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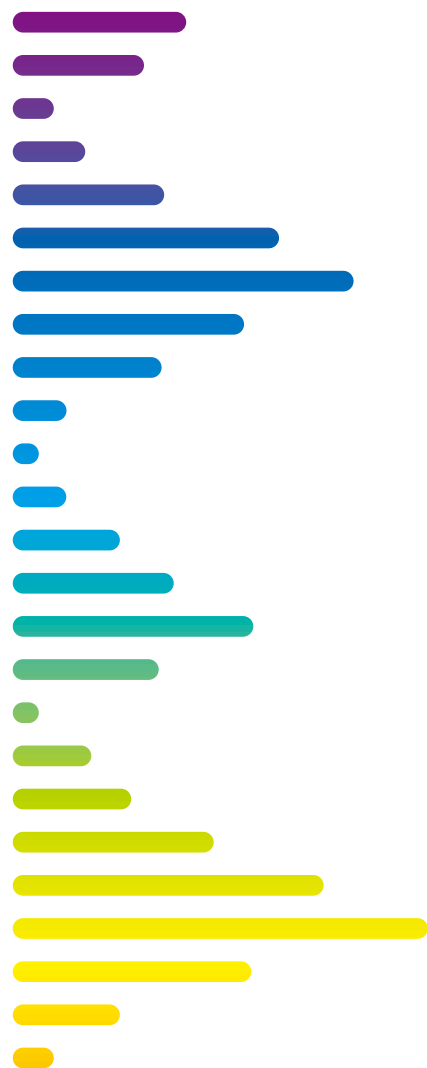
The 19th 北京分析测试学术报告会暨展览会
Beijing Conference and Exhibition
on Instrumental Analysis

ACADEMIC CONFERENCE PROGRAM

学术 会刊
2021.09.27-29

CHINA INTERNATIONAL EXHIBITION CENTER (TIANZHU NEW HALL), BEIJING, CHINA

中国国际展览中心天竺新馆



CHINA ASSOCIATION FOR INSTRUMENTAL ANALYSIS
中国分析测试协会

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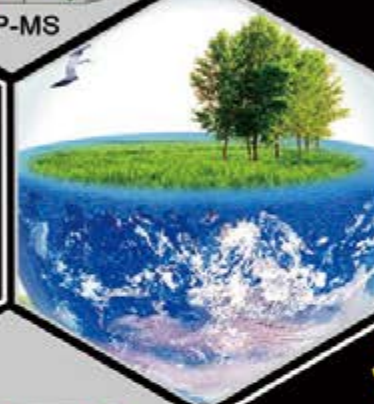
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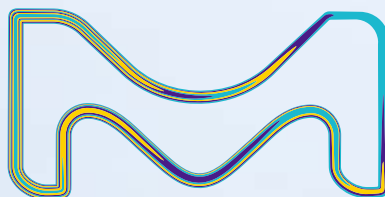


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新型冠状病毒导致的肺炎疫情仍在蔓延，全球科学家在病毒传播、检测、药物及疫苗研发等方面进行了大量的科研攻关，中国分析测试协会在 BCEIA2021 上举办的“新冠疫情下诊疗技术发展高峰论坛”，旨在交流推广全球在抗击新型冠状病毒疫情过程中涌现出的新技术、新方法、新成果，分享经验，搭建合作平台，充分展示分析测试技术及仪器在核酸及抗体检测、组学、模型、疫苗研发等诊断治疗工作中的重要作用。

时间：2021年9月28日

地点：北京·中国国际展览中心天竺新馆学术会议区 W201

语言：中文、英文

规模：400-500人

定位：高规格、跨领域、前瞻性

亮点：强大嘉宾阵容、高端参会群体、全新媒体传播方式



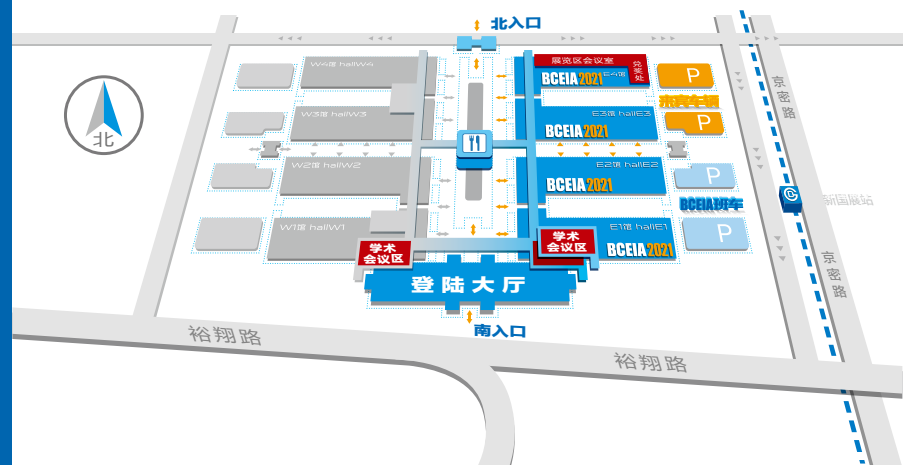
27-29 SEP. 2021
Beijing, China

BCEIA2021

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北京·中国国际展览中心 **天竺新馆**

China International Exhibition Center(Tianzhu New Hall), Beijing.





PREFACE

The 19th Beijing Conference and Exhibition on Instrumental Analysis (BCEIA 2021) is scheduled to be held on September 27-29, 2021 at China International Exhibition Center (Tianzhu New Hall), Beijing. Adhering to the vision of “Analytical Science Creates Future”, BCEIA 2021 will continue to host academic conferences, forums and exhibitions under the theme of “Moving Towards a Green Future”.

The BCEIA Plenary Session has always been at the forefront of advances in science and technology. World renowned scientists will be invited to discuss recent developments in analytical sciences, including in areas such as Proteomics, metabolomics, Brain Science, neurochemistry, computational intravital imaging based on artificial intelligence, green bio-manufacturing, innovation and development of mass spectrometer, functional nucleic acids related to infectious disease diagnosis, advanced biosensing , and share their perspectives and research results in fields such as life sciences, precision medicine, new energy and new materials.

The ten Parallel Sessions - Electron Microscopy and Material Science, Mass Spectrometry, Optical Spectroscopy, Chromatography, Magnetic Resonance Spectroscopy, Electroanalytical Chemistry, Analytical Techniques in Life Sciences, Environmental Analysis, Chemical Metrology and Reference Materials, and Labeled Immunoassay will involve discussions and academic exchanges under different themes and topics in these fields.

The COVID-19 epidemic is still ongoing. Global scientists have made a large number of scientific research breakthroughs in virus transmission, detection, drug and vaccine

research and development. The “Summit on COVID-19 Diagnostics & Treatment” will be held to discuss achievements and experiences in fighting the epidemic.

Numerous thematic forums and concurrent meetings will be hosted at BCEIA 2021, focusing on industrial transformation, the evolution of science and technology, industry-academia-research collaboration, integration and development, within the framework of the national science and technology development strategy of the 14th Five-Year Plan. Topics include semiconductors, microplastics, cell analysis, food and health, etc.

With a total exhibition area of 53,000 m², BCEIA 2021 will showcase cutting-edge worldwide technologies and state-of-the-art instruments in the field of analytical sciences.

We sincerely look forward to your participation!

China Association for Instrumental Analysis
2021.9

Conference General Schedule

Date	Time	Item	Location
Sept.27	9:00-17:00	Registration	South Entry Hall (南登录大厅)
	9:30-12:00	Plenary Session	Room W201, Academic Conference Area
	13:30-17:00		
Sept.28	9:10-12:30	Summit on COVID-19 Diagnostics & Treatment	Room W201, Academic Conference Area
	9:20-12:00 13:30-16:50	Parallel Sessions (Oral Presentations, Posters)	Oral Presentations: Academic Conference Area Posters: E1-E4 Hallway
		A Electron Microscopy and Material Science	Room : W104
		B Mass Spectrometry	Room : W105
		C Optical Spectroscopy	Room : E206
		D Chromatography	Room : W102
		E Magnetic Resonance Spectroscopy	Room : E303
		F Electroanalytical Chemistry	Room : E306
		G Analytical Techniques in Life Sciences	Room : W103
		H Environmental Analysis	Room : E302
		I Chemical Metrology & Reference Materials	Room : E201
Sept.29	9:10-12:00 13:30-16:50	Parallel Sessions (Oral Presentations, Posters)	Oral Presentations: Academic Conference Area Posters: E1-E4 Hallway
		A Electron Microscopy and Material Science	Room : W104
		B Mass Spectrometry	Room : W105
		C Optical Spectroscopy	Room : E206
		D Chromatography	Room : W102
		E Magnetic Resonance Spectroscopy	Room : E303
		F Electroanalytical Chemistry	Room : E306
		G Analytical Techniques in Life Sciences	Room : W103
		H Environmental Analysis	Room : E302
		I Chemical Metrology & Reference Materials	Room : E201
		J Labeled Immunoassay	Room : E301
	14:00-15:00	BCEIA Best Posters Awards Ceremony	South Entry Hall (南登录大厅)

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 Institute of Cancer and Basic Medicine, CAS

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Plenary Session

Date: September 27th, 2021

Time: 9:30-12:00 / 13:30-17:00

Location: Room W201, Academic Conference Area

 China International Exhibition Center

 (Tianzhu New Hall), Beijing, China

Schedule of Plenary Session			
AM			
Chair / Prof. Yukui ZHANG			
9:30-9:40	Opening Remarks by BCEIA2021 Chairman, Prof. Guibin JIANG Introductory Remarks by BCEIA2021 Academic Committee Chairman, Prof. Weihong TAN		
Time	No.	Title	Lecturer
Chair / Prof. Erkang WANG			
9:40-10:15	1	The Great Commission of Proteomics and its Challenges	Prof. Fuchu HE Academician, Chinese Academy of Sciences National Center for Protein Sciences · Beijing
10:15-10:45	2	D-amino Acid-containing Neuropeptides: from Characterization and Structure to Function	Prof. Jonathan V. SWEEDLER University of Illinois, Urbana-Champaign
10:45-11:00	Coffee Break		
Chair / Prof. Xinrong ZHANG			
11:00-11:35	3	Computational Intravital Imaging	Prof. Qionghai DAI Academician, Chinese Academy of Engineering School of Information Science and Technology, Tsinghua University
11:35-12:05	4	Functional Nucleic Acids for Pathogenic Bacteria Detection	Prof. Yingfu LI McMaster University, Canada
PM			
Chair / Prof. Huwei LIU			
13:30-14:05	5	Green Bio-manufacturing	Prof. Tianwei TAN Academician , Chinese Academy of Engineering Beijing University of Chemical Technology
14:05-14:35	6	Deep Metabolomics: Analytical Challenges and Research Opportunities	Prof. Liang LI Elected Fellow, The Royal Society of Canada University of Alberta, Canada
14:35-15:10	7	Development of MS in China over 40 Years	Prof. Xiang FANG National Institute of Metrology
15:10-15:20	Coffee Break		
Chair / Prof. Xiurong YANG			
15:20-15:50	8	Progress in SI-traceable Reference Measurement Systems for Protein Biomarkers	Dr. Ralf D JOSEPHS The International Bureau of Weights and Measures (BIPM)
15:50-16:25	9	Advances in Biosensors	Prof. Xian-En ZHANG Institute of Biophysics, Chinese Academy of Sciences
16:25-17:00	10	Integrated Toxicology Analyzer & Environmental Risk Assessment	Prof. Guibin JIANG Academician, Chinese Academy of Sciences Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences

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Keynote Speakers Biography & Abstract

(in order of the schedule)

Prof. Fuchu HE



Academician, Chinese Academy of Sciences

National Center for Protein Sciences-Beijing

Dr. He is the leading scientist studying proteomics in China. He was the founder of CNHUPO and among the first group of people who founded HUPO in 2001. He was the first Chinese scientist who led an international consortium-Human Liver Proteome Project (HLPP), and the founder of Beijing

Proteome Research Center, Phoenix Center (proteomics) and Institutes of Biomedical Sciences Fudan University. As the chief scientist, he has been propelling HLPP to the China Human Proteome Project (CNHPP), to create an encyclopedia of proteins in the human body under physiological and pathological conditions. Recently, his team stratified early hepatocarcinoma (HCC) into 3 proteomic subtypes with different clinical outcome. Some drug targetable proteins have been demonstrated useful in identifying patients with HCC who could potentially benefit from targeted treatment in further clinical trials. These studies demonstrated the proteomic analysis as an independent powerful tool in cancer molecular subtyping, indicating that the era of "Proteome Driven Precision Medicine (PDPM)" is coming.

The Great Commission of Proteomics and its Challenges

Numerous biological processes are concurrently and coordinately active in every living system. Multiple individual proteoforms derived from the same gene can in turn combinatorically form different protein machines, complexes, networks and populations, thus ensuring the establishment and maintenance of single cell identity, which is required for proper development of multicellular organisms. Moreover, each unit of the proteome at the individual molecule, population set, and proteomic complement has multiple interconnected properties - dimensions - in time and space that together contribute to the robustness and systematicness of the life.

Since the human genome project (HGP), genomics and transcriptomics have long been expected to be the major force for decoding the life. However, the complexity of the hierarchy regulation of the proteome means that straightforward translation of genomic or transcriptomic information into "the code of life" is unlikely.

In the last two decades, building upon mass spectrometry (MS) and information technology, proteomics has emerged as an indispensable subdiscipline for molecular and cellular biology and for the emerging field of systems biology. Particularly, proteomics has drawn great attention in the post-HGP era (Nature 2001, 409: 747; Science 2001, 291: 1221). Of note, the Human Proteome Organization (HUPO) was established right after HGP being done, followed by the Human Proteome Project (HPP). As one of co-founders of HUPO, I proposed the "solar system" as an executive guideline when drafting the blueprint of HPP. This strategy led the progress of proteomics in the following 20 years and was successfully applied on the first proteome project of human tissue and organs, the Human Liver Proteome Project (HLPP), and then the Chinese Human Proteome Project (CNHPP). For instance, the latter systematically constructed the proteomic landscape and the molecular subtyping pattern of ten representative diseases of major human organs, such as liver cancer and lung cancer which are malignant tumors with high incidence in Chinese population, and further identified and validated several potential biomarkers and therapeutic targets, moving us toward a new era of Proteomics-driven Precision Medicine (PDPM) (Nature 2019, 567: 257).

Despite these advances, proteomics is still facing with many challenges in terms of spatiotemporal resolution, sensitivity, throughput, and so on. It therefore requires a joint force by multi-disciplines, including but not limited to mathematics, informatics, chemistry, engineering and materials. Looking forward, the cutting-edge MS instrumentation and the next-generation protein/proteomics detection technologies will further support proteomics-driven life decoding and precision medicine.



Prof. Jonathan V. SWEEDLER



University of Illinois, Urbana-Champaign

Prof. Sweedler currently holds the James R. Eiszner Family Endowed Chair in Chemistry, is a Center for Advanced Study Professor of Chemistry, as well as the Director of the School of Chemical Sciences at University of Illinois; besides chemistry, he has appointments in the College of Medicine, the Neuroscience Program, and the Departments of Bioengineering and of Molecular and Integrative Physiology. He received his Ph.D. in Chemistry from the University of Arizona in 1988, spent several years at Stanford before moving to the University of Illinois at Urbana-Champaign in 1991 where he has been ever since. The research emphasis of his group is on analytical neurochemistry, including the creation of peptidomics, metabolomics and other comprehensive approaches for measuring small volume samples. The second group theme is studying the distribution and dynamic release of neuropeptides and classical transmitters in a cell-specific manner, elucidating novel neurochemical pathways, and in understanding cell-cell signaling in microbial microenvironments. Sweedler has published more than 500 manuscripts and presented 600 invited lectures. He is currently the Editor-in-Chief of Analytical Chemistry.

D-amino Acid-containing Neuropeptides: from Characterization and Structure to Function

In the nervous system, D-amino acids (D-AAs) are endogenous and functional neuromodulators and neurotransmitters. As examples, D-serine, D-aspartate and D-alanine are found at high levels in specific brain, endocrine, and exocrine structures, although their formation, degradation and functions are not well understood. We have created a range of sampling approaches, capillary electrophoresis / laser induced fluorescence, capillary electrophoresis / mass spectrometry and liquid chromatography / mass spectrometry approaches to characterize the chemical content of small brain regions, even down to individual neurons, that can characterize D-amino acids and D-amino acid containing peptides. As one example, using capillary electrophoresis with laser induced fluorescence detection, we have determined which neurons synthesize D-Asp, and have measured the formation, transport and release of D-Asp in a stimulation dependent manner; we recently characterized the enzyme responsible for its formation in these cells. Because such neurons are not common, the use of homogenates from larger multicellular structures results in the dilution of the D-AAs levels to the point where their detection and characterization becomes problematic. Hence, single cell measurements become important. Using our suite of capillary scale separations, we have shown these molecules are involved in a range of cell to cell signaling in the nervous and endocrine systems of a variety of animals. In addition, D-amino containing neuropeptides exist in the brain, although are even more difficult to characterize than the free amino acids. Using liquid chromatography / mass spectrometry and capillary electrophoresis approaches, we have discovered a number of d-amino acid containing neuropeptides and for several, have determined their impact on animal behavior. Current efforts involve discovering the isomerase enzyme responsible for their formation and characterizing D-amino acid containing peptides in vertebrates.

Prof. Qionghai DAI



Academician, Chinese Academy of Engineering
School of Information Science and Technology,
Tsinghua University

Dr. Qionghai Dai is a professor in the Department of Automation at Tsinghua University. He is also an Academician of the Chinese Academy of Engineering. Now he works as the dean of the School of Information at Tsinghua University, the dean of Beijing National Research Center for Information Science and Technology, and the chairman of the Chinese Association for Artificial Intelligence. He received the National Science Fund for Distinguished Young Scholars in 2005.

Dr. Dai is expertized in imaging, artificial intelligence, brain and cognitive sciences. His researches focus on innovative theories and key technologies in these fields and are supported by the National Program on Key Basic Research Project (973 Program), the Special Fund for Research on National Major Research Instruments, and the National Science Foundation of China.

His current research efforts include cognitive intelligence, light field imaging, intelligent medicine, and optoelectronic computing.

Computational Intravital Imaging

Long-term subcellular intravital 3D imaging in mammals is vital to study diverse intercellular behaviors and organelle functions during native physiological processes. However, optical heterogeneity, tissue opacity, and phototoxicity pose great challenges, leading to the tradeoff between the field of view, resolution, speed, and sample health. In this talk, I will discuss our recent work in large-scale intravital microscopy based on computational imaging methods. Various large-scale fast subcellular processes are observed, including brain-wide neural recoding in mice at single resolution, 3D calcium propagations in cardiac cells, human cerebral organoids, and Drosophila larval neurons, membrane dynamics in zebrafish embryos, and large-scale cell migrations during immune response and tumor metastasis, enabling simultaneous in vivo studies of morphological and functional dynamics in 3D.



Prof. Yingfu LI



McMaster University, Canada

Yingfu Li is currently a professor of the Department of Biochemistry and Biomedical Sciences and the Department of Chemistry and Chemical Biology in McMaster University, Canada, and a Canada Research Chair in Chemical Biology of Nucleic Acids. He won Overseas Young Chinese Scholar Research Excellence Award in 2007.

He is a world-renowned scientist in the field of functional nucleic acid research, especially with a high influence in the basic and applied research of nucleic acid enzymes and aptamers.

He has published more than 190 high-level academic papers in famous journals such as Nature Chemistry, Nature Comm, PNAS, JACS and ACIE, etc.; He is an associate editor of "Journal of Molecular Evolution" and a member of the editorial board of "Scientific Reports". He has won many honors, including Canada Academic Gold Medal awarded by the Governor of Canada and W. A. McBryde Metal Medal awarded by the Canadian Chemical Society.

Functional Nucleic Acids for Pathogenic Bacteria Detection

Pathogens have long presented a significant threat to human lives and hence rapid detection of infectious pathogens is vital for improving human health. Current detection methods oftentimes lack the means to detect infectious pathogens in a simple, rapid, and reliable manner at the time and point of need. With their distinctive advantages such as integrating biorecognition with signal amplification and transduction, with no need for user intervention, functional nucleic acids (FNAs) have the potential to overcome these limitations by acting as key components for point-of-care (POC) biosensor development.

In this presentation, I will discuss the work completed in my group, in collaboration with several other groups at McMaster University, Canada, towards developing FNA-based biosensors for detecting bacteria. In vitro selection has led to the isolation of many RNA-cleaving fluorogenic DNAses (RFDs) and DNA aptamers that can recognize infectious pathogens, including Escherichia coli, Clostridium difficile, Helicobacter pylori and Legionella pneumophila. In most cases, a "many-against-many" approach was employed using a DNA library against a crude cellular matrix of an infectious pathogen containing diverse biomarkers as the target to isolate RFDs, with combined counter and positive selections ensuring high specificity towards the desired target. This procedure allows for the isolation of pathogen-specific FNAs without first identifying a suitable biomarker. Multiple target-specific DNA aptamers, including anti-glutamate dehydrogenase (GDH) circular aptamers, anti-degraded toxin B aptamers, and anti-RNase H1 aptamers, have also isolated for detection of bacteria such as Clostridium difficile. The isolated FNAs have been integrated into fluorescent, colorimetric, and electrochemical biosensors using various signal transduction mechanisms. Both simple-to-use paper-based analytical devices and hand-held electrical devices with integrated FNAs have been developed for POC applications. In addition, signal amplification strategies, including DNA catenane enabled rolling circle amplification (RCA), DNAses feedback RCA and an all-DNA amplification system using a four-way junction and catalytic hairpin assembly, have been designed and applied to these systems to further increase their detection sensitivity. The use of these FNA-based biosensors to detect pathogens directly in clinical samples, such as urine, blood and stool, has now been demonstrated with an outstanding sensitivity as low as 10 cells per milliliter, highlighting the tremendous potential of using FNA-based sensors in clinical applications. I will further describe our strategies to overcome the challenges of using FNA-based biosensors in clinical applications, including strategies to improve the stability of FNAs in biological samples and prevent their nonspecific degradation from nucleases, strategies to maintain the functionality of FNAs in clinical samples, and strategies to deal with issues like signal loss caused by non-specific binding and biofouling. Lastly, the remaining roadblocks for employing FNA-based biosensors in clinical applications are discussed.

Prof. Tianwei TAN



Academician , Chinese Academy of Engineering
Beijing University of Chemical Technology

TAN Tianwei, Ph. D., Academician of the Chinese Academy of Engineering, National Outstanding Teacher, Professor and President of the Beijing University of Chemical Technology.

TAN Tianwei graduated from the Department of Chemical Engineering of the Tsinghua University in July 1986. After qualifying upon graduation as a Master degree candidate, he proceeded to pursue his Ph. D. studies in the Tsinghua University in September 1987. From February 1990 to October 1992, he was enrolled in a joint Ph. D. program in Germany's Biotechnology Research Institute and Sweden's Lund University. He received a Ph. D. degree in Chemical Engineering from the Tsinghua University in March 1993. From May 1993 to May 1995, he undertook Postdoctoral research in Biochemical Engineering in the BUCT. From March 1997 to August 1997 and from January 1998 to April 1998, he worked at Sweden's Uppsala University twice as visiting scholar.

TAN Tianwei started to teach in the BUCT in 1995. In the following year, he was turned into a full professor and began to serve as Head of the Department of Biochemical Engineering in the School of Chemical Engineering. In 2003, he became Dean of the College of Life Science and Technology. In November 2007, he was promoted to the role of Vice President of the BUCT. Professor Tan has served as President of the BUCT since June 2012.

Professor TAN Tianwei has long been involved in the teaching and research of Biochemical Engineering and Industrial Biotechnology. In 2001, he became a Distinguished Professor under the Changjiang Scholars Program of the Ministry of Education. In 2003, he won the National Science Fund for Distinguished Young Scholars. In 2006, he received the Science and Technology Award for Chinese Youth and the Advancement Prize of the Ho Leung Ho Lee Foundation. In 2007, he became the Chief Scientist of the Project 973 on "The Basic Research of the Process Science of Industrial Biotechnology". In 2011, he was elected to be an Academician of the Chinese Academy of Engineering. Professor Tan Tianwei also served as Vice President of the Chemical Industry and Engineering Society of China (CIESC), Vice Director of the Specialized Committee on Biochemical Engineering of the CIESC, Standing Vice President of the China Education Association of Chemical Industry, Director of the Colleges and Universities Work Committee of the China Education Association of Chemical Industry. Professor Tan Tianwei is also director of the Enzyme Engineering Society of China, member of the Academic Committee of the State Key Laboratory of Biochemical Engineering, member of the Academic Committee of the State key Laboratory of Bioreactor, and member of the editorial boards of several core journals in Chinese or English.

Professor TAN Tianwei has undertaken many important research projects as the project leader, which include fourteen projects under the categories of the national technological projects, Project 863, key projects of the National Natural Science Foundation, and Project 973, and ten projects at the Ministerial level. He has published over 200 SCI papers and over 230 EI papers. He has been the first winner of two Second Prizes of the National Award for Technological Invention, and five First Prizes and five Second Prizes at the Provincial or Ministerial level.

Green Bio-manufacturing

Bio-manufacturing is a new industrial model, using industrial biotechnology and a combination of chemical engineering technologies to produce chemicals, energy, and materials from biomass and other raw materials. Bio-manufactured products and technologies applications can radiate into industries such as chemical industry, energy, new materials, agriculture, forestry, light industry, environmental protection, medicine, and food. Bio-manufacturing can reduce carbon emissions from the raw materials and achieve a green and clean production process through industrial biotechnology. Benefit from the 'green' system of bio-manufacturing, it can change the existing mode of "high energy consumption and high emission" in China's economic and social development.

At present, the global bio-manufacturing industry is at the critical stage of technological breakthroughs and commercial application. Therefore, the development of bio-manufacturing technologies is of great strategic significance for promoting China's coordinated and sustainable development of economy and environment, as well as actively responding to economic globalization and international competition.



Prof. Liang LI



Elected Fellow, the Royal Society of Canada
University of Alberta, Canada

Dr. Li obtained his B.Sc. degree in Chemistry from Zhejiang (Hangzhou) University, China, in 1983, and his Ph.D. degree in Chemistry from the University of Michigan, Ann Arbor, USA, in 1989, under the direction of Professor David M. Lubman. After graduation, he joined the Department of Chemistry at the University of Alberta, Edmonton, Alberta in July 1989. He was an Assistant Professor from 1989 to 1994 and an Associate Professor from 1994 to 1999. He has been a Full Professor since July 1999. Dr. Li is an elected fellow of the Royal Society of Canada (Academy of Science) (2019). He is a Canada Research Chair in Analytical Chemistry. His research interests focus on developing analytical mass spectrometry for proteomics and metabolomics applications. His group is particularly interested in the analysis of biosystems, such as organelles, cells, tissues, and body fluids, by an interdisciplinary research approach that uses advanced analytical technologies and sophisticated bioinformatics tools to produce, interrelate, and integrate a large body of chemical and biological information on a biological system. He has published more than 280 research papers mainly in the area of analytical mass spectrometry. Dr. Li is currently an editor of *Analytica Chimica Acta*.

Deep Metabolomics: Analytical Challenges and Research Opportunities

Metabolomics is a relatively newcomer of the omics family for large scale characterization of molecular features of a biological system. A key step in metabolomics is to determine metabolic differences among different samples. We want to detect as many metabolites as possible, ideally covering the entire metabolome chemical and other information space. High-coverage metabolome analysis will benefit many research areas including systems biology, disease biomarker discovery and population-based health analytics, but is currently a challenging task. To increase coverage, traditionally, multiple analytical tools and methods are used to generate a combined metabolome data set. However, this approach requires heavy investment on equipment and high analytical skills and expertise. Even with the combined results, the overall metabolome coverage is still relatively low, particularly for quantitative metabolite analysis. In this presentation, I will discuss a robust platform for in-depth metabolome analysis or deep metabolomics, based on chemical isotope labeling (CIL) liquid chromatography (LC) mass spectrometry (MS). I will discuss the rationales and research strategies behind the development of the CIL LC-MS platform. I will use several examples of applications to showcase the CIL LC-MS platform for disease biomarker discovery research as well as biological studies.

Prof. Xiang FANG



National Institute of Metrology

Mr. Fang Xiang is the Director General and a research fellow of the National Institute of Metrology, China, and is the Chairperson of Asia Pacific Metrology Programme. Prior to his current position, he had served successively as Vice Director General of the former National Research Center for Certified Reference Materials, Vice Director General of NIM, Vice Director General of China National Institute of Standardization, Chief Engineer and then Vice Administrator of Standardization Administration of the People's Republic of China (SAC).

Mr. Fang Xiang has a long-term involvement in metrology and testing. With many unique innovations made to mass spectrometry and mass spectrometer development and application research works, he is the winner of two 2nd prizes of the National Science and Technology Progress Reward (as group leader).

Development of MS in China over 40 Years

Since the invention of mass spectrometer in the last century, mass spectrometry technology has been widely used in various application fields, closely related to economic development and human health, and has become one of the most important tools for scientific discovery and an important means for analysis and detection.

The report reviews the development history of mass spectrometry in the world and China, which is divided into several developing stages, and shows the representative achievements made by Chinese scientists and technicians in the mass spectrometer R & D and related applications. Driven by a wide range of applications and supported by major projects such as the Ministry of science and technology and the NSFC, China's mass spectrometry R & D have made continuous progress in complete machine development, ionization, mass analyzer and data processing. They have not only made a series of academic innovations, but also established China's position in the global mass spectrometry related scientific research field. In the past 15 years, a number of Chinese mass spectrometry manufacturers have emerged, with independent intellectual property rights and more voice in high-end precision mass spectrometer manufacturing. A review of the development of mass spectrometry in China will enable us to move forward and realize many more dreams of Chinese mass spectrometry.

Dr. Ralf D JOSEPHS



The International Bureau of Weights and Measures (BIPM)

Ralf is a Principal Scientific Official in the Organic Analysis Group of the Chemistry Department of the International Bureau of Weights and Measures (BIPM) situated in the vicinity of Paris, France.

He has the lead for the coordination of primary calibrator purity assessment comparisons, notably for larger organic molecules (peptides/proteins) and the Metrology for Safe Food and Feed in Developing Economies project within the framework of the BIPM Capacity Building and Knowledge Transfer programme.

He is an active member of the Working Groups on Protein Analysis (PAWG) and Organic Analysis (OAWG) and ad hoc Steering Group on Microbial Measurements (MBSG) of the Consultative Committee for Amount of Substance - Metrology in Chemistry and Biology (CCQM). He is the BIPM observer to the Committee on Methods of Analysis and Sampling (CCMAS) of the FAO/WHO Codex Alimentarius Commission.

Progress in SI-traceable Reference Measurement Systems for Protein Biomarkers



Prof. Xian-En ZHANG



Institute of Biophysics, Chinese Academy of Sciences

He has been engaged in research of biosensors and molecular cellular imaging for many years and elucidated their applications in virology and cell biology. He became a full professor in Wuhan Institute of Virology, Chinese Academy of Sciences in 1993, and is now a professor in the National Key Laboratory of Biomacromolecules, Institute of

Biophysics, Chinese Academy of Sciences, and honorary dean of the Faculty of Synthetic Biology, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences. He has served as Vice President of the Chinese Society of Biotechnology, Honorary Director of the Biosensor/Biochip/Nanobiology Committee, Director of the Synthetic Biology Committee, Co-Founding Chair of the Division of Nanobiotechnology/Biosensors/Biochips, Asian Biotechnology Association, member of the Organizing Committee of the World Congress on Biosensors (2008-), member of editorial committee or advisory committee of a number of scientific journals such as *Biosensors & Bioelectronics* and *Science China-Life Science*. He received an Honorary Doctor of Science Degree from the University of Alberta, Canada, and is the Fellow of the Royal Society of Chemistry and Fellow of the American Institute for Medical and Biological Engineering.

Advances in Biosensors

Biosensors as a typical convergence technology plays a vital role in the rapid and accurate determination of biological and related chemical substances, with the characteristics of convenience and easy automation. It has been widely used in life science research, clinical diagnosis, bioprocess control, environmental monitoring, food safety, quarantine, defense etc. For example, SPR biosensor and Biolayer interferometry biosensor have become the main tools in study of biomolecular interactions in life science; DNA chips and protein chips have created unique high-throughput platforms for molecular and cellular biology and medical science; glucose enzyme electrodes have brought great convenience for self-monitoring of patients with hyperglycemia; Nanopore sequencing based on electrochemical sensing and nanobiology is becoming the mainstream technology of the third generation sequencing. The 31st World Congress on biosensors held in August of this year showed that One-Health is brought new driving force to the development of biosensor technology. However, the thermal stability of biological sensing elements remains unsolved. Synthetic biology, nanotechnology, artificial intelligence and flexible robots, are guiding biosensors to realize new technological iterations.



Prof. Guibin JIANG



Academician, Chinese Academy of Sciences
Research Center for Eco-Environmental
Sciences, Chinese Academy of Sciences

Prof. Guibin Jiang is an academician of the Chinese Academy of Sciences (CAS), fellow of the Third World Academy of Sciences (TWAS), and analytical and environmental chemist. He obtained his BS degree in analytical chemistry at Shandong University in January 1982. At Research Center for Eco-Environmental Sciences (RCEES) of CAS, he was awarded MS and Ph.D. degree in 1987 and 1991, respectively. Prof. Jiang was the director-general of RCEES, CAS, the vice president of Chinese Chemical Society (CCS), the vice president of Chinese Society of Toxicology (CST). He is now the deputy director of the Population, Resources and Environment Committee of the 13th CPPCC, the president of China Association for Instrumental Analysis (CAIA), the director of the State Key Laboratory of Environmental Chemistry and Ecotoxicology (SKLECE), and the dean of the College of Resources and Environment, University of Chinese Academy of Sciences. In 2005, Prof. Jiang was invited by American Chemical Society (ACS) to set up the first Asian Office of Environmental Science and Technology (ES&T), and has been appointed the associate editor of ES&T since then.

Prof. Jiang's research is mainly focused on speciation analysis, analytical instrument, environmental process and toxicology, and environmental applications and effects of nano-materials, etc. His contribution has promoted the research of persistent toxic substances (PTS) in China, conducted the academic direction of screening and discovering new pollutants. He was the principal scientist of two projects of the National Basic Research Program of China (973 program) on persistent organic pollutants (POPs), the principal investigator of Major Programs and Innovative Research Groups of NSFC, member of advisor committee of 973 program, member of the National Nanotechnology Development Steering Committee, member of advisor committee of National Environmental Protection, member of National Food Risk Assessment Steering Committee. Prof. Jiang has participated in China's scientific expedition in Antarctic and Arctic.

In recent years, he has been the principal investigator of Strategic Priority Research Program of CAS (Environmental Exposure and Health Hazard Mechanisms of Typical Contaminants), the expert group leader of the Major Research Plan of National Natural Science Foundation of China (NSFC) (Toxicology and Health Effects of Atmospheric Fine Particulate Matters), and the principal investigator of National Key Scientific Instrument and Equipment Development Project of NSFC (High Throughput and Multifunctional Integrated Toxicology Analyzer).

Prof. Jiang was honored with the National Natural Science Fund for Distinguished Young Scholar, the Young Scientist Award of CAS, the Chang Jiang Scholars Achievement Award of China's Ministry of Education, Agilent Thought Leader Award, Outstanding Science and Technology Achievement Prize of CAS, the National Innovation Competition Award, the First-Ever Outstanding Achievements in Environmental Science & Technology Award of ACS, and the second prize of National Natural Science Award of State Council of China for three times.

Integrated Toxicology Analyzer & Environmental Risk Assessment

People are currently being exposed to complex chemical mixtures, and many diseases are believed to be closely associated with environmental chemical exposure. However, the main chemicals responsible for the negative effects on human health are far from fully understood. In terms of the risk assessment on environmental chemical exposure, the combination of biological assay and chemical analysis is believed a promising tool for finding out the main causal toxicants in samples. However, the main limitation of this method is the throughput of the whole procedure, including the repeated cycles in sample fractionation, concentration, solvent transfer, toxicological assay, and chemical identification, which largely hinders the wide application of the method. Hence, it is necessary to develop a system which allows for high-throughput toxicological screening to be performed to identify unknown chemicals responsible for the measured biological effects in complex samples.

To accomplish the above objective, an integrated toxicology analyzer has been developed, combining non-target mass spectrometry based chemical identification and toxicological assessment. This system integrates automatic processes including sample extraction, cleanup, separation, chemical analysis, and biological tests, enabling high-throughput multi-target toxicological tests and identification of key causal compounds to the measured effects in the sample. In addition to the risk assessment on environmental samples, there are potentials for the system to be applied in the identification of new pollutants, drugs, and other bioactive chemicals in plants, food stuffs, and traditional Chinese medicines.



分析科学 创造未来
ANALYTICAL SCIENCE CREATES FUTURE



北京分析测试学术报告会暨展览会
全球分析科学与生化技术博览

2021.09.27-29

相约北京·中国国际展览中心·天竺新馆



SCHEDULE OF SESSIONS

A ELECTRON MICROSCOPY AND MATERIALS SCIENCES

HONORARY CHAIR:

Prof. JING ZHU

Prof. HENGQIANG YE

CHAIR:

Prof. ZE ZHANG

CONVENER:

Prof. XIAODONG HAN

ORAL LECTURES

Theme:Microscopy Enlightens New Future

Dates: Sept.28-29,2021

Location: Academic Conference

Area:Room W104,

China International Exhibition

Center (Tianzhu New Hall), Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Session 1: In-situ TEM Chair: Xiaodong HAN		
9:20-9:25	Opening Remarks	
9:25-9:55	A2	To Be Confirmed Ze Zhang (Keynote) Zhejiang University, China
9:55-10:15	A3	Experimental Exploration of New Ferroelec Xiuliang Ma (Invited) Institute of Metal Research, CAS, China
10:15-10:35	A4	Topological Superconductors Investigated by In-situ STM Jinfeng Jia (Invited) Shanghai Jiao Tong University, China
10:35-10:45		Development and Application of In-situ Atomic-scale Force-thermal electric Coupling Technique in Transmission Electron Microscopy Zhipeng Li (Oral)
10:45-10:55	Coffee break	
Session 2: In-situ TEM Chair: Prof. Hengqiang YE		
10:55-11:15	A5	To Be Confirmed Xiaodong Han (Invited) Beijing University of Technology, China
11:15-11:35	A6	Spin-orbit Torque in Magnetic Multilayers Yong Jiang (Invited) Tianjin University of Technology, China
11:35-11:55	A7	Reconstruction Methods in Transmission Electron Rong Yu (Invited) Tsinghua University, China
11:55-12:05		Spectra Ultra- New hope for advanced Material characterization Xinliang Mou (Oral)
12:05-14:00	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Session 3: Characterization by Cs-corrected TEM Chair: Yong Wang		
14:00-14:20	A8	Application of In situ Characterization in Chip Field Litao Sun (Invited) Southeast University, China
14:20-14:40	A9	In situ TEM Studies of Nanocatalysts Under Reaction Environments Yong Wang (Invited) Zhejiang University, China
14:40-15:00	A10	In situ Observation of Phase Transition in Oxides Jianbo Wang (Invited) Wuhan University, China
15:00-15:10		The Technology of Objective Lens in Scanning Electron Microscopy Xiangliang Meng KYKY TECHNOLOGY CO., LTD.
15:10-15:20	Coffee break	

Session 4: Characterization by Cs-corrected TEM Chair: Rong Yu		
15:20-15:40	A11	From Lattice Charges to Atomic Orbitals Lin Gu (Invited) Institute of Physics, CAS, China
15:40-16:00	A12	New Imaging Capabilities Enabled by Electron Ptychography Zhen Chen (Invited) Tsinghua University, China
16:00-16:20	A13	Applications of Aberration-corrected TEM on Thermoelectric Materials Binghui Ge (Invited) Anhui University, China
16:20-16:30		Microanalysis Solutions from Opton Ruixue Su(Oral) OPTON
16:30-16:40	/	Poster Awards
16:40	Adjourn	

Date: Sep. 29, 2021 Am (Wednesday)		
Session 5: TEM Applications on Functional Materials Chair: Jinfeng Jia		
9:30-9:50	A14	Research Progress of Tungsten-based Functional Materials Jinshu Wang (Invited) Beijing University of Technology, China
9:50-10:10	A15	Dynamic Magnetics of Magnetic Materials and Spintronics In situ Transmission Electron Microscopy Yong Peng (Invited) Lanzhou University, China
10:10-10:30	A16	In situ Atomic-scale Observation of Grain Size and Twin Thickness Effect Limit in Twin-Structural Nanocrystalline Platinum Lihua Wang (Invited) Beijing University of Technology, China
10:30-10:40		Recent Progress in In-situ TEM Characterization of GATAN Chang Lu (Oral)
10:40-11:00	Coffee Break	
Session 6: TEM Applications on Functional Materials Chair: Jinshu Wang		
11:00-11:20	A17	Atomistic Scale Mechanisms of Twinning and Kinking in Lamellar Ti-6Al-4V Alloy Shijian Zheng (Invited) Hebei University of Technology, China
11:20-11:40	A18	Preliminary Study on Dynamic Mechanism of Interface Plastic Deformation Jiangwei Wang (Invited) Zhejiang University, China

11:40-12:00	A19	Atomic Scale Study on Ordered Evolution of Oxygen Vacancies in LaCoO3-X Qinghua Zhang (Invited) Institute of Physics, CAS, China
12:00-12:10		Introduce of EPMA as a Surface Analysis Method Yandong Gong (Oral) Shimadzu (China) Co.,LTD
12:10-13:30	Lunch Break / Poster Session	

Date: Sep. 29, 2021 Pm (Wednesday)		
Session 7: Alloys and Catalysts Chair: Xiaodong Han		
13:30-13:50	A20	The Evolution of Precipitates in Al-Si-Mg Alloys Zhihong Jia (Invited) Nanjing University of Technology, China
13:50-14:10	A21	Multiscale and In Situ Tem Characterization on Deformation Mechanisms of High Entropy Alloys Qian Yu (Invited) Zhejiang University, China
14:10-14:30	A22	High-active, Long-term Stability of Low-Platinum Fuel Cell Electrocatalysts: From In situ Understanding to Rational Design Jianbo Wu (Invited) Shanghai Jiaotong University, China
14:30-14:50	A23	Atomic Characterization of the Interface Between 2D-TMD Semiconductor and 3D Metal Pan Liu (Invited) Shanghai Jiao Tong University, China
14:50-15:00	Coffee Break	
Session 8: Alloys and Catalysts Chair: Zhihong Jia		
15:00-15:20	A24	Structure-Performance Relationship and Sub-Atomic Structures of Metal-Based Catalysts Jun Luo (Invited) Tianjin University of Technology, China
15:20-15:40	A25	The Manipulation of Topological Magnetic Domains Via In-situ Lorentz TEM Ying Zhang (Invited) Institute of Physics, CAS, China
15:40-16:00	A26	Orientation-dependent Ductility and Deformation Behaviors in BCC Mo Nanowires He Zheng (Invited) Wuhan University, China
16:00-16:20	A27	Hetero-structured Strategy for Producing a Nano-lamellar Low Carbon Steel with Ultra-high Strength Hao Zhou (Invited) Nanjing University of Science and Technology, China
16:20	Closing Remarks/Adjourn	

SCHEDULE OF SESSIONS

A

ELECTRON MICROSCOPY AND MATERIALS SCIENCES

Honorary Chair:

Prof. JING ZHU

Prof. HENGQIANG YE

CHAIR:

Prof. ZE ZHANG

CONVENER:

Prof. XIAODONG HAN

POSTER SESSION

Theme:Microscopy Enlightens New Future

Dates: Sept.28-29,2021

Location: E1-E4 Hallway,
China International Exhibition
Center (Tianzhu New Hall), Beijing

A-P1

APTAMER FUNCTIONALIZED PHOTONIC CRYSTAL SENSOR FOR RAPID DETECTION OF SARS-CORONAVIRUS-2

Ghulam MURTAZA1, Aysha Sarfraz RIZVI1, Zi Hui Meng*1

1 School of Chemistry and Chemical Engineering, Beijing Institute of Technology, Beijing, China 100081

A-P2

SPINODAL-MODULATED SOLID SOLUTION DELIVERS A STRONG AND DUCTILE REFRACTORY HIGH-ENTROPY ALLOY

Zibing An1, Shengcheng Mao1*, Tao Yang2, C.T. Liu2, Evan Ma3*, Ze Zhang1,4 and Xiaodong Han1*

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4.State Key Laboratory of Silicon Materials and Department of Materials Science and Engineering, Zhejiang University, 310058 Hangzhou, China.

A-P3

MAJORANA ZERO MODE IN THE VORTEX OF ARTIFICIAL TOPOLOGICAL SUPERCONDUCTOR

Zhen Zhu, Hao Zheng, and Jin-feng Jia.

School of Physics and Astronomy, Key Laboratory of Artificial Structures and Quantum Control (Ministry of Education), Shenyang National Laboratory for Materials Science, Tsung-Dao Lee Institute, Shanghai Jiao Tong University, Shanghai 200240, China

A-P4

DESIGNER SPIN ORDER IN DIRADICAL NANOGRAHLENES

Yuqiang Zheng, Can Li, Chengyang Xu, Doreen Beyer, Xinlei Yue, Yan Zhao, Guanyong Wang, Dandan Guan, Yaoyi Li, Hao Zheng, Canhua Liu, Junzhi Liu, Xiaoqun Wang, Weidong Luo, Xinliang Feng, Shiyong Wang & Jinfeng Jia.

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6.These authors contributed equally: Yuqiang Zheng, Can Li.

A-P5

MULTIFUNCTIONAL ANTIFERROMAGNETIC MATERIALS WITH GIANT PIEZOMAGNETISM AND NONCOLLINEAR SPIN CURRENT

Hai-Yang Ma, Mengli Hu, Nana Li, Jianpeng Liu, Wang Yao, Jin-Feng Jia & Junwei Liu.

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3.Department of Physics and Center of Theoretical and Computational Physics, University of Hong Kong, Hong Kong, China. 4 Tsung-Dao Lee Institute, Shanghai, China.

A-P6

STRUCTURES AND STRUCTURAL EVOLUTION OF SUBLAYER SURFACES OF METAL-ORGANIC FRAMEWORKS

Xiaocang Han, Prof. Pan Liu, Dr. Fang Lin, Dr. Wenqian Chen, Ruichun Luo, Qi Han, Zhuo Jiang, Prof. Xiaodong Wang, Prof. Shuangxi Song, Prof. Kolan Madhav Reddy, Prof. Hexiang Deng, Prof. Mingwei Chen.

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6. Department of Materials Science and Engineering Johns Hopkins University Baltimore, MD 21218 (USA).

A-P7

ROOM-TEMPERATURE SUPERPLASTICITY IN AU NANOWIRES AND THEIR ATOMISTIC MECHANISMS

Pan Liu, Lihua Wang, Yonghai Yue, Shuangxi Song, Xiaodong Wang, Kolan Madhav Reddy, Xiaozhou Liao, Ze Zhang, Mingwei Chen and Xiaodong Han.

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Baltimore, MD 21218, USA.

A-P8

ASSEMBLY OF 1T' -MOS2 BASED FIBERS FOR FLEXIBLE ENERGY STORAGE

Hui Pan, Jingyi Lin, Xiaoyu Han, Yao Li, Xin Meng, Ruichun Luo, Joseph James Broughton, Muhammad Imtiaz, Zhixin Chen, Dawei Wang, Shenmin Zhu, Pan Liu and Zhengxiao Guo.

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4.School of Chemical Engineering, UNSW Australia, Sydney, NSW 2052, Australia

5.Departments of Chemistry and Mechanical Engineering, The University of Hong Kong, Hong Kong SAR.

A-P9

TWISTED 1T TAS2 BILAYERS BY LITHIATION EXFOLIATION

Hui Li, Pan Liu, Qi Liu, Ruichun Luo, Chenguang Guo, Ziqian Wang, Pengfei Guan, Christopher Florencio Aleman, Fuqiang Huang and Mingwei Chen.

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3.State Key Laboratory of High Performance Ceramics and Superfine Microstructure, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai 200050, China

4.Department of Materials Science and Engineering, Johns Hopkins University, Baltimore, MD 21214, USA.

A-P10

NANOPOROUS HIGH-ENTROPY ALLOYS FOR HIGHLY STABLE AND EFFICIENT CATALYSTS

Hua-Jun Qiu, Gang Fang, Yuren Wen, Pan Liu, Guoqiang Xie, Xingjun Liu and Shuhui Sun.

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2.School of Materials Science and Engineering, University of Science and Technology Beijing, Beijing 100083, China.

3.State Key Laboratory of Metal Matrix Composites, School of



分会日程

BCEIA2021 Schedule Of Sessions

Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200030, P. R. China.

4.Institut National de la Recherche Scientifique-Energie Materiaux et T'el'ecomunications, Varennes, Quebec J3X 1S2, Canada.

5.State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology, Shenzhen 518055, China.

A-P11

A GAME-CHANGING DESIGN OF LOW-COST, LARGE-SIZE POROUS COCATALYSTS DECORATED BY ULTRA-SMALL PHOTOCATALYSTS FOR HIGHLY EFFICIENT HYDROGEN EVOLUTION

Yuanli Li, Chunlang Gao, Wenshuai Jiang, Chunqiang Zhuang, WuyuanTan, Weiming Li, Yongli Li, LihuaWang, XiaozhouLiao, ZaichengSun, JinZou, XiaodongHan.

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A-P12

CDS NANOSPHERES DECORATED WITH NIS QUANTUM DOTS AS NOBEL-METAL-FREE PHOTOCATALYSTS FOR EFFICIENT HYDROGEN EVOLUTION

Wuyuan Tan, Yuanli Li, Wenshuai Jiang, Chunlang Gao, and Chunqiang Zhuang.

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A-P13

ANCHORING ULTRA-SMALL TIO2 QUANTUM DOTS ONTO ULTRA-THIN AND LARGE-SIZED MXENE NANOSHEETS FOR HIGHLY EFFICIENT PHOTOCATALYTIC WATER SPLITTING

Weiming Li, Chunqiang Zhuang, Yuanli Li, Chunlang Gao, Wenshuai Jiang, Zai chengSun, Kezhen Qi.

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A-P14

DESIGNING LARGE-SIZED COCATALYSTS FOR FAST CHARGE SEPARATION TOWARDS HIGHLY EFFICIENT VISIBLE-LIGHT-DRIVEN HYDROGEN EVOLUTION

Hang Zhang, Yuanli Li, Weiming Li, Chunqiang Zhuang, Chunlang Gao, Wenshuai Jiang, Wei Sun, Kezhen Qi, Zaicheng Sun, Xiaodong Han.

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A-P15

IN SITU LIQUID CELL TRANSMISSION ELECTRON MICROSCOPY GUIDING THE DESIGN OF LARGE-SIZED COCATALYSTS COUPLED WITH ULTRA-SMALL PHOTOCATALYSTS FOR HIGHLY EFFICIENT ENERGY HARVESTING

Chunlang Gao, Chunqiang Zhuang, Yuanli Li, Heyang Qi, Ge Chen, Zaicheng Sun, Jin Zou and Xiaodong Han.

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A-P16

FIRST-PRINCIPLES STUDY OF MECHANICAL AND THERMODYNAMIC PROPERTIES OF BINARY AND TERNARY COX (X = W AND MO) INTERMETALLIC COMPOUNDS

Yunfei Yang, Changhao Wang *, Junhao Sun, Shilei Li, Wei Liu, Hao Wu and Jinshu Wang *

Key Laboratory of Advanced Functional Materials, Education Ministry of China, Faculty of Materials and Manufacturing, Beijing University of Technology, Beijing 100124, China.

A-P17

FACILE SYNTHESIS OF MoO2/CASO4 COMPOSITES AS HIGHLY EFFICIENT ADSORBENTS FOR CONGO RED AND RHODAMINE B

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A-P18

STUDIES OF THE INFLUENCE OF ZRH2 ADDITION TO THE IMPREGNANT ON THE PERFORMANCE OF YTTRIUM OXIDE-TUNGSTEN MATRIX BA DISPENSER CATHODES

Xiaoke Zhang; Yazhou Hua; Jinshu Wang; Yunfei Yang; Wei Liu.

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A-P19

A GENERAL ROUTE TO MODIFY DIATOMITE WITH NIOBATES FOR VERSATILE APPLICATIONS OF HEAVY METAL REMOVAL

Tianning Wang, Yunfei Yang, Jinshu Wang, Junshu Wu, Lingmin Sun, Yucheng Du, Yongli Li and Hongyi Li

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A-P20

DENSIFICATION BEHAVIOR AND MICROSTRUCTURE EVOLUTION OF MO MANOCRYSALS BY MICROWAVE SINTERING

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A-P21

FOG COLLECTION ON A SUPERHYDROPHOBIC/HYDROPHILIC COMPOSITE SPINE SURFACE

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A-P22

INVESTIGATION ON THE DISTRIBUTION OF FE AND NI IN REDUCED MO POWDERS AND ITS EFFECTS ON THE ACTIVATED SINTERING OF Mo COMPACTS

Haidong Hu, Qiao Yin, Shuqun Chen, Yanlin Jia, Wenyuan Zhou, Hongyi Li, Peng Hu and Jinshu Wang

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A-P23

REVEALING THE FAILURE MECHANISM OF TRANSITION-METAL CHALCOGENIDES TOWARDS THE COPPER CURRENT COLLECTOR IN CECNDARY BATTERIES

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A-P24

TUNGSTEN OXIDE NANOSTRUCTURES AND NANOCOMPOSITES FOR PHOTOELECTROCHEMICAL WATER SPLITTING

Guangwei Zheng, Jinshu Wang, Hu Liu, Vignesh Murugadoss, Guannan Zu, Haibing Che, Chen Lai, Hongyi Li, Tao Ding, Qiang Gao and Zhanhu Guo

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A-P25

ENGINEERING MATERIALS WITH LIGHT: RECENT PROGRESS IN DIGITAL LIGHT PROCESSING BASED 3D PRINTING

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A-P26

Transient Electronic Depletion and Lattice Expansion Induced Ultrafast Bandedge Plasmons

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A-P27

IN SITU STUDY OF FRACTURE BEHAVIOR OF ULTRAFINE WC-CO CEMENTED CARBIDE

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A-P28

HOW NON-FERROMAGNETIC MN ENHANCES THE MAGNETIZATION OF SMCO7 BASED ALLOYS

Kai Guo, Hao Lu, Fei Mao, Dong Liu, Fawei Tang, Haibin Wang and Xiaoyan Song

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A-P29

HOW HARD METAL BECOMES SOFT: CRYSTALLOGRAPHIC ANALYSIS ON THE MECHANICAL BEHAVIOR OF ULTRA-COARSE CEMENTED CARBIDE

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A-P30

EVALUATION OF INTERFACIAL STABILITY AND STRENGTH OF CERMETS BASED ON WORK FUNCTION

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SCHEDULE OF SESSIONS

B

MASS SPECTROMETRY

CHAIR:
Prof. Huwei LIU

ORAL LECTURES

Theme:Accurate Measurement, MS Improves Health

Dates: Sept.28-29,2021

Location: Academic Conference Area:Room W105

China International Exhibition Center (Tianzhu New Hall), Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Chair: Prof. Xinrong Zhang, Prof. Huiru Tang		
9:20-9:25	Opening Remarks by Prof. Huwei Liu	
9:25-9:50	B2	Method Development for Single-Cell Analysis with Mass Spectrometry Xinrong ZHANG (Keynote) Tsinghua University, China
9:50-10:15	B3	Quantification of Lipoprotein Phenome and Applications Huiru TANG (Keynote) Fudan University, China
10:15-10:30		Safeguard Human Health - Shimadzu Clinical LCMS/MS Shuying PENG (Oral) Shimadzu (China) Co., Ltd.
10:30-10:50	Coffee Break	
Chair: Prof. Mingliang Ye and Prof. Ruixiang Sun		
10:50-11:15	B4	Probe Free Methods to Identify Drug Targets at Proteome Level Mingliang YE (Keynote) Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
11:15-11:40	B5	Fragmentation Behaviors of RNA Oligomers by Tandem Mass Spectrometry Ruixiang SUN (Keynote) National Institute of Biological Sciences, China
11:40-11:55	B6	Mass Spectrometry-Based Metabolomics and Lipidomics of Covid-19 Convalescent Patients Shuhai LIN (Oral) Xiamen University, China
11:55-13:30	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Chair: Prof. Yinlong Guo, Prof. Wei Hang		
13:30-13:55	B8	Emerging Mass Spectrometric Techniques for Single Cell Imaging Wei HANG (Keynote) Xiamen University, China
13:55-14:20	B16	Understanding Allosteric Enzyme Regulation Using Integrative Structural Mass Spectrometry Huilin LI (Keynote) Sun Yat-Sen University, China
14:20-14:45	B9	Mass Spectrometry-Based Discovery of New Chemical Scaffold in Cancer Chemotherapy Yinlong GUO (Keynote) Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China
14:45-15:00	B20	In Vivo Facemask Microextraction Sampling of Human Breath for Mass Spectrometry Analysis Bin HU (Oral) Jinan University, China
15:00-15:15	Coffee Break	
Chair: Prof. Huanwen Chen, Prof. Yu Bai		
15:15-15:40	B11	Production and Application of Reactive Water Radical Cations under Ambient Conditions Huanwen CHEN (Keynote) East China Institute of Technology, China
15:40-16:05	B12	Mass Spectrometry Based Platform for Profiling Exosome Surfacome of Pancreatic Adenocarcinoma Cell Hong WANG (Keynote) Hangzhou Cosmos Wisdom Biothchnology, China

16:05-16:30	B13	Ultrasensitive Ambient Mass Spectrometry Immunoassay and Its Applications Yu BAI (Keynote) Peking University, China
16:30-16:55	B14	Exploration and Discovery of Novel Geochemistry Biomarkers From Crude Oils Yehua HAN (Keynote) China University of Petroleum-Beijing, China
Date: Sep. 29, 2021 Am (Wednesday)		
Chair: Prof. Haojie Lu, Prof. Zheng Ouyang		
9:20-9:45	B15	Novel Approaches for Analysis of Protein Glycosylation by Mass Spectrometry Haojie LU (Keynote) Fudan University, China
9:45-10:10	B7	How to Make Small Mass Spectrometry System Intelligent Zheng OUYANG (Keynote) Tsinghua University, China
10:10-10:25	B17	An Electrochemistry-Mass Spectrometry System and Its Application in Peptide/Protein Characterization Ming LI (Oral) National Institute of Metrology, China
10:25-10:40	Coffee Break	
Chair: Prof. Jiuming He, Dr. Honggang Nie		
10:40-11:05	B18	Quantitative Mass Spectrometry Imaging Method and Its Application in the Evaluation of Antitumor Drug Jiuming HE (Keynote) Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, China
11:05-11:30	B19	Progress in the Application of Mass Spectrometry Imaging and Related Technologies Honggang NIE (Keynote) Peking University, China
11:30-11:45	B10	Isomer-specific Fragmentation and Cryogenic IR Spectroscopy of Glycans Lei YUE (Oral) Hunan University, China

11:45-13:30	Lunch time/Poster Session	
Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Prof. Qian Liu, Prof. Dongfa Guo		
13:30-13:55	B21	Mass Spectrometry for Multi-Dimensional Characterization of Nanoparticles in Environmental Media Qian LIU (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China
13:55-14:20	B22	Inductively Coupled Plasma-Sector Field Mass Spectrometers and Typical Applications in Nuclear Geology Dongfa GUO (Keynote) Beijing Research Institute of Uranium Geology, China
14:20-14:45	B23	The Development of Multiplex Tags Chemical Isotope Labeling Strategy for UHPLC-MS/MS Xianen ZHAO (Keynote) Qufu Normal University, China
14:45-15:00	B24	Liquid Secondary Ion Mass Spectrometry for in situ and Real-Time Characterizations of Electrode-Electrolyte Interfaces Yanyan Zhang (Oral) Institute of Chemistry, Chinese Academy of Sciences, China
15:00-15:15	Coffee Break	
Chair: Prof. Huwei Liu, Prof. Xiayan Wang		
15:15-15:40	B25	Single-Cell Metabolites Based on Volume-Visualized Pico/Femtoliter Sampling Probes Xiayan WANG (Keynote) Beijing University of Technology, China
15:40-16:05	B26	All-In-One Single-Cell Mass Spectrometry System for the Rapid and Deep Intracellular Profiling Shuting XU (Keynote) Jiangnan University, China
16:05-16:20	/	Closing Remarks Chair: Prof. Huwei LIU

SCHEDULE OF SESSIONS

B MASS SPECTROMETRY

CHAIR:
Prof. Huwei LIU

POSTER SESSION

Theme:Accurate Measurement, MS Improves Health
Dates: Sept.28-29,2021
Location: E1-E4 Hallway, China International Exhibition Center (Tianzhu New Hall), Beijing

B-P1

LC-MS/MS-BASED METABOLOMICS ANALYSIS OF GLIOMA MULTICELLULAR TUMOR SPHEROIDS

Shanjing Wen1, Qingce ZANG1, Ruiping ZHANG1,* , Zeper ABLIZ1,2

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2 Centre for Bioimaging and Systems Biology, Minzu University of China, Beijing 100081, P. R. China.

B-P2

ONLINE EXTENSION OF SINGLE-CELL EVENTS FOR SINGLE CELL MASS SPECTROMETRY ANALYSIS

Shaojie QIN, Daiyu MIAO, Yu BAI* and Huwei Liu

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B-P3

DIRECT SPECIATION ANALYSIS OF ARSENIC IN RAW BIOLOGICAL SAMPLES BY AMBIENT IONIZATION MASS SPECTROMETRY

Debo WU1, Shuiping YANG1, Md. Matiur RAHMAN1, Wei LIU1, Jiaquan XU*1 and Huanwen CHEN1

1Jiangxi Key Laboratory for Mass Spectrometry and Instrumentation, East China University of Technology, Nanchang, 330013

B-P4

RAPID AND SENSITIVE DETECTION OF ACETONE IN EXHALED BREATH THROUGH AMBIENT REACTION WITH WATER RADICAL CATIONS

Xiaoping ZHANG*, Mingyu ZHENG, Konstantin CHINGIN, Huanwen CHEN

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B-P5

DIRECT MASS SPECTROMETRY ANALYSIS OF URANIUM ORE SAMPLES

Faliang LI, Jiaquan XU, Debo WU, Huanwen CHEN, Xinglei ZHANG*

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B-P6

RAPID ONLINE SEQUENTIAL ANALYSIS OF RARE EARTH ELEMENTS IN A DINOSAUR BONE BY MASS SPECTROMETRY

Zequn Yang¹, Faliang Li¹, Hui Li¹, Jiaquan Xu^{*1}, Shuanglong Wang^{*1}

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B-P7

SEQUENTIAL ANALYSIS OF HEAVY METAL COMPOUNDS IN THE INNER WALL ATTACHMENT OF WATER PIPE USING ELECTROCHEMICAL MASS SPECTROMETRY

Lili SONG, Huanwen CHEN, Jiaquan XU *

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B-P8

FACILE FORMATION OF PROTONATED WATER-HYDROGEN CLUSTERS THROUGH COLLISION-INDUCED REACTION

Dongbo MI, Yuanyuan CHENG, Tenggao ZHU, Konstantin CHINGIN, Meng WANG*, and Huanwen CHEN

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B-P9

STUDY ON THE MASS SPECTRAL CHARACTER OF SYNTHETIC CATHINONES WITH GC-MS

Haohan Yuan¹, Junyang Liang^{1,2}, Chijian Shan¹ and Xueguo Chen^{*1}

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² Institute of Evidence Identification of Jilin Province Public Security Department, Changchun Jilin 130117 China

B-P10

AFADESI-MSI-BASED SPATIALLY RESOLVED PHARMACO-METABOLOMICS APPROACH TO EVALUATE DRUG PENETRATION AND METABOLISM IN 3D HEPG2 SPHEROIDS

Limei LI¹, Qingce ZANG¹, Ruiping ZHANG^{1,*}, Zeper ABLIZ^{1,2}

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B-P11

PROPYLENE GLYCOL OXIDATION INTO LACTIC

ACID IN AQUEOUS MICRODROPLETS

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B-P12

SENSITIVE DEMARCATION AND QUANTITATION OF ISCHEMIC BOUNDARY USING AMBIENT MASS SPECTROMETRY IMAGING

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B-P13

STUDY ON SPECIATION OF URANYL ACETATE COMPLEX IN LEACHING SOLUTION OF URANIUM SLAG BY ESI-MS/MS

Kai ZENG^{1,2}, Lingling XU², Mingbiao Luo^{1,2}, Xinglei ZHANG^{1*}, Tao YU^{1,2*}

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B-P14

ORGAN-SPECIFIC METABOLITES ANNOTATION STRATEGY FOR MASS SPECTROMETRY IMAGING OF WHOLE-BODY MOUSE

Ying ZHU¹, Qingce ZANG¹, Ruiping ZHANG¹ and Zeper ABLIZ^{*1,2}

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B-P15

DESIGN AND SYNTHESIS OF NEW MASS TAGS FOR ULTRASENSITIVE DETECTION OF PROTEINS ON CELL SURFACES

Mingxia LIU, Jinjuan XUE, Yu BAI*, Huwei LIU

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B-P16

ACCELERATING THE CHEMICAL REACTION IN

MICRODROPLETS

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B-P17

DISCRIMINANT ANALYSIS OF VEGETABLE OILS BASED ON NONTARGET ANALYSIS BY THERMOGRAVIMETRIC-GAS CHROMATOGRAPHY/MASS SPECTROMETRY (TGA-GC/MS)

Xia ZHOU¹, Xiuqin LI¹, Bo ZHAO¹, Xiaoting CHEN², Qinghe ZHANG^{*1}

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² Department of Scientific Research, Qiqihar Medical University, Qiqihar, 161006, China

B-P18

DIRECT SURFACE ANALYSIS OF INTERNAL AND EXTERNAL SUBSTANCES IN FOODS VIA LESA

Ruling Zheng¹, Yahong Chen², Minkan Lu², Jianzhong Shentu^{*2,3}, Yinglei PU⁴, Xiaokun DUAN⁴, Charles C. LIU⁴

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³ First Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou, China

⁴ ASPEC Technologies Limited, Beijing, China

B-P19

EXPLORING THE POTENTIAL OF AP-MALDI IN ANALYZING DRUGS AND RELEVANT COMPOUNDS

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B-P20

THE DISTRIBUTION MAP OF AROMATIC HYDROCARBONS IN DBE VERSUS CARBON NUMBER PLOT

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B-P21

RAPID DETECTION OF LARGER ALIPHATIC

ACIDS IN HUMAN PLASMA BY IM-MS

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B-P22

IN SITU CHEMICAL DERIVATIZATION OF TISSUE USING TEMPERATURE-CONTROLLED CONDENSATION AND REACTION FOR MASS SPECTROMETRY IMAGING

Jing Han¹, Zixuan Wang¹, Xin Li^{*1}, Zeper Abliz^{1,2}

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B-P23

METABOLOMIC CHARACTERIZATION OF 1P19Q CODELETION GLIOMA USING MASS SEPCTROMETRY IMAGING

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B-P24

SELECTIVE IONIZATION OF DISSOLVED ORGANIC NITROGEN BY POSITIVE MODE ELECTROSPRAY IONIZATION ORBITRAP MASS SPECTROMETRY

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B-P25

DESIGN OPTIMIZATION OF PRECISION DESORPTION ELECTROSPRAY PROBE AND HIGH-RESOLUTION SPATIAL METABOLOMICS APPLICATIONS

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B-P26

DIRECT ANALYSIS IN REAL TIME (DART) MASS SPECTROMETRY: FOCUS ON ON-SITE FAST BROAD-SPECTRUM ANALYSIS AND NAVIGATION INSPECTION

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B-P27

SOFT IONIZATION BY CHEMICAL REACTION IN TRANSFER (SICRIT) MASS SPECTROMETRY: FOCUS ON GAS ANALYSIS, AROMATICS, SYNTHETIC BIOLOGY, AND RESPIRATORY MEDICINE

Tiwen LI1, Xiaokun DUAN1, Lexie PU1, Charles C. LIU1

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B-P28

SENSITIVE DEMARCATION AND QUANTITATION OF ISCHEMIC BOUNDARY USING AMBIENT MASS SPECTROMETRY IMAGING

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B-P29

METABOLOMIC CHARACTERIZATION OF 1P19Q CODELETION GLIOMA USING MASS SEPCTROMETRY IMAGING

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B-P30

ANALYSIS OF DEPROTONATION SITES OF ACIDIC MOLECULES BASED ON ION MOBILITY MASS SPECTROMETRY AND DFT

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B-P31

MASS SPECTROMETRY IMAGING BASED SPATIAL METABOLOMICS REVEAL DRUG EFFECTS AND MOLECULAR MECHANISMS IN RAT BRAIN MICROREGIONS

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B-P32

VISUALIZING METABOLITES IN THE XYLEM BY MATRIX ASSISTED LASER DESORPTION/IONIZATION MASS SPECTROMETRY IMAGING

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B-P33

IN-SITU IMAGING OF SOOT PARTICLES, NITRATES AND SULFATES FROM GRADING SAMPLING MEMBRANE

Ke Min, Weichao Wang, Zigu Chen, Lin Liu, Qian Liu*, Guibin Jiang

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B-P34

BLOOD METAL MARKERS FOR CHILDREN WITH AUTISM: A STUDY BASED ON COPPER CONCENTRATION/ISOTOPE FINGERPRINTS

Weibo LING1, 2, Weichao WANG1, 2, Luyao ZHANG1, 2, Dawei LU1, 2, Qian LIU1, 2, *and Guibin JIANG1, 2

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B-P35

MC-ICP-MS PLAYS A ROLE IN DETECTING COPPER IMBALANCE DURING AGING PROCESS

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B-P36

IDENTIFY AND QUANTIFY THE HOST CELL PROTEINS OF MONOCLONAL ANTIBODY BASED ON THE LABEL-FREE-QUANTIFICATION

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B-P37

INTRODUCING DERIVATIZATION VIA CLICK REACTION FOR DETECTION OF UNSTABLE METABOLITES IN LIVING SINGLE CELLS AND BRAIN TISSUES

Meihui ZHUANG1, and Guangming HUANG*1

1 Hefei National Laboratory for Physical Sciences at the Microscale, School of Chemistry and Materials Science, University of Science and Technology of China, Hefei, Anhui, 230026, P. R. China.

B-P38

LASER CLEAVABLE MASS PROBES FOR IN SITU MULTIPLEXED GLYCAN DETECTION AND IMAGING USING MASS SPECTROMETRY

Wen Ma1,*, Yu Bai2,* and Huwei Liu2

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B-P39

CARDIAC TROPONIN I IMMUNOASSAY BY PAPER SPRAY IONIZATION MASS SPECTROMETRY

Yuanyi He, and Guangming Huang*

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B-P40

PRESERVED PROTEIN STRUCTURE IN NATIVE ELECTROSPRAY IONIZATION REVEALED BY MOLECULAR DYNAMICS SIMULATIONS

Moujun Luan, Zhuanghao Hou*, and Guangming Huang*

Hefei National Laboratory for Physical Sciences at the Microscale, National Synchrotron Radiation Laboratory, School of Chemistry and

Materials Science, University of Science and Technology of China (USTC), Hefei, 230026 P. R. China

B-P41

A FACILE APPROACH TO IMPROVE SENSITIVITY IN PAPER SPRAY IONIZATION VIA AGAROSE HYDROGEL CONDITIONING

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B-P42

ACCURATE QUANTIFICATION OF RNA REFERENCE MATERIALS BASED ON NUCLEOTIDE ANALYSIS USING ID-LC-MS/MS

Xiaoting QIAO1, Jie XIE1, Chunyan NIU1, Lianhua DONG1, You JIANG1, Xinhua DAI*1, Xiang FANG*1

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B-P43

APPLICATIONS OF LIQUID EXTRACTION SURFACE ANALYSIS-MASS SPECTROMETRY IN THE ANALYSIS AND QUALITY EVALUATION OF HERBAL MEDICINES

Linnan LI 1, *, Mei TIAN 1, Yanqiao XIE 1, Ruirong ZHENG 1, Yilin CHEN 1, Li YANG 1, 2, * and Zhengtao WANG 1, 2, *

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2 Shanghai R&D Center for Standardization of Chinese Medicines, Shanghai, 201203

B-P44

SEQUENTIAL DETECTION OF ORGANIC/INORGANIC LEAD COMPOUNDS IN PM2.5 USING ELECTROCHEMICAL MASS SPECTROMETRY

Jiaquan XU*, Lili SONG, Ting LI, Konstantin CHINGIN and Huanwen CHEN

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SCHEDULE OF SESSIONS

C
OPTICAL SPECTROSCOPY

CHAIR:
Prof. Yan He

ORAL LECTURES
Theme: Highly Sensitive Optical Analysis and Imaging
Dates: Sept.28-29,2021
Location: Academic Conference Area:Room E206, China International Exhibition Center (Tianzhu New Hall), Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Chair: Prof. Yan He		
9:20-9:25	Opening Remarks by Prof. Yan He	
9:25-9:45	C2	Analysis of Protein Stoichiometry and Organelle Dynamics by Single-Molecule Fluorescence Imaging Xiaohong Fang Institute of Chemistry, Chinese Academy of Sciences
9:45-10:05	C3	Plasmonic Patch Nanoantennas: Cavity Modes and Surface-Enhanced Raman Spectroscopy Qi-Huo Wei Southern University of Science and Technology
10:05-10:25	C4	Quantitative Chemiluminescence Resonance Energy Transfer Chao Lu Beijing University of Chemical Technology
10:25-10:37	C5	Machine Learning-Enabled Mid-IR spectrometer for Volatile Organic Compound Identification Jianxiong Zhu Southeast University
10:37-10:50	Coffee break	
Chair: Prof. Xiaohong Fang, Prof. Huimin Ma		
10:50-11:10	C6	Spectroscopic Probes and Imaging Analysis (2021) Huimin Ma Institute of Chemistry, Chinese Academy of Sciences
11:10-11:30	C7	Silicon-Based Nano-Biosensing and Bioimaging Yao He Soochow University
11:30-11:50	C8	Spectra Analysis of Nano-Cell Interaction and Potential Application Xiue Jiang Changchun Institute of Applied Chemistry, Chinese Academy of Sciences
11:50-12:10	C9	Multifunctional Nanoparticals for Cancer Diagnosis and Therapy Na Na Beijing Normal University
12:10-12:30	C10	Multi-microenvironment Triggered Sensing System for Highly Contrast Tumor Fluorescence Imaging Zhaohui Li Zhengzhou University
12:30-13:00	Lunch	
Date: Sep. 28, 2021 Pm (Tuesday)		
Chair: Prof. Na Li, Prof. Xiue Jiang		
13:00-13:20	C11	Single Molecule Study of Chromatin Structure and Dynamics Yujie Sun Peking University
13:20-13:40	C12	Super-Resolution: Vision from A New Dimension Peng Xi Peking University
13:40-14:00	C13	Cross-Scale Analysis of Cytoskeletal Structure and Dynamics Xin Liang Tsinghua University
14:00-14:20	C14	Underwater Super-Resolution Imaging for In Situ Observation of Marine Plankton Jianping Li Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences
14:20-14:32	C15	Development and Applications of Single-Molecule Spectrometer Based on Fluorescence Correlation Spectroscopy Shaohui Huang Institute of Biophysics, Chinese Academy of Sciences

14:32-14:44	C16	Analysis of Intracellular Fate of Gold Nanoparticles by Hyperspectral Dark-Field Imaging Lining Xu Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences
14:44-14:56	C17	Artificial Bacteria Communities Programmed by DNA Nanotechnology Hang Xing Hunan University
14:56-15:08		The Innovation Technology of Scientific Detectors for Life Science and Spectroscopy Kevin Zhu Andor Technology
15:08-15:20	Coffee break	
Chair: Prof. Yao He		
15:20-15:40	C18	The Optical Sensing via Microscopic Single Particle Counting Na Li Peking University
15:40-16:00	C19	Developing Three-Dimensional Single Particle Tracking Technique in Complicated Environments Using Deep Neural Networks Gufeng Wang North Carolina State University
16:00-16:20	C20	Nanosopic Imaging of β -Amyloid Peptides Fibrillation Lehui Xiao Nankai University
16:20-16:32	C21	Real-Time Visualization of Iodide-Induced Morphological Transformation of Single Gold Nanostars with Red and Green Laser Co-Illumination Dong Xu Central South University of Forestry & Technology
16:32-16:55	Adjourn	
Date: Sep. 29, 2021 Am (Wednesday)		
Chair: Prof. Chuan Dong		
9:20-9:40	C22	Rational Design of DNA Nanomachines and Their Biological Applications Bang-Ce Ye East China University of Science and Technology
9:40-10:00	C23	Aptamer-Based Electrochemistry for Biomedical Application Quan Yuan Hunan University
10:00-10:20	C24	Cataluminescence Sensing Systems Yi Lv Sichuan University
10:20-10:32		Analysis of Plastic Aging and Degradation by Infrared Spectroscopy Wei Zheng Shimadzu (China) Co.Ltd
10:32-10:45	Coffee break	
Chair: Prof. Bang–Ce Ye, Prof. Yi Lv		
10:45-11:05	C25	Photochemical Activity Modulation and Analytical Applications of 2D Lanthanide Porphyrin Metal Organic Frameworks Chengzhi Huang Southwest University
11:05-11:25	C26	Study and Application of Spectral Properties of Carbon Dots and Functional Dyes Chuan Dong Shanxi University

11:25-11:45	C27	Progress in Cyclic Chemiluminescence Techniques Gongke Li Sun Yat-sen University
11:45-12:05	C28	Graphitic Nanocapsule Based Raman Analysis and Biomedical Applications Zhuo Chen Hunan University
12:05-12:25	C29	Nanoscintillators-Based X-Ray Luminescence Imaging Qiushui Chen Fuzhou University
12:25-13:00	Lunch	
Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Prof. Chengzhi Huang, Prof. Gongke Li		
13:00-13:20	C30	Liquid Metal-Elastomer Composites for Flexible Electronics that Allow Biochemical Analysis Xingyu Jiang Southern University of Science and Technology
13:20-13:40	C31	Bioinspired Colloidal Motors for Biomedical Applications Qiang He Harbin Institute of Technology
13:40-14:00	C32	Chemical Reaction Revisited by In Situ Electron Microscopy and Field Gradient NMR Huan Wang Peking University
14:00-14:20	C33	Bacteria Transport in Microfluidic Channels Guangjin Jing Northwest University
14:20-14:40	C34	Living Cell Analysis Using Microfluidics and Liquid-Crystal Sensing Ling Lin Beijing Technology and Business University
14:40-15:00	C35	Biological Imaging of Chemical Bonds by Stimulated Raman Scattering Microscopy Fanghao Hu Tsinghua University
15:00-15:12		Efficient Removal of Se Mass Interference in Complex Food Matrix By iCRC Collision Reaction Cell Fenguo Wu Analytik Jena GmbH
15:12-15:25	Coffee break	
Chair: Prof. Zhiqin Yuan		
15:25-15:37	C36	Applications of Concentric DNA Amplifier in Biosensing and DNA Computing Peng Yang Sichuan University
15:37-15:49	C37	Development of A Long-Lived Luminescence Probe Based on Transition Metal Complexes for Liver Injury Diagnosis Wenzhu Zhang Dalian University of Technology
15:49-16:01	C38	Luminescence Analysis of Molecular Aggregates Weijiang Guan Beijing University of Chemical Technology
16:01-16:13	C39	DNA Self-Assembly Nanomotors and Its Clinical Application Junbo Chen Sichuan University
16:13-16:25	C40	Biological Remote Sensing Based on Optical Waveguide of A DNA-Hybrid Semiconductor Prismatic Hexagon Chunzhi Cui Yanbian University
16:32-16:55	Adjourn	

SCHEDULE OF SESSIONS

C OPTICAL SPECTROSCOPY

CHAIR:
Prof. Yan He

POSTER SESSION

Theme: Highly Sensitive Optical Analysis and Imaging

Dates: Sept.28-29,2021

Location: E1-E4 Hallway, China International Exhibition Center (Tianzhu New Hall), Beijing

C-P1

SEMICONDUCTING POLYMER DOTS FOR BIOSENSING AND BIOIMAGING

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C-P2

RAPID DETERMINATION OF CADMIUM IN RICE BY ATOMIC FLUORESCENCE SPECTROMETRY

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C-P3

A SIGNAL CONVERSION SYSTEM USING BINDING-INDUCED STRAND DISPLACEMENT FOR DISEASE BIOMARKER ASSAY

Lingying XIA1, Yuling JIANG2, Peng YANG1, Lijie DU1, Junbo CHEN*1, Xiandeng HOU*1,2 and Nansheng CHENG*3

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3 Biliary Surgical Department, West China Hospital, Sichuan University, Chengdu, Sichuan, China

C-P4

SENSITIVE DETECTION OF TELOMERASE ACTIVITY BASED ON ENZYMATIC ETCHING OF GOLD NANORODS

Xiao Feng Yang, Peng Fei Gao*, Cheng Zhi Huang*

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C-P5

Isomeric Bis(dialkoxyphenyl)pyrenes: Multiple Phases and Versatile Photophysical Properties

Fengniu Lu1,2, Izuru Kawamura3, Akinori Saeki4, Hengdao Quan1 and Takashi Nakanishi*2

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4 Graduate School of Engineering, Osaka University, Osaka 565-0871, Japan

C-P6

EFFECT OF LIPID-PACKING DEFECTS ON TUMOR CELL EXTRAVASATION ACROSS THE ENDOTHELIAL

Nan Li, Jin-Ming Lin*2

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C-P7

SINGLE NANOPARTICLE TRACKING REVEALS EFFICIENT LONG-DISTANCE UNDERCURRENT TRANSPORT IN UPPER FLUID OF BACTERIAL SWARMS

Xiaodong Wen, Jingjing Feng, Zexin Zhang, Jianfeng Xue, Yan He*

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C-P8

MONITORING THE SPATIOTEMPORAL HETEROGENEITY OF BIOCHEMICAL PROCESSES WITH HIGH-SPEED SINGLE-NANOROD ROTATIONAL SENSING

Xijian Lin, and Yan He*

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C-P9

DETERMINATION OF IMPURITY CARBON CONTENT IN AUXILIARY MATERIAL OF NUCLEAR POWER ROTORS

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C-P10

SEMICONDUCTOR QUANTUM DOTS FOR HIGHLY SENSITIVE MULTIPLEXED DETECTION

Yanbing Lv, Qiaoli Jin, Yifan Yang, Huanhuan Xing, Ruili Wu*, Huaibin Shen, and Lin Song Li*

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C-P11

SINGLE PARTICLE SPATIOTEMPORAL ANALYSIS

OF ENTIRE TRANSMEMBRANE PROCESS OF GOLD NANORODS

Feng Ge, Dong Xu, Yi Du, Jianfeng Xue, Yan He *

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C-P12

DIRECT IMAGING OF SINGLE PLASMONIC METAL NANOPARTICLES WITH LASER LIGHT-SHEET SCATTERING IMAGING

Yongyu Zhang1, Xuan Cao2, Jingjing Feng1, Qi Pan1, and Yan He*1

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C-P13

REALTIME STUDY OF PROTEIN PHASE SEPARATION WITH SPATIOTEMPORAL ANALYSIS OF SINGLE NANOPARTICLE TRAJECTORIES

Jianfeng Xue1, Qi Pan1, Daxiao Sun2, Jie Hao1, Hansen Zhao1, Xijian Lin1, Li Yu2, and Yan He*1

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C-P14

ULTRASENSITIVE DOPAMINE DETECTION BY GOLD NANOCLUSTER-BASED RATIO-METRIC FLUORESCENT PROBE

Ying LIU1, Zhiqin YUAN*1 and Chao LU*12

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C-P15

STIMULI-ACTIVATED FLUORIMETRIC SELF-DIAGNOSIS OF POLYAMINE OXIDATION

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C-P16

IMPROVED HYDROGEN SULFIDE ANALYSIS VIA CHEMICAL REACTION INTEGRATION

Wencai LIU, Siyi WANG, Zhiqin YUAN* and Chao LU

State Key Laboratory of Chemical Resource Engineering College of Chemistry Beijing University of Chemical Technology, Beijing, 100029, China

C-P17

SUBSTITUTION OF RESORCINOL MEDIATED "TURN-ON" TO RATIOMETRIC DOPAMINE ASSAY WITH AMPLIFIED SENSITIVITY

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C-P18

POLYAMINE-ASSISTED RAPID GOLD NANOCUSTER SYNTHESIS VIA ELECTROSTATIC ATTRACTION-FACILITATED CORE APPROACHING

Jing ZHANG, He ZHOU, Zhiqin YUAN* and Chao LU

State Key Laboratory of Chemical Resource Engineering College of Chemistry Beijing University of Chemical Technology, Beijing, 100029, China

C-P19

DIRECT OBSERVATION OF SPATIOTEMPORAL HETEROGENEOUS GELATION BY ROTATIONAL TRACKING OF SINGLE ANISOTROPIC NANOPROBE

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2College of Chemistry and Chemical Engineering, Shandong Sino-Japanese Center for Collaborative Research of Carbon Nanomaterials, Qingdao University, Qingdao, 266071, China

C-P20

CONSTRUCTION OF LONG-WAVELENGTH EMISSIVE TWO-PHOTON FLUORESCENT PROBES WITH DUAL TARGETTING AND THEIR APPLICATION IN BIO-SENSOR

Zhang kai* Zhang Yanjun

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C-P21

EVALUATING BAND GAP OF SEMICONDUCTORS BY CATALUMINESCENCE

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2 Key Laboratory of Green Chemistry & Technology, Ministry of Education, College of Chemistry, Sichuan University, Chengdu, Sichuan 610064, China

C-P22

SMART DNA SENSOR FOR HIV DNA DETECTION BASED ON HOMOGENEOUS CASCADE AMPLIFICATION-TRIGGERED IN SITU FORMATION OF SILVER NANOCCLUSERS

Rongxian DU, Ran MENG, and Ting YANG*

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C-P23

THREE-DIMENSIONAL VISUALIZATION AND DYNAMIC STUDIES OF POLYMER AGING EVOLUTION

Rui Tian,*1 Qi Xu,1 Chao Lu1

1 Department of Chemistry, Beijing University of Chemical and Technology, Beijing, China

C-P24

BIASED HOMOCHIRALITY MADE OF ACHIRAL MONOMER BY LIVING SUPRAMOLECULAR POLYMERIZATION EVOLUTION

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C-P25

RAPID SCREENING OF OXYGEN VACANCIES IN LAYERED DOUBLE HYDROXIDES BY ELECTROCHEMILUMINESCENCE

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C-P26

THE PHOSPHORESCENCE NANOCOMPOSITE THIN FILM WITH RICH OXYGEN VACANCY: TOWARDS SENSITIVE OXYGEN SENSOR

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SCHEDULE OF SESSIONS



CHROMATOGRAPHY

CHAIR:

Prof. Lihua ZHANG

ORAL LECTURES

Theme: Separation Science

Escorts Future Health

Dates: Sept.28-29,2021

Location: Academic Conference

Area:Room W102,

China International Exhibition

Center (Tianzhu New Hall),

Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Chair: Prof. Gongke Li, Prof. Zhen Liu		
9:20-9:25	Opening Remarks by Prof.Yukui Zhang	
9:25-9:50	D2	Recent Progress in Fast Sample Preparation Techniques Gongke LI (Keynote) Sun Yat-sen University, China
9:50-10:15	D3	A Novel Liquid Phase Nanoextraction and Application Donghao LI (Keynote) Yanbian University, China
10:15-10:40	D4	Preparation of Magnetic Porous Carbon Nanomaterials for Sample Preparation Hongdeng QIU (Keynote) Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, China
10:40-10:50	Coffee Break	
10:50-11:15	D5	Advanced Materials Enable High-Specificity Recognition and High-Resolution Separation of Glycans Zhen LIU (Keynote) Nanjing University, China
11:15-11:40	D6	Functionalized Metal Organic Frameworks for Enrichment and Direct Detection of Small Molecules by MALDI-TOF MS Spectrometry Analysis Yan XIA (Keynote) Nankai University, China
11:40-11:55		Keep Pace with Your Processes by Online LC Solutions Yao XIAO(Oral) Agilent Technology (China) Co. Ltd. Beijing, China
11:55-13:30	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Chair: Prof. Yi Chen, Prof. Feng Qu		
13:30-13:55	D7	Theory and Practice Of Ultra-Stable Capillary Electrophoresis Yi CHEN (Keynote) Institute of Chemistry, Chinese Academy of Sciences, China
13:55-14:20	D8	Research Advances of Capillary Electrophoresis Feng QU (Keynote) Beijing Institute of Technology, China
14:20-14:45	D9	Screening Inhibitors for Blocking UHRF1 Methylated DNA Interaction with Capillary Electrophoresis Jingwu KANG (Keynote) Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China
14:45-15:10	D10	Switchable Enzyme Carriers Based on Stimuli-Responsive Porous Polymer Membranes for Enzymatic Kinetics Study Li QI (Keynote) Institute of Chemistry, Chinese Academy of Sciences, China
15:10-15:20	Coffee Break	
Chair: Prof. Hailin Wang, Prof. Bifeng Yuan		
15:20-15:45	D11	Detection and Quantification of Ultraviolet-Induced Pyrimidine Dimeric Lesions by UHPLC-MS/MS and Immunoassays Hailin WANG (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China
15:45-16:10	D12	Liquid Chromatography-Mass Spectrometry for Determination of Nucleic Acid Modifications Bifeng YUAN (Keynote) Wuhan University, China



16:10-16:35	D13	Selective Discovery of Beta2-Adrenoceptor Ligands from DNA-Encoded Library Containing Compounds with Dual-Pharmacophore Xinfeng ZHAO (Keynote) Northwest University, China
16:35-16:50		Rapid Determination of Fat-Soluble Compounds in Oils with A Two-Dimensional SFC-RPLC System Yanli GUO (Oral) Shimadzu (China) Co. LTD. Beijing Branch
16:50	Adjourn	
Date: Sep. 29, 2021 Am (Wednesday)		
Chair: Prof. Qun Fang, Prof. Weijie Qin		
9:15-9:40	D14	Integrated Microfluidic In-situ Probes for High-efficiency Liquid Chromatography Mass Spectrometry Analysis Qun FANG (Keynote) Zhejiang University, China
9:40-10:05	D15	Separation and Analysis of Protein Lysine 2-Hydroxyisobutyrylation and Its Regulatory Enzymes Kai ZHANG (Keynote) Tianjin Medical University, China
10:05-10:30	D16	Cross-Linking Mass Spectrometry Identifies the Enzymatic Substrates of A Bacterial Glucosyltransferase Xiaoyun LIU (Keynote) Peking University, China
10:30-10:40	Coffee Break	
10:40-11:05	D17	New Enrichment Methods for Extracellular Vesicle (EV) and Multi-omics Analysis Weijie QIN (Keynote) Beijing Proteome Research Center, China
11:05-11:30	D18	Separation and Analysis Based on Size-Dependent Exosome Subpopulations from Urine Mingxia GAO (Keynote) Fudan University, China
11:30-11:55	D19	The Development of Novel Immunoaffinitive Strategy for Highly Efficient Exosomes Capture Xiaoqiang QIAO (Keynote) Hebei University, China
11:55-12:10		New Generation of IOT Online Gas Chromatography Analysis Platform and Its Application in Energy and Coal Chemical Process Zhirong GAO (Oral) Shanghai Asicotech Company Limited, China
12:10-13:30	Lunch Break / Poster Session	
Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Prof. Guowang Xu, Prof. Qinghe Zhang		
13:30-13:55	D20	Functionalized Magnetic Composites Assisted Subcellular Metabolomics Analysis Guowang XU (Keynote) Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China

13:55-14:20	D21	Organic LC-IDMS Analysis: Effect of Isotope Analogs, Equilibrium and Matrix Effects Qinghe ZHANG (Keynote) National Institute of Metrology, China
14:20-14:45	D22	Peptide-Functionalized Biomimetic Nanointerfaces for Synergetic Isolation of Circulating Tumor Cells Yanyan HUANG (Keynote) Institute of Chemistry, Chinese Academy of Sciences, China
14:45-15:10	D23	Development of Solid-Phase Alkylation for All-in-One Sample Preparation to Achieve Low-Input Proteome Analysis Huiming YUAN (Keynote) Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
15:10-15:20	Coffee Break	
Chair: Prof. Huwei Liu, Prof. Lihua Zhang		
15:20-15:35	D24	Surface Nano-Sieving Polyether Sulphone Particles with Graphene Oxide Encapsulation for the Negative Isolation toward Extracellular Vesicles Yilan LI (Oral) Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
15:35-15:50	D25	Wide-Scope Multi-Residue Analysis of Pesticides In Animal-Origin Food by Quechers Coupled With UHPLC-QTOF-MS Rui WENG (Oral) Institute of Quality Standard and Testing Technology for Agro-Products, Chinese Academy of Agricultural Sciences, China
15:50-16:05	D26	High Performance Liquid Chromatography Coupled with Mass Spectrometry in the Quality Evaluation of Lilium You QIN (Oral) University of Macau, China
16:05-16:20	/	Closing Remarks Chair: Prof. Guowang Xu



SCHEDULE OF SESSIONS

CHROMATOGRAPHY

CHAIR:
Prof. Lihua ZHANG

POSTER SESSION

Theme: Separation Science
Escorts Future Health
Dates: Sept.28-29,2021
Location: E1-E4 Hallway,
China International Exhibition
Center (Tianzhu New Hall),
Beijing

D-P1

DEVELOPMENT OF SOLID-PHASE ALKYLATION BASED MICROREACTOR FOR PROTEOMIC ANALYSIS OF A SMALL NUMBER OF MAMMALIAN CELLS

Yingyun He^{1,2}, Huiming Yuan^{*,1}, Yu Liang¹, Lihua Zhang^{*,1} and Yukui Zhang¹
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²University of Chinese Academy of Sciences, Beijing 100049, China.

D-P2

METAPROTEOMIC INSIGHTS INTO THE METABOLIC ARCHITECTURE OF MICROBIAL COMMUNITIES IN SOUTH CHINA SEA

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D-P3

IONIC LIQUID-BASED EXTRACTION SYSTEM FOR IN-DEPTH ANALYSIS OF MEMBRANE PROTEIN COMPLEXES

Hongwei Chu,^{†,‡,#} Qun Zhao,^{†,#} Ju Liu,[§] Kaiguang Yang,[†] Yanlei Wang,[§] Jianhui Liu,[†] Baofeng Zhao,^{*,†} Hongyan He,^{*,§} Yong Zheng,[¶] Shijun Zhong,[‡] Zhen Liang,[†] Lihua Zhang,^{*,†} and Yukui Zhang^{†,‡}
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D-P4

THE APPLICATION OF AN INTEGRATED SYSTEM OF PRE-CONCENTRATION-GC-SCD/MS FOR DETERMINATING TRACE SULFUR COMPOUNDS, FORMALDEHYDE AND ORGANIC



CHLORIDES IN PEMFC HYDROGEN

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D-P5

DESIGN, SYNTHESIS AND SCREENING OF ANTISENSE PEPTIDE LIBRARIES FOR TARGETING AN EXOSOME-SURFACE PROTEIN

Kun Xu, Yanyan Huang, Yulong Jin, Rui Zhao*

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D-P6

SCREENING BIOACTIVE COMPONENTS OF SIRAITIA GROSVENORII BY IMMOBILIZED MUSCARINIC-3 ACETYLCHOLINE RECEPTOR CHROMATOGRAPHY

Xue ZHAO1, Xiaoying FU1, Ru XU1, Aerduosi SHAYIRANBIEKE1, Taotao WANG1, Xinfeng ZHAO*1

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D-P7

EVALUATION OF NEW LEADS AGAINST ASTHMA FROM NATURAL PRODUCTS BY BETA2-ADRENOCEPTOR CHROMATOGRAPHY

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D-P8

DETERMINATION OF QUATERNARY AMMONIUM SALTS IN COMPOUND CHEMICAL DISINFECTANTS BY CAPILLARY ELECTROPHORESIS

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D-P9

Quantitative Analysis of Monomer Residues in Fluorescent Tagged Polymer by HPLC-UV

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D-P10

RETENTION BEHAVIOR STUDIES OF DIVERSE COMPOUNDS IN GRADIENT REVERSED PHASE LIQUID CHROMATOGRAPHY

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D-P11

INVESTIGATING THE INFLUENCES OF RANDOM-REGION LENGTH ON APTAMER SELECTION EFFICIENCY BASED ON CAPILLARY ELECTROPHORESIS-SELEX AND HIGH-THROUGHPUT SEQUENCING

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D-P12

ANALYSIS OF MULTICLASS MULTIRESIDUE PESTICIDES IN MILK USING AGILENT CAPTIVA EMR-LIPID WITH LC/MS/MS AND GC/MS/MS

Xia YANG, Youjuan ZHANG, and Zhiming ZHANG

Agilent Technologies, Inc.

D-P13

PREPARATION AND BIOANALYTICAL APPLICATION OF HYDRAZONE BOND-ORIENTED SURFACE IMPRINTED POLYMERS FOR A CYCLIC PEPTIDE HORMONE

Rui Zhao*

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SCHEDULE OF SESSIONS

E

MAGNETIC RESONANCE

CHAIR:

Prof. Shenlin WANG

ORAL LECTURES

Theme:From Spins to Life, NMR Facilitating in Understanding the Life Process

Dates: Sept.28-29,2021

Location: Academic

Conference Area:Room E303
China International Exhibition Center (Tianzhu New Hall),
Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Session 1: Nucleic Acid by NMR Chair: Shenlin WANG		
9:20-9:25	Opening Remarks by Prof.Shenlin Wang	
9:25-9:50	E2	Chemical Shift Pertubation of Nucleic Acids by Semi-empirical Approach Yi XUE (Keynote) Tsinghua University, Beijing, China
9:50-10:15	E3	NMR Studies on the Interaction Between G4 DNA and Ligand Chunyang CAO (Keynote) Shanghai Institute of Organic Chemistry, Shanghai, China
10:15-10:40	E4	NMR Studies of the Stability and Interactions of Nucleic Acids in Living Cells Conggang LI (Keynote) Innovation Academy for Precision Measurement for Science and Technology, CAS, Wuhan, China
10:40-10:50	Coffee Break	
Chairman: Prof. Guangjin HOU		
10:50-11:15	E5	Assembly of G-Quadruplexes of Nucleic Acids Studied by Solution NMR Spectroscopy Na ZHANG (Keynote) High Magnetic Field Laboratory of Chinese Academy of Sciences, Hefei, China
11:15-11:40	E6	NMR Investigation on Non-B DNA Formed by Short Tandem Repeats Associated with Neurodegenerative Disorders Pei GUO (Keynote) South China University of Technology, Guangzhou, China
11:40-11:55		Bruker NMR News Lu SHAN Bruker
11:55-13:30	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Session 2: Drug Discovery by NMR Chair: Prof. Chun TANG		
13:30-13:55	E7	NMR Studies on the Mechanisms of PPI Inhibitors in the Ubiquitin-Proteasome System Hao HUANG (Keynote) Peking University,Shenzhen Graduate School, Shenzhen, China
13:55-14:20	E8	Hsp90a-targeted Allosteric Modulator Discovery by Using an NMR-based FBLD Platform Naixia ZHANG (Keynote) Shanghai Insititute of Materia Media, CAS, Shanghai, China
14:20-14:45	E9	Structural Elucidation of Small Molecules by Anisotropic NMR Xinxiang LEI (Keynote) South-Center University for Nationalities, Wuhan, China
14:45-15:10	E10	Discovery of Small Molecular Inhibitors to mediate the Granule Assembly Ke RUAN (Keynote) University of Science and Technology of China, Hefei, China
15:10-15:20	Coffee Break	



15:20-15:45	E11	Revealing the Structure and Functional Dynamics in Chromatin Regulation by Solid-state NMR Xiangyan SHI (Keynote) Shenzhen MSU-BIT University, Beijing, China
15:45-16:10	E12	The lipoprotein BamC can adopt different conformations in the beta barrel assembly complex and in a cellular context ShengQi XIANG (Keynote) University of Science and Technology of China, Hefei, China
16:10-16:35	E13	Functional dynamics of membrane proteins revealed by solid-state NMR Chaowei SHI (Keynote) University of Science and Technology of China, Hefei, China
16:35-16:50		厂商报告
16:50-17:00		Adjourn
Date: Sep. 29, 2021 Am (Wednesday)		
Session 3: Dynamics and Structures of Protein by NMR Chair: Prof. Conggang Li		
9:15-9:40	E14	Protein Phase Separation and Amyloid Aggregation in Neurodegenerative Diseases Cong LIU (Keynote) Shanghai Institute of Organic Chemistry, CAS, Shanghai , China
9:40-10:05	E15	NMR Investigation of Dynamic Association and Dissociation of Protein Complex in Crowded Environment Chun TANG (Keynote) Peking University, Beijing, China
10:05-10:30	E16	Metalloproteins in the Mechansim of Metalodrugs Yangzhong LIU (Keynote) University of Science and Technology of China, Hefei, China
10:30-10:40		Coffee Break
10:40-11:05	E17	Paramagnetic Effect in Elucidation of Dynamic Protein Complexes by NMR Xun-cheng SU (Keynote) Nankai University, Tianjin, China
11:05-11:30	E18	Molecular insight into BSA modifying the folding free energy landscape of client proteins Lichun HE (Oral) Innovation Academy for Precision Measurement for Science and Technology, CAS, Wuhan, China
11:30-11:55	E19	Internal Standard Correction HPLC-QNMR of Its Application on Purify Assessment of Pyributicarb Ting HUANG (Keynote) National Institute of Metrology, Beijing, China
11:55-12:20	E25	Using Methyl Selective Detection Nmr Spectroscopy to Monitor Histone Methylation At Natural Isotopic Abundance Zhongpei Fang (Oral) Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences, Wuhan, 430071, P. R. China

12:20-13:30	Lunch Break / Poster Session	
Date: Sep. 29, 2021 Pm (Wednesday)		
Session 4: EPR Chair: Prof. Shenlin Wang		
13:30-13:55	E20	3D Structure Determination of Large RNAs by Combined Use of SAXS and PELDOR/ DEER Spectroscopy Xianyang FANG (Keynote) Tsinghua University, Beijing, China
13:55-14:20	E21	Second Coordination Sphere Effects of Cu(II) Heme Analogs in HER Jian-feng LI (Keynote) University of Chinese Academy of Sciences, Beijing, China
14:20-14:45	E22	Tailored Trityl-nitroxide Biradicals with Breakthrough Dynamic Nuclear Polarization Performance at Ultra-high Fields Yangping LIU (Keynote) Tianjin Medical University, Tianjin, China
14:45-15:10	E23	In-Situ High-Resolution Measurements on Biomacromolecules Yin YANG (Keynote) Nankai University, Tianjin, China
15:10-15:20	Coffee Break	
15:20-15:45	E24	Lipoprotein Particles Measured by NMRS Provide More Information about Cardiovascular Risks in CHD Patients Qiong YANG National Center for Cardiovascular Diseases & Fuwai Hospital, Beijing, China
15:45-16:00	Poster Awards/Closing Remarks	
16:00	Adjourn	



SCHEDULE OF SESSIONS

E

MAGNETIC RESONANCE

CHAIR:

Prof. Shenlin WANG

POSTER SESSION

Theme: From Spins to Life, NMR Facilitating in Understanding the Life Process

Dates: Sept.28-29,2021

Location: E1-E4 Hallway, China International Exhibition Center (Tianzhu New Hall), Beijing

E-P1

LIPOPROTEIN PARTICLES MEASURED BY NMR SPECTROSCOPY PROVIDE MORE INFORMATION ABOUT CARDIOVASCULAR RISKS IN CHD PATIENTS WITH DIFFERENT APOE GENOTYPE

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E-P2

STUDY ON THE FUNCTION OF NITROSYLATION OF YEAST CYTOCHROME C

Qin Hu1,2, Jianhua Zhan1,2,xiong xiao1,2, Xu Zhang1,2,3*, Maili Liu1,2,3*

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2. University of Chinese Academy of Sciences, 100049, Beijing, P. R. China
3. Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, Wuhan, 430071.

E-P3

THE NMR STUDY OF HIGH-RESOLUTION STRUCTURES AND RECOGNITION MECHANISM OF AFLATOXINS B1 APTAMER

Chen WANG1,2, Guohua XU1, Conggang LI*1,2

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- 2University of Chinese Academy of Sciences, Beijing 100049, China

E-P4

DYNAMICS OF WEAK BASE PAIRS IN RNA BY SOLID-STATE NMR EXCHANGE SPECTROSCOPY

Sha ZHAO1,2, Xinming LI3, Ziyang WEN1, Mengbing ZOU1, Ge YU2, Xiangyang LIU2, Jiafei MAO4, Lixin ZHANG2, Yi XUE3*, Riqiang FU5* and Shenlin WANG1,2,6*



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E-P5

THE R148K MUTATION OF NUCLEOCAPSID PROTEIN ALTERS THE NUCLEIC ACID BINDING MECHANISM

Hongye Lu
East China University of Science and Technology

E-P6

ANALYZING THE STRUCTURE OF THE SARS-COV-2 N PROTEIN BY INTEGRATED STRUCTURAL BIOLOGY METHODS

Xiaoxian Li¹, Hongye Lu¹, Changxing Ma¹, Na Li², Lixin Zhang¹, Shenlin Wang*¹

1State Key Laboratory of Bioreactor Engineering, East China University of Science and Technology, Shanghai 200237, Peoples R China

2Chinese Academic Science, National Center for Protein Science Shanghai, Shanghai 201204, Peoples R China

E-P7

VALIDATING HYDROGEN COORDINATES IN PROTEINS BY NMR RESIDUAL DIPOLAR COUPLINGS

Ying PAN¹ and Yi XUE*¹

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E-P8

COMBINED ANALYSIS OF SPIN RELAXATION RATES OF HAIRPIN RNAs FROM SOLUTION-STATE NMR SPECTROSCOPY AND MOLECULAR DYNAMIC SIMULATIONS

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SCHEDULE OF SESSIONS

ELECTROANALYTICAL CHEMISTRY

CHAIR:
Prof. Jinghong Li

ORAL LECTURES

Theme: Electroanalytical Chemistry: Innovation and Opportunity
Dates: Sept.28-29,2021
Location:Academic Conference Area:Room E306, China International Exhibition Center (Tianzhu New Hall), Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Chair: Lanqun Mao, Xueji Zhang		
9:20-9:25	Opening Remarks by Prof. Xiurong Yang	
9:25-9:50	F2	Oxidase-Like MOF-818 Nanozyme with High Specificity for Catalysis of Catechol Oxidation Shaojun Dong Changchun Institute of Applied Chemistry, CAS
9:50-10:15	F3	Intelligent Biosensor and Cancer Nano Theranostics Xueji Zhang Shenzhen University
10:15-10:40	F4	Electrochemiluminescence of Halide Perovskite Materials and Their Sensing Applications Junjie Zhu Nanjing University
10:40-10:50	Coffee Break	
10:50-11:15	F5	A Study of Nanozymes Erkang Wang Changchun Institute of Applied Chemistry, CAS
11:15-11:40	F6	Sensing Science in Brain Chemistry Lanqun Mao Beijing Normal University
11:40-11:55	F7	Single Molecule Sensor for Quantitative Analysis of Biomarkers with Electrochemical Modulation Hui Yu (Oral) Shanghai Jiao Tong University
11:55-13:30	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Chairman: Huangxian Ju, Genxi Li		
13:30-13:55	F8	Electrochemiluminescence Biosensing with Nanoparticles and Polymer Dots as Emitters Huangxian Ju Nanjing University
13:55-14:20	F9	Highly Sensitive Electrochemical Biosensing Strategies Based on Surface/Interface Regulation Zhihui Dai Nanjing Normal University
14:20-14:45	F10	Differential Electrochemiluminescence Immunosensor Based on Potential-Resolved Nanoluminophores Hua Cui University of Science and Technology of China
14:45-15:10	F11	Studying the Structure and Functions of Cell Membranes by Single Molecule Approaches Hongda Wang Changchun Institute of Applied Chemistry
15:10-15:20	Coffee Break	
15:20-15:45	F12	Electrochemical Biosensors Based on Nanotubes, Microcapsules and / or Bio-Sourced Nanoparticles Serge Cosnier Grenoble Alpes University, France
15:45-16:10	F13	Assembly of Peptides with Some Kinds of Nanomaterials for Electrochemical Analysis of Disease Markers Genxi Li Nanjing University



16:10-16:25	F14	Target-responsive Charge Controllable Homogeneous Electrochemiluminescence Biosensor for the Detection of Hyaluronidase Zhenyu Lin (Oral) Fuzhou University
16:25-16:40	F15	Luminophor Controllable Assembly in Confined Space for Electrochemiluminescence Enhancement Ying Zhuo (Oral) Southwest University
16:25-16:40	F16	Polarized Electrochemiluminescence Biosensor Based on Surface Plasmon Coupling Effect Qiang Ma (Oral) Jilin University
16:40		Adjourn

Date: Sep. 29, 2021 Am (Wednesday)		
Chair: Yang Tian, Yitao Long		
9:25-9:50	F17	Study of ECL/CL Nanohybrid Materials and Their Application In Label Free Analysis Xiurong Yang Changchun Institute of Applied Chemistry, CAS
9:50-10:15	F18	Analysis of Chemical Expression of Electroencephalogram Signal Yang Tian East China Normal University
10:15-10:40	F19	Micro/Nanotubes for Single Cell Analysis and Electrochemical Reaction Mechanism Study Jingjuan Xu Nanjing University
10:40-10:50		Coffee Break
10:50-11:15	F20	Nanoconfinement Controlled Electrochemistry for Single-Molecule Measurement Yitao Long Nanjing University
11:15-11:40	F21	Stretchable Electrochemical Sensors for Cell and Tissue Detection Weihua Huang Wuhan University
11:40-11:55	F22	Integrated Tunneling Electrochemical Sensors for Single-Biomolecular Analysis Longhua Tang (Oral) Zhejiang University
11:55-13:30		Lunch Break / Poster Session

Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Xinghua Xia, Shaojun Guo		
13:30-13:55	F23	Plasmonic Enhanced IR Spectroscopic and Electrochemical Analysis Xinghua Xia Nanjing University
13:55-14:20	F24	Microconfinement Based Single Molecule Detection and Biosensing Baohong Liu Fudan University

14:20-14:45	F25	Molecular Nature of Structured Water in Regulation of Electrostatic Properties of Biomembranes Xiue Jiang Changchun Institute of Applied Chemistry
14:45-15:00	F26	Nanozymes for Selective and Accurate Analytical Applications Yuanhong Xu (Oral) Qingdao University
15:00-15:10		Coffee Break
15:10-15:35	F27	Materials Strain for Electrocatalysis Shaojun Guo Peking University
15:35-16:00	F28	Monitoring Cascade Reactions in a Multienzyme System Haichen Wu Institute of Chemistry, CAS
16:00-16:15	F29	In Situ AFM Studies of Electrochemical Interfaces in Energy Storage Batteries Rui Wen (Oral) Institute of Chemistry, CAS
16:15-16:30	F30	Ratiometric Electrochemical Biosensor for Ultrasensitive Detection of MecA Gene based on ISDPR Ying Wang (Oral) Tongji University
16:30-16:45	F31	An Electrochemical Nanoplasmonic Sensing Platform for Potentially Investigating the Blood Coagulation Process In Vitro Jianhua Zhou (Oral) Sun Yat-sen University
16:45-16:50		Closing Ceremony



SCHEDULE OF SESSIONS



ELECTROANALYTICAL CHEMISTRY

CHAIR:
Prof. Jinghong Li

POSTER SESSION

Theme: Electroanalytical Chemistry: Innovation and Opportunity

Dates: Sept.28-29,2021

Location:E1-E4 Hallway,
China International Exhibition
Center (Tianzhu New Hall),
Beijing

F-P1

ELECTROCHEMICAL SENSOR BASED ON DUAL-TEMPLATE MOLECULARLY IMPRINTED POLYMER AND NANOPOROUS GOLD LEAF MODIFIED ELECTRODE FOR SIMULTANEOUS DETERMINATION OF DOPAMINE AND URIC ACID

Yudong Sun, Jiao Yang*, Yingchun Li*

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F-P2

THE MULTI-MIMIC ACTIVITIES OF Co₃O₄ NANOPOLYHEDRONS AND THE APPLICATION FOR RELIEVING TUMOR HYPOXIC

Yu Zhu, Meiling Liu*, Xiaohua Zhu, Youyu Zhang, Shouzhao Yao

Key Laboratory of Chemical Biology & Traditional Chinese Medicine Research (Ministry of Education, China), College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha 410081, P. R. China

F-P3

SELF-CALIBRATION FOR GLUTATHIONE DETECTION BASED ON THE FERROCENE-FUNCTIONALIZED MOF VIA SOLID-STATE ELECTROCHEMISTRY

Zhenjuan Xu, Peipei Li, Xiaohua Zhu, Meiling Liu*, Youyu Zhang, Shouzhao Yao

Key Laboratory of Chemical Biology & Traditional Chinese Medicine Research (Ministry of Education, China), College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha 410081, P. R. China

F-P4

AG₂S QUANTUM DOTS/CoOOH NANOSHEET FLUORESCENT NANOSENSOR FOR GSH DETECTION

Haoyu Chen, Peipei Li, Xiaohua Zhu, Meiling Liu*, Youyu Zhang, Shouzhao Yao

Key Laboratory of Chemical Biology & Traditional Chinese Medicine Research (Ministry of Education, China), College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha 410081, P. R. China

F-P5

A SENSITIVE GLUTATHIONE FLUORESCENT NANOPLATFORM BASED ON SILVER NANOCLUSTERS VIA THE IN-SITU CATALYSIS FORMED POLYELECTROLYTE TEMPLATE

Yaxin Xu, Meiling Liu*, Xiaohua Zhu, Youyu Zhang, Shouzhao Yao

Key Laboratory of Chemical Biology & Traditional Chinese Medicine Research (Ministry of Education, China), College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha 410081, P. R. China

F-P6

TRACKING THE HYDROXIDE GENERATED OF Cu₂O@Ni₂P FOR WATER AND METHANOL OXIDATION REACTIONS BY IN SITU RAMAN SPECTROSCOPY

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² College of Chemistry, Sichuan University, Chengdu, China

F-P7



THE ELECTROCHEMICAL AND VISUAL DUAL-MODE SENSORS BASED ON THE PHOTOCATALYTICIZATION OF NUCLEIC ACID DYES FOR THE DETECTION OF LEAD IONS IN WATER

Fangfang Sheng¹,Zhaoxia Chen¹,Shuxia Xu^{1*}

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F-P8

NANOELECTRODE INTEGRATED SOLID-PHASE MICROEXTRACTION FOR THE SERIAL DETECTION OF CYTOPLASMIC DOPAMINE IN A SINGLE LIVING CELL

Yaran CHANG, Guangsheng GUO and Xiayan WANG*

Department of Chemistry and Biology, Beijing University of Technology, Beijing 100124 PR China

F-P9

POTENTIAL-RESOLVED DIFFERENTIAL ELECTROCHEMILUMINESCENCE IMMUNOSENSOR FOR CARDIAC TROPONIN I BASED ON MOF-5 WRAPPED CDS QUANTUM DOTS NANOLUMINOPHORES

Dexin Du¹, Jiangnan Shu^{1*}, Mingquan Guo¹, Mohammad A. Haghighatbin¹, Di Yang², Zhiping Bian², and Hua Cui^{1*}

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²Institute of Cardiovascular Disease, First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, P. R. China

F-P10

A LABEL-FREE THREE POTENTIAL RATIOMETRIC ELECTROCHEMILUMINESCENCE IMMUNOSENSOR FOR CARDIAC TROPONIN I BASED ON N-(4-AMINO BUTYL)-N-ETHYLISOLUMINOL FUNCTIONALIZED GRAPHENE QUANTUM DOTS

Mingquan Guo ^{1,3}, Jiangnan Shu ^{1,*},3 Dexin Du ¹, Mohammad A. Haghighatbin ¹, Di Yang ^b, Zhiping Bian ², Hua Cui ^{1, 3}

¹ CAS Key Laboratory of Soft Matter Chemistry, iChEM (Collaborative Innovation Center of Chemistry for Energy Materials), Department of Chemistry, University of Science and Technology of China, Hefei, Anhui, 230026, PR China

² Institute of Cardiovascular Disease, First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu, 210029, PR China

F-P11

SIMULTANEOUS DETERMINATION OF Cr(VI) AND TOTAL Cr USING A DUAL-MODE MICROFLUIDIC PAPER-BASED ANALYTICAL DEVICE

Yingying An^{1,2}, Qing Zhang², Xiayan Wang^{1*}

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²Chinese Academy of Inspection and Quarantine, Beijing, China

F-P12

ELECTROCHEMILUMINESCENT STRATEGY FOR SENSITIVE DETECTION OF MICRORNA BASED ON CASCADE AMPLIFICATION STRATEGY

Huimin Liu, and Guangming Huang*

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F-P13

A SUPER SENSITIVE ELECTROCHEMICAL DNA DETECTION STRATEGY BASED ON HOMOLOGOUS PROXIMITY HYBRIDIZATION

Ritong Sun¹, Qianyi Wan¹, Xiangning Han¹,Jian Zhang¹,Cuiping Ma^{*1},

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F-P14

A NOVEL ELECTROCHEMICAL DNA BIOSENSOR FOR ULTRASENSITIVE DETECTION

Mingyuan Zhao¹, Yake Duan ¹, Xiaoli Zhao¹, Cuiping Ma^{1,*}

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F-P15

A SILICON NANOPARTICLES-BASED NANOPROBE FOR FLUORESCENCE RATIOMETRIC AND VISUAL DETECTION OF GLUCOSE

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F-P16

APTAMER FLUORESCENT SENSOR FOR OCHRERETOXIN A BASED ON CARBON QUANTUM DOTS AND GOLD NANOPARTICLES

Xuehua SUN*, Jingting ZHANG, Yu QIANG, Rui TIAN, Loujun GAO

Key Lab of Chemical Reaction Engineering of Shaanxi Province, College of Chemistry and Chemical Engineering, Yan'an University, Yan'an 716000

SCHEDULE OF SESSIONS

G

ANALYTICAL TECHNIQUES IN LIFE SCIENCES

CHAIR:
Prof. Lei GUO

ORAL LECTURES

Theme:Analytical Techniques
Improve the Understanding of Life

Dates: Sept.28-29,2021

Location: Academic
Conference Area:Room W103
China International Exhibition
Center (Tianzhu New Hall),
Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Session 1: Single Molecule/Cell/Particle Analysis Chair: Prof. Guannngming HUANG, Prof. Yong GUO		
9:20-9:25	Opening Remarks by Prof. Lei GUO	
9:25-9:50	G2	The Application of Single Cell Analysis in Environmental Toxicology Maoyong SONG (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
9:50-10:15	G3	Click Reaction Derivatization for Single Cell Mass Spectrometry Guangming HUANG (Keynote) School of Chemistry and Materials Science, University of Science and Technology of China, Hefei, China
10:15-10:40	G4	Quantification of Viruses and Bacteria by Nano-Flow Cytometry for Biomedical and Food Safety Applications Xiaomei YAN (Keynote) Department of Chemical Biology, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China
10:40-10:50	Coffee Break	
10:50-11:15	G5	The Research and Application Progress of Digital PCR in Molecular Diagnosis Yong GUO (Keynote) School of medicine, Tsinghua University, Beijing, China
11:15-11:40	G6	Information Processing and Single Molecular Operating Based on Reconfigurable DNA Nanostructures Jie SONG (Keynote) Institute of Cancer and Basic Medicine (IBMC), Chinese Academy of Sciences, Hangzhou, China; Institute of Nano Biomedicine and Engineering, Shanghai Jiao Tong University, Shanghai, China
11:40-11:55	G22	Studying the Structure and Functions of Cell Membranes by Single Molecule Approaches Hongda WANG State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China
11:55-13:15	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Session 2: Omics/ Precise Medical Diagnosis Chair: Prof. Chaoyong YANG, Prof. Zeping HU		
13:15-13:40	G7	Deciphering Metabolic Reprogramming in Infectious Diseases Using Advanced Metabolomics Technologies Zeping HU (Keynote) School of Pharmaceutical Sciences, Tsinghua-Peking Joint Center for Life Sciences, Beijing Frontier Research Center for Biological Structure, Tsinghua University, Beijing, China
13:40-14:05	G8	Profiling Proteins and Peptides in Excipient Zein by The Combination of Multi-Enzyme Digestion Jinlan ZHANG (Keynote) State Key Laboratory of Bioactive Substances and Functions of Natural Medicines, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China



14:05-14:30	G9	Enzyme-Mediated Bioorthogonal Labeling Method for Genome-wide Mapping of DNA Modification Bifeng YUAN (Keynote) Sauvage Center for Molecular Sciences, Department of Chemistry, Wuhan University, Wuhan, China
14:30-14:55	G10	Proteomics/Phosphoproteomics Deciphered Molecular Mechanism of Action of Anticancer Drug Cisplatin Fuyi WANG (Keynote) Institute of Chemistry, Chinese Academy of Sciences, Beijing, China
14:55-15:05	G23	Mass Spectrometry-Based Metabolic Flux Analysis in Cells Shuhai LIN School of Life Sciences, Xiamen University, Xiamen, China
15:05-15:15	G36	Application of Cid Ms/Ms Fragmentation in Underivatized Oligosaccharide Analysis Dora Molnar-Gabor DSM - Glycom A/S, Denmark
15:10-15:20	Coffee Break	
Chair: Prof. Bifeng YUAN, Prof. Jinlan ZHANG		
15:20-15:45	G11	Nanosecond Photochemically Promoted Click Chemistry: A Fast Protein Structural Probing Tool for Structural Mass Spectrometry Gongyu LI (Keynote) Research Center for Analytical Science, Nankai University, Tianjin, China
15:45-16:10	G12	Digital-Wgs: Automated, Highly Efficient Whole-Genome Sequencing of Single Cells by Digital Microfluidics Chaoyong YANG (Keynote) Department of Chemical Biology, Xiamen University, Xiamen, China; Institute of Molecular Medicine, Shanghai Jiao Tong University School of Medicine, Shanghai, China
16:10-16:25	G24	Mapping Dynamic Histone Modification Patterns of Low-Level Sulfur Mustard Exposure on Hacat Cells by Mass Spectrometry Minmin QU State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing, China
16:25-16:40	G25	Lattice-Like 3-D DNA Nanostructure-Based Bioseparation Strategy for Accurate Quantification of Low-Abundance Biomarker by MS Rui ZHAI Technology Innovation Center of Mass Spectrometry for State Market Regulation, Center for Advanced Measurement Science, National Institute of Metrology, Beijing, China
16:40-16:55	G26	Multi-omics Integrated with Cell Analysis to Accelerate the Engineering Cycle of Synthetic Biology Xiaorong RAN Agilent Technologies, Beijing, China
16:55-17:00	/	Adjourn

Date: Sep. 29, 2021 Am (Wednesday)		
Session 3: Health and Safety/ Precise Medical Diagnosis		
Chair: Prof. Zongxiu NIE, Prof. Bingjie ZOU		
9:10-9:35	G13	Mass Spectrometry Imaging of Nanomaterials in Sub-Organ Distribution Zongxiu NIE (Keynote) Beijing National Laboratory for Molecular Sciences, Key Laboratory for Analytical Chemistry for Living Biosystems, Institute of Chemistry, Chinese Academy of Sciences, Beijing, China
9:35-10:00	G14	Integrated Toxicology Analysis System Guangbo QU (Keynote) State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
10:00-10:25	G15	Droplet Microfluidics and Microbiological Applications Wenbin DU (Keynote) State Key Laboratory of Microbial Resources, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China
10:25-10:40	G27	Pathological Aggregation of α -Synuclein in Parkinson's Disease Cong LIU Interdisciplinary Research Center on Biology and Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China
10:40-10:50	Coffee Break	
Chair: Prof. Guangbo QU, Prof. Wenbin DU		
10:50-11:05	G28	Structure Recognition Endonuclease Based Nucleic Acid Colorimetric Detection Bingjie ZOU Key Laboratory of Drug Quality Control and Pharmacovigilance, Ministry of Education, School of Pharmacy, China Pharmaceutical University, Nanjing, China
11:05-11:20	G29	Study on Non-Target and High-Throughput Screening Strategy of Chemical Hazards Based on LC-HRMS Bin XU State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing, China
11:20-11:45	G16	Surface Science of Aptamer/Nanomaterial Based Biosensors (Video) Juewen LIU (Keynote) Department of Chemistry, University of Waterloo, Waterloo, ON, N2L 3G1, Canada
11:45-12:00	G30	Application of Precise Capillary Electrophoresis in Life Sciences Yu QIAN Denogen (Beijing) Biotech. Co., Ltd, Beijing, China
12:00-13:05	Lunch Break / Poster Session	

Date: Sep. 29, 2021 Pm (Wednesday)		
Session 4: Precise Medicine Analysis and Medical Diagnosis Chair: Ping XU, Prof. Fan ZHANG		
13:05-13:30	G17	Rapid and Sensitive Imaging of Poly-Ubiquitination Signal via the Chemically Labeled Materials Ping XU (Keynote) State Key Laboratory of Proteomics, Beijing Proteome Research Center, National Center for Protein Sciences (Beijing), Institute of Lifeomics, Beijing, China
13:30-13:55	G18	Living-System-Induced Evolution of Peptide Nano Probes Based on Microchip Weizhi WANG (Keynote) School of Chemistry and Chemical Engineering, Institute of Technology, Beijing,China
13:55-14:20	G19	Second Near-infrared Window Fluorescent Probes for in vivo Multiplexed Bioimaging Fan ZHANG (Keynote) Department of Chemistry & Laboratory of Advanced Materials, Fudan University, Shanghai, China
14:20-14:35	G31	Polymer/Inorganic Nanohybrids: An Attractive Materials for Analysis and Sensing Jiefang SUN Beijing Key Laboratory of Diagnostic and Traceability Technologies for Food Poisoning, Beijing Center for Disease Prevention and Control, Beijing, China
14:35-14:50	G32	A Smart AURKB-Responsive Peptide Hydrogel and Its Application in the Treatment of Cercial Cancer Guangqiong XU Department of Analytical & Testing Center, School of Basic Medical, Nanjing Medical University, Nanjing, China
14:50-15:00	Coffee Break	
Chair: Prof. Gaolin LIANG, Prof. Weizhi WANG		
15:10-15:35	G20	Using Cbt-Cys Click Reaction to Enhance Magnetic Resonance Imaging Signal Gaolin LIANG (Keynote) State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing, China
15:35-15:50	G33	Single-Molecule Nucleic Acid Signal Amplification: An Alternative Tool for Digital Nucleic Acid Analysis Yunlong LIU State Key Laboratory of Natural Medicines, Department of Biomedical Engineering, School of Engineering, China Pharmaceutical University, Nanjing, China
15:50-16:05	G34	Temperature and Calcium Ion/ATP Determination Based on Polymer Probe in Living Cells Juan QIAO Key Laboratory of Analytical Chemistry for Living Biosystems, Institute of Chemistry, Chinese Academy of Sciences, Beijing, China

16:05-16:20	G35	Sensitive Detection of Telomerase Activity Based on Enzymatic Etching of Gold Nanorods Xiaofeng YANG Key Laboratory of Luminescent and Real-Time Analytical System, Chongqing Science and Technology Bureau, College of Pharmaceutical Sciences, Southwest University, Chongqing, China
16:20-16:45	G21	Point-of-care Photometric Biosensing Using a Thermometer Xiujun James LI (Keynote) Department of Chemistry, Border Biomedical Research Center, and Biomedical Engineering, University of Texas at El Paso, Texas, USA
16:45-17:00		Poster Awards/Closing Remarks
17:00	/	Adjourn



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ANALYTICAL TECHNIQUES IN LIFE SCIENCES

CHAIR:
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POSTER SESSION

Theme: Analytical Techniques
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Dates: Sept.28-29,2021

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G-P1

COMPARISON ON THE IN VITRO ENZYME INHIBITION KINETICS OF NATURAL AND RECOMBINANT HUMAN CHOLINESTERASE BY V-AGENTS

Kexin LI, Yanqin LIU, Yulong LIU, Lei GUO* and Jianwei XIE

State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing 100850, China

G-P2

DETERMINATION OF PHOSPHATIDYLETHANOL IN HUMAN BLOOD AS A BIOMARKER FOR ALCOHOL INTAKE BY LIQUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY

Zhaoyang Liu, Yueming Tang, Siming Wang*

The Key Laboratory of Geriatrics, Beijing Institute of Geriatrics, Beijing Hospital, National Center of Gerontology, National Health Commission; Institute of Geriatric Medicine, Chinese Academy of Medical Sciences, Beijing 100730, China

G-P3

RAPID SERS DETECTION OF FENTANYL BASED ON NANO-FRAME MATERIALS

Xiaoya Li1,2, Dongmei Li, Zehua Li, Lei Guo2*, Yongmei Yin1*

1. College of Pharmacy, State Key Laboratory of Medicinal Chemical Biology and Tianjin Key Laboratory of Molecular Drug Research, Nankai University, Tianjin 300353, China
2. State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing 100850, China

G-P4

NON-TARGETED AND TARGETED SCREENING OF METABOLITES OF FENTANYL IN RATS URINE

Zehua Li, Dongmei Li, Bin Xu, Jia Chen, Lei Guo* and Jianwei Xie

State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, 27 Taiping Road, Haidian District, 100850, Beijing, China

G-P5

THE POTENTIAL OF COBALAMIN BASED METHOD FOR RAPID DETECTION OF CYANIDE

Zichun LI1,2, Ying GONG1, Lei GUO*1

1 State Key Laboratory of Toxicology and Medical Countermeasures, Laboratory of Toxicant Analysis, Institute of Toxicology and Pharmacology, Academy of Military Medical Sciences, Beijing 100850, China

2 Beijing Institute of Technology, Beijing 102488, China

G-P6

AFFINITY INTERACTION-BASED ASSAYS FOR HIGHLY SENSITIVE

AND SPECIFIC MEASUREMENT OF RICIN BIOTOXIN

Li Luo1,2, Zhi Li2, Hua Xu2, Zhifang Yang1, Lei Guo2*, Jianwei Xie2

1 School of Public Health, Hebei Medical University, Shijiazhuang 050017, China

2 State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing 100850, China

G-P7

QUANTIFICATION AND TOXICOKINETICS OF PARAQUAT IN MOUSE PLASMA AND LUNG TISSUES BY INTERNAL STANDARD SURFACE ENHANCE RAMAN SPECTROSCOPY

Luyuan QIN1, Xiaomin ZHANG2, Jianfeng WU1, Hao SUN2, Jinsong ZHANG2, Lei GUO*1 and Jianwei XIE1

1 State Key Laboratory of Toxicology and Medical Countermeasures, Laboratory of Toxicant Analysis, Institute of Toxicology and Pharmacology, Academy of Military Medical Sciences, Beijing 100850, China

2 Department of Emergency, Jiangsu Province Hospital, the First Affiliated Hospital of Nanjing Medical University, Nanjing, China

G-P8

A NOVEL METHOD OF SIMULTANEOUS DETECTING ADJACENT ESR1 MUTATIONS IN SINGLE CTC FROM BREAST CANCER

Chen Wang1, Bingjie Zou1, Shaohua Wang*2, Qinxin Song*1, and Guohua Zhou2

1 Key Laboratory of Drug Quality Control and Pharmacovigilance, Ministry of Education, School of Pharmacy, China Pharmaceutical University, 210009, China

2 Jinling Hospital, Medical School of Nanjing University, Nanjing 210002, China

G-P9

ENZYMATIC KINETICS OF ACTIVE RICIN EVALUTED VIA OLIGONUCLEOTIDE SUBSTRATE BY LC-MS

Chenyu WANG1,2, Jiewei YANG1, Ying GONG1, Li TANG2, Lei GUO*1

1 State Key Laboratory of Toxicology and Medical Countermeasures, Laboratory of Toxicant Analysis, Institute of Toxicology and Pharmacology, Academy of Military Medical Sciences, Beijing 100850, China

2 Key Laboratory of Ethnomedicine, Ministry of Education, School of Pharmacy, Minzu University of China, Beijing 100081, China

G-P10

ANTI-TIM4 GRAFTING STRONGLY HYDROPHILIC METAL-ORGANIC FRAMEWORKS IMMUNOAFFINITY FLAKE FOR HIGH-EFFICIENCY CAPTURE AND SEPARATION OF EXOSOMES

Haiyan Wang, Lei Zhang, Xiaoqiang Qiao*

College of Pharmaceutical Sciences, Hebei University, Baoding 071002, China

G-P11

DISCOVERING METABOLIC VULNERABILITY USING SPATIAL METABOLOMICS

Xiangyi WANG1, Jin ZHANG1, Kailu ZHENG2, Qingce ZANG1, Jianpeng HUANG1, Ruiping ZHANG1, Yan LI2, Jiuming HE*1, Zeper ABLIZ1,3

1 State Key Laboratory of Bioactive Substance and Function of Natural Medicines, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, China

2 Beijing Key Laboratory of New Drug Mechanisms and Pharmacological Evaluation Study, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, China

3 Center for Imaging and Systems Biology, Minzu University of China, Beijing 100081, China

G-P12

SELECTION OF PEPTIDES SPECIFIC AGAINST RICIN VIA CHEMICAL DISPLAY LIBRARY THROUGH MICROFLUIDIC TECHNIQUE

Zhifang Yang1, Chenyu Wang1,2, Li Luo1, Weizhi Wang3, Lei Guo1,*

1 State Key Laboratory of Toxicology and Medical Countermeasures, and Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing 100850, China

2 Key Laboratory of Ethnomedicine, Ministry of Education, School of Pharmacy, Minzu University of China, Beijing 100081, China

3 School of Chemistry and Chemical Engineering, Beijing Institute of Technology, Beijing 100081, PR China.

G-P13

SELF-TARGETING CARBON QUANTUM DOTS FOR PEROXYNITRITE DETECTION AND IMAGING IN LIVING CELLS

Yan Bai, Lei Zhan* and Cheng Zhi Huang*

Key Laboratory of Luminescence Analysis and Molecular Sensing (Southwest University), Ministry of Education, College of Pharmaceutical Science, Southwest University, Chongqing 400715, China.

G-P14

METABOLISM-BASED CAPTURE AND ANALYSIS OF CIRCULATING TUMOR CELLS IN AN OPEN SPACE

Weifei Zhang, Hongmei Li*

1 Division of Chemistry and Analytical Science, National Institute of Metrology, Beijing 100029, China

G-P15

BI-SPECIFIC APTAMERS RECRUIT NATURAL KILLER CELLS FOR TARGETED THERAPY OF ACUTE LEUKEMIA

Xiaomin Zhang, Ge Yang, Feng Qu* & Yuanyu Huang*

School of Life Science, Key Laboratory of Molecular Medicine and Biotherapy, Institute of Engineering Medicine, Ministry of Industry and Information Technology, Beijing Institute of Technology, Beijing 100081, China



G-P16

CALCIUM SIGNALING THROUGH TUMOR MICROTUBES FOR SINGLE CELL-CELL COMMUNICATION ON AN OPEN-SPACE MICROFLUIDIC CHIP

Shuo Feng, Jin-Ming Lin*
Department of Chemistry, Beijing Key Laboratory of Microanalytical Methods and Instrumentation, MOE Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology, Tsinghua University, Beijing 100084, China

G-P17

EPIGENETIC EFFECTS AND THE EARLY WARNING OF SULFUR MUSTARD AND DIVINYL SULPHONE BASED ON PATTERN-RECOGNIZED STRATEGY WITH MULTIPLE PROFILE OF NUCLEIC ACID MODIFICATIONS QUANTIFIED BY UPLC-MS/MS

Weiwei HE, Hua XU, Minmin QU, Zhi LI, Jianfeng WU, Yajiao ZHANG, Bin XU*1 and Jianwei Xie*1
1State Key Laboratory of Toxicology and Medical Countermeasures, Laboratory of Toxicant Analysis, Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing, 100850, China

G-P18

IN SITU STABLE GENERATION OF FREE RADICALS BY OPEN MICROFLUIDIC PROBE FOR SUBCELLULAR CHEMISTRY

Qiang ZHANG, Jin-Ming LIN*
Beijing Key Laboratory of Microanalytical Methods and Instrumentation, MOE Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology, Tsinghua University, Beijing 100084, China.

G-P19

DOUBLE STEM-LOOP HAIRPIN MEDIATED HYBRIDIZATION CHAIN REACTION TO REGULATE THE RELEASE OF G-QUADRUPLEXES APTAMER IN BIOSENSING

Xin Peng, Jiao Yang*, Yingchun Li*
School of Science, Harbin Institute of Technology, University Town of Shenzhen, Shenzhen, 518055, China

G-P20

ESTABLISHMENT OF DROPLET DIGITAL PCR METHOD FOR ABSOLUTE QUANTITATIVE DETECTION OF PSEUDOMONAS COCOVENENANS

Huijie Li1, 2; Jiayi Yang2*
1 College of Food Sciences & Technology, Shanghai Ocean University, Shanghai 201306, China
2 Center for Advanced Measurement Science, National Institute of Metrology, Beijing 100029, China

G-P21

RAPID DIAGNOSIS OF MYCOPLASMA PNEUMONIA INFECTION BY DENATURATION

BUBBLE-MEDIATED STRAND EXCHANGE AMPLIFICATION

Yake Duan1, Xiaoli Zhao1, Mingyuan Zhao1, Cuiping Ma*1
1 Shandong Provincial Key Laboratory of Biochemical Engineering, Qingdao Nucleic Acid Rapid Detection Engineering Research Center, College of Marine Science and Biological Engineering, Qingdao University of Science and Technology, Qingdao, 266042, PR China.
53 Zhengzhou Road, Qingdao City, Shandong Province, China

G-P22

A RAPID DETECTION OF BACILLUS CEREU BY DENATURATION BUBBLE-MEDIATED STRAND EXCHANGE AMPLIFICATION IN PASTEUR PIPETTE

Xiangning Han1, Jian Zhang1, Ritong Sun1, Qianyi Wan1, Cuiping Ma1*
1 Shandong Provincial Key Laboratory of Biochemical Engineering, Qingdao Nucleic Acid Rapid Detection Engineering Research Center, College of Marine Science and Biological Engineering, Qingdao University of Science and Technology, Qingdao, 266042, PR China.
53 Zhengzhou Road, Qingdao City, Shandong Province

G-P23

A VISUAL DETECTION METHOD FOR AFRICAN SWINE FEVER VIRUS BASED ON ISOTHERMAL AMPLIFICATION

Xiaoli Zhao1, Mingyuan Zhao1, Yake Duan1, Cuiping Ma*1
1 Shandong Provincial Key Laboratory of Biochemical Engineering, Qingdao Nucleic Acid Rapid Detection Engineering Research Center, College of Marine Science and Biological Engineering, Qingdao University of Science and Technology, Qingdao, 266042, PR China.
53 Zhengzhou Road, Qingdao City, Shandong Province

G-P24

ESTABLISHMENT OF VISUAL ISOTHERMAL DETECTION METHOD FOR MEAT ADULTERATION IN LOW RESOURCE ENVIRONMENT

Jian Zhang1, Ritong Sun1, Qianyi Wan1, Xiangning Han1, Cuiping Ma*1,
1 Shandong Provincial Key Laboratory of Biochemical Engineering, Qingdao Nucleic Acid Rapid Detection Engineering Research Center, College of Marine Science and Biological Engineering, Qingdao University of Science and Technology, Qingdao, 266042, PR China.
53 Zhengzhou Road, Qingdao City, Shandong Province

G-P25

A RAPID PLATFORM BASED ON SILICA MEMBRANE, INTEGRATED NUCLEIC ACID ENRICHMENT AND VISUAL DETECTION OF PATHOGENS

Qianyi Wan1, Xiangning Han1, Jian Zhang1, Ritong Sun1, Cuiping Ma1,*
1 Shandong Provincial Key Laboratory of Biochemical Engineering, Qingdao Nucleic Acid Rapid Detection Engineering Research Center, College of Marine Science and Biological Engineering,

Qingdao University of Science and Technology, Qingdao, 266042, PR China.
53 Zhengzhou Road, Qingdao City, Shandong Province

G-P26

A NOVEL HIGH THROUGHPUT SOLID PHASE EXTRACTION METHOD FOR LIPIDOMICS ANALYSIS IN BIOLOGICAL MATRICES USING LIQUID CHROMATOGRAPHY MASS SPECTROMETRY

Limian Zhao, Alex Apffel, Xia Yang
Agilent Technologies Inc.

G-P27

AUTOMATIC FAT SOLUBLE VITAMIN ANALYSIS BY MICROWAVE ASSISTANT SAPONIFICATION AND ONLINE SPE COUPLED WITH TWO DIMENSIONAL HPLC

Zhegao Yu, Biyun Jiang, Shuping Jing, Yuehan Xing and Xiaoyan Wang
R&D Solution Center Shanghai of DSM Nutritional Products

G-P28

SENSITIVE DETECTION OF TELOMERASE ACTIVITY BASED ON ENZYMATIC ETCHING OF GOLD NANORODS

Xiao Feng Yang, Peng Fei Gao*, Cheng Zhi Huang*
Key Laboratory of Luminescent and Real-Time Analytical System (Southwest University), Chongqing Science and Technology Bureau, College of Pharmaceutical Sciences, Southwest University, Chongqing 400715, P. R. China.



SCHEDULE OF SESSIONS

ENVIRONMENTAL ANALYSIS

CHAIR:
Prof. Hailin Wang

ORAL LECTURES

Theme: Environment and Health
Dates: Sept.28-29,2021
Location: Academic
Conference Area:Room E302,
China International Exhibition
Center (Tianzhu New Hall),
Beijing

Date: Sep. 28, 2021 Am (Tuesday)		
Session 1: PM2.5 and Nano-pollutants Chair: Guibin JIANG, Xiaoming SHI		
9:15-9:25	Opening Remarks by Prof. Guibin JIANG	
9:25-9:50	H2	PM1.0-Nitrite Heterogeneous Formation and Toxic Assessment by an on-line VACES Jianmin CHEN (Keynote) Fudan University, Shanghai, China
9:50-10:15	H3	Short-Term PM2.5 Exposure and Epigenetic Aging: A Quasi-Experimental Study in Young Healthy Adults Xu GAO (Keynote) Peking University, Beijing, China
10:15-10:40	H4	Injury Target, Toxic Effect and Molecular Mechanism of Main Atmospheric Pollutants Nan SANG (Keynote) Shanxi University, Taiyuan, China
10:40-10:50	Coffee Break	
10:50-11:15	H5	Application of Exposure Science in Geriatric Health Research Xiaoming SHI (Keynote) National Institute of Environmental Health, Chinese Center for Disease Control and Prevention, Beijing, China
11:15-11:30	H6	Aptamer Assays and Sensors for Sensitivity Detection of Aflatoxin B1 Qiang ZHAO (Oral) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
11:30-11:45	H7	Field Effect Transistor Biosensor for Monitoring of Pollutants in Aquaculture Environments Lidong WU (Oral) Chinese Academy of Fishery Science, Beijing, China
11:45-12:00	H8	Detecting Microplastic in Artificial Seawater with Single Particle (SP) ICP-MS Method Shuofei DONG (Oral) Agilent Technologies Co. Ltd, Shanghai, China
12:00-13:30	Lunch Break / Poster Session	
Date: Sep. 28, 2021 Pm (Tuesday)		
Session 2: Chemical Toxicology Chair: Bin HU, Bingsheng ZHOU		
13:30-13:55	H9	Epigenetic Biomarkers in Chemical Carcinogenesis Yuxin ZHENG (Keynote) Qingdao University, Qingdao, China
13:55-14:20	H10	The Disturbing Lipid Metabolism and Development of Nonalcoholic Fatty Liver Disease in Zebrafish upon Exposure to TBPH Bingsheng ZHOU (Keynote) Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, China
14:20-14:45	H11	Droptite Microfluidic Chip Online Combined with ICP-MS for Single Cell Analysis Bin HU (Keynote) Wuhan University, Wuhan, China
14:45-15:10	H12	Determination of Micro(nano)Plastics and Black Carbon in Environmental Waters Jingfu LIU (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
15:10-15:20	Coffee Break	

15:20-15:45	H13	Novel Perfluoroalkyl Ether Carboxylic Acids (PFECAS) and Sulfonic Acids (PFESAS): Occurrence in Human Matrix and Association with Serum Biochemical Parameters in Residents Jiayin DAI (Keynote) Shanghai Jiao Tong University,Shanghai, China
15:45-16:00	H14	Array-Based Chemical Sensors for Environmental Monitoring of Toxic Gases Zheng LI (Oral) Shenzhen University, Shenzhen, China
16:00-16:15	H15	Machine Learning as a Powerful Tool to Analyze Complicated Biological Responses Xiangang HU (Oral) Nankai University, Tianjin, China
16:15-16:30	H16	Mass Spectrometry Imaging-Based Multi-Modal Technique to Visualize Biomarker Distributions in Environmental Toxicology Chao ZHAO (Oral) Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China
16:30-16:45	H17	Quantification of DNA Modifications of Sub-chromatin Structure by Fractionation and UHPLC-MS/MS Analysis Weiyi LAI (Oral) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
16:45-17:00	H18	Chromatographic Application for NMHC Analysis Wei WANG (Oral) Shanghai Asicotech Co., Ltd. Shanghai, China
17:00	Adjourn	
Date: Sep. 29, 2021 Am (Wednesday)		
Session 3: Environmental Omics Chair: Weidong QU, Zhen LIU		
9:15-9:40	H19	Gold Clusters: Lung Tumor Diagnostics Xueyun GAO (Keynote) Beijing University of Technology, Beijing, China
9:40-10:05	H20	Single-Cell Plasmonic Immunosandwich Assay: An Appealing Tool for Signalling Tool for Signaling Pathway Studies Zhen LIU (Keynote) Nanjing University, Nanjing, China
10:05-10:30	H21	Translocation and Biotransformation of Selenium Nanoparticles in Plants Xian-Zheng YUAN (Keynote) Shandong University, Qingdao, China
10:30-10:40	Coffee Break	
10:40-11:05	H22	Proteome Analysis Revealed Disorders of Cell Metabolism and Intergrin Signalling Pathways Induced by PM2.5 Lihua ZHANG (Keynote) Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China

11:05-11:30	H23	DNA-bonded Colloidal SERS Hotspots Zhaoxiang DENG (Keynote) University of Science and Technology of China, Hefei, China
11:30-11:45	H24	Development of Rapid and Reliable Detection Method of Microplastics in Feces Applied for Exposure Risk Assessment in Children Ying ZHOU (Oral) Fudan University, Shanghai, China
11:45-12:00	H25	Determination of Legacy and Emerging Dioxins in Soil by GCMSMS Ge YIN (Oral) Shimadzu Co., LTD., Shanghai, China
12:00-13:30	Lunch Break / Poster Session	
Date: Sep. 29, 2021 Pm (Wednesday)		
Session 4: Environmental Pollutant Analysis Chair: Tiangang LUAN, Chuanyong JING		
13:30-13:55	H26	Bacterial Analysis Using ICP MS Qiuquan WANG (Keynote) Xiamen University, Xiamen, China
13:55-14:20	H27	Novel Mass Spectrometric Techniques for Environmental Pollutant Analysis and Toxicology Investigation Tiangang LUAN (Keynote) Sun Yat-Sen University, Guangzhou, China
14:20-14:45	H28	A New Mobilization Pathway of Antimonite: Thiolation and Oxidation by Dissimilatory Metal-Reducing Bacteria via Elemental Sulfur Respiration Chuanyong JING (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
14:45-15:10	H34	Detection of Nanoparticles and Their Toxicity Ruibin LI (Keynote) Soochow University, Suzhou, China
15:10-15:20	Coffee Break	
15:20-15:45	H30	Hepatic Bioaccumulation of PFASs and Structure-Toxicity Relationship in Mice Yong Liang (Keynote) Jiangnan University, Wuhan, China
15:45-16:10	H29	Fabrication and Application of Capturers for Flue Gaseous Heavy Metals Based on Specie/Fraction Transformation Chungang YUAN (Keynote) North China Electric Power University, Baoding, China
16:10-16:35	H31	Single-Cell Analysis of Pb in Human Blood Cells Ligang HU (Keynote) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
16:35-16:50	H33	Research on Standard Reference Materials Perfluorocarboxylic Acids and Perfluorosulfonic Acids Lei ZHANG (Oral) Alta Scientific Co., Ltd, Tianjin, China
16:50-17:05	H32	DNA Motor for Imaging and Modulating Key Molecules in Living Cells Hanyong PENG (Oral) Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China
17:05-17:10	/	Poster Awards/Closing Remarks Chair: Prof. Hailin WANG
17:10	Adjourn	

SCHEDULE OF SESSIONS

H

ENVIRONMENTAL ANALYSIS

CHAIR:
Prof. Hailin Wang

POSTER SESSION

Theme: Environment and Health

Dates: Sept.28-29,2021

Location: E1-E4 Hallway,
China International Exhibition
Center (Tianzhu New Hall),
Beijing

H-P1

MICROBIAL-ASSISTED THIOLATION OF METHYLANTIMONY: IDENTIFICATION AND STRUCTURAL CHARACTERIZATION

Zhipeng Yin^{1,2}, Li Ye³, Wen Zhong^{1,2}, Chuanyong Jing^{*1,2,3}

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H-P2

STRUCTURAL AND MECHANISTIC STUDY OF ANTIMONITE COMPLEXATION WITH ORGANIC LIGANDS AT THE GOETHITE-WATER INTERFACE

Wen Zhong^{1,2}, Zhipeng Yin^{1,2}, Liying Wang^{1,2}, Li Yan^{1,2}, Chuanyong Jing^{1,2,*}

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H-P3

EFFECTS OF CONTAMINANTS ON THE CELLULAR MODEL OF CDX2 MEDIATED TE DIFFERENTIATION IN VITRO

Zhiyi Zhao¹, Shaokun chen¹, Hailin Wang^{*1}

¹State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, 100085, China

H-P4

ANALYSIS OF DNA DAMAGES CAUSED BY ENVIRONMENTAL EXPOSURE USING MULTI-ENZYMES CASCADE REACTOR COUPLED WITH LC-MS

Junfa Yin^{*1,3}, Tianjiao Fang^{1,3}, Chao Tang^{1,2}, Shaokun Chen^{1,3}, and Hailin Wang^{1,2,3}

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H-P5

QUANTIFICATION OF DNA HYDROXYMETHYLATION IN MATRIX ATTACHMENT REGIONS BY FRACTIONATION OF SUB-CRHOMATIN STRUCTURE AND STABLE ISOTOPE DILUTION UHPLC-MS/MS ANALYSIS

Rui ZHANG^{1,2}, Weiyi LAI^{1,2}, and Hailin WANG^{1,2*}

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H-P6

SILVER(I) MEDIATED T-RICH OLIGONUCLEOTIDES TO FORM INTRAMOLECULAR T-SILVER(I)-T BASE PAIRS IN SOLUTION

Jinghua Hao^{1,3}, Dapeng Zhang^{*1,2,3} and Hailin Wang^{1,2,3,4}

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H-P7

THE DEAMINASE ADAL- AND ADENYLATE KINASE 1- PIVOTED CATABOLISM CHECKPOINT SUPPRESSES ABERRANT DNA N6-METHYLADENINE INCORPORATION

Shaokun Chen¹, Weiyi Lai², Zhiyi Zhao¹, Ning Zhang², Yan Liu², Jie Jiang⁴, Xiangjun Li^{1*}, Guibin Jiang^{2,3}, Hailin Wang^{1,2,3*}

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H-P8

THE INTERACTIONS OF YTHDF2 WITH RNA M6A AND DNA 6MA

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H-P9

DETECTION OF EPIGENETIC MODIFICATIONS OF MITOCHONDRIAL DNA BY UHPLC-MS/MS

Jing Zheng^{1,2}, Weiyi Lai¹, Shaokun Chen², Hailin Wang^{*1,2}

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H-P10

DNA POLYMERASE INDUCED DNA N6-METHYLADENINE INCORPORATION IN MOUSE EMBRYONIC STEM CELLS

Yao LI¹, Xiaoling LIU², Weiyi LAI¹, Cong LV¹, Hailin WANG^{1,*}

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H-P11

ANALYSIS OF DNA N6-METHYLADENINE DURING MOUSE ERYTHROPOIESIS

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²University of Chinese Academy of Sciences, Beijing 100049, China

H-P12

REMOVAL OF Cr(VI) FROM WASTEWATER BY A NEW MoSe₂ MODIFIED HALLOYSITE COMPOSITE

Ziwu JIANG, Kegang ZHANG, Xuelei DUAN, Jiexuan YU, Chungang YUAN^{*}

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H-P13

QUANTIFICATION OF GENOME-WIDE SINGLE STRAND DNA BY ENZYMATIC DEAMINATION TANDEM UHPLC-MS/MS

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H-P14

IMMOBILIZATION OF GASEOUS ARSENIC BY METAL OXIDES

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H-P15

MICROWAVE-ASSISTED SEQUENTIAL EXTRACTION OF LEAD FRACTIONS AND BIOAVAILABILITY ASSESSMENT IN COAL COMBUSTION AND ITS PRODUCTS

Yan LI, Kaiqiang HE, Yuanpeng LI, Chungang YUAN^{*}

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H-P16

ARSENIC REMOVAL IN WATER WITH MANGANESE-FUNCTIONALIZED MAGNETIC HALLOYSITE

Jiexuan YU¹, Kegang ZHANG¹, Xuelei DUAN¹, Chungang YUAN^{*1}

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H-P17

INSIGHT OF THE BIOAVAILABILITY OF ARSENIC AND HUMAN HEALTH RISK ASSESSMENT IN RESUSPENDED FLY ASH

Yiwen SHEN, Hao ZHAO, Jiaojiao XIE, Kegang ZHANG and Chungang YUAN^{*}

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H-P18

FACILE FABRICATION OF Fe/Zr BIMETAL-ORGANIC FRAMEWORKS FOR ARSENIC REMOVAL

Qi GUO, Liwei ZHENG, Xiaoyang WEI, Yan XU, Yuan LI and Chungang YUAN*

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H-P19

REMOVAL OF SELENITE IONS FROM INDUSTRIAL WASTE WATER USING SULFUR LOADED MAGNETIC MICROSPHERE

Changxian ZHAO, Xuelei DUAN, Chungang YUAN*

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H-P20

ELEMENTAL MERCURY REMOVAL IN COAL-FIRED FLUE GAS USING PEROVSKIT AND HALLOYSITE COMPOSITE

Shengli NIU, Xuelei DUAN, Chungang YUAN*

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H-P21

SIMULTANEOUS DETERMINATION OF HEXABROMOCYCLODODECANES AND TETRABROMOBISPHENOL A IN SOILS AND SEDIMENTS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY - TANDEM MASS SPECTROMETRY

Chaofei Zhu1*, Hongli Fan2, Wenlong Yang1, Liang Dong1, Meiling Lu2

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2 Agilent Technologies, Inc., Beijing, 100102, China

H-P22

CHLORINATED POLYFLUOROALKYL ETHER SULFONIC ACID AND LEGACY PER- AND POLYFLUOROALKYL SUBSTANCES IN ELDERLY POPULATION IN JINAN, CHINA: THE EXPOSURE LEVELS, SHORT-TERM CHANGE TRENDS AND INTAKE ASSESSMENT

Xuan JIA1,2, Qi JIN1,2, Yali SHI*1,2, Jianlong FANG3, Song TANG3, Haoran DONG3, Yuanyuan LIU3, Fuchang DENG3, Yaqi CAI1,2 and Xiaoming SHI3

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2 University of Chinese Academy of Sciences, Beijing 100049, China
3 China CDC Key Laboratory of Environment and Population Health, National Institute of Environmental Health, Chinese Center for Disease Control and Prevention, Beijing 100021, China

H-P23

TISSUE DISTRIBUTION OF SODIUM P-PERFLUOROUS NONENOXYBENZENE SULFONATE (OBS) IN MICE VIA ORAL EXPOSURE

Longfei Zhou1,2, Sisi He1,3, Yali Shi*1,2, Yaqi Cai1,2, Chunhui Zhang3

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2University of Chinese Academy of Sciences, Beijing 100049, China
3School of Chemical & Environment Engineering, China University of Mining and Technology, Beijing 100083, China

H-P24

EXPOSURE TO ORGANOPHOSPHATE ESTERS IN A COHORT OF ELDERLY PEOPLE: ASSOCIATIONS BETWEEN HUMAN BIOMONITORING AND EXTERNAL EXPOSURE

Minmin HOU1,2, Jianlong FANG3, Yali SHI*1,2, Song TANG3, Haoran DONG3, Yuanyuan LIU3, Fuchang DENG3, Yaqi CAI1,2 and Xiaoming SHI3

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H-P25

SCREENING OF SUSPECTED AND NON-TARGET ORGANIC POLLUTANTS IN CONTAMINATED SOILS USING GC-QTOF/MS

Di HUANG1, Lirong GAO*1, Minghui ZHENG1, Wenwen WANG2 and Meiling LU2

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2Agilent Technologies, Inc., Beijing, 100102, China

H-P26

DNA NANOMACHINE FOR DELIVERING BIOMOLECULES INTO CELLS

Aijiao YUAN1,2, Rui SHA1,2, Caiying HOU1, Zi YE2,3, Hang XIAO1,2, Xiaoyan WANG1,2, and Hanyong PENG*1,2

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H-P28

SUSPECT SCREENING AND UNTARGETED SCREENING OF ORGANIC POLLUTANTS IN SOIL FROM A TYPICAL INDUSTRIAL PARK BY GC-QTOF/MS

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2 Agilent Technologies, Inc., Beijing, 100102, China

H-P29

MONITORING THE BIODEGRADATION OF SILVER NANOPARTICLES BY SPECTRAL AND MASS SPECTROMETRIC TECHNIQUES

Xudong Wang1, 2, 3, Ming Xu*1, 2, 3

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2University of Chinese Academy of Sciences, Beijing 100049, China
3School of Environment, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences, Hangzhou 310024, China

H-P30

ANALYSIS OF POLYCHLORINATED NAPHTHALENES IN CHINESE AQUATIC FOODS

Cui LI1, Jingguang LI2, Lei ZHANG2, Yongning WU2, Lili YANG1, Minghui ZHENG1 and Guorui LIU*1

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2China National Center for Food Safety Risk Assessment, Beijing 100022, China

H-P31

STIMULATION OF PLANT GROWTH BY METAL-ORGANIC FRAMEWORK MIL-101 (CR) UNRAVELED BY LA-ICP-MS IMAGING

Yacong LIU1, Yue LIN1, Weichao WANG1,2, Qian LIU1,2* and Guibin JIANG1,2

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2University of Chinese Academy of Sciences, Beijing 100049, China

H-P32

HAIRPIN-STRUCTURED MAGNETIC SERS SENSOR FOR TETRACYCLINE RESISTANCE GENE TETA DETECTION

Shaoyu Lu, 1, 2 Chuanyong Jing*1, 2

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2 College of Resources and Environment, University of Chinese Academy of Sciences, Beijing 100049, China

H-P33

MASS DISTRIBUTION OF MAGNETIC NANOPARTICLES IN COAL-FIRED ASH POLLUTION

Hang YANG1, Qinghua ZHANG1, Lin LIU1, Dawei LU1, Qian LIU1*, Guibin JIANG1

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H-P34

ENHANCED PEROXIDASE-LIKE ACTIVITY AND IMPROVED ANTIBACTERIAL PERFORMANCE OF PALLADIUM NANOSHEET BY ALGINATE-CORONA

Minghao Ma1, 2, Ming Xu*1, 2, 3

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H-P35

A TARGET-MODULATED SWITCH ULTRASENSITIVE SENSING PLATFORM FOR NITRITE ANALYSES BASED ON FUNCTIONALIZED UPCONVERSION NANOPROBE

Mingyuan Yin1, Xiaoqiang Qiao*2, Qiliang Deng*3

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SCHEDULE OF SESSIONS

CHEMICAL METROLOGY AND REFERENCE MATERIALS

CHAIR:
Prof. Hongmei Li

ORAL LECTURES

Dates: Metrology for Worldwide Mutual Trust and Prosperity

Dates: Sept. 28-29, 2021

Location: Academic Conference Area: Room E 201 China International Exhibition Center (Tianzhu New Hall), BeijingBeijing

Date: Sep. 28, 2021 Am (Tuesday)		
9:30-9:40	Opening Remarks by Prof. Hongmei LI	
Chairperson: Qinghe Zhang & Xiuqin LI		
9:40-10:00	I2	Update on the Creation of A New ISO Technical Committee (TC 334) for Reference Materials Angelique BOTHA (Keynote) National Metrology Institute of South Africa (NMISA)
10:00-10:20	I3	New Technologies for Novel Reference Materials in Chemistry and Biology Derek CRASTON (Keynote) Laboratory of the Government Chemist, UK (LGC)
10:20-11:00	Coffee Break/Poster session	
11:00-11:20	I4	Metrological Technical Specification for Purity Assessment of Organic Purity Certified Reference Materials in China Ting HUANG (Oral) National Institute of Metrology (NIM)
11:20-11:40	I5	Preparation for Certified Reference Material of Important Chemical Contaminants in Typical Matrix of Food Yunfeng ZHAO (Keynote) China National Center for Food Safety Risk Assessment (CFSA)
11:40-12:00	I6	Development of LC-ID-MS/MS for the Accurate Determination of Harmful Organic Residues in Food Xiuqin LI (Keynote) National Institute of Metrology (NIM)
12:10-13:30	Lunch Break	
Date: Sep. 28, 2021 Pm (Tuesday)		
Chairperson: Yibing LV & Liuxing FENG		
13:00-13:20	I7	Research on Preparation Technique of Multi-Organic-Component Mix-Standard Solutions Lei ZHANG (Keynote) Alta Scientific Co. Ltd.
13:20-13:40	I8	Study of Matrix Certified Reference Materials for Drug Residues Measurement in Animal Derived Agro-Product Mengrui YANG (Keynote) Chinese Academy of Agricultural Sciences
13:40-14:00	I9	Metrology in Food Safety - The African Experience Maria FERNANDES-WHALEY (Keynote) National Metrology Institute of South Africa (NMISA)
14:00-14:20	I10	The Development of Patulin Certified Reference Materials Xianjiang LI (Keynote) National Institute of Metrology (NIM)
14:20-14:40	I11	TBD Yibing LV (Keynote) China National Environmental Monitoring Centre
14:40-15:00	I12	Technical Information Related to Reference Material Productions for Environmental Analysis by NMIJ Nobuyasu HANARI (Keynote) National Metrology Institute of Japan (NMIJ)
15:00-15:30	Coffee Break / Poster Session	
15:30-15:50	I13	Methods for Determination of the Mass and Particle Number Concentration of Micro- and Nano-Plastics Jingfu LIU (Keynote) Research Center for Eco-Environmental Sciences, CAS
15:50-16:10	I14	Development of One Step SPLE Method with Process Control for Determination of 16 PFCs in Atmospheric Particulate Matter Hua TANG (Keynote) National Institute of Metrology (NIM)
16:10-16:30	I15	Comparison of the Determination of 117 Component VOCs Simultaneously Using Online and Canister Sampling Method Xin ZHOU (Oral) National Institute of Measurement and Testing Technology
16:30-17:00	Q&A	

Date: Sep. 29, 2021 Am (Wednesday)		
Chairperson: Zhixin TIAN & Jinlan ZHANG		
9:30-9:50	I16	Introduction to National Drug Standard Management and Drug Reference Standard Management Zonghua SONG (Keynote) Chinese Pharmacopoeia Commission
9:50-10:10	I17	TBD Jinlan ZHANG (Keynote) Institute of Materia Medica, Chinese Academy of Medical Science
10:10-10:30	I18	Towards Standardization of Brain Natriuretic Peptides Christelle DUBOIS (Keynote) Laboratory of the Government Chemist, UK (LGC)
10:30-11:00	Coffee Break	
11:00-11:20	I19	Site- and Structure-specific Analysis of Protein N-glycosylation Zhixin TIAN (Keynote) Tongji University
11:20-11:40	I20	Determination of Structurally Related Impurity in Peptide Pharmaceutical by Mass Spectrometry Ming LI (Keynote) National Institute of Metrology (NIM)
11:40-12:00	I21	Standardization of Procalcitonin Assays Vincent DELATOUR (Keynote) French National Metrology Institute (LNE)
12:10-13:00	Lunch Break	

Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Baorong CHEN & Dewei SONG		
13:00-13:20	I22	How to Train the Standardization of Clinical Laboratory Medicine? Baorong CHEN (Keynote) King-Med Technology Co., Ltd
13:20-13:40	I23	Study on the Epitopes of Important Protein Diagnostic Bioarkers Based on Hydrogen-deuterium Exchange Mass Spectrometry Dewei SONG (Keynote) National Institute of Metrology (NIM)
13:40-14:00	I24	IDMS Method for Urine Albumin Measurement and Its Application to External Quality Assessment Programme and Reference Material Certification Qinde LIU (Keynote) Health Sciences Authority Singapore (HSA)
14:00-14:20	I25	How to Ensure the Accuracy of Laboratory Test Results from the Perspective of Supervision Yi JU (Keynote) Shanghai Center for Clinical Laboratory
14:20-14:40	I26	Mass Spectrometry-Based Candidate Reference Measurement Procedure for Quantification of Cystatin C in Human Serum Qiaoxuan ZHANG (Keynote) Traditional Chinese Medicine Hospital of Guangdong Province

14:40-15:00	I27	Results from a CCQM Pilot Study on Determination of Growth Hormone in Serum Using Mass Spectrometry Cristian ARSENE (Keynote) Physikalisch-Technische Bundesanstalt (PTB)
15:00-15:30	Coffee break	
15:30-15:50	I28	Precise Measurement of Nucleic Acids of SARS-Cov-2 and Development of Reference Material Lianhua DONG (Oral) National Institute of Metrology (NIM)
15:50-16:10	I29	Progress in SI-traceable Reference Measurement Systems for Protein Biomarkers Ralf JOSEPHS (Keynote) International Bureau of Weights and Measures (BIPM)
16:10-16:50	Q&A	
16:50-17:00	Wrap-up	



SCHEDULE OF SESSIONS

CHEMICAL METROLOGY AND REFERENCE MATERIALS

CHAIR:
Prof. Hongmei Li

POSTER SESSION

Dates: Metrology for Worldwide Mutual Trust and Prosperity

Dates: Sept. 28-29, 2021

Location: E1-E4 Hallway, China International Exhibition Center (Tianzhu New Hall), BeijingBeijing

I-P1

ACCURATE DETERMINATION OF VITAMIN B12 IN INFANT FORMULA BY ISOTOPE DILUTION LIQUID CHROMATOGRAPHY HIGH RESOLUTION MASS SPECTROMETRY

Xuxin Wang, Xiaomin Li*, and Qinghe ZHANG

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I-P2

DEVELOPMENT OF A CERTIFIED REFERENCE MATERIAL FOR THE DETERMINATION OF PERFLUOROALKYL SUBSTANCES IN FISH POWDER

Yan Gao, Xiaomin Li, Xiuqin Li and Qinghe Zhang*

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I-P3

DEVELOPMENT OF HUMAN INSULIN PURITY CERTIFIED REFERENCE MATERIAL

Xianxia WANG1, Liqing WU2, Yanjie HUANG3, Ping SU*1, Yi YANG1

1Beijing University of Chemical Technology, China, Beijing

2National Institute of Metrology, China, Beijing

3Guangdong Provincial Institute of Metrology, China, Guangzhou

I-P4

DEVELOPMENT OF REFERENCE MATERIALS OF TRACE ELEMENTS IN GOLD SOLUTIONS

Jianying Zhang, Yanjie Cui, Tao Zhou*, Bing Wu and Yichuan Tang

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I-P5

QUANTITATIVE DETERMINATION OF KEY ELEMENTS IN NI-BASED SUPER-ALLOY BY MASS SPECTROMETRY AND ATOMIC SPECTROSCOPY

Jianying Zhang, Bing Wu*, Tao Zhou, Yanjie Cui and Yichuan Tang

Division of Chemical Metrology and Analytical Science, National Institute of Metrology, Beijing 100029, China

I-P6

HOMOGENEITY TEST AND CERTIFICATION OF OR ELEMENTS IN GLASS CERTIFIED REFERENCE MATERIAL BY MICRO X-RAY FLUORESCENCE SPECTROSCOPY (μ -XRF)

Liuxing Feng,* Naijie Shi, Qian Wang

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I-P7

ABSOLUTE QUANTIFICATION OF HAEMOGLOBIN IN WHOLE BLOOD VIA IRON AND SULFUR USING ONLINE HPLC ISOTOPE DILUTION MASS SPECTROMETRY

Mengyun Pan1†, Xi-Rui Zhou1†, Yanli Lu1, 2, Yang Zang1, 2, Jinping Xiong2,* , Liuxing Feng1,*

1.Feng, L.; Huo, Z.; Xiong, J.; Li, H. Anal Chem 2020, 92 (19), 13229-13237 10.1021/acs.analchem.0c02381.

I-P8

ABSOLUTE QUANTIFICATION VILIP-1 BY SPECIES-UNSPECIFIC ISOTOPE-DILUTION LIQUID CHROMATOGRAPHY-INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY

Yang Zang1,2, Xirui Zhou1, Jinping Xiong2 and Liuxing Feng1*

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2College of Material Science and Technology, Beijing University of Chemical Technology, Beijing 100029, P.R. China

I-P9

DEVELOPMENT OF SIGNATURE PEPTIDE FOR TAU PROTEIN QUANTIFICATION WITHOUT THE NEED OF IMMUNOCAPTURE

Yanli LU1,2, Xi-rui ZHOU2, Yang ZANG1,2, Jinping XIONG*1 and Liuxing FENG*2

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2 Division of Chemical Metrology and Analytical Science, National Institute of Metrology, Beijing 100029, China

I-P10

DETERMINATION OF SELENIUM SPECIATION IN RICE USING LC-ICP-MS AFTER ENZYMATIC HYDROLYSIS

Qian MA1, Qinghe ZHANG*1, Xiao LI

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I-P11

STABILITY OF A CALIBRANT AS CERTIFIED REFERENCE MATERIAL FOR DETERMINATION OF TRANS-ZEARALENONE BY HPLC-DAD-MS/MS

Shuan LIU1, Xiuqin LI*1, Zhen GUO1, Xiaomin LI1, Qinghe ZHANG1

Division of Chemical Metrology and Analytical Science, National Institute of Metrology, Beijing 100029, P. R. China

I-P12

ANALYSIS OF D-DIMER HETEROGENEITY BY SINGLE-MOLECULE IMAGING

Rong Zhao1, Mengran Li1, 2, Dewei Song*1, Hongmei Li *1

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2Beijing University of Chemical Technology, Beijing 100029, P.R. China

I-P13

DEVELOPMENT OF CANDIDATE REFERENCE METHODS FOR IMPORTANT BIOMARKERS IN NEWBORN SCREENING

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ANALYSIS OF THE HEART BIOMARKER IN SERUM USING ANTIBODY COUPLED MAGNETIC BEAD AND LCMS APPROACH

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DEVELOPMENT OF A MIXED SOLUTION REFERENCE MATERIAL OF 9 β -AGONISTS IN METHANOL

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PURITY DETERMINATION OF TYPICAL SYNTHETIC ESTROGENS BY DIFFERENTIAL SCANNING CALORIMETRY

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ACCURATE QUANTIFICATION OF PROSTATE SPECIFIC ANTIGEN BY AMINO ANALYSIS COUPLED WITH ISOTOPE-DILUTION MASS SPECTROMETRY

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AMINO ACID HYDROLYSIS FOR ACCURATE QUANTIFICATION OF PROCAICITONIN BY ISOTOPE DILUTION MASS SPECTROMETRY

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EPITOPE MAPPING FOR ANTIBODIES UTILIZED IN C-REACTIVE PROTEIN ASSAY KIT BY HYDROGEN-DEUTERIUM EXCHANGE MASS SPECTROMETRY

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APPLICATION OF SPLIT-LEVEL TEST SAMPLE IN LABORATORY PROFICIENCY TESTING

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QUANTIFICATION OF TRACE TITANIUM DIOXIDE WITH SIZES DOWN TO 20nm BASED ON SIZE EXCLUSION CHROMATOGRAPHY COUPLED WITH ICP-MS

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QUANTIFICATION AND SIZE DISTRIBUTION OF TITANIUM DIOXIDE NANOPARTICLE IN FOOD BY SP-QQQ-ICPMS

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DETERMINATION OF SULFURIC ACID CONCENTRATION BY POTENTIOMETRIC TITRATION WITH ANHYDROUS SODIUM CARBONATE REFERENCE MATERIAL

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MULTI-PARAMETERS DETERMINATION OF TITANIUM DIOXIDE NANOPARTICLES BY SP-QQQ-ICPMS

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DEVELOPMENT & APPLICATION OF A MULTI-SPECTROMETRY CHARACTERISTIC INFORMATION ANALYSIS SYSTEM FOR FOOD AUTHENTICITY

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DETERMINATION OF NUMBER CONCENTRATION OF POLY-DISPERSED GOLD NANOPARTICLES BASED ON SINGLE PARTICLE INDUCTIVELY PLASMA MASS SPECTROMETRY

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RESEARCH ON CERTIFIED TECHNIQUE FOR PERFLUOROOCTANOIC ACID REFERENCE MATERIAL

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CHARACTERIZATION OF ACTIVE OLIGOSACCHARIDE CHAINS IN LOW MOLECULAR WEIGHT HEPARINS USING IN SILICO SEQUENCING AND TANDEM MASS SPECTROMETRY

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THE DETERMINATION OF 9 FENTANYL DRUGS IN HAIR SAMPLES BY GC-MS/MS AND LC-MS/MS

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CERTIFICATION OF THE REPLICATION OF CREATININE REFERENCE MATERIALS IN FROZEN HUMAN SERUM

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EMULSIFICATION/DEMULSIFICATION TECHNIQUE COUPLED TO GC-MS/MS FOR MULTI-CLASS ANALYSIS OF PESTICIDES IN EDIBLE OILS

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THE TRACEABILITY OF ANALYSIS OF ORGANIC ELEMENTS

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STUDY ON THE SYNTHESIS OF TIGECYCLINE-D9

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RAPID DETECTION OF SINGLE VIABLE ESCHERICHIA COLI O157 CELLS IN FRESH LETTUCE AND STRAWBERRY BY IMMUNO-MAGNETIC FLOW CYTOMETRY IN COMBINATION WITH PRE-ENRICHMENT

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WD-XRF TEST FOR INORGANIC ELEMENTS IN BOVINE LIVER POWDER

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DETERMINATION AND OCCURRENCE OF ORGANOPHOSPHATE ANTIOXIDANT AND ITS METABOLITES IN HUMAN PLASMA

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DEVELOPMENT OF AN ACCELERATED SOLVENT EXTRACTION-COLUMN PURIFICATION-SOLID PHASE EXTRACTION METHOD FOR SIMULTANEOUS DETERMINATION OF PCBS, PBDES AND OPFRS IN SEDIMENTS

ZHANG Wei-Ting^{1,2}, CAI Li-Mei^{1,2}, LIU Si1², SONG Shan-Jun^{*1}, LI Peng-Hui^{*2}

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DISCUSSION ON DIFFERENT QUANTITATIVE MEASUREMENT METHODS FOR ELIMINATING THE MATRIX INTERFERENCE OF SELENIUM DETERMINATION IN INFANT FORMULA POWDER

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DETERMINATION OF TRACE SULFUR IN ALLOYS AND METALS BY USING GLOW DISCHARGE MASS SPECTROMETRY

Tao ZHOU, Jianying ZHANG, Yanjie CUI, Yichuan TANG

National Institute of Metrology, China

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THE DEVELOPMENT OF OSCIDROP DIGITAL PCR SYSTEM AND ITS APPLICATION IN THE QUANTIFICATION OF NUCLEIC ACID REFERENCE MATERIALS

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PREPARATION AND UNCERTAINTY EVALUATION OF NCRM: SULFAMETHOXAZOLE SOLUTION IN ACETONITRILE

Yin XU^{1, 2}, QingLong TONG¹, JianXin WANG¹, YueFeng JIA¹, JuLing Chen¹, Lei ZHANG^{*1, 2}

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SCHEDULE OF SESSIONS

J

LABELED IMMUNOASSAY TECHNOLOGY

CHAIR:

Prof. Guangtao YAN

ORAL LECTURES

Theme: Innovation and Integration, Accurate Diagnosis
Dates: September 29, 2021

Location: Conference room E301, Academic Conference Area, China International Exhibition Center (Tianzhu New Museum), Beijing

Date: Sep. 29, 2021 Am (Wednesday)		
Chair: Prof. Hua JING, Prof. Liyan CUI		
9:00-9:30	J2	Development of a New Chemiluminescence Immunoassay for Ischemic Stroke Marker (ASC) and Its Clinical Significance Guojun ZHANG Beijing Tiantan Hospital, Capital Medical University
9:30-10:00	J3	Gene Expression Regulation of Tumor Glycolysis Qinong YE Beijing Institute of Biotechnology
10:00-10:30	J4	Application of Nucleic Acid Mass Spectrometry in Clinical Examination Xiangyi LIU Beijing Tongren Hospital Affiliated to Capital Medical University
10:30-10:45	Coffee Break	
10:45-11:15	J5	Analytical Performance Evaluation of High Sensitivity Cardiac Troponin Assay Zhou ZHOU Fuwai Hospital, Chinese Academy of Medical Sciences
11:15-11:45	J8	Clinical Application of Flow Cytometry in the Detection of Lymphocyte Subsets and Intracellular and Extracellular Cytokines Jinbao ZONG The Affiliated Qingdao Haici Hospital of Qingdao University
Date: Sep. 29, 2021 Pm (Wednesday)		
Chair: Prof. Jiankui CHEN, Prof. Guobin XU		
13:30-14:00	J7	Early Detection of Colorectal Cancer in Clinical Laboratory Jianwei GUO Beijing first integrated traditional Chinese and Western Hospital
14:00-14:30	J6	Clinical Application and Development of Flow Fluorescence Technique Yanhong GAO First Medical Center, Chinese PLA General Hospital
14:30-14:45	Coffee Break	
14:45-15:15	J9	Tumor Heterogeneity and Application of Liquid Biopsy in Bladder Cancer Haixia LI Peking University First Hospital
15:15-15:45	J10	Progress in Clinical Application of Laboratory Diagnostic Technique in Autoimmune Diseases Yongzhe LI Peking Union Medical College Hospital
15:45-16:00	J11	Ultra Bright Fluorescent Protein Expands the New Journey of Immunoassay Yufei LU Agilent Technology (China) Co. Ltd. Beijing, China
16:00	Adjourn	

SCHEDULE OF SESSIONS

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LABELED IMMUNOASSAY TECHNOLOGY

CHAIR:

Prof. Guangtao YAN

POSTER SESSION

Theme: Innovation and Integration, Accurate Diagnosis
Dates: September 29, 2021

Location: E1-E4 Hallway, China International Exhibition Center (Tianzhu New Museum), Beijing

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THE CLINICAL VALUE OF FLOW FLUORESCENT IMMUNOASSAY FOR THE DETECTION OF ANTINUCLEAR ANTIBODY SPECTRUM IN AUTOIMMUNE DISEASES

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CLINICAL VALUES OF LABORATORY INFLAMMATION INDICATORS FOR DIAGNOSIS AND TREATMENT OF COVID-19 PATIENTS

Wang Dagang, Li Weijie, Jin Fangfang, Wang Shuang, Sun Jiyun, Zhou Chun, Xu Fei, Guo Jingjing, Wang Yajie

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J-P3

CONFOUNDING FACTORS DISRUPTING THE ACCURATE ESTIMATION OF DIVERGENCE BETWEEN SARS-COV-2 AND RATG13

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J-P4

IDENTIFICATION OF TRADITIONAL CHINESE MEDICINE CONSTITUTION AND MLH1 GENE POLYMORPHISM IN PATIENTS WITH GASTROINTESTINAL CANCER

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THE EXPRESSION AND MECHANISM OF INTERLEUKIN-8 IN CHRONIC SINUSITIS

Yu Song, Xiangyi Liu

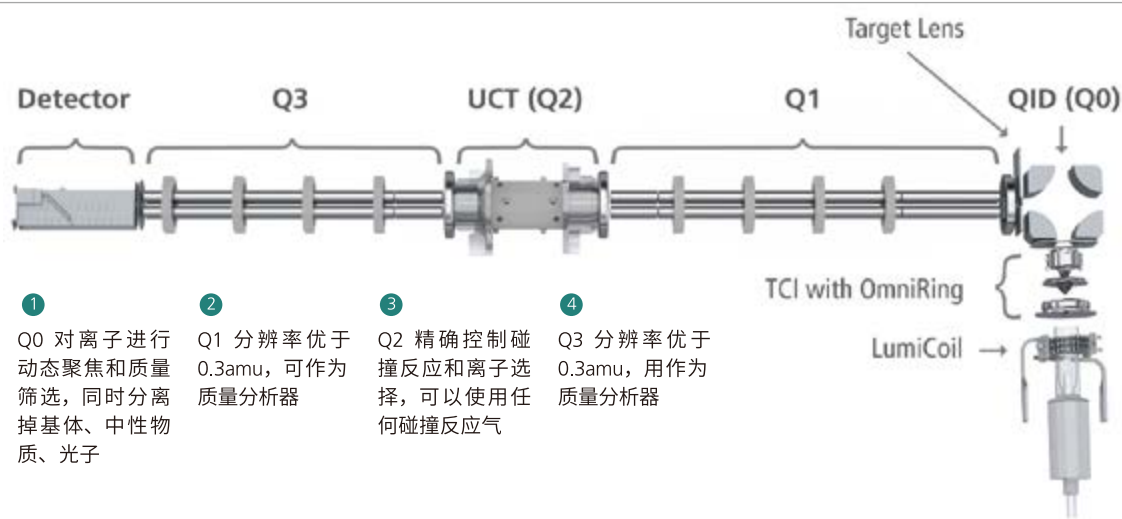
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