

Program

Time: April 25-28, 2014

Venue: Dalian International Convention Center, Dalian, China

Registration

Time: 08:30-18:00, April 24-25, 2014; Place: Lobby, 1st Floor, Dalian International Convention Center(DICC)

Opening Ceremony

Opening Ceremony

Time: 09:00-10:30, April 25, 2014 (Friday); Place: Multi-functional Conference Center, Bio Valley

Nobel Laureates Forum I

Time: 10:30-12:05, April 25, 2014 (Friday); Place: Multi-functional Conference Center, Bio Valley

Moderator *Dr. Wang Min*, Professor, Yale University School of Medicine, USA; The First Affiliated Hospital, Sun Yat-sen University, China

10:30-10:35

Chair's Introduction

10:35-11:05

Title: Synapse Formation and Synaptic Transmission – From Proteins to Pathogenesis

Dr. Thomas C. Südhof, Professor, Stanford University, USA

Nobel Prize Laureate in Physiology or Medicine, 2013

11:05-11:35

Title: The Personalized Medicine Revolution: Are We Going to Cure All Diseases and at What Price?

Dr. Aaron Ciechanover, Professor, Technion-Israel Institute of Technology, Israel

Nobel Prize Laureate in Chemistry, 2004

11:35-12:05

Title: DNA-induced Emission of Electromagnetic Signals in Human Diseases

Dr. Luc Montagnier, President, CEO & Co-founder of Nanectis Biotechnologies SA, France

Nobel Prize Laureate in Physiology or Medicine, 2008

Nobel Laureates Forum II

Time: 09:00-11:35, April 26, 2014 (Saturday); Place: Room 304A, 3rd Floor, DICC

Moderator *Dr. Lei Guo*, Professor, Jilin University; Chief Scientist, SCL Biotechnology CO., LTD, China

09:00-09:05

Chair's Introduction

09:05-09:35

Title: Controlling Single Atoms and Photons and Exploring the Boundary between the Quantum and the Classical Worlds

Dr. Serge Haroche, Professor, École Normale Supérieure, France

Nobel Prize Laureate in Physics, 2012

09:35-10:05

Title: The Discovery of Quasi-periodic Materials

Dr. Dan Shechtman, Professor, Technion-Israel Institute of Technology, Israel

Nobel Prize Laureate in Chemistry, 2011

10:05-10:35

Title: Membrane Proteins: Importance, Functions, Mechanisms

Dr. Hartmut Michel, Professor and Director, Max Planck Institute of Biophysics, Germany

Nobel Prize Laureate in Chemistry, 1988

10:35-11:05

Title: Mapping the Universe and Its History

Dr. George F. Smoot, Professor, University of California, Berkeley, USA

Nobel Prize Laureate in Physics, 2006

11:05-11:35

Title: Umbilical Cord Mesenchymal Stem Cells in Clinic Application

Dr. Lei Guo, Professor, Jilin University; Chief Scientist, SCL Biotechnology CO., LTD, China

Keynote Forum of AnalytiX & Pepcon

Time: 14:00-16:55, April 25, 2014 (Friday); Place: Multi-functional Conference Center-3, Bio Valley

Moderator *Dr. Matthew He*, Director, Full Professor, Nova Southeastern University, USA

14:00-14:10 Moderator's Introduction

14:10-14:35 *Title: An Easy Synthesis of Organic Compounds by Cross-coupling Reaction of Organoboranes Useful for Production of Pharmaceuticals*

Dr. Akira Suzuki, Professor Emeritus, Hokkaido University, Japan
Nobel Prize Laureate in Chemistry, 2010

14:35-15:00 *Title: Spectroscopy and Microscopy with Laser Frequency Combs*

Dr. Theodor W. Hänsch, Director, Max-Planck-Institut für Quantenoptik, Germany
Nobel Prize laureate in Physics 2005

15:00-15:25 *Title: Alteration of Immunogenic Properties by Structural Modification of Protein Epitopes Using Peptide Conjugates*

Dr. Ferenc Hudecz, Member of the Hungarian Academy of Sciences; Professor, Eotvos Lorand University, Hungary

15:25-15:40 Coffee Break

15:40-16:05 *Title: Size of Human Proteome: Width and Depth*

Dr. Alexander Archakov, Full member of the Russian Academy of Medical Sciences (RAMS); Professor, Institute of Biomedical Chemistry of Russian Academy of Medical Sciences, Russia

16:05-16:30 *Title: Applications of Spin Labeling to Protein-Protein: A Sensitive Diagnostic Technique*

Dr. Lawrence J Berliner, Fellow of the Prestigious American Academy of Arts and Sciences; Professor, Chair, University of Denver, USA

16:30-16:55 *Title: Challenges and Opportunities of Protein-based Vaccine Process Development and Manufacturing*

Dr. Yanping Yang, Director, Sanofi Pasteur Canada Limited, Canada

Frontier 1: Mass Spectrometry**Gateway 101: MS Frontier Technologies and Hyphenated Tandem MS**

Time: 08:30-12:10, April 26, 2014 (Saturday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Mats Larsson*, Professor, Department of Physics, Stockholm University, Sweden

08:30-08:35 Chair Introduction

08:35-09:00 *Title: Challenges in Modern Organic MS Analysis*

Dr. Xiangyang Zhang, Group Leader, Institute of Organic Chemistry, ETH Zurich, Switzerland

09:00-09:25 *Title: Physics with Stored and Cooled Molecular Ions in the Desiree*

Dr. Mats Larsson, Professor, Department of Physics, Stockholm University, Sweden

09:25-09:50 *Title: Quantitation of Metformin in Human Plasma Using Ion Pair Chromatography-Tandem Mass Spectrometry*

Dr. Tian-Sheng Lu, Associate Director, Bioanalytical Laboratories, Medpace Inc., USA

09:50-10:15 *Title: Integrative Systems Pathology: Mass Spectrometry Driven Toponome Analysis*

Dr. Hans-Jürgen Thiesen, Professor and Director of the Institute of Immunology, University of Rostock, Germany

10:15-10:30 Coffee Break

- 10:30-10:55 *Title: An Investigation of Heat Shock Protein 27 and P-Glycoprotein Mediated Multi-drug Resistance Using Liquid Chromatography-Tandem Mass Spectrometry-based Targeted Proteomics*
Dr. Yun Chen, Professor, Nanjing Medical University, China
- 10:55-11:20 *Title: Development of a Mathematical Model for Online Microextraction by Packed Sorbent under Equilibrium Conditions. Application for Polycyclic Aromatic Hydrocarbon Determination in Water by Gas Chromatography–Mass Spectrometry*
Dr. Maurizio Quinto, Associate Professor in Analytical Chemistry, University of Foggia, Italy
- 11:20-11:45 *Title: Expanding Homolog-targeted liquid Chromatography-Mass Spectrometry Profiling toward Class-specific Unknown Screening*
Dr. Bin Guo, Associate Professor, Hunan Normal University, China
- 11:45-12:10 *Title: Comprehensive Analysis of Extractables and Leachables of Medical Devices and Pharmaceutical Packages and Containers*
Ms. Kate Comstock, Marketing Specialist, Thermo Fisher Scientific, USA

Gateway 102: Imaging MS and Ionization Techniques for IMS and MS

Time: 13:30-15:40, April 26, 2014 (Saturday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Yonnie Wu*, Director of Mass Spec Center, Department of Chemistry and Biochemistry, Auburn University, USA

13:30-13:35 **Chair Introduction**

- 13:35-14:00 *Title: Towards a 3D Mass Spectrometry*
Dr. Yonnie Wu, Director of Mass Spec Center, Department of Chemistry and Biochemistry, Auburn University, USA
- 14:00-14:25 *Title: Dielectric Barrier Electrospray: Innovative Soft Ionization Technique*
Dr. Joachim Franzke, Head of the Work Group "Miniaturisation", Leibniz-Institut für Analytische Wissenschaften–ISAS–e.V., Germany
- 14:25-14:50 *Title: Atom Probe Tomography-3D Imaging of Materials at the Atomic Scale*
Dr. Bernard Deconihout, Professor, Rouen University, France
- 14:50-15:15 *Title: Development of Miniature Mass Spectrometer and Ion Mobility Spectrometer*
Dr. Jing Wang, Associate Professor, University of South Florida, USA
- 15:15-15:40 *Title: Pulsed Desorption Electrospray Ionization Mass Spectrometry Imaging*
Dr. Richard H. Perry, Assistant Professor, Department of Chemistry, University of Illinois, USA

Gateway 103: Improved MALDI-TOF MS, ICP-MS and other Novel MS

Time: 08:30 -11:45, April 27, 2014 (Sunday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Yanbei Zhu*, Senior Scientist, Environmental Standard Section, National Institute of Advanced Industrial Science and Technology (AIST), Japan

08:30-08:35 **Chair Introduction**

- 08:35-09:00 *Title: Novel Mass Spectrometer Development and Biomarker Discovery*
Dr. Chung Hsuan (Winston) Chen, Distinguished Research Fellow and Director, Mass Spectrometry Division, Korea Basic Science Institute, South Korea
- 09:00-09:25 *Title: Correlated Ion and Neutral Time of Flight Mass Spectrometry (COINTOF MS)*
Dr. Hassan Abdoul-Carime, Associated Professor, Université de Lyon 1, France
- 09:25-09:50 *Title: Application of MALDI-MS for Forensics; Mass Measurement of Low-molecular-weight Drugs Using Zeolite Matrix*
Dr. Tatsuya Fujino, Associate Professor, Tokyo Metropolitan University, Japan
- 09:50-10:15 *Title: Characterization of Bovine Brain Derived Peptides Which Accelerate Structural Conversions of the Recombinant Bovine Prion Protein (rbPrP) by MALDI-TOF-MS/MS*
Dr. Kiyoshi Nokihara, CEO and CSO, HiPep Laboratories, Japan

- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: ICP-MS with Various Sample Introduction/Preparation Techniques*
Dr. Yanbei Zhu, Senior Scientist, Environmental Standard Section, National Institute of Advanced Industrial Science and Technology (AIST), Japan
- 10:55-11:20 *Title: ICP-MS For Source Identification of Radionuclides Released from the Fukushima Nuclear Accident*
Dr. Jian Zheng, Senior Researcher, National Institute of Radiological Sciences, Japan
- 11:20-11:45 *Title: Confirmation of Fructans Biosynthesized in Vitro from [1-13C]Glucose in Asparagus Tissues Using MALDI-TOF MS and ESI-MS*
Dr. Takashi Suzuki, Associate Professor, Hokkaido University, Japan

Gateway 104: MS Applications in Drug Discovery and Biology (Single Molecule, Single Cell and Clinical)

Time: 13:30-16:45, April 27, 2014 (Sunday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Xiaowei Fu*, Assistant Professor, University of Southern California, Director, Biochemical Genetics & Special Chemistry, Children's Hospital Los Angeles, USA

13:30-13:35 **Chair Introduction**

- 13:35-14:00 *Title: State-of-the-art Technologies in Quality Control of Modern Botanical Medicine -LC-MS/MS for Accurate Quantitative Analysis of Multiple Bioactive Compounds in a Botanical Drug*
Dr. Yan Ling Zhang, Analytical Group Leader, InSite Vision, Inc. USA
- 14:00-14:25 *Title: Application of Mass Defect Technology in Quality Evaluation of Traditional Chinese Medicines*
Dr. Zhe-ming Gu, VP, XenoBiotic Laboratories, Inc., USA
- 14:25-14:50 *Title: The Light in Mass Spectrometry: Using Spectroscopic Techniques to Improve the Analytics*
Dr. Jürgen Grotemeyer, Chair for Physical Chemistry, Institute for Physical Chemistry, Christian-Albrechts-University at Kiel, Germany
- 14:50-15:15 *Title: High Throughput Physicochemical Property Determinations and QC Analyses in Drug Discovery*
Dr. Baiwei Lin, Scientist, Analytical/purification, Discovery Chemistry, Genentech Inc. USA

15:15-15:30 **Coffee Break**

- 15:30-15:55 *Title: Implementing Assays using Liquid Chromatography Mass Spectrometry (LC/MS/MS) in Clinical Laboratory, Two Examples*
Dr. Xiaowei Fu, Assistant Professor, University of Southern California; Director of Biochemical Genetics & Special Chemistry, Children's Hospital Los Angeles, USA
- 15:55-16:20 *Title: Determination of O6-Methylguanine and N7-alkylguanine in Cancer Patients' Blood during Administration of Cyclophosphamide by Ultra High Performance Liquid Chromatography-Tandem Mass Spectrometry*
Dr. Yahdiana Harahap, Professor, University of Indonesia, Indonesia
- 16:20-16:45 *Title: Antiviral Activity of Proanthocyanidin and Flavonoid Compounds*
Dr. Abdelaaty Abdelaziz Shahat, Professor, King Saud University, Saudi Arabia

Gateway 105: MS Applications in Proteomics, Metabonomics and Other Omics

Time: 08:30-09:50, April 28, 2014 (Monday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Song Yang*, Principal Investigator, University of Washington, USA

08:30-08:35 **Chair Introduction**

- 08:35-09:00 *Title: New Opportunities for Biocatalysis: Metabolomic Insights into Microbial Methane Conversion*
Dr. Song Yang, Principal Investigator, University of Washington, USA

09:00-09:25 *Title: Matrix-free Detection of Protein Molecules by Argon-cluster Secondary Ion Mass Spectrometry*

Dr. Kozo Mochiji, Professor, University of Hyogo, Japan

09:25-09:50 *Title: Conserved Protein-protein Complexes across Metazoan Species*

Dr. Cuihong Wan, University of Toronto, Canada

Gateway 106: MS Applications in Food and Environment

Time: 10:25-12:10, April 28, 2014 (Monday); Place: Room 615, 6th Floor, DICC

Chair *Dr. John Zhou*, Professor of Environmental Engineering, London South Bank University, UK

10:25-10:30 **Chair Introduction**

10:30-10:55 *Title: High Throughput No Sample Clean Up by using Micro Flow Liquid Chromatography (MFLC) Coupling with High Resolution/Accurate Mass (HR/AM) in Food Safety Analysis*

Dr. James Chang, Manager, Thermo Scientific, USA

10:55-11:20 *Title: Analysis of Antibiotics in Environmental and Food Samples by Mass Spectrometry: Comparison of Different Extraction Methods, Clean-up Approaches and Chromatography Separations*

Dr. John Zhou, Professor of Environmental Engineering, London South Bank University, UK

11:20-11:45 *Title: Functional Component in Brewer's Yeast Biomass as Determined by LC-MS-MS*

Dr. Tsai Hua Kao, Associate Professor, Fu Jen University, Taiwan

11:45-12:10 *Title: Fast Screening of Toxic Substances in Paper Based Food Packaging Materials Using Desorption Corona Beam Ionization Source*

Dr. Wenjian Sun, Managing Director, Shimadzu Research Laboratory (Shanghai) Co., Ltd., China

Frontier 2: Spectroscopy and Microscopy

Gateway 201: Terahertz Technology Based Spectroscopy (Part I)

Time: 08:30-12:10, April 26, 2014 (Saturday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Yaochun Shen*, Senior Lecturer, University of Liverpool, UK

08:30-08:35 **Chair Introduction**

08:35-09:00 *Title: Chemometrics as a Tool to Explore Hydration Shell of Molecules with Terahertz Spectroscopy in a Microfluidic Device*

Dr. Ludovic Duponchel, Professor, University of Lille, France

09:00-09:25 *Title: Terahertz Applications in Pharmaceutical Industry and Science*

Dr. Yaochun Shen, Senior Lecturer, University of Liverpool, UK

09:25-09:50 *Title: Ultrafast THz Technology for Spectroscopy and Imaging*

Dr. Peter Uhd Jepsen, Professor, Technical University of Denmark, Denmark

09:50-10:15 *Title: Terahertz Time Domain Spectroscopy and Its Applications to Two-dimensional Materials*

Dr. Keshav M Dani, Head of Femtosecond Spectroscopy Unit, Okinawa Institute of Science & Technology, Graduate University, USA

10:15-10:30 **Coffee Break**

10:30-10:55 *Title: The Interaction between Biomolecule and Ligand Investigated by Terahertz Time-domain Spectroscopy*

Dr. Hongwei Zhao, Associate Professor, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, China

10:55-11:20 *Title: High-peak-power, Single-longitudinal-mode, Continuously Tunable Terahertz-wave Generation Pumped by a Microchip Nd: YAG Laser*

Dr. Hayashi Shin'ichiro, Researcher, RIKEN, Japan

- 11:20-11:45 *Title: Study of Dielectric Relaxation of Water Based Ionic Solutions Using Terahertz Time-domain Spectroscopy*
Dr. Wenchao Qiao, Lecturer, Shandong University, China
- 11:45-12:10 *Title: Spin Dynamics in Magnetic Materials Observed in the Terahertz Region*
Dr. T. Moriyasu, Project Researcher, Kobe University, Japan

Gateway 201: Terahertz Technology Based Spectroscopy (Part II)

Time: 15:50-17:35, April 26, 2014, (Saturday); Place: Room 615, 6th Floor, DICC

Chair *Dr. Suizu Koji*, Associate Professor, Chiba Institute of Technology, Japan

15:50-15:55 **Chair Introduction**

- 15:55-16:20 *Title: Microwave Kinetic Inductance Detector for an Imaging Fourier Transform Terahertz Spectrometer*
Dr. Seiichiro Ariyoshi, Assistant Professor, Nagoya Institute of Technology, Japan
- 16:20-16:45 *Title: THz-wave Spectroscopy via Pump and Signal Wave Detection Interacted with Evanescent THz Waves*
Dr. Suizu Koji, Associate Professor, Chiba Institute of Technology, Japan
- 16:45-17:10 *Title: THz Light: Light Our Life*
Dr. Feng Qi, Foreign Postdoctoral Researcher, RIKEN Advanced Science Institute, Japan
- 17:10-17:35 *Title: Development of Broadband Stable Terahertz Spectroscopy and its Application to Extraction of Material Parameters*
Dr. Takanori Okada, Terahertz Technology Expert, Advantest (Japan) Co., Ltd, Japan

Gateway 202: Molecular Spectroscopy, Atomic Spectroscopy and Laser-induced Breakdown Spectroscopy

Time: 13:30-17:10, April 26, 2014 (Saturday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Manuel Bautista*, Associate Professor, Western Michigan University, USA

13:30-13:35 **Chair Introduction**

- 13:35-13:55 *Title: Trapping HeNe* Excimers on vibrational States Using Short Laser Pulses*
Dr. Cristian Bahrim, Associate Professor, Lamar University, USA
- 13:55-14:15 *Title: Molecular Conformation, Normal Modes of Vibration of Di and Trihalogenotrimethylbenzenes: DFT Calculations, Raman, Infrared and INS Spectra, Methyl Tunneling*
Dr. Jean Meinel, Professor, University of Rennes 1, France
- 14:15-14:35 *Title: AtomPy: An Open Atomic-data Curation Environment for Astrophysics, Plasmas, and Industrial Applications*
Dr. Manuel Bautista, Associate Professor, Western Michigan University, USA
- 14:35-14:55 *Title: Parametrization of the Atomic Structure for Transition Metal and Lanthanide Ions: Critical Review and Comparison of the Approaches*
Dr. Yau-yuen Yeung, Professor and Associate Head, Department of Science and Environmental Studies, Hong Kong Institute of Education, Hong Kong, China
- 14:55-15:15 *Title: Development of Fluorescent Molecular Probes for the Detection of Proteins and Their Application to High-throughput Protein Analysis*
Dr. Yoshio Suzuki, Principal Researcher, National Institute of Advanced Industrial Science and Technology (AIST), Japan
- 15:15-15:30 **Coffee Break**
- 15:30-15:50 *Title: Online Compositional Analysis of Molten Steel by Laser-Induced Breakdown Spectroscopy*
Dr. Lanxiang Sun, Associate Researcher, Shenyang Institute of Automation, Chinese Academy of Sciences, China

- 15:50-16:10 *Title: Effect of Mid-infrared Free-Electron Laser Irradiation on Refolding of Amyloid-Like Fibrils of Lysozyme into Native Form*
Dr. Takayasu Kawasaki, Project Researcher, Tokyo University of Science, Japan
- 16:10-16:30 *Title: XRF Approach to Non-destructive Characterization of Gilded and Enamelled Silver of Cultural Interest: The Case Study of Some Medieval Religious Objects from Central Italy*
Ms. Claudia Polese, Consenation Scientist, INFN Frascati National Laboratories, Italy
- 16:30-16:50 *Title: Validation of Quantum Dot-coupled X-ray Fluorescence Spectroscopy for Ischemia-modified Albumin Detection*
Dr. Yang Luo, Chairman, Department of Transfusion Medicine, Southwest Hospital, The Third Military Medical University, China
- 16:50-17:10 *Title: New Type of the Two-dimensional Spectrum-folded Spectrometer with High Resolution and High Speed*
Dr. Liang-Yao Chen, Professor, Department of Optical Science and Engineering, Fudan University, China

Gateway 203: Advanced Electron Microscopy, Spectromicroscopy and Scanning Tunneling Microscopy(Part I)

Time: 08:30-12:10, April 27, 2014 (Sunday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Zhongfu Zhou*, Professor, Aberystwyth University, UK

08:30-08:35 Chair Introduction

08:35-09:00 *Title: In Situ Studies of Surface Reactions*

Dr. Hans-Peter Steinruck, Professor, University Erlangen-Nuremberg, Germany

09:00-09:25 *Title: X-Ray Microanalysis and Imaging at High Spatial Resolution Using a State of the Art FE-SEM*

Dr. Raynald Gauvin, Professor, McGill University, Canada

09:25-09:50 *Title: Seeing Small: Enabling New Discoveries in Energy Materials Through Advanced Transmission Electron Microscopy*

Dr. Paulo Ferreira, Associate Professor, The University of Texas, USA

09:50-10:15 *Title: A Combination of Electron Microscopy Tools Applied to Martensitic Microstructures in Steels*
Dr. Peter Hedstrom, Department of Materials Science and Engineering, KTH Royal Institute of Technology, Sweden

10:15-10:30 Coffee Break

10:30-10:55 *Title: Low Energy Scanning Transmission Electron Microscopy and Its Application to Examination of Graphene*

Dr. Ludek Frank, Senior Research Scientist, Institute of Scientific Instruments ASCR, Czech Republic

10:55-11:20 *Title: Viewing Extremely Small Defects under TEM*

Dr. Zhongfu Zhou, Professor, Aberystwyth University, UK

11:20-11:45 *Title: Critical Role of Doping Chemistry on Fundamental Functionalities of Oxide Semiconductors – Theory and Spectroscopy*

Dr. Guosheng Shao, Professor, University of Bolton, UK

11:45-12:10 *Title: Theoretical Analysis of Photoinduced Electron Transfer in some Flavoproteins: Ultrafast Fluorescence Dynamics and Molecular Dynamics Simulation*

Dr. Fumio Tanaka, Professor, Chulalongkorn University, Thailand

Gateway 203: Advanced Electron Microscopy, Spectromicroscopy and Scanning Tunneling Microscopy (Part II)

Time: 13:30-17:10, April 27, 2014 (Sunday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Yucheng Zhang*, Research Scientist, Swiss Federal Laboratories for Materials Science and Technology, Switzerland

13:30-13:35 Chair Introduction

13:35-14:00 *Title: Exploring the Interface-induced Phenomenon in Metal Nitride Thin Film Using Advanced Transmission Electron Microscopy*

Dr. Zaoli Zhang, Senior Scientist/Group Leader, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Austria

14:00-14:25 *Title: TEM Characterization of ALD-grown TiO₂ on CNT*

Dr. Yucheng Zhang, Research Scientist, Swiss Federal Laboratories for Materials Science and Technology, Switzerland

14:25-14:50 *Title: Optimum TEM Characterization of Multiphase Porous Energy Materials: The Merit of Epoxy*
Dr. Wei Zhang, Researcher, Technical University of Denmark, Denmark

14:50-15:15 *Title: Morphology Observation of Latex Particles with Scanning Transmission Electron Microscopy by a Hydroxyethyl Cellulose Embedding Combined with RuO₄ Staining Method*
Mr. Xiang Geng, Senior Chemist, Dow Chem (China) Invest Co. Ltd., China

15:15-15:30 Coffee Break

15:30-15:55 *Title: 3D FIB-SEM for Brain Mapping: From Nanometer to Sub-millimeter*

Dr. C. Shan Xu, Senior Scientist, Janelia Farm Research Campus, USA

15:55-16:20 *Title: Development of Highly Conductive Nanodomains in Poly (3-hexythiophene) Films Studied by Conductive Atomic Force Microscopy*

Dr. Hiroaki Bente, Assistant Professor, Kyoto University, Japan

16:20-16:45 *Title: Advanced Measurement Technique for Reproducible Indentation Fracture (IF) Resistance of Ceramic Materials*

Dr. Hiroyuki Miyazaki, Senior Researcher, National Institute of Advanced Industrial Science and Technology (AIST), Japan

16:45-17:10 *Title: Stabilities, Structures, and Scanning Tunneling Microscopy Images of Lattice Defects in Atomically Thin Films*

Dr. Yoshitaka Fujimoto, Assistant Professor, Tokyo Institute of Technology, Japan

Gateway 203: Advanced Electron Microscopy, Spectromicroscopy and Scanning Tunneling Microscopy (Part III)

Time: 08:30-09:50, April 28, 2014 (Monday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Toshikazu Ekino*, Professor, Hiroshima University, Japan

08:30-08:35 Chair Introduction

08:35-09:00 *Title: STM/STS of the Layered Iron-chalcogenide and Nitro-chloride Superconductors*

Dr. Toshikazu Ekino, Professor, Hiroshima University, Japan

09:00-09:25 *Title: Microscopy and Microanalysis of Hematological Parameters in Common Carp, *Cyprinus carpio*, Inhabiting a Polluted Lake in North East India*

Dr. Bashida Massar, Assistant Professor, Department of Zoology, St. Anthony's College Shillong, India

09:25-09:50 *Title: Image Processing for Phase Imperfections in Electron Holography*

Dr. Wei Li, Graduate School of Engineering Nagoya University, Japan

Gateway 204: Advanced Functional Near Infrared Spectroscopy, Raman Spectroscopy, SERS and Instrumentation (Part I)

Time: 08:30-11:45, April 27, 2014 (Sunday); Place: Room 617, 6th Floor, DICC

Chair *Dr. Chenxu Yu, Assistant Professor, Iowa State University, USA*

08:30-08:35 **Chair Introduction**

08:35-09:00 *Title: Near-Infrared Dyes in Bioanalytical Chemistry Applications*

Dr. Gabor Patonay, Professor, Georgia State University, USA

09:00-09:25 *Title: Utilisation of NIR Spectroscopy in the Improved Breeding of Trees for Commercial Planted Forests*

Dr. Albert Roger Meder, Principal Research Scientist and Research Group Leader, CSIRO Plant Industry, Australia

09:25-09:50 *Title: Near Infrared Spectroscopy and Application to Food Safety and/or Fish Health*

Dr. Anna Cavinato, Professor of Chemistry, Eastern Oregon University, USA

09:50-10:15 *Title: Exploring Raman Spectroscopy for the Evaluation of Glaucomatous Retinal Changes*

Dr. Chenxu Yu, Assistant Professor, Iowa State University, USA

10:15-10:30 **Coffee Break**

10:30-10:55 *Title: Near Infrared Spectroscopy for Validating Numerical Model for Membrane Preparation*

Dr. Denis Bouyer, Professor in Chemical Engineering at University Montpellier 2, European Membrane Institute (IEM), France

10:55-11:20 *Title: Carrier Recombination Dynamics of III-nitrides Based on Infrared Spectroscopy*

Dr. Yoshihiro Ishitani, Professor, Chiba University, Japan

11:20-11:45 *Title: Structure of a Metal Mediated Base Pair Studied by 2-color IR Dissociation Spectroscopy*

Dr. Yevgeniy Nosenko, Research Associate, Technical University Kaiserslautern, Germany

Gateway 204: Advanced Functional Near Infrared Spectroscopy, Raman Spectroscopy, SERS and Instrumentation (Part II)

Time: 13:30-15:15, April 27, 2014 (Sunday); Place: Room 619, 6th Floor, DICC

Chair *Dr. Chenxu Yu, Assistant Professor, Iowa State University, USA*

13:30-13:35 **Chair Introduction**

13:35-14:00 *Title: Dual-wavelength Monolithic Y-branch Distributed Bragg Reflection Diode Laser at 671 nm for Shifted Excitation Raman Difference Spectroscopy*

Dr. Martin Maiwald, Scientist, Ferdinand-Braun-Institut, Germany

14:00-14:25 *Title: A Non-destructive Method for Doping Profiles Characterization by Micro-Raman Spectroscopy*

Dr. Andrea Sanson, Aggregate Professor, University of Padua, Italy

14:25-14:50 *Title: Computational Method-Useful Tool for Characterization of Experimentally Measured IR Spectrum*

Dr. Eva Scholtzova, Institute of Inorganic Chemistry of Slovak Academy of Sciences, Slovakia

14:50-15:15 *Title: Identification of Electron Beam-Irradiated Indian Spices Using Luminescence Techniques*

Dr. Bhaskar Sanyal, Kyungpook National University Daegu, South Korea

Gateway 205: Electron Spin Resonance (ESR) Spectroscopy

Time: 15:25-16:45, April 27, 2014 (Sunday); Place: Room 619, 6th Floor, DICC

Chair *Dr. Lawrence Jules Berliner, Professor, University of Denver, USA*

15:25-15:30 **Chair Introduction**

- 15:30-15:55 *Title: New Approaches to Analytical Sciences Using Electron Spin Resonance (ESR) Spectroscopy*
Dr. Lawrence Jules Berliner, Professor, University of Denver, USA
- 15:55-16:20 *Title: Electron Transport Properties Measured Using ESR Spectrometer*
Dr. Aneta Drabinska, University of Warsaw, Poland
- 16:20-16:45 *Title: Advanced Electron Paramagnetic Resonance Spectroscopy to Identify Irradiated Sea Vegetables*
Mr. Jae-Jun Ahn, School of Food Science and Biotechnology, Kyungpook National University, South Korea

Gateway 206: Multidimensional Coincidence Spectroscopies, Ultrafast and Advanced Vibrational Spectroscopy

Time: 10:25-12:10, April 28, 2014 (Monday); Place: Room 616, 6th Floor, DICC

Chair *Dr. Raimund Feifel*, Professor, Department of Physics, Gothenburg University; Department of Physics and Astronomy, Uppsala University, Sweden

10:25-10:30 **Chair Introduction**

10:30-10:55 *Title: Multiple Ionisation Processes of Atoms and Molecules Studied with Efficient Correlation Spectroscopy Techniques*

Dr. Raimund Feifel, Professor, Department of Physics, Gothenburg University; Department of Physics and Astronomy, Uppsala University, Sweden

10:55-11:20 *Title: Multidimensional Covariance Mapping Analysis*

Dr. Vitali Zhaunerchyk, Department of Physics, University of Gothenburg, Sweden

11:20-11:45 *Title: Structures and Gas Storage Performance of Metal-organic Framework Materials at High Pressures Probed by in situ Vibrational Spectroscopy*

Dr. Yang Song, Professor, The University of Western, Canada

11:45-12:10 *Title: Ultrafast Electron Dynamics Probed by Time-Resolved Hard X-ray Photoelectron Spectroscopy*

Dr. Masaki Oura, RIKEN SPring-8 Center, Japan

Gateway 207: Synchrotron Radiation Instrumentation

Time: 08:30-10:40, April 28, 2014 (Monday); Place: Room 617, 6th Floor, DICC

Chair *Dr. Renfei Feng*, Staff Scientist, Canadian Light Source, Canada

08:30-08:35 **Chair Introduction**

08:35-09:00 *Title: Analytical Applications of VUV Synchrotron Radiation on the Beamline DESIRS at SOLEIL*
Dr. Laurent Nahon, Head of the "Dilute Matter" Scientific Group of SOLEIL, Synchrotron Soleil, France

09:00-09:25 *Title: X-Ray Spectro- and Diffraction-Microscopy Using Synchrotron Radiation*

Dr. Renfei Feng, Staff Scientist, Canadian Light Source, Canada

09:25-09:50 *Title: New Generation of Accelerator Based Light Sources*

Dr. M. E. Couprie, Synchrotron SOLEIL, France

09:50-10:15 *Title: Laboratory Synchrotron Light Source (SLS) Realized XAFS, USAX, Residual Stress Measurement Which Were Only Possible by Large SLS*

Dr. Hironari Yamada, Professor, Ritsumeikan University, Japan

10:15-10:40 *Title: The Design for the Stabilities of an Ultra-stable Synchrotron Light Source*

Dr. June-Rong Chen, Researcher, NSRRC; Professor, Department of Biomedical Engineering and Environmental Sciences, NTHU, Taiwan

Frontier 3: Crystallography

Gateway 301: New Developments in Crystallography

Time: 08:30-11:45, April 26, 2014, (Saturday); Place: Room 617, 6th Floor, DICC

- Chair** *Dr. Christine Rehm*, Instrument Scientist, ANSTO, Australia
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Growth of TeO₂ Single Crystals by Low Temperature Gradient Czochralski Method with Nonuniform Heating*
Dr. Alexandr Kokh, Head of the Crystal Growth Lab in the Institute of Geology and Mineralogy, Russia
- 09:00-09:25 *Title: Exploring Microstructures of Materials Using Ultra-Small-Angle Neutron Scattering*
Dr. Christine Rehm, Instrument Scientist, ANSTO, Australia
- 09:25-09:50 *Title: Temperature-controlled Neutron Diffraction to Probe the Framework-assisted Migration of Oxide Ions in Derivatives of Beta-La₂Mo₂O₉*
Dr. Gwenaél Corbel, Full-time Junior Researcher, University of Maine, France
- 09:50-10:15 *Title: XRD Structural Investigations of Selected Technologically Attractive Nanomaterials: Transparent Conducting Oxides, Doped Optoelectronic and Luminescent Materials, Doped Ceramics*
Dr. Biserka Gzeta, Senior Scientist, Rudjer Boskovic Institute, Croatia
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Growth and Characterization of ZnO Nanostructure and Crystalline Cu(In,Ga)Se₂ Thin-films on Electrical Properties of Photovoltaic Cells*
Dr. Yi Chih Wang, Researcher of Laboratory for Thin Film Solar Cells, Institute of Electro-Optical Engineering, National Chiao Tung University, Taiwan
- 10:55-11:20 *Title: Advanced V-shaped Channel-cut Monochromators for the Extreme X-Ray Beam Manipulation*
Dr. Matej Jergel, Senior Research Fellow, Institute of Physics, Slovak Academy of Sciences, Slovak Republic
- 11:20-11:45 *Title: Diffractational Study of Crystall Lattice Changes during the Orthorhombic-to-hexagonal Transition into Intermetallic Compound Ti₃Sn*
Ms. Olga Ivanova, Frantsevich Institute for Problems of Materials Science, National Academy of Sciences, Ukraine

Gateway 302: Novel Technology of X-Ray Analysis

Time: 11:00-11:55, April 28, 2014 (Monday); Place: Room 617, 6th Floor, DICC

- Chair** *Dr. Raimund Fromme*, Faculty Research Associate, Arizona State University, USA
- 11:00-11:05 **Chair Introduction**
- 11:05-11:30 *Title: Towards Time Resolved Structures of Photosynthetic Proteins Using Hard X-ray Free Electron Laser*
Dr. Raimund Fromme, Faculty Research Associate, Arizona State University, USA
- 11:30-11:55 *Title: New Comprehensive X-ray Spectral Model from the Post-shock Accretion Column in Intermediate Polars*
Dr. Takayuki Hayashi, Researcher, Institute of Space and Astronautical Science, Japan

Frontier 4: NMR/MRI in Biology and Material Science

Gateway 401: Advanced NMR Technologies and Neuroimaging and Brain MRI

Time: 08:30-12:35, April 26, 2014 (Saturday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. Yanming Wang*, Associate Professor, Case Western Reserve University, USA
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Ultra-High Field PET-MRI for In-vivo Human Brain Imaging - from Parkinson's to Depression*
Dr. Zang-Hee Cho, University Professor & Director, Neuroscience Research Institute, South Korea
- 09:00-09:25 *Title: Hyperfine Spectrum of a Single Spin*
Dr. Yishay Manassen, Professor, Ben Gurion University, Israel
- 09:25-09:50 *Title: Neuroimaging, the Past, Present, and Future*
Dr. Yanming Wang, Associate Professor, Case Western Reserve University, USA
- 09:50-10:15 *Title: ¹H and ¹³C NMR Spectroscopy and Imaging of Wood Dewatering Using Supercritical Carbon Dioxide*
Dr. Albert Roger Meder, Principal Research Scientist and Research Group Leader, CSIRO Plant Industry, Australia
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Glycan Compositional Analysis by ¹⁹F-NMR*
Dr. Wen-Bin Yang, Associate Research Specialist, Academia Sinica, Taiwan
- 10:55-11:20 *Title: NMR Phased Arrays: Past, Present and Future-Practical Implications from Mutual Inductance Elimination Using the Paddle End-Ring Design*
Dr. Christakis Constantinides, Engineer, Chi-Biomedical Limited, Cyprus
- 11:20-11:45 *Title: A New Numerical Approach Based on the Trust-Region Algorithm for the Inversion (TRAI_n) of Diffusion NMR Data*
Mr. Kaipin Xu, Doctoral Student, Physics Department and Shanghai Key Laboratory of Magnetic Resonance, East China Normal University, China
- 11:45-12:10 *Title: A Virtual NMR System Embedded in the Interface of a Routine NMR Spectrometer*
Mr. Huawei Liu, PhD Candidate, Shanghai Key Laboratory of Magnetic Resonance, Department of Physics at East China Normal University, China
- 12:10-12:35 *Title: The Expanded Pascal Triangles and Their Use in Study of NMR Signal Splitting Pattern due to Coupling of Multi-Equivalent Nuclei with Spin Quantum Number I*
Dr. John Kuo, Professor, Department of Chemistry, Xi'an Jiaotong-Liverpool University, Suzhou, China

Gateway 402: NMR/MRI in Biology(Protein, Biomolecular and Body)

Time: 08:30-11:45, April 27, 2014 (Sunday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. Kimberly L. Colson*, Business Development Manager, R & D Division, Bruker BioSpin, USA
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Dynamic-contrast-enhanced MRI and Dynamic Tensor Imaging (DTI) for the Early Detection of Anti-angiogenic Effect and Vessel "Normalization" in Human Breast Cancer Treated with Adjuvant Chemotherapy*
Dr. Ng Thian C, Professor of Radiology Department; Director of Research (Magnetic Resonance); National University of Singapore, Singapore
- 09:00-09:25 *Title: Ginseng Analysis by NMR: Providing New Insights to Identity and Product Development*
Dr. Kimberly L. Colson, Business Development Manager, R & D Division, Bruker BioSpin, USA

- 09:25-09:50 *Title: Measurements of 'Invisible' State Chemical Shift for the Calculation of Transiently Populated Protein States*
Dr. Patrik Lundström, Assistant Professor, Linköping University, Sweden
- 09:50-10:15 *Title: Combined Approaches for Characterization of Vine Leaves by NMR Spectroscopy, High Resolution Mass Spectrometry and X-Ray Powder Diffraction*
Dr. Vito Gallo, Assistant Professor, DICATECh-Polytechnic of Bari, Italy
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Solid-state NMR Study of Retinal-protein Interactions in Photoreceptor Membrane Protein*
Dr. Izuru Kawamura, Associate Professor, Yokohama National University, Japan
- 10:55-11:20 *Title: NMR Structure-based Drug Design Targeting Membrane-bound Proteins*
Dr. Thomas Haselhorst, Senior Research Fellow-ARC Future Fellow, Institute for Glycomics, Griffith University (Gold Coast Campus), Australia
- 11:20-11:45 *Title: Structural Dynamics Intrinsically Detuning Enzyme Action Revealed by NMR*
Dr. Shin-ichi Tate, Professor, Department Mathematics and Life Sciences, Hiroshima University, Japan

Frontier 5: Biomarkers, Probes, and Biosensors

Gateway 501: Advances in Biomarker Analysis and Assay Development

Time: 08:30-10:40, April 26, 2014 (Saturday); Place: Room 619, 6th Floor, DICC

- Chair** *Dr. Youhe Gao*, Professor, Chinese Academy of Medical Sciences/Peking Union Medical College, China
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Plant Flavonoids: A Group of Compounds with Antineoplastic Activity on B16-F10 Murine Melanoma Cells*
Dr. Cinzia Forni, Associate Professor, Department of Biology, University of Rome "Tor Vergata", Italy
- 09:00-09:25 *Title: Changes Introduced into the Blood Can be More Sensitive Detected in Urine—Potential Impact on Biomarker Field*
Dr. Youhe Gao, Professor, Chinese Academy of Medical Sciences/Peking Union Medical College, China
- 09:25-09:50 *Title: Circulating Antigen-immunoglobulin M Complexes as Biomarkers of Liver Dysfunction and Cancer*
Dr. Matteucci Claudia, Assistant Professor, Department of Experimental Medicine and Surgery, University of Rome "Tor Vergata", Italy
- 09:50-10:15 *Title: Single-nuclear DNA Instability Analyses by Means of Single-cell Pulsed-field Gel Electrophoresis - Technical Problems of the Comet Assay and Their Solutions for Quantitative Measurements*
Dr. Satoru Kaneko, Associate Professor, Department of Obstetrics and Gynecology, Ichikawa General Hospital, Tokyo Dental College, Japan
- 10:15-10:40 *Title: Immunostaining by Human Herpes Virus 8 Latent Nuclear Antigen-1 of Kaposi's Sarcoma: A Potential Biomarker of Severity of Disease?*
Dr. Louis-Jacques van Bogaert, Principal Histopathologist, National Health Laboratory Service and University of Limpopo, South Africa

Gateway 502: Novel Molecular Probe and Molecular Imaging Technologies

Time: 13:30-14:50, April 26, 2014, (Saturday); Place: Room 619, 6th Floor, DICC

Chair *Dr. Ian Liao*, Associate Professor, Institute of Molecular Science and Department of Applied Chemistry, National Chiao Tung University, Taiwan

13:30-13:35 **Chair Introduction**

13:35-14:00 *Title: Kelvin Probe Force Microscopy for Characterizing Doped Semiconductors for Future Sensor Applications in Electrically Polarizable Molecules in Nano- and Biotechnology*

Dr. Nan Du, Engineer, Chemnitz University of Technology, Germany

14:00-14:25 *Title: A Chemical Strategy to Visualize Neurotransmission with Fluorescence Imaging*

Dr. Ian Liao, Associate Professor, Institute of Molecular Science and Department of Applied Chemistry, National Chiao Tung University, Taiwan

14:25-14:50 *Title: Green Electrochemical Sensor for Environmental Monitoring of Pesticides*

Dr. L'ubomír Švorc, Young Researcher, Institute of Analytical Chemistry, Faculty of Chemical and Food Technology, Slovak University of Technology in Bratislava, Slovak Republic

Gateway 503: Biosensors for Microarrays, Lab-on-Chips and Immunoassay

Time: 15:00-17:10, April 26, 2014, (Saturday); Place: Room 619, 6th Floor, DICC

Chair *Dr. Min-Cheng Chen*, Division Director, Fabrication Service Division, National Nano Device Laboratories, Taiwan

15:00-15:05 **Chair Introduction**

15:05-15:30 *Title: Amperometric Microbial Sensors for Determination of Some Low Molecular Organic Compounds*

Dr. T. N. Kuvichkina, Staff Scientist, Skryabin Institute of Biochemistry and Physiology of Microorganisms, Russian Academy of Sciences, Russia

15:30-15:55 *Title: A Vth-adjustable Poly-Si Nanowire Device by CMOS-compatible Process for Bioelectronic Probing Applications*

Dr. Min-Cheng Chen, Division Director, Fabrication Service Division, National Nano Device Laboratories, Taiwan

15:55-16:20 *Title: Development and Automation of Microelectromechanical Systems-Based Biochip Platform for Protein Assay*

Dr. Chin-Feng Wan, Assistant Professor, School of Applied Chemistry, Chung Shan Medical University, Taiwan

16:20-16:45 *Title: Printing of Protein and DNA Arrays Using a SPR Imaging System and a Multichannel Fluidic Flow Cell*

Dr. Boonsong Sutapun, Lecturer, Institute of Engineering, Suranaree University of Technology, Thailand

16:45-17:10 *Title: BioMEMS Based Cells Patterning and Multiplexed Detection*

Dr. Dahai Ren, Associate Professor, State Key Laboratory of Precision Measurement Technology and Instruments, Department of Precision Instrument, Tsinghua University, China

Gateway 504: Chemical Sensors and Optical Sensors (Part I)

Time: 8:30-12:10, April 27, 2014, (Sunday); Place: Room 619, 6th Floor, DICC

Chair *Dr. Michael Thompson*, Professor of Bioanalytical Chemistry, Department of Chemistry, University of Toronto, Canada

08:30-08:35 **Chair Introduction**

- 08:35-09:00 *Title: Tandem Biosensor Detection and Removal of Endotoxin in Blood: A True Theranostic Approach to Medicine*
Dr. Michael Thompson, Professor of Bioanalytical Chemistry, Department of Chemistry, University of Toronto, Canada
- 09:00-09:25 *Title: Electrical, Optical and Mechanical Detection of Gas-phase Electrophiles*
Dr. Yoav Eichen, Associate Professor, Technion-Israel Institute of Technology, Israel
- 09:25-09:50 *Title: A New Concept of Chemical Sensors and Biosensors Based on the Electrostriction Effect of Membranes Supported on Electrodes*
Dr. Slawomir Kalinowski, Associate Professor, University of Warmia and Mazury, Poland
- 09:50-10:15 *Title: Design of a New Optical Fiber Process Tomography Configuration with High Image Reconstruction Resolution*
Dr. Chunsheng Yan, Associate Professor, JORCEP (Sino-Swedish Joint Research Center of Photonics), Zhejiang University (ZJU), China
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Optical-Fiber Self-referred Refractometer based on Fresnel Reflection at the Fiber Tip*
Dr. Rodolfo Martínez, Head of the Photonics Research Group, University of Johannesburg, South Africa
- 10:55-11:20 *Title: Studies on the Electrochemical Properties of Ferrocenium Complexes and Theferrocenium Complex -DNA Interaction at a Langmuir-Blodgett Films Modified Electrode*
Dr. Pingping Liu, Engineer, Zhengzhou Tobacco Research Institute of CNCT, China
- 11:20-11:45 *Title: Direct Spectrofluorimetric Technique for Glucose Assessment*
Dr. Amr A. Essawy, Chemistry Department, Faculty of Science, Fayoum University, Egypt
- 11:45-12:10 *Title: Polarimetric Tilted Fiber Grating Biological Sensor for In-situ Detection of Density Alteration in Non-physiological Cells*
Dr. Tuan Guo, Associate Professor, Jinan University, China

Gateway 504: Chemical Sensors and Optical Sensors (Part II)

Time: 10:50-12:35, April 26, 2014, (Saturday); Place: Room 619, 6th Floor, DICC

- Chair** *Dr. Michael Thompson*, Professor of Bioanalytical Chemistry, Department of Chemistry, University of Toronto, Canada
- 10:50-10:55 **Chair Introduction**
- 10:55-11:20 *Title: Fluorescent Organogel Films for Detection of Organic Amine Vapors*
Dr. Pengchong Xue, Associate Professor, State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin University, China
- 11:20-11:45 *Title: Integrated Micro-volume Fiber-optic Sensor based on Evanescent-wave Excitation*
Dr. Yan Xiong, Director, Southwest Petroleum University, China
- 11:45-12:10 *Title: Design and Improvement of Vitamin C Electrochemical Chemo/bio Sensors Based on Conducting Polymer Composites and Its Application in Agriculture*
Dr. Yangping Wen, Lecturer, Jiangxi Science and Technology Normal University, China
- 12:10-12:35 *Title: Immobilization of an Ionic Iridium Complex on the Glassy Carbon Electrode for Electrochemiluminescence Sensing*
Dr. Qijun Song, Professor, Jiangnan University, China

Gateway 505: Nanobiosensors, Nanomaterials & Nanoanalytical Systems

Time: 08:30-12:10, April 28, 2014, (Monday); Place: Room 619, 6th Floor, DICC

- Chair** *Dr. Heiko O. Jacobs*, Professor, Ilmenau University of Technology, Germany
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Membrane Nanoelectronics for DNA Sensing and Bio-manipulation*
Dr. Jean-Pierre Leburton, G. Stillman Professor of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, USA
- 09:00-09:25 *Title: Localized Collection of Airborne Analytes: A Transport Driven Approach to Improve the Response Time of Existing Gas Sensor Designs including SERS Based Detection of Small Molecules*
Dr. Heiko O. Jacobs, Professor, Ilmenau University of Technology, Germany
- 09:25-09:50 *Title: Adapting Nature's Tricks to Engineer Better Biosensors*
Dr. Alexis Vallée-Bélisle, Assistant professor, Director of the Laboratory of Biosensors & Nanomachines, Département de chimie, Université de Montréal, Canada
- 09:50-10:15 *Title: Fluorescent Indicator Proteins (FLIP) Nanosensors for Glucose Assay*
Dr. Amin Karmali, Professor, Chemical Engineering and Biotechnology Research Center and Department of Chemical Engineering of Instituto Superior de Engenharia de Lisboa, Portugal
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Electrochemical Biosensors Based on 1D Nanostructure Arrays*
Dr. Yucheng Wu, Vice President, Hefei University of Technology, China
- 10:55-11:20 *Title: Surface Plasmon Resonance (SPR) and Fluorescence Enhancement for Biosensors*
Dr. Yi Wang, Research Fellow, Centre for Biomimetic Sensor Science, Nanyang Technological University, Singapore
- 11:20-11:45 *Title: Imprinted Polymeric Nanoparticles for Optical Sensing*
Dr. Francesco Canfarotta, Research Assistant, Chemistry Department Leicester University, UK
- 11:45-12:10 *Title: Poly(m-phenylenediamine)-Prussian Blue Hybrid Film Formed by One-step Electrochemical Deposition for Glucose Biosensor*
Dr. Guang-Ri Xu, Professor, Department of Chemistry and Chemical Engineering, Henan institute of Science and Technology, China

Frontier 6: Chromatography

Gateway 601: Innovative Development in Chromatography

Time: 13:30-17:05, April 26, 2014, (Saturday); Place: Room 617, 6th Floor, DICC

- Chair** *Dr. Yu-Chiao Yang*, Assistant Professor, Kaohsiung Medical University, Taiwan
- 13:30-13:35 **Chair Introduction**
- 13:35-14:00 *Title: Extraction Characteristics of Oleanolic and Ursolic Acids from Hedyotis Diffusa under Ultrasound-assisted Supercritical Carbon Dioxide Extraction*
Dr. Yu-Chiao Yang, Assistant Professor, Kaohsiung Medical University, Taiwan
- 14:00-14:25 *Title: Pulsed Discharge Detector for Gas Chromatography*
Dr. Huamin Cai, VICI Valco Instruments Co. Inc., USA
- 14:25-14:50 *Title: Roasted and Ground Coffee Adulterations Detected by HPLC*
Dr. Suzana L. Nixdorf, Associate Professor, Department of Chemistry, State University of Londrina, Brazil

- 14:50-15:15 *Title: High-performance Liquid Chromatography and Derivative Spectrophotometric Methods for the Simultaneous Determination of Pravastatin and Fenofibrate in Their Dosage Form*
Dr. Gamal A. E. Mostafa, Professor, College of Pharmacy, King Saud University, Saudi Arabia
- 15:15-15:25 **Coffee Break**
- 15:25-15:50 *Title: Multidimensional Gas Chromatography for Sulfur Compound Analysis*
Dr. Xiuhua Yang, Research Scientist, Dow Chemical China, China
- 15:50-16:15 *Title: Evaluation of Charged Aerosol Detector for Purity Assessment of Protein*
Dr. Rui Wang, Senior R&D Engineer, Shimadzu Research Laboratory (Shanghai) Co., Ltd., China
- 16:15-16:40 *Title: Separation of Guaifenesin Enantiomers on Cellulose tris 3,5-Dimethylphenylcarbamate Packed Column Using SMB and Varicol Units*
Dr. Ping Li, Professor, East China University of Science and Technology, China
- 16:40-17:05 *Title: Enantioselective Separation and Detection of Chiral Polychlorinated Biphenyl in Lotus Plant and Sediment*
Dr. Jing Qiu, Associate Professor, Chinese Academy of Agricultural Sciences, China

Gateway 602: Applications of Hyphenated Chromatography Techniques

Time: 13:30-17:05, April 27, 2014, (Sunday); Place: Room 617, 6th Floor, DICC

- Chair** *Dr. Li-Heng Pao*, Associate Professor, Department of Nutrition and Health Sciences, Director, Research Center for Industry of Human Ecology, Chang Gung University of Science and Technology, Taiwan
- 13:30-13:35 **Chair Introduction**
- 13:35-14:00 *Title: Achieving "Green" Separation and Sensitive Detection through Micellar-microbore Systems with Microfluidic-Chemiluminescence Detector*
Dr. Haider A. J. Al Lawati, Associate Professor, Sultan Qaboos University, Oman
- 14:00-14:25 *Title: Characterization of Branched Polymers with Uni- and Multimodal Molecular-weight Distribution by SEC with Multiple Detection*
Dr. Milos Netopilik, Senior Research Fellow, Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Czech Republic
- 14:25-14:50 *Title: Separation of Alkaloids from Herbs Using pH-zone Refining Counter-current Chromatography*
Dr. Xiao Wang, Vice Deputy Director, Shandong Analysis and Test Center, Shandong Academy of Sciences, China
- 14:50-15:15 *Title: Analysis of Carbamate Pesticides in Water by Chromatography*
Ms. Xiaonan Wang, Engineer, the Institute of Seawater Desalination and Multipurpose Utilization, SOA, China
- 15:15-15:25 **Coffee Break**
- 15:25-15:50 *Title: The Establishment of Activity-integrated Fingerprint for Screening and Evaluating Active Ingredients in Traditional Chinese Medicine and Their Application*
Dr. Yanxu Chang, Associate Professor, Tianjin University of Traditional Chinese Medicine, China
- 15:50-16:15 *Title: Determination of P-Aminohippuric Acid in Rat Plasma by Liquid Chromatography-Tandem Mass Spectrometry*
Dr. Li-Heng Pao, Associate Professor, Department of Nutrition and Health Sciences, Director, Research Center for Industry of Human Ecology, Chang Gung University of Science and Technology, Taiwan
- 16:15-16:40 *Title: Analysis of Volatile Sulfurs in Food Using GC-PFPD and GC-SCD*
Dr. Xiao-Fen Du, Scientist Analytical Innovation, Corporate R & D Division, Firmenich Aromatics (China) Co. Ltd., China

- 16:40-17:05 *Title: Using Metabolomics Approach and Anti-oxidative Assays to Investigate the Quality Impact of Post-harvest Practices Differences: Application to the Fresh Produce of Herbal Tea Ingredient, Uraria Crinita*
Mr. Jung Chao, Ph.D. Candidate, Institute of Pharmacology, National Yang-Ming University, Taiwan

Frontier 7: Electrophoresis, Micro/Nanofluidics and Lab-on-Chips

Gateway 701: Electrophoresis, Microchip CE and Microfluidics in Bio/Chemical Analysis/Synthesis/Separation

Time: 13:30-15:15, April 26, 2014, (Saturday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. Mirek Macka*, Professor and Australian Research Council Future Fellow, Australian Centre for Research on Separation Science (ACROSS), University of Tasmania, Australia

13:30-13:35 **Chair Introduction**

- 13:35-14:00 *Title: On-line Detection of Heavy Metal Ions by Using Fluorescent Molecular Sensors Inserted in a Microfluidic Chip*

Dr. Isabelle Leray, CNRS Research Director, PPSM, France

- 14:00-14:25 *Title: Low Entry Barrier Microfluidics: A Dream?*

Dr. Mirek Macka, Professor and Australian Research Council Future Fellow, Australian Centre for Research on Separation Science (ACROSS), University of Tasmania, Australia

- 14:25-14:50 *Title: Synthesis of D-Mannose Capped Silicon Nanoparticles and Their Interactions with MCF-7 Human Breast Cancerous Cells*

Dr. Yimin Chao, Senior Lecturer, School of Chemistry, University of East Anglia, UK

- 14:50-15:15 *Title: Microfluidic Flow-Free Generation of Chemical Concentration Gradients*

Dr. Yao Zhou, Postdoctoral Associate, Massachusetts Institute of Technology, USA

Gateway 702: Droplet-based Microfluidics and Micro/Nanochannels, Micro/Nanopores Application

Time: 15:20-17:30, April 26, 2014, (Saturday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. Chen-Kuei Chung*, Professor, Department of Mechanical Engineering, National Cheng Kung University, Taiwan

15:20-15:25 **Chair Introduction**

- 15:25-15:50 *Title: An Optical Toolbox for Controlling Bubbles and Droplets in Microfluidic System*

Dr. Masahiro Motosuke, Junior Associate Professor, Department of Mechanical Engineering/ Research Institute for Science and Technology, Tokyo University of Science, Japan

- 15:50-16:15 *Title: Synthesis of Nanoporous Alumina using Hybrid Pulse Anodization at Relatively High Temperature and Its Application*

Dr. Chen-Kuei Chung, Professor, Department of Mechanical Engineering, National Cheng Kung University, Taiwan

- 16:15-16:40 *Title: On-Demand Single Picoliter Droplet Formation-A Platform for Biochemical Testing*

Dr. Adrian Neild, Associate Professor, Department of Mechanical and Aerospace Engineering, Monash University, Australia

- 16:40-17:05 *Title: Bubble/droplet Generation, Viscous Drag, and Instability in Micro Two-phase Flows*

Dr. Ken Yamamoto, Visiting Researcher, Department of Mechanical Engineering, Tokyo Metropolitan University, Japan

- 17:05-17:30 *Title: Formulating Complex Emulsions One Droplet at a Time*

Dr. Jan Guzowski, Researcher, Institute of Physical Chemistry, Polish Academy of Sciences, Poland

Gateway 703: Advanced Fabrication Processes and Applications for Microarray, Lab-on-Chips and Microfluidics

Time: 13:30-17:10, April 27, 2014, (Sunday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. Artur Dybko*, Professor, Warsaw University of Technology, Poland
- 13:30-13:35 **Chair Introduction**
- 13:35-13:55 *Title: Management of Statistical Data and Process on Matrix Data and Its Application to Array Data Analysis*
Dr. Kaneko Kunihiko, Associate Professor, Kyushu University, Japan
- 13:55-14:15 *Title: Personalized Anticancer Medicine Based on Lab-on-a-chip*
Dr. Artur Dybko, Professor, Warsaw University of Technology, Poland
- 14:15-14:35 *Title: New Idea Inspired by the Self-aggregating to Form Fibers and the Controlling Growth of the Fiber*
Dr. Jiapu Zhang, Centre for Informatics and Applied Optimization & Graduate School of Sciences, Information Technology and Engineering, The University of Ballarat, Australia
- 14:35-14:55 *Title: An Active Valve Incorporated into a Microchip Using a High Strain Electroactive Polymer*
Dr. Yo Tanaka, Unit Leader, Quantitative Biology Center, RIKEN, Japan
- 14:55-15:15 *Title: DNA Microarray for Authentication of Medicinal Dendrobium Species*
Dr. Yan-Bo Zhang, Associate Professor, University of Hong Kong, Hong Kong, China
- 15:15-15:30 **Coffee Break**
- 15:30-15:50 *Title: A Promising Submicron Sensor for in Situ Temperature Sensing in Lab-on-a-chip Systems*
Dr. Shengyong Xu, Professor, Peking University, China
- 15:50-16:10 *Title: Cell Culture Using Centrifugal Microfluidic Platform*
Dr. Yong Ren, Assistant Professor, Department of Mechanical, Materials & Manufacturing Engineering, University of Nottingham Ningbo China, China
- 16:10-16:30 *Title: Front Tracking Simulation of Bio-droplet Dynamic Mechanism in Microfluidics*
Dr. Bofeng Bai, Deputy Director, State Key Laboratory of Multiphase Flow in Power Engineering, Xi'an Jiaotong University, China
- 16:30-16:50 *Title: Advanced Flow-rate Control Based on Pressure Actuation in Microfluidics-Case Studies of Co-flow and Droplet Generation*
Dr. Francois Leblanc, Chief Executive Officer, FLUIGENT S.A., France
- 16:50-17:10 *Title: Microfluidic Chip Electrophoresis Investigation of Major Milk Proteins: Study of Buffers Effects and Quantitative Approaching*
Dr. Fabiano Freire Costa, Professor, Federal University of Juiz de Fora, Brazil

Frontier 8: Chemometrics and Analytical Informatics

Gateway 801: Chemometrics and Bioinformatics

Time: 08:30-12:10, April 28, 2014, (Monday); Place: Room 618, 6th Floor, DICC

- Chair** *Dr. John H. Kalivas*, Professor, Department of Chemistry, Idaho State University, USA
- 08:30-08:35 **Chair Introduction**
- 08:35-09:00 *Title: Characterizing the Implicative Selectivity/Sensitivity Balance Using the Explicative Bias/Variance Tradeoff in Selecting Multivariate Calibration Model Tuning Parameters*
Dr. John H. Kalivas, Professor, Department of Chemistry, Idaho State University, USA
- 09:00-09:25 *Title: Chemometrics and Multivariate Methods in the Industry: A Discussion on Validation, Interpretation, Significance and Causality*
Dr. Frank Westad, Chief Scientific Officer, CAMO Software, Norway

- 09:25-09:50 *Title: Fuzzy Grid Encoding: A New Paradigm for Multivariate Chemometrics*
Dr. Peter de B. Harrington, Director of the Forensic Chemistry Programs, Ohio University, USA
- 09:50-10:15 *Title: Study of Lipids of Deep Water Sponge *Baikalospongia Intermedia Profundalis**
Dr. Selmeg Vladimirovna Bazarsadueva, Engineer, Baikal Institute of Nature Management of Siberian Branch of Russian Academy of Sciences, Russia
- 10:15-10:30 **Coffee Break**
- 10:30-10:55 *Title: Locally Weighted PLS-DA: A New and Versatile Tool for Non-linear Classification*
Dr. Federico Marini, Professor, University of Rome "La Sapienza", Italy
- 10:55-11:20 *Title: Hardware Direct Computation for Bioinformatics Applications*
Dr. Yoshiki Yamaguchi, Assistant Professor, University of Tsukuba, Japan
- 11:20-11:45 *Title: Chemometrics in Chemical Imaging: The Multivariate Advantage*
Dr. Aoife A Gowen, Senior Lecturer, University College Dublin, Ireland
- 11:45-12:10 *Title: Multi-dimensional NMR Simulation and Responses Characteristics in Porous Rocks*
Dr. Maojin Tan, Associate Professor, China University of Geosciences (Beijing), China



*****DNA*****

Chinese Session of World DNA and Genome Day-2014

Chinese Forum 01: Progress in Chinese Protein and Molecular Biology
2014*4*26**08:30-12:00 **304B***

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08:35-09:00 * *: *****_--**2013***** *****
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10:55-11:20 * *: *****EDSM-Y*****
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Chinese Forum 02: Breakthrough Studies in Antibody Field of China (1)
2014*4*26**08:30-12:10 **307A***

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Chinese Forum 03: Breakthrough Studies in Antibody Field of China (2)

2014*4*2613:30-17:00 *****307A***

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Chinese Forum 04: Groundbreaking Research in Analysis Field of China

2014*4*27**08:30-11:45 **307A***

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