

AMN 2012 Lecture Program

Registration

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| 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

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| 8:30 8:50 | Opening Ceremony <i>Chair: Jianhua Qin</i> | Hall1: Energy Building |
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Session 1

Chair: Hsueh Chia Chang Hall1: Energy Building

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

Session 2

Chair: Yoshinobu Baba Hall1: Energy Building

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| 10:50 11:20 | Hsueh Chia Chang University of Notre Dame, USA IL4 A New Nanoporous Membrane Molecular Sensing Platform |
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| 11:20 11:50 | James L. Lee The Ohio State University, USA IL5 Nanofluidics Electroporation for Gene Delivery |
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12:00 13:00 *Lunch*

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| 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

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| 15:00 15:20 | Dong Pyo Kim Pohang University of Science and Technology, Korea IL6 Lab on a Chip Systems for Microchemical Synthetic Applications |
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| 15:20 15:40 | Weijia Wen HKUST, Hongkong, China IL7 Logic Control of Microfluidic Droplets |
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| 15:40 15:55 | Kristelle Bougot Robin HKUST, Hongkong, China | 01 |
| | Resonant Grating Biochips Imaging for the Detection of Single Point Mutation in the Framework of Resistance to Antibiotics | |
| 15:55 16:10 | | |

Session 6**Chair: Teck Neng Wong / Jinyi Wang** Hall3: Biotechnology Building

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| 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

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| 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

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| 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

Session 9

Chair: Jinming Lin / Zhike He Hall2: Chemical Engineering Building

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| 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 *Coffee Break*

Session 10

Chair: Chia Fu Chou / Yanyi Huang Hall2: Chemical Engineering Building

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| 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 *Banquet* Dalian's Night Theme Restaurant

Session 11*Chair: Zachary Gagnon / Qun Fang* Hall3: Biotechnology Building

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| 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

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| 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

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| 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 |

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| 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

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| 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 | O30 |
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Session 16**Chair: Hongbo Sun / Levent Yobas** Hall2: Chemical Engineering Building

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

15:20 15:40 Closing Ceremony Hall1: Energy Building**Session 17****Chair: Guoqing Hu/Jiang Zhao** Hall3: Biotechnology Building

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

15:20 15:40 Closing Ceremony Hall1: Energy Building