi Stevens Institute of Technology, USA Bioinspired Nanoengineered Surfaces for Micro-and Nanofluidics	IL8
17:05-17:20	Shau-Chun Wang National Chung Cheng University, Taiwan, China Weak Solution pH Effects in Protein Charge States with Alternative Current Electrospray Ionization	O4
17:20-17:35	Chih-Hsin Shih Feng Chia University, Taiwan, China Prothrombin Time Monitoring Using a Microfluidic Disc Analyzer	O5
17:35-17:50	Kaige Wang Northwest University, China Study of Nanoparticles Transporting through Anodized Alumina Nanopores	O6
17:50-18:05	Do-Hyun Lee KAIST, Korea Lateral Interconnection Approach for PDMS-based Microfluidic Device	O7
18:10-19:00	<i>Dinner</i>	

Session 5

Chair: Kahp-Yang Suh / Steffen Hardt

Hall3: Biotechnology Building

15:00-15:20	Steffen Hardt University of Darmstadt, Germany Chaos Management with Nanostructures: Gas Dynamics on Small Scales	IL9
15:20-15:40	Kahp-Yang Suh Seoul National University, Korea High-throughput Microfluidic Synthesis of Monodisperse Lipid Vesicles via Bio-inspired Multi-dimensional Pore Arrays	IL10
15:40-15:55	Guiren Wang University of South Carolina, USA Turbulent Mixing in Microfluidics Where Reynolds Number is in the Order of 1	O8
15:55-16:10	Ho Cheung Shum The University of Hong Kong, Hong Kong, China Fluid Dynamics in Multiphase System with Low Interfacial Tension	O9
16:10-16:25	Jiahai Wang Changchun Institute of Applied Chemistry, China Conical Shaped Nanofluidics in Polymer for Analytical Chemistry	O10
16:25-16:45	<i>Coffee Break</i>	

Session 6

Chair: Teck Neng Wong / Jinyi Wang

Hall3: Biotechnology Building

16:45-17:05	Djamel Lakehal ASCOMP GmbH, Switzerland Progress in Computational Microfluidics Flows using the CMFD Code TransAT	IL11
17:05-17:20	Jinyi Wang Northwest A&F University, China Integrated Microfluidic System for Studying Injury and Regeneration of Central Nervous System	O11
17:20-17:35	Teck Neng Wong Nanyang Technological University, Singapore Modeling of Tunable Optofluidic Lens Based on Combined Effect of Hydrodynamics and Electroosmosis	O12
17:35-17:50	Dharmalingam Sugumar Deakin University, Australia Multiple Annealing Temperature Rapid PCR Device	O13
17:50-18:05	Isabella Guido Peking University, China Electroporation of Mammalian Cells through Hydrodynamic Focusing and Fluidic Electrodes	O14
18:10-19:00	<i>Dinner</i>	

25 May 2012, Friday

Session 7

Chair: Dongqing Li

Hall1: Energy Building

8:30-9:10	Luke P. Lee University of California, USA Bionanoscience for Innovative Global Healthcare Research & Technology	IL12
9:10-9:40	Yoshinobu Baba Nagoya University, Japan Nanobiodevice-based Single Biomolecule and Single Cell Analysis for Cancer Diagnosis and Stem Cell Therapy	IL13
9:40-10:10	Patrick Tabeling ESPCI, France Colloidal Microfluidics	IL14
10:10-10:30	<i>Coffee Break</i>	

Session 8

Chair: Je-kyun Park

Hall1: Energy Building

10:30-11:00	Dongqing Li University of Waterloo, Canada Induced Charge Electrokinetic Microfluidics	IL15
11:00-11:30	Pengyuan Yang Fudan university, China Proteolysis in Microfluidic Reactors: an Approach to Interface Protein Separation and Peptide Mass Spectrometry	IL16
11:30-12:00	Leslie Y. Yeo Monash University, Australia The Lab-on-a-Disc: Miniature Counterpart to the Lab-on-a-CD for Chip-Based Microcentrifugation	IL17
12:00-13:00	<i>Lunch</i>	

13:00-15:00	Poster Session and Exhibitions	Hall3: Biotechnology Building
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Session 9

Chair: Jinming Lin / Zhike He

Hall2: Chemical Engineering Building

15:00-15:20	Peng Zhou RHEONIX, INC. The Pathway of Innovation, Productization and FDA Registration of “Sample to Answer” Microfluidic Molecular Diagnostic Product	IL18
15:20-15:40	Jinming Lin Tsinghua University, China Fabrication of Microfluidic Devices Based on the Surface Tension Induced Control and Manipulation Inside Microchannels	IL19
15:40-15:55	Liyu Liu Institute of Physics, China Microfluidic Advances for Cancer Biophysics Research	O15
15:55-16:10	Kai Wang Tsinghua University, China Research on Fast Exothermic Reaction Between Cyclohexanecarboxylic Acid and Oleum in Microreactors	O16
16:10-16:25	Ziyi Yu Nanjing University of Technology, China Tri-phase Microfluidic Fabrication of Shape-controllable Colloidal Photonic Crystal Beads for Multi-color Displays	O17
16:25-16:45	<i>Coffee Break</i>	

Session 10

Chair: Chia-Fu Chou / Yanyi Huang

Hall2: Chemical Engineering Building

16:45-17:05	Chia-Fu Chou Institute of Physics, Taiwan, China The Surprising Effects of Nanoconfinement on Biosensing, Polymer Dynamics, and Bacterial Cytoskeletal Oscillators	IL20
17:05-17:20	Yanyi Huang Peking University, China Quantitatively Study the Dynamic Behavior of Cells through Microfluidic Devices at Single Cell Resolution	O18
17:20-17:35	Ying-Jie Lo Institute of Applied Mechanics, National Taiwan University, Taiwan, China A Microfluidic Device for Massive Cell Lysis Using Electricity	O19
17:35-17:50	Tingjiao Liu Dalian Medical University, China Bioengineered Blood Vessel Model for Studying the Transendothelial Invasion of Tumor Aggregates in Realtime	O20
17:50-18:05	Qiong Wei Peking University, China CD4 ⁺ T Cell Counting by Impedance Measurement on a Chip with Fluidic Electrodes	O21
18:10-20:00	<i>Banquet</i>	Dalian’s Night Theme Restaurant

Session 11

Chair: Zachary Gagnon / Qun Fang

Hall3: Biotechnology Building

15:00-15:20	Qun Fang Zhejiang university, China Automated and High-throughput Droplet-based Microfluidic Analysis and Screening Systems	IL21
15:20-15:40	Jurgen Kosel KAUST, Kingdom of Saudi Arabia A Magneto-mechanical Device to Concentrate, Immobilize and Detect Biological Targets	IL22
15:40-15:55	Zachary Gagnon Johns Hopkins University, USA Electrohydrodynamics at Aqueous Interfaces: Regulating Diffusion in Microfluidic Devices	O22
15:55-16:10	Christopher Tostado Tsinghua University, China A New Method for the Continuous Online Measurement of Dynamic Interfacial Tension in a Co-flow Junction Microfluidic Device	O23
16:10-16:25	Cheng Wang University of Illinois at Urbana-Champaign, USA Frequency Dependent Microbubble Streaming Flows	O24
16:25-16:45	<i>Coffee Break</i>	

Session 12

Chair: Charles Yang / Bifeng Liu

Hall3: Biotechnology Building

16:45-17:05	Charles Yang Nanyang Technological University, Singapore Electrokinetic for Manipulations of Solutes and Particles/Cells in Microfluidics	IL23
17:05-17:20	Jie Xu Washington State University, USA Ultrasonic Manipulation in Free-Surface Microfluidics	O25
17:20-17:35	Bifeng Liu Huazhong University of Science and Technology, China A Rapid Micromixer for High Viscous Fluids to Investigate DNA Folding Kinetics in Molecular Crowding Condition	O26
17:35-17:50	Zheng Xu Dalian University of Technology, China A Bionic Device Based on the Polymer Microfluidic chip for Electric Conductivity Detection	O27
17:50-18:05	Ke Du Stevens Institute of Technology, USA Nanopatterning of PDMS Substrates via Novel Lift-off Process of Free-standing Photoresist Film	O28
18:10-20:00	<i>Banquet</i> Dalian's Night Theme Restaurant	

26 May 2012, Saturday

Session 13

Chair: Leslie Y. Yeo

Hall1: Energy Building

8:30-9:10	Aaron Wheeler University of Toronto, Canada Digital Microfluidics for Cell Culture and Analysis	IL24
9:10-9:40	Je-kyun Park KAIST, Korea Label-free Microfluidic Cell Separation	IL25

9:40-10:10	Rong Fan Yale University, USA Single Cell Microfluidics for Systems Oncology	IL26
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10:10-10:40 *Coffee Break*

Session 14

Chair: Zhanhua Li / Rong Fan

Hall2: Chemical Engineering Building

10:40-11:00	Hongbo Sun Jilin University, China Optical Detection and Catalysis in Microfluidic Systems	IL27
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11:00-11:20	Haiping Fang Shanghai Institute of Applied Physics, China Hydrophobic Behavior of the Solid Surfaces with Charge Dipoles at Room Temperatures	IL28
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11:20-11:35	Jitkai Chin University of Nottingham Malaysia, Malaysia Soft Micro-molding of Modified Gel Casting Suspension – A New Fabrication Route for Zirconia MEMS-based Satellite Propulsion	O29
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11:35-11:50	Zhanhua Li Institute of Mechanics, China Micro-vorticity in Micro/Nano Channel Flows	O30
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11:50-12:05	Lin Wang Peking University, China Surface Modification of Polymer Nanopores with Plasma Enhanced Atomic layer Deposition Method	O31
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12:05-13:30 *Lunch*

Session 15

Chair: Che-Hsin Lin / Li Qi

Hall3: Biotechnology Building

10:40-11:00	Hanfa Zou Dalian Institute of Chemical Physics, China Size-selective Extraction of Biological Samples with Mesoporous Adsorbents for Protein and Peptides Analysis	IL29
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11:00-11:20	Yonggang Zhu CSIRO, Australia Fiber-based Bioluminescence-resonance Energy Transfer (BRET) System on a Microfluidic Chip	IL30
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11:20-11:35	Che-Hsin Lin National Sun Yat-sen University, Taiwan, China Novel Thread-Based Microfluidic System for Capillary Electrophoresis Electrochemical Detection Applications	O32
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11:35-11:50	Li Qi Institute of Chemistry, China Study on Chiral Separation of Amino Acids and Enzymatic Kinetics by Microchip Electrophoresis	O33
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11:50-12:05	Yunshan Wang University of Notre Dame, USA Multiplexed Nucleic Acid Sensing by Target-induced Nanoparticle Aggregation with Optical Fiber Cone Arrays	O34
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12:05-13:30 *Lunch*

Session 16

Chair: Hongbo Sun / Levent Yobas

Hall2: Chemical Engineering Building

13:30-13:50	Levent Yobas HKUST, Hongkong, China Monolithic Integration of Cylindrical Glass Microcapillaries and Their Biomicrofluidic Applications	IL31
13:50-14:05	Ling Zhu Anhui Institute of Optics & Fine Mechanics, China An Integrated Microfluidic Real-Time PCR System for Rapid Identification of H5 Avian Influenza Virus	O35
14:05-14:20	Hui Wen Dalian Institute of Chemical Physics, China Probing the Anti-aging Role of Polydatin in <i>C.elegans</i> on Microfluidic Device	O36
14:20-14:35	Guolin Xu Institute of Bioengineering and Nanotechnology, Singapore Pre-loaded Low Temperature Paraffin Wax as Sealing for Realtime-PCR Detection in Lab-on-a-Chip System	O37
14:35-14:50	Juyue Chen Peking University, China Fabrication of Microporous PDMS and PDMS Microspheres with Emulsion of PDMS/Water	O38
15:20-15:40	Closing Ceremony	Hall1: Energy Building

Session 17

Chair: Guoqing Hu/Jiang Zhao

Hall3: Biotechnology Building

13:30-13:50	Jiang Zhao Institute of Chemistry, China Hofmeister Effect on Interfacial Dynamics of Single Molecules	IL32
13:50-14:10	Yingxin Qi Shanghai Jiaotong University, China The Role of Mechanical Cyclic Strain on Dysfunctions of Vascular Cells during Hypertension	IL33
14:10-14:25	Guoqing Hu Institute of Mechanics, China Interaction between Nanoparticles and Pulmonary Surfactant: A Molecular Dynamics View	O39
14:25-14:40	Yongbo Deng Institute of Optics, Fine Mechanics and Physics, China A Flexible Layout Design Method for Novel Passive Micromixers	O40
14:40-14:55	Taotao Fu Tianjin University, China Droplet Formation and Breakup Dynamics in Microfluidic Flow-focusing Devices	O41
15:20-15:40	Closing Ceremony	Hall1: Energy Building