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BCEIA 2023

BCEIA 2023

A World Exposition on Analytical Science
and Biochemical Technology

The 20th Beijing Conference and
Exhibition on Instrumental Analysis

REPORT

ORGANIZER:

China Association for Instrumental Analysis (CAIA)

BCEIA 2023 第二十届北京分析测试学术报告会暨展览会
THE 20th BEIJING CONFERENCE AND EXHIBITION ON INSTRUMENTAL ANALYSIS

FOR A GREEN & HEALTHY FUTURE
生命 生活 健康 面向绿色未来



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www.foodmate.net
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http://www.china17pf.com
China Quality Certification

The BCEIA 2023 Exhibition, positioned as “A World Exposition for Analytical Science and Biochemical Technologies”, attracted 723 domestic and foreign instrument manufacturers to showcase more than 6,000 new products related to laboratory analysis and biochemical technologies. The Exhibition highlighted popular analysis and testing applications, such as environmental analysis, food analysis, biomedicine, materials analysis, energy and petrochemicals, in-vitro diagnostics, laboratory design and construction, geology and mining, metallurgy, textiles, and aviation & aerospace. In addition to the traditional analytical and biochemical instrument section, there were some signature sections that were introduced this year, featuring quality control/ materials analysis, innovative pretreatment technologies, scientific and technical

literature and authoritative academic journals. Aside from academic activities, the participants had an opportunity to explore the world's latest analytical and biochemical instruments and seek potential business and academic partnerships. In total, the 3-day Exhibition received 51,907 visitors, while many well-known analytical instrument companies debuted their new products in China for the first time.

The BCEIA official live-streaming platform allowed online participants to experience the Academic Conference and Exhibition of BCEIA 2023 at any time and any place. The BCEIA Focus Online Program, produced by the organizer, was enhanced and invited experts and accomplished scholars from the Conference and the Organizing Committee to speak on the history and heritage of BCEIA and the highlights of this year's event. This content was interspersed with international advanced academic presentations, explorations of novel products at exhibition halls, and in-depth interviews. Statistics reveal that the live streaming session generated nearly 40,000 views during the 3-day event, allowing numerous members of the analysis and testing sector, who were unable to attend in person, the ability to enjoy BCEIA via the internet.

Over the last 40 years, BCEIA has overcome many difficulties and has grown to become a premier international conference and exhibition in the field of analytics and testing. In 2025, BCEIA will celebrate its 40 years' anniversary, and we look forward to meeting you again in Beijing after two years to participate in this analytical science event, when we can together witness the flourishing development of the scientific instrument industry!

China Association for Instrumental Analysis

2023.10

FOR A GREEN & HEALTHY FUTURE

BCEIA 2023

ACADEMIC CONFERENCE

The BCEIA 2023 Academic Conference hosted more than 540 academic lectures in various forms, including the Plenary Lecture Session, Parallel Sessions, Advanced Academic Forums, Posters, and Concurrent Meetings.

The gathering of many Chinese and foreign academicians has always been a special attribute of BCEIA, and this year was no exception. Attendees included the Chinese Academy of Sciences and the Chinese Academy of Engineering members Guibin Jiang, Yukui Zhang, Jinghong Li, Maili Liu, Erkang Wang, Hengqiang Ye, Hongyuan Chen, Qikun Xue, Zhifang Chai, Heping (Peace) Cheng, Xiurong Yang, Yongfang Li, Chunhai Fan, Chunming Xu, Lizhu Wu, Guanghui Ma and Haizhou Wang, fellow of the Third World Academy of Sciences Shaojun Dong, fellows of the Royal Society of Canada Michael SIU, X. Chris Le and Xing-Fang Li, and fellows of the European Academy of Sciences and Arts, the Royal Society of Chemistry, the Academy of Medical Sciences, the National Academy of Engineering, and the American Institute for Medical and Biological Engineering.



BCEIA2023 ACADEMIC CONFERENCE
Plenary Session

The BCEIA Plenary Session was attended and addressed by 11 internationally celebrated scholars, one recommended by each of the 11 specialized parallel sessions of BCEIA. It has always been a platform for sharing the latest academic findings in analytical and testing technologies, and for exploring the development of analytical science. These 11 scholars are all internationally recognized experts in their respective fields of research, and their presentations attracted full-house audiences that packed the conference hall with more than 1,000 scholars.



The academic lectures at the BCEIA Plenary Session have always been at the forefront of the advancement of science and technology. Topics addressed the applications of advanced analytical and testing technologies in fields related to people's livelihood, including proteomics, single-cell metabolome analysis, brain science, vaccine purification, precision medicine, pathogen traceability, urine toxicology, nucleic acids-based information materials, high-temperature superconductivity mechanism, environmental toxicology, and high-precision measurements of greenhouse gas emissions.



OPENING REMARKS

Prof. Guibin JIANG

Chairman, BCEIA2023
President, China Association for Instrumental Analysis, CAIA
Academician, Chinese Academy of Sciences
Fellow, Third World Academy of Sciences
Director, State Key Laboratory of Environmental Chemistry and Ecotoxicology
Dean, School of Resource & Environment, University of Chinese Academy of Sciences



OPENING REMARKS

Defang HE

Deputy Secretary General,
Ministry of Science and Technology



OPENING REMARKS

Prof. Yukui ZHANG

Vice Chairman, BCEIA2023
Chairman, BCEIA2023 Academic Committee
Academician, Chinese Academy of Sciences
Dalian Institute of Chemical Physics, Chinese Academy of Sciences



CHAIR

Prof. Zhifang CHAI

Academician, Chinese Academy of Sciences
Institute of High Energy Physics (IHEP), Chinese Academy of Sciences



CHAIR

Prof. Xiurong YANG

Academician, Chinese Academy of Sciences
Changchun Institute of Applied Chemistry, Chinese Academy of Sciences



CHAIR

Prof. Maili LIU

Vice Chairman, BCEIA2023
Vice Chairman, BCEIA2023 Academic Committee
Academician, Chinese Academy of Sciences
Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Science



CHAIR

Prof. Jinghong LI

Vice Chairman, BCEIA2023 Academic Committee
Chairman, Colleges and Universities Branch, CAIA (CUBIA)
Academician, Chinese Academy of Sciences
Tsinghua University



Keynote Speaker

Prof. Qikun XUE

Academician, Chinese Academy of Sciences
Southern University of Science and Technology
Topic: On the Pairing Mechanism of High Temperature Superconductivity



Keynote Speaker

Prof. K.W.Michael SIU

University of Windsor

Topic: Linkage between the Environment and Health: Impact of Environmental Factors on Individual's Health and Expressed in Changes in their Proteome



Keynote Speaker

Prof. Chunhai FAN

Academician, Chinese Academy of Sciences
Shanghai Jiao Tong University

Topic: Nucleic Acids-based Information Materials



Keynote Speaker

Prof. Heping (Peace) CHENG

Academician, Chinese Academy of Sciences
Peking University

Topic: Miniature Multi-photon Microscopy Ushering in New Paradigms in Brain Science Research



Keynote Speaker

Prof. Guanghui MA

Academician, Chinese Academy of Sciences
Institute of Process Engineering, CAS
Topic: Preparation of Novel Microspheres for Protein / Vaccine Separation Application



Keynote Speaker

Prof. Ruifu YANG

Academy of Military Medical Sciences, China

Topic: Source Tracing of Pathogens: from Phylogenomics to Trace-element Analysis

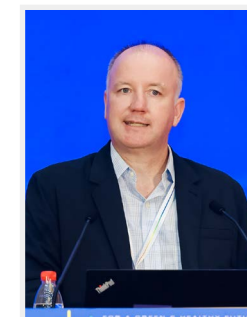


Keynote Speaker

Prof. Jeremy K NICHOLSON

Murdoch University
Imperial College London

Topic: Molecular Spectroscopy in Precision Medicine



Keynote Speaker

Prof. Paul WESTERHOFF

Regent Professor & Fulton Chair of Environmental Engineering
Arizona State University

Topic: Analytical Strategies to Assess PFAS Removal and Lifecycle Fate during Adsorption and Transformative Water Treatment Processes



Keynote Speaker

Prof. Oliver J. SCHMITZ

University of Duisburg-Essen, Germany

Topic: Development of a New Ionization Source for Single Cell Metabolome Analysis



Keynote Speaker

Dr. Robert WIELGOSZ

International Bureau of Weights and Measures (BIPM)

Topic: Certified Reference Materials for a Global Greenhouse Gas Monitoring Infrastructure



Keynote Speaker

Mr. Paul BREITENBECHER

Breiten Associates LLC

Topic: False positive, negative, and unexpected Drug Testing Results in the Urine Toxicology Laboratory



BCEIA2023 ACADEMIC CONFERENCE PARALLEL SESSIONS

Some 400 academic lectures were delivered during 11 Parallel Sessions on topics including Electron Microscopy and Materials Sciences, Mass Spectrometry, Optical Spectroscopy, Chromatography, Magnetic Resonance Spectroscopy, Electroanalytical Chemistry, Analytical Techniques in Life Sciences, Environmental Analysis, Chemical Metrology & Reference Materials, Labeled Immunoassay, as well as Micro Total Analysis.

The Electron Microscopy and Materials Sciences Parallel Session, themed "Microscopy Enlightens New Future", combined theoretical research on electron microscopy, advancement of instrumentation technologies, and the frontiers of application, and addressed topics including the methodology and application progress of transmission electron microscopy, the application of electron microscopy in structural and functional materials science, and the application of electron microscopy in energy and catalytic materials. 25 Chinese and foreign senior scientists and young scholars devoted to electron microscopy were invited to introduce the breakthroughs and progresses they have made in recent years in new methods, applications and instrumentation technologies in their field of study.

The Mass Spectrometry Parallel Session, themed "Mass Spectrometry Analysis-Creating Frontier in Interdisciplinary", covered major topics such as fundamentals of mass spectrometry, instrumentation and innovations of mass spectrometry, MS-based proteomic analysis, MS-based epigenetic analysis, pretreatment technologies in MS analysis, applications of mass spectrometry in multidisciplinary sciences. 40 Chinese and foreign senior scientists and young scholars specialized in mass spectrometry were invited to share the breakthroughs they have made in recent years in new methods, applications and instruments in their field of study.

The Optical Spectroscopy Parallel Session, themed "Highly Sensitive Optical Spectral Analysis and Imaging", focused on topics including molecular and nanoscale spectra, spectral analysis and material, high resolution optical imaging, optical spectrometer and microscope. 47 senior optical Spectroscopy scientists and young scholars from China delivered enlightening speeches.

The Chromatography Parallel Session, themed "Separation Science Safeguards Healthy Life", highlighted topics including sample preparation, highly efficiency separation, highly sensitive detection and applications. 36 senior chromatography scientists and young scholars from China and abroad were invited to introduce the breakthroughs the mass chromatography experts and scholars have made in recent years in new principles, materials, methods and instruments in their field of study.

The Magnetic Resonance Spectroscopy Parallel Session, themed "Magnetic Resonance Technology for Healthy Living", covered topics including the biological NMR spectroscopy and applications, NMR applications on small molecules, EPR techniques and applications, magnetic resonance imaging, and metabolomics studies based on nuclear magnetic resonance. 23 senior spectroscopy scientists and young scholars delivered informative speeches.



Prof. Jiangnan CHEN
Director
China National Analytical
Center, Guangzhou

After years of development, BCEIA is now regarded as the most iconic event of China's analytical testing sector, has made an impact globally and attracted the participation of top scientists from all over the world.

11 Parallel Sessions, 400 Talks

Electron Microscopy and Materials Sciences



Mass Spectrometry



Optical Spectroscopy



Magnetic Resonance Spectroscopy



Chromatography



Electroanalytical Chemistry





BCEIA2023 ACADEMIC CONFERENCE PARALLEL SESSIONS

The Electroanalytical Chemistry Parallel Session, themed "Electroanalytical Chemistry Innovation and Opportunity", addressed topics including new techniques and methods in electroanalysis, surface modification and characterization, electrochemical sensors, hyphenated techniques, nanoelectrochemistry, bioelectroanalysis, spectroelectrochemistry and interdisciplinary field of electroanalysis. 33 senior electroanalytical chemistry scientists and young scholars delivered insightful speeches.

The Analytical Techniques in Life Sciences Parallel Session, themed "Analytical Techniques Improve the Understanding of Life", focused on topics including precision medical diagnosis, -omics analysis, biomedicine analysis, and new techniques and methods related to health and safety. 30 senior scientists and young scholars in the field of life sciences from China and abroad held wide-ranging discussions and exchanges on frontier research and innovative clinical applications.

The Environmental Analysis Parallel Session, themed "Environment and Health", addressed topics including new pollutant analysis, exposure omics and exposure analysis, micro- and nano-scale particles and their impacts, new analytical techniques and instruments in environmental health research, and the application of AI and machine learning in environmental analysis. 34 Chinese and foreign senior scientists and young talents devoted to environmental sciences were invited to introduce the breakthroughs the mass environment experts and scholars have made in recent years in new principles, materials, methods and instruments in their field of study.

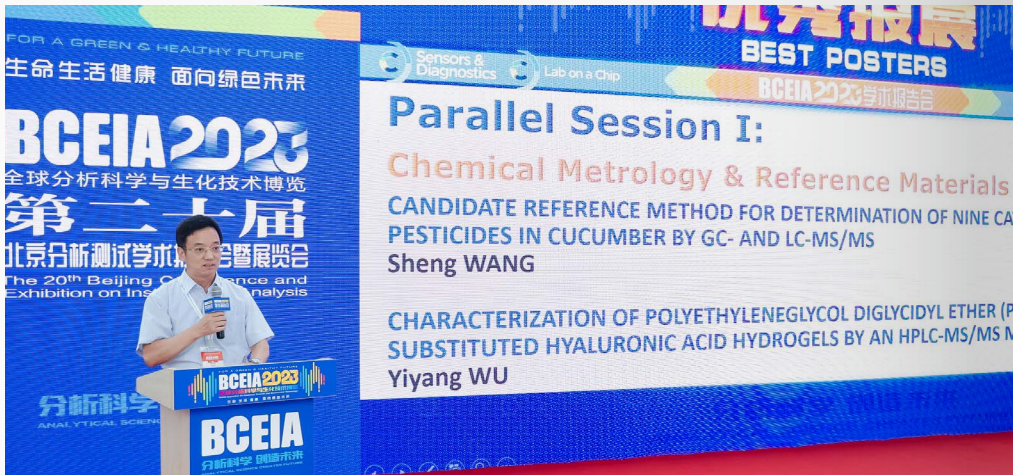
The Chemical Metrology & Reference Materials Parallel Session, themed "Metrology For Worldwide Mutual Trust and Prosperity", addressed topics including new techniques for reference materials, green manufacturing, new techniques and methods in nutrition and health. 24 senior scientists and young scholars in the related field from China and abroad held extensive discussions and exchanges on frontier research and innovative applications of metrology.

The Labeled Immunoassay Parallel Session, themed "Innovation and Integration, Accurate Diagnosis", covered topics including accurate diagnosis of new detection technology, new test indicators clinical validation transformation, test quality control, and test reference substances and traceability. 28 senior laboratory medicine scientists and young scholars delivered illuminating speeches.

The Micro Total Analysis Parallel Session, themed "Miniaturized Analytical Technology for the Whole Society", addressed six topics, namely, microfluidic analysis, techniques for micro and nano analysis, micro sampling process, single entity analysis, and new principles, techniques, methods and instruments. 32 Chinese and foreign renowned scientists in this field gave elevating lectures on new principles, techniques, methods, instruments, and applications.

11 Parallel Sessions, 400 Talks





The BCEIA 2023 Academic Conference received a total of 818 high-quality academic papers, most of which were contributed by young scholars specialized in the analysis and testing discipline at top universities and research institutes. 372 posters were displayed at the venue. Finally, 35 were recognized as Best Posters and presented with certificates issued by the American Chemical Society, the Royal Society of Chemistry, and the CAIA.





BCEIA 2023 ACADEMIC CONFERENCE ADVANCED ACADEMIC FORMS

Post-Pandemic Big Health Development Forum



OPENING REMARK

Prof. Hongyuan CHEN
Academician, Chinese Academy of Sciences
Nanjing University

Post-Pandemic Big Health Development Forum addressed a wide range of health-related topics, from macro theories and status quo to specific research techniques and approaches. Five experts elaborated on the challenges, development trends and directions of big health development in the post-epidemic era and shed light on future research topics. The contents covered climate change and public health, in vitro diagnosis and individualized health assessment system, glucose metabolism and tumor research, clinical mass spectrometry technology and accurate diagnosis and treatment applications. Latest developments in the fight against tumors and viruses, cancer early screening and diagnosis, and marker detection were shared. The forum also featured in-depth discussions on the hottest instruments and applications, such as POCT, clinical mass spectrometry and biochips. The government, the industry, the academia, the research institutes and the users got together to brainstorm and enlighten the mass big health practitioners, as well as the general public.

CHAIR



Prof. Jianwei XIE

Academy of Military Medical Sciences



Prof. Guangtao YAN

Chairman, Labeled Immunoassay Committee, CAIA
PLA General Hospital



Prof. Huwei LIU

Vice Chairman, BCEIA2023 Organizing Committee
Peking University

KEYNOTE SPEAKER



Prof. Haidong KAN

School of Public Health,
Fudan University



Prof. Haibo SONG

Chief Technician,
Branch of Medical Laboratory
Science, National Association of
Health Industry and Enterprise
Management



Prof. Xixiong KANG

Chief Physician,
Capital Medical University



Prof. Qinong YE

Academy of Military Medical
Sciences



Prof. Ling QIU

Peking Union Medical College
Hospital

Dr. Young WANG
Past President 2020,
Board Member, North
American Chinese
Clinical Chemists
Association



Thanks so much for inviting me to attend the BCEIA 2023. As an Academic Committee member, I have witnessed the full process, starting from the beginning. When I actually attended the conference in Beijing in early September, I was still impressed by the presentations by the plenary keynote speakers. They are very informative and have delivered cutting-edge technologies in the field. The Labeled Immunoassay parallel session attracted more professionals in clinical laboratories and students. Because from the session we/I can see the application and utilities for the innovation and developed technologies being used in the actual world!



BCEIA2023 ACADEMIC CONFERENCE ADVANCED ACADEMIC FORMS

Sustainable Science and Technology under
the“Dual Carbon”Strategy Forum



The analysis and testing technology plays a vital role in the development of new energy technology, helping the country achieve sustainable development with higher energy efficiency and less emissions. In support of the goals of carbon peak and carbon neutrality (“Dual Carbon”), the CAIA hosted the high-profile Sustainable Science and Technology under the “Dual Carbon” Strategy Forum, with the presence of top scientists from the academia and the industry. 4 academicians of the Chinese Academy of Sciences were invited to discuss the governance of new pollutants in the current environment, the status quo of the applications of new energy and new materials, and the green, low-carbon development of traditional energy. The breakthroughs the experts and scholars devoted to Dual Carbon have made in recent years in terms of new principles, new materials, new methods and new instruments were discussed. It is the first all-academician forum organized by BCEIA.

Science and technology innovation is the driving force of green low-carbon technology research and development and commercialization. The Forum addressed the development of new energy science and technology, environmental risk assessment in new forms of business and other frontier topics and provided a platform of communication to science and technology professionals in energy, environmental protection, materials, chemistry and nanotechnology sectors.

OPENING REMARK

CHAIR



Prof. Erkang WANG

Academician, Chinese Academy of Sciences
Fellow, Third World Academy of Sciences
Changchun Institute of Applied Chemistry, Chinese Academy of Sciences



Prof. Jinghong LI

Vice Chairman, BCEIA2023 Academic Committee
Chairman, Colleges and Universities Branch, CAIA(CUBIA)
Academician, Chinese Academy of Sciences
Tsinghua University



Prof. Xiurong YANG

Academician, Chinese Academy of Sciences
Changchun Institute of Applied Chemistry, Chinese Academy of Sciences

KEYNOTE SPEAKER



Prof. Guibin JIANG

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



Prof. Yongfang LI

Academician, Chinese Academy of Sciences
Institute of Chemistry, Chinese Academy of Sciences (ICCAS)



Prof. Chunming XU

Academician, Chinese Academy of Sciences
China University of Petroleum (UPC)



Prof. Lizhu WU

Academician, Chinese Academy of Sciences
Technical Institute of Physics and Chemistry of the Chinese Academy of Sciences (TIPC-CAS)



BCEIA 2023 ACADEMIC CONFERENCE ADVANCED ACADEMIC FORMS



OPENING REMARK

Prof. Chengyan LIU
Vice President, China Association for Instrumental Analysis (CAIA)



Prof. Jing WANG
Institute of Quality Standard and Testing Technology for Agro-Products of CAAS

BCEIA is a world-class learning and exchange platform, bringing together resources from the government, the academia, the industry, research institutes and users. I hope that united efforts of all stakeholders will foster high-quality development of China's analysis and testing sector.

The 4th Food Safety Risk Monitoring Symposium



During the 4th Food Safety Risk Monitoring Symposium, academicians, experts, and scholars specializing in food safety and inspection & testing examined the latest topics and industry dynamics, including the study of new contaminants in food, innovative food testing technologies, and intelligent regulation of food safety. This was done in pursuit of the goals of strengthening academic exchanges in the field of analysis and testing, and enhancing the quality and safety level across the food supply chain in terms of capability development, risk monitoring, and technology support, as well as in order to assure food safety for the populace.

Prof. Feng Zhang, Vice President of the Chinese Academy of Inspection and Quarantine (CAIQ), the convenor of the Symposium, noted that the Symposium is an academic event of significance to food safety risk monitoring in China, wherein the latest research findings are shared and new techniques and methods are promoted. It offers a comprehensive showcase of food quality and safety testing level, government regulation, assurance by enterprises and public service capabilities in China. Experts, scholars and postgraduates from research institutes, universities and enterprises across the country attended and benefited a lot from the Symposium in an engaging academic vibe.



CONVENOR/KEYNOTE SPEAKER
Prof. Feng ZHANG
Chief Expert and Vice President, Chinese Academy of Inspection and Quarantine (CAIQ)



CHAIR
Prof. Hanxia LIU
Chinese Academy of Inspection and Quarantine (CAIQ)



KEYNOTE SPEAKER
Prof. Jinfeng PENG
Xi'an Jiaotong University



KEYNOTE SPEAKER
Prof. Guibin JIANG
Academician of CAS, Research Center for Eco-Environment Sciences, CAS



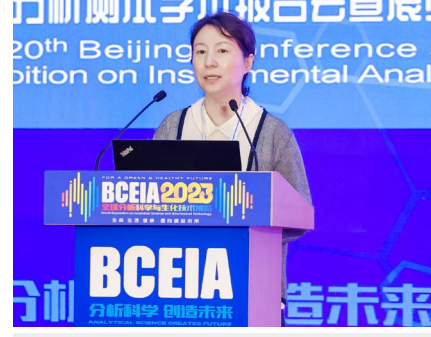
CHAIR/KEYNOTE SPEAKER
Prof. Zhixian GAO
Academy of Military Medical Sciences



KEYNOTE SPEAKER
Prof. Qingjun LIU
Beijing Academy of Science and Technology



KEYNOTE SPEAKER
Prof. Yujun JIANG
College of Food Science, Northeast Agricultural University



KEYNOTE SPEAKER
Prof. Jing WANG
Institute of Quality Standard and Testing Technology for Agro-Products of CAAS



KEYNOTE SPEAKER
Prof. Jing ZHANG
Beijing Center for Disease Prevention and Control



KEYNOTE SPEAKER
Jianlong YU
Chief Application Engineer
Waters



BCEIA 2023 ACADEMIC CONFERENCE CONCURRENT MEETINGS

As an important component of the Academic Conference, 17 special forums and concurrent meetings served as occasions for boosting communication, discussion and collaboration between government representatives, experts, exhibitor R&D representatives, and young scholars on advanced analytical science and technology, and the interpretation of policies and regulations. These events were quite popular and highly praised by attendees as they covered academic areas such as mass spectrometry, chromatography, optical spectroscopy, magnetic resonance spectroscopy, and electron microscopy, and the topics addressed the hottest applications of analysis and testing technologies.



Prof. Jinghong Li, academican of the Chinese Academy of Sciences, from Tsinghua University attended and addressed the Forum.



Organized by the Young Scholars Academic Committee of CAIA, the 4th China Young Scientists Forum, invited 9 laureates of the National Science Fund for Distinguished Young Scholars from the past two years in the field of analytical chemistry, to share and exchange ideas about the latest methods, technologies, and applications in life sciences, material analysis, and environmental science.



Prof. Haizhou Wang, academican of the Chinese Academy of Engineering, delivered an enlightening speech on “Instrument In-Service Performance Conformity Assessment Provides Effective Support for High-Quality Development Across the Industrial Chain” .



CAIA Instrument Review/CSTM Instrument In-Service Performance Conformity Assessment Release Conference 2023
Organized by: CAIA; Chinese Society for Testing & Materials, Zhongguancun (CSTM)



Environment&Health Forum
Organized by: Editorial Office of Environment&Health, American Chemical Society



Sensors & Diagnostics at Micro and Nano-Scale Forum
Organized by: Royal Society of Chemistry



Wiley Journal Workshop
Organized by: Wiley



China Medical Devices Industry Innovation and Industry-Education Integration Development Forum
Organized by: Industry-Education Integration Committee, China Association for Medical Devices Industry (CAMDI)



The 3rd ICC China Scientific Instrument Investment & Financing and Channel Matchmaking Conference
Organized by : CAIA; EWG1990



Safe and Sustainable Construction of Novel Laboratory Scenarios Forum
Organized by: Laboratory Construction Branch, CAIA



Magnetic Solid Phase Microextraction (MSPME) Revolutionizes Sample Pre-treatment Technology Forum
Organized by: Suzhou Agile Bio Electronic Technology Co., Ltd.



Seminar on Preparation Solutions for Chromatography 2023-Imagine "Light-out Lab" Automation
Organized by: Beijing Orienda Instruments Co., Ltd.



Seminar on Green Chemistry and Interdisciplinary Technologies in Frontier Sciences
Organized by: Thermal Analysis Committee, Beijing Physical & Chemistry Testing Technology Society



Special Food High-quality Inspection and Testing Technology (Solution) Development Forum
Organized by: Beijing Polytechnic (School of Bio-engineering)



"The 10th Anniversary of the Home-produced Scientific Instruments Take-off Initiative and Kick-off of the Fifth Home-produced Good Instruments Event"
Organized by: www.instrument.com.cn



"Near Infrared Spectroscopy Embraces Intelligent Production and Life" Forum Organized by: China Council of Near Infrared Spectroscopy, CCNIRS; www.instrument.com.cn



Meeting with Altascientific-Seminar on Reference Standards and Mass Spectrometry Applied Technologies
Organized by: References and Testing Technology Branch, Tianjin Association for Instrumental Analysis; Alta Scientific Co., Ltd.



Forum on Quality and Safety Testing Technique for Chinese Herbs and Decoction Pieces
Organized by: Inspection and Testing Service Branch, China Food and Drug Corporation Quality and Safety Promotion Association; National Center of Quality Inspection and Testing on Food Products; EasyLab



Dr. Jose OLIVEIRA
Senior Director, Wiley

I sincerely thank you for inviting Wiley to participate in this exhibition. The BCEIA event allowed us to reconnect with authors, readers, researchers, and industry KOLs after the pandemic. We were privileged to interact with them, and establish closer connections at this exhibition. We hope for more opportunities in the future to continue collaborating with the China Association for Instrumental Analysis!



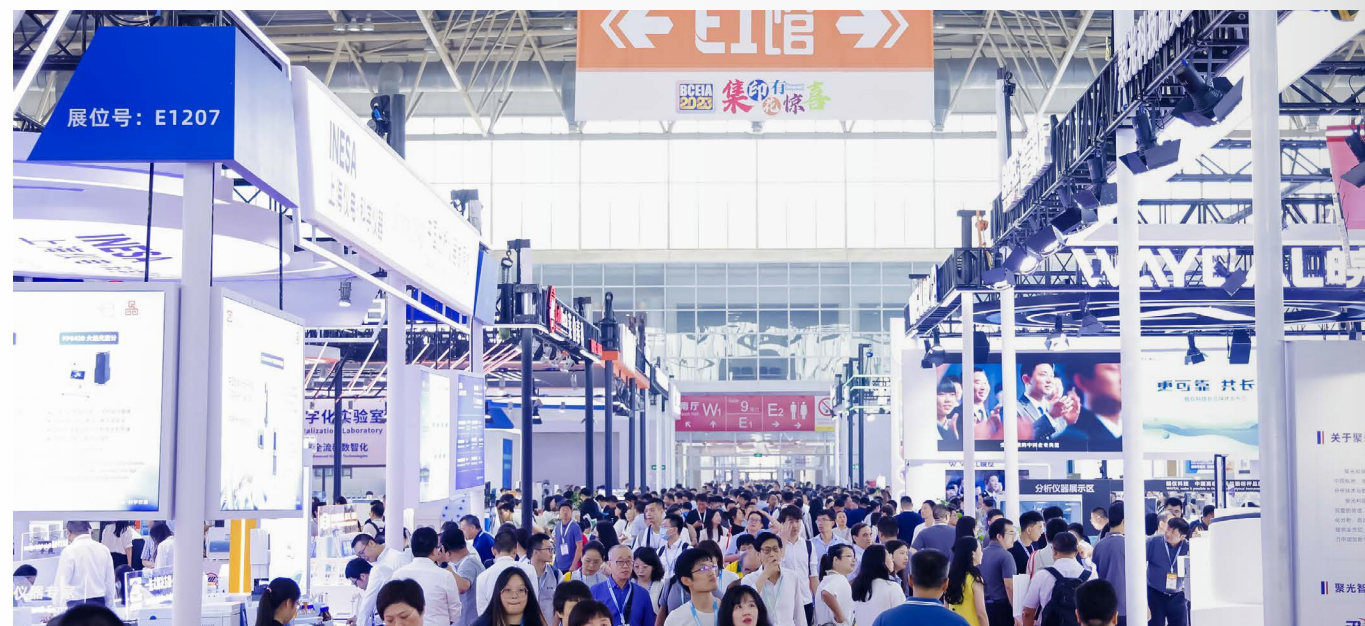
BCEIA 2023 Exhibition

BCEIA2023

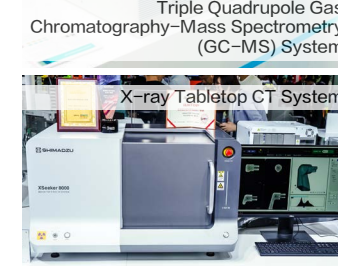
World Exposition for Analytical Science and Biochemical Technologies

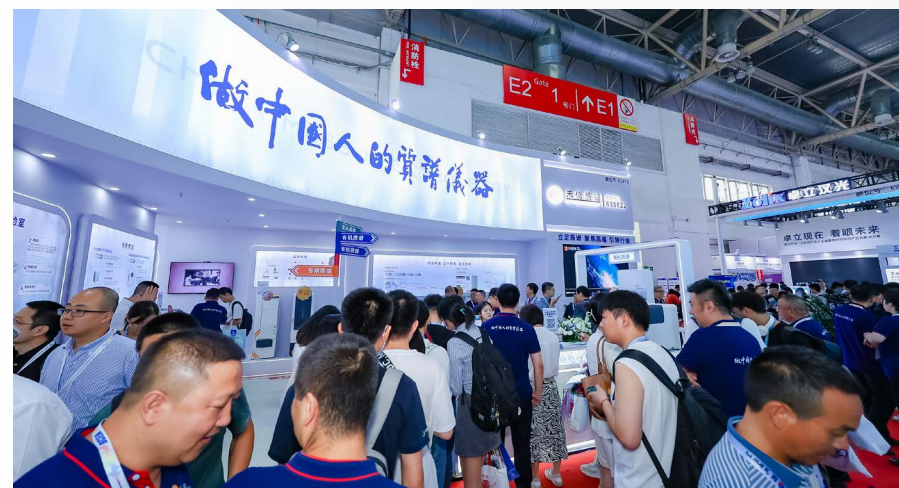
EXHIBITION

Positioned as a World Exposition for Analytical Science and Biochemical Technologies, the BCEIA 2023 Exhibition attracted 723 domestic and foreign producers and manufacturers, covering an exhibition area of 53,400m². The exhibits, ranging from high-end analytical biochemical instruments, integrated intelligent analysis and testing solutions, key components and consumables, reference standards and reagents, to general-purpose laboratory equipment and management software, are widely used in environmental analysis, biomedicine, food analysis, energy and petrochemical, material analysis, in vitro diagnosis, laboratory design and construction, geology and mining, metallurgy, textile, aviation and aerospace and third-party testing services. Chinese and foreign well-known analytical biochemical tech firms staged a grand show of their offerings. Tens of thousands of researchers and high-end users visited the Exhibition and experienced a wide range of interactive activities, designed to foster closer ties among the industry, the academia, and research institutes.



BCEIA is hailed as the weathervane of the industry, as it is a stage for the latest products characterized by high-tech, high precision and sophistication. New products launched this year generally provide higher throughput, higher sensitivity and lower limit of detection (LOD), while taking instrument automation to the next level, meeting the needs of different industries. High-end instruments like LC-MS, GC/LC-QTOF, ICP, ICP-MS, in particular, deliver even lower LOD and higher resolution, with their superior performance further optimized. In the field of data monitoring, auto-diagnosis and troubleshooting are achieved thanks to the availability of countless built-in sensing processors, combined with AI-based algorithms and diagnosis features.





Laboratory Intelligent Transfer Robot



In traditional analytical work, sample pre-treatment is the most time-consuming part. Future development efforts on sample pre-treatment instruments will focus on efficiency improvement and simplification. Among the exhibits, a collection of new products defined by automation, intelligence and superior performance came to the fore. Some home-grown brands exhibited their latest sample processing systems, which can realize an unmanned sample preparation process, by integrating key steps, such as sample management, liquid treatment, oscillation and extraction, centrifugal separation, and even sample transfer and delivery.

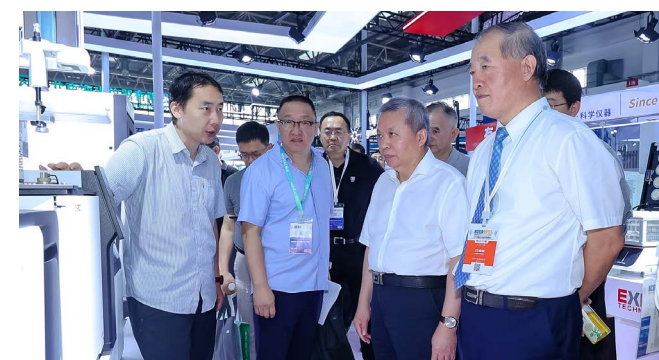
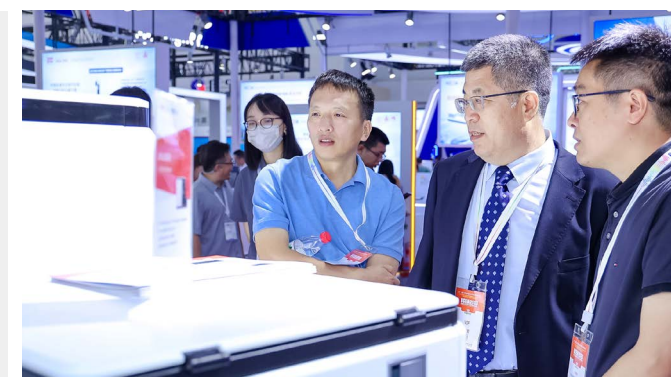
In recent years, with the mature application of mass spectrometry (MS) technology in the biopharmaceutical and clinical fields, the world's leading instrument manufacturers have put forth tremendous efforts and financial resources therein. They have constantly pushed the boundaries in terms of the performance of high-end mass spectrometry products and the scope of applications and rolled out some game-changing new mass spectrometry products. These blockbuster exhibits were bound to make a hit at BCEIA, and those booths displaying them, packed with visitors, were definitely "The Most Visited".

The application and development of the Internet of Things (IoT) information technology in analysis and testing work became the center of attention at the Exhibition. Many renowned companies have launched laboratory solutions and instruments empowered by "Intelligence", "Digitalization" and "AI". In future analysis and testing work, instruments and users will be interconnected via the laboratory management software. Samples will be subject to real-time monitoring and alarm throughout the process, from the safe and intelligent warehousing system to the fully automated intelligent sample pre-treatment workstation. Finally, an unattended analytical process will be shaped. The future of manual-operation-free laboratories, with better data quality and higher productivity, is wholly foreseeable!

A tour of the Exhibition shows that foreign instrument brands still hold a dominant position, concentrated on life sciences, materials technology and other frontier sectors, and offer a rich line-up of high-end instrument product lines and a complete collection of integrated solutions. It is noteworthy that many Chinese brands are seeking to tackle core technologies and putting forth unremitting efforts on automation, information technology and intelligence. LC-MS, QTOF, ICP-MS and dPCR new products that they have launched prove to have made big strides in product performance and design and have the potential to grab a share of the high-end analytical instrument market. Many experts and senior scholars present at the Exhibition said that they, as users, were exciting to see home-produced instruments making an impression at BCEIA.

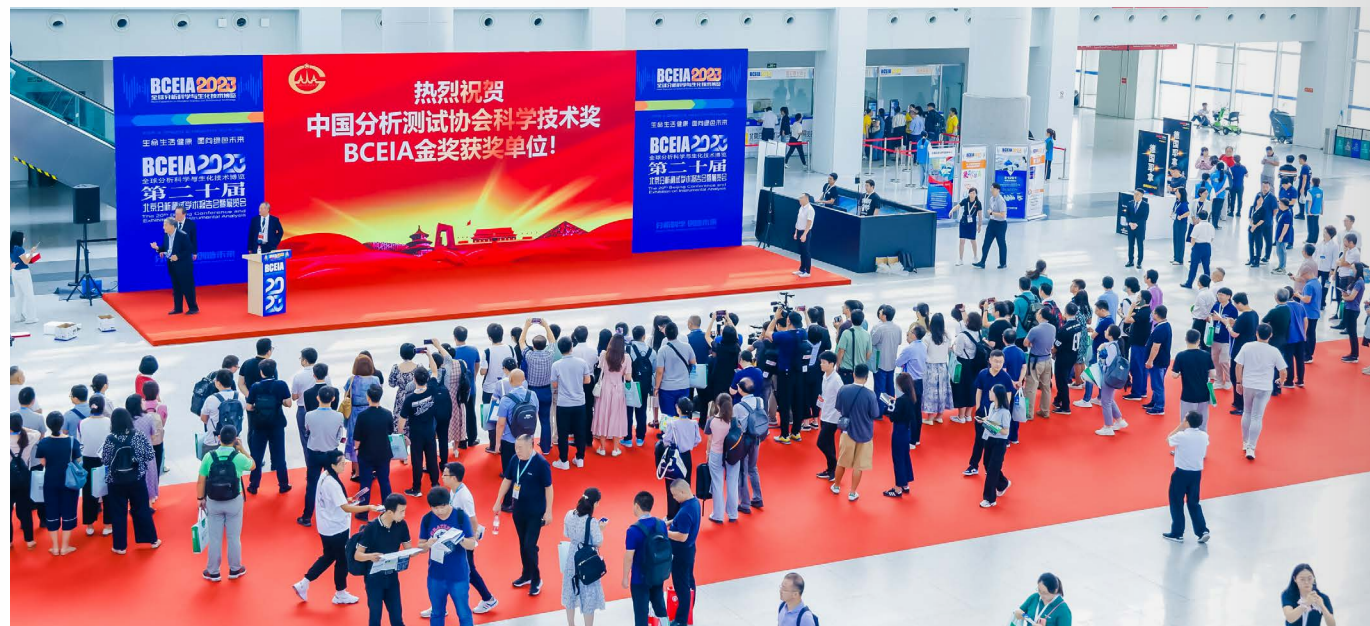


BCEIA has always been under the strong support of the Ministry of Science and Technology (MOST). On September 6, a delegation led by Defang He, Deputy Secretary-General of the Ministry of Science and Technology (MOST), in the company of Prof. Chengyan Liu, Vice President of CAIA, visited the BCEIA Exhibition. They were especially interested in the products of home-grown brands and exchanged views on the application of core technologies.



On September 7, a delegation led by Kejian Zhang, Vice Minister of the Ministry of Industry and Information Technology (MIIT), in the company of Prof. Guibin Jiang, President of CAIA and Prof. Chengyan Liu, Vice President of CAIA, visited the BCEIA Exhibition and attentively listened to an introduction of the breakthroughs in core instrumentation technologies by the R&D engineers.

The leaders of the MOST and the MIIT said that they were deeply impressed by the home-grown brands' products seen at the Exhibition.



BCEIA2023 EXHIBITION

BCEIA Gold Award Winners

On September 6, the list of winners for the “BCEIA 2023 Gold Award” was unveiled. There were totally 13 instruments and 5 key components won the award.



Prof. Gangfeng OUYANG
Sun Yat-sen University

BCEIA provides an opportunity you must not miss, where you may not only participate in high-end, advanced academic exchanges but also see in person the world's state-of-the-art instrumentation innovations and the development of home-produced instruments.

This year, the number of gold-award-winning instruments and components accounted for 29.5% and 33.3% of the total submitted candidates, respectively. Among those gold award winners, many are instruments developed to meet the needs of national development.

List of Winners for the BCEIA 2023 Gold Award (Analytical and Testing Instruments)
(in no particular order)



No.	Name of the Company/Institution	Prize-winning Instruments
1	Suzhou Institute of Biomedical Engineering and Technology, CAS, Suzhou MicroClear Medical Instruments Co., Ltd	CRO PLUS Single-Cell Resolution Laser (SCRL) Confocal Scanning Funduscope
2	Beijing Orienda Instruments Co., Ltd., Petrochemical Research Institute, PetroChina Company Limited	SARALyzer Elite Heavy Oil Four-Component Analyzer
3	Beijing Beifen-Ruili Analytical Instrument (Group) Co., Ltd	SP-5220 Gas Chromatograph (Built-in Cold Atomic Fluorescence Detector)
4	National Research Center for Geoanalysis, NCS Testing Technology Co., Ltd.	CNX-808 Wavelength Dispersive X-ray Fluorescence Spectrometer
5	Chromai (Beijing) Technology Co., Ltd.	Frontier Ultrahigh-performance Liquid Chromatography System
6	Shanghai Wufeng Scientific Instrument Co., Ltd.	EX1800 Flagship 2D High-/Ultrahigh-performance Liquid Chromatography System
7	Panna (Changzhou) Instruments Co., Ltd.	QLIT-6610(MD) Quadrupole-Linear Ion Trap Tandem Mass Spectrometer System
8	Preekem Scientific Instruments Co., Ltd.	P3 Intelligent Microwave Digestion System
9	Beijing LabTech Instruments Co., Ltd.	LabMS 5000 Inductively Coupled Plasma Tandem Mass Spectrometer
10	Ailiben Science & Technology Co., Ltd.	PTR-TOFMS 6000 Proton Transfer Reaction-Time-of-Flight Mass Spectrometer
11	Shanghai Techcomp Instrument Ltd.	DSC 30-4 Differential Scanning Calorimeter
12	Intelligent Analysis Service Co., Ltd.	IAS-3120 Portable Near Infrared Spectrum Analyzer
13	Shenyang Institute of Automation, CAS, BGRIMM MTC Technology Co., Ltd.	SIA-LIBSLurry 201 Slurry Grade LIBS Online Analyzer



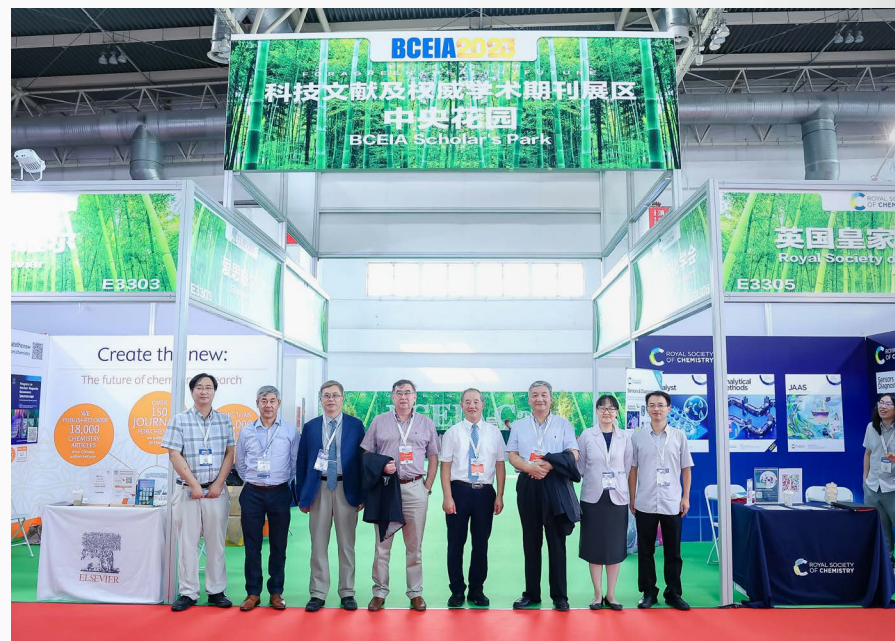
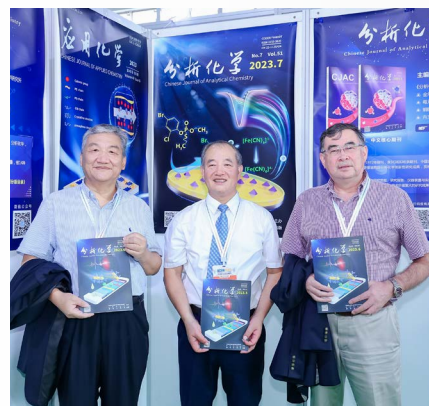
No.	Name of the Company/Institution	Prize-winning Key Components
1	Dalian Institute of Chemical Physics, CAS	Accuopt 2000 Low-Light-Level Detector
2	Institute of Materia Medica, Chinese Academy of Medical Science, Tsinghua University, Beijing Viktor Technology Co., Ltd.	AFAI Open Aerodynamic Assisted Ion Source
3	Research Center for Eco-Environmental Sciences, CAS	RS-Single Cell ICP-MS Sampling Device
4	Suzhou Institute of Biomedical Engineering and Technology, CAS, NanJing Koye Optics Technology Co., Ltd.	SIBET SuperPlanApo Mesoscopic Microscope
5	Jiangxi Hengyao Technology Co., Ltd., East China University of Science and Technology	DHZP17030902 Soft Ionization Device for Mixed Samples with Each Group in Sequence

Details of the entries and the list of winners will be disclosed at <http://www.caia.org.cn> and <http://www.bceia.cn>.



BCEIA2023 EXHIBITION

Science & Technology Literature and Authoritative Academic Journals Exhibition Area



It was the first time that there was an exhibition area dedicated to science & technology literature and authoritative academic journals at this edition of BCEIA.

Distinguished literature service institutions, publishers, academic journals and books, including National Science and Technology Library (NSTL), American Chemical Society (ACS), The Royal Society of Chemistry (RSC), Elsevier, Springer · Nature, The Institute of Physics (IOP), Wiley, Environment & Health, Magnetic Resonance Letters, Chinese Journal of Analytical Chemistry, Journal of Instrumental Analysis, Chinese Journal of Chromatography, Chemical Reagents, Chinese Journal of Analysis Laboratory, Journal of Analysis and Testing (JAT), MDPI, Chemical Analysis and Meterage, VIEW and Labeled Immunoassays, were invited to the Exhibition, offering tailored academic literature services and resources and advice on paper contribution, in a face-to-face manner, to visiting experts, scholars, researchers and college graduates. This exhibition area was widely applauded by visitors with its one-stop feature integrating conference, exhibition, learning, communication and interaction.

BCEIA2023 BCEIA FOCUS



BCEIA 2023 Official Live Streaming Program

Organized by: China Association for Instrumental Analysis (CAIA)

Exclusive Rebroadcast Platform: ewg1990.com

On September 6, "BCEIA Focus", the official live-streaming program, came online. Interviews of senior scholars and experts from the Organizing Committee and explorations of the most popular booths were made to give an insight into the event from different perspectives. 8 experts showed up at the live-streaming studio and talked about the developments of the industry and shared their personal feelings and experiences at BCEIA. Some academic keynote presentations were aired exclusively. 7 well-known companies shared the new products and technologies at their booths. According to statistics, 12,000 viewers participated in online interactions. "BCEIA Focus" served as another bridge for efficient communication and a window for spreading value across the scientific instruments industry.

Guanqun SONG
Regional Publisher,
The Royal Society of Chemistry

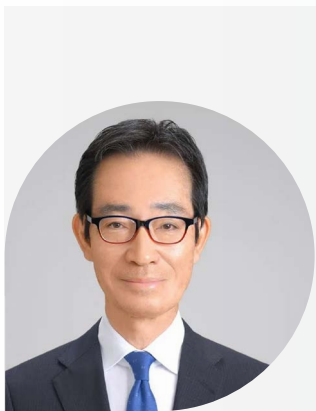


I attended BCEIA when I was a PhD student. On behalf of the Royal Society of Chemistry publishing, I felt honoured to get the invitation to BCEIA, the highly recognized and well branded international conference. With much appreciation, we were grateful to the organizer of BCEIA for the great platform they provide. It was much pleasure to meet the friendly community and had the fruitful communication with our board members, authors, reviewers and the readers.





BCEIA2023 INTERNATIONAL COOPERATION MEETINGS



Hasegawa TOSHIKAZU
Chairman
Japan Scientific Instruments Association (JSIA)

I really appreciate the great efforts the organizer of BCEIA 2023 has made over these years on organizing a well-reputed international conference and exhibition in the field of analytical chemistry.

On September 7, representatives of the China Association for Instrumental Analysis (CAIA) and the Japan Scientific Instruments Association (JSIA) signed a Memorandum of Understanding at BCEIA. Both parties expect to realize a long-term and stable strategic partnership based on the details of the MoU.

A top-level meeting also held between the representatives of CAIA and Messe München GmbH to discuss future prospective of partnership and cooperation between the two parties.



BCEIA2023 FREE SHUTTLE BUS SERVICES

This year, BCEIA has set up a total of 30 shuttle bus stops, 26 located in Beijing and 4 new ones in Tianjin.

More than 350 trips were made, carrying some 10,000 attendees safely.

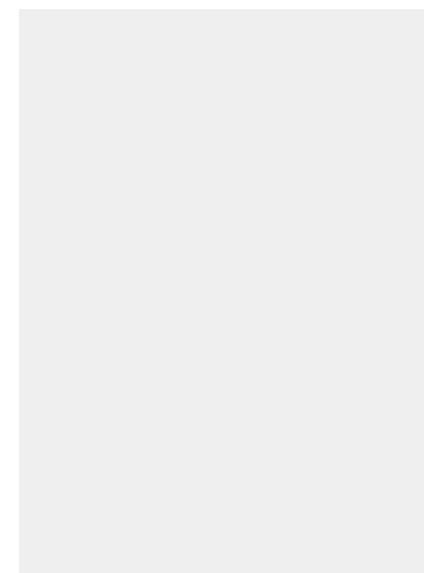
BCEIA free shuttle bus service was available to every attendee in the morning and evening, in all weathers.



BCEIA2023 CONCURRENT EVENTS

As one of the world's four major scientific instruments exhibitions, BCEIA also staged a passionate football game.

This year's Tournament was hosted by CAIA and organized by Beijing Physical & Chemistry Testing Technology Society. Six teams, namely, Shimadzu, Agilent, Hangzhou EXPEC, Liaoning Association, Beijing Society and Beijing Physical & Chemistry Testing Technology Society, competed in the Tournament. Prof. Guibin Jiang, Chairman of BCEIA 2023, conferred the memorial trophies to the teams.





BCEIA2023 AUDIENCE STATISTICS

At BCEIA2023 the number of professional visitors reached 37,456, an increase of 10% compared with 2021. The total unique visitors and participants reached 40,000 on the BCEIA Video Streaming Platform, and the peak number of online visitors reached 1,000. The BCEIA cloud photo album displayed 7,200 photos of the Conference and Exhibition. Till the end of November 2023, a total of 260,000 photo album views have been recorded.

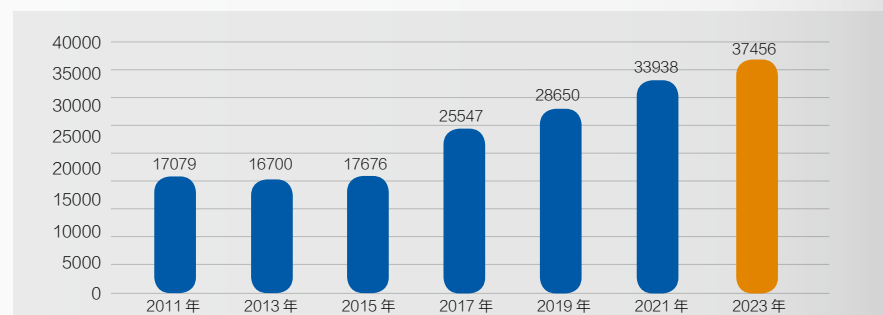
Exhibition Area: 53,400m²
Number of Exhibitors : 723
Number of Visitors: 37456

78% of the professional visitors participated the questionnaires. (Exhibitor representatives and some conference delegates are not included)



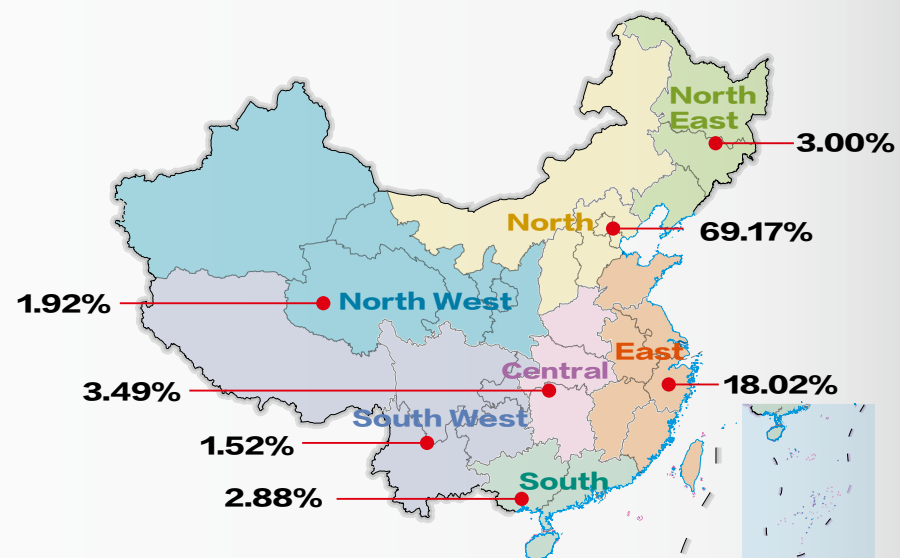
BCEIA2023 AUDIENCE STATISTICS

+Statistics on Registered Visitors+



BCEIA2023 AUDIENCE STATISTICS

+Mainland China Audience by Region+



BCEIA2023 STATISTICS

37456

Professional
Visitors

25

Academicians

4200

Scholars

540

Academic
Talks

818

Academic
Papers

372

Posters

16

Countries and
Regions

53400M²

Exhibition
Area

51907

Exhibition
Visitors

6000

Products

723

Exhibitors

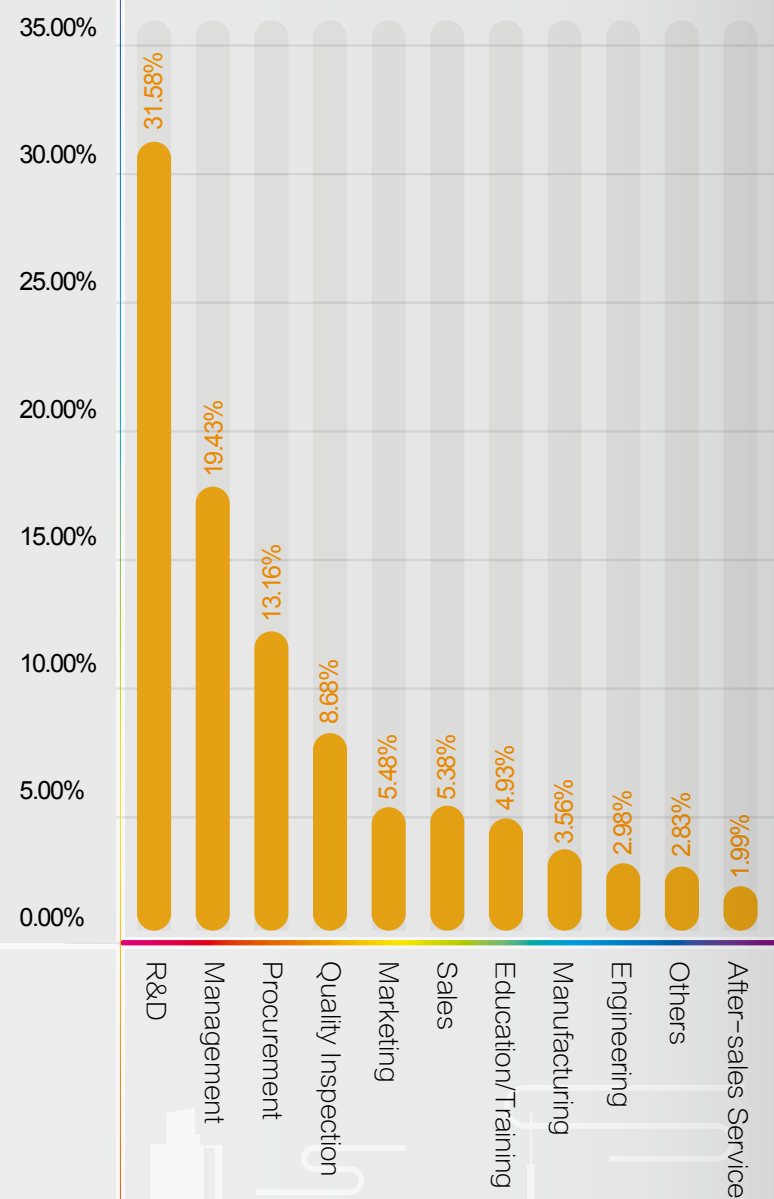


BCEIA2023 Video Streaming Platform Statistics



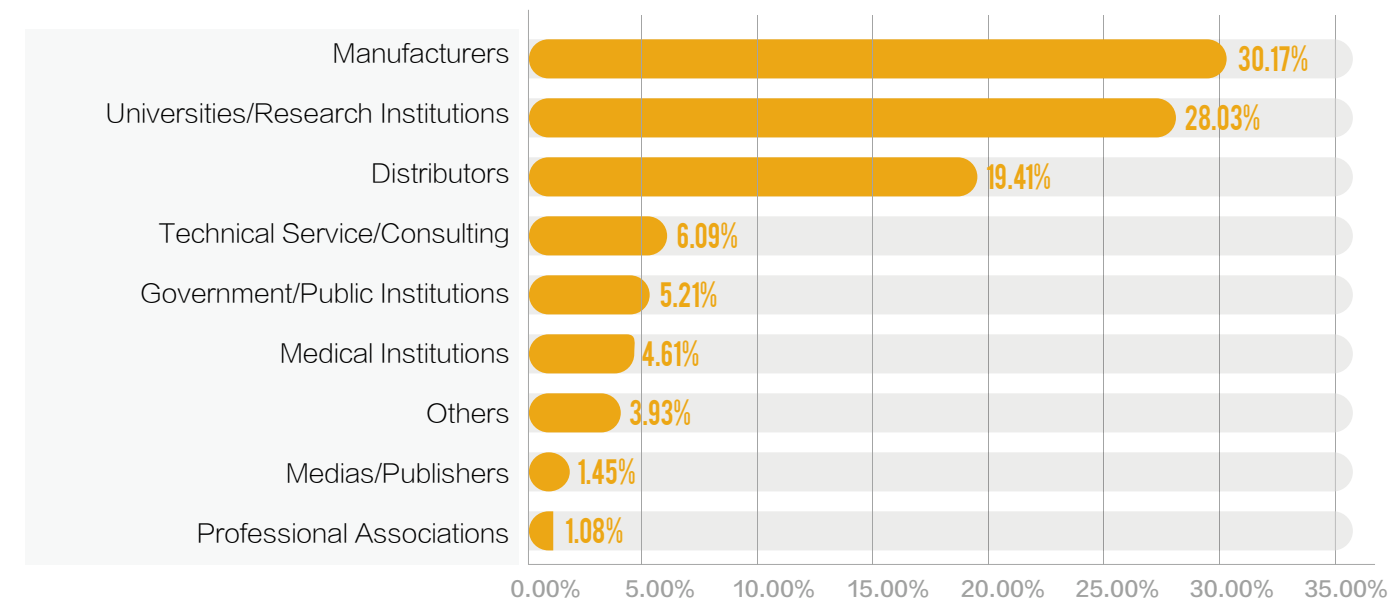


BCEIA 2023 AUDIENCE STATISTICS
+Statistics on Visitors' Occupation+



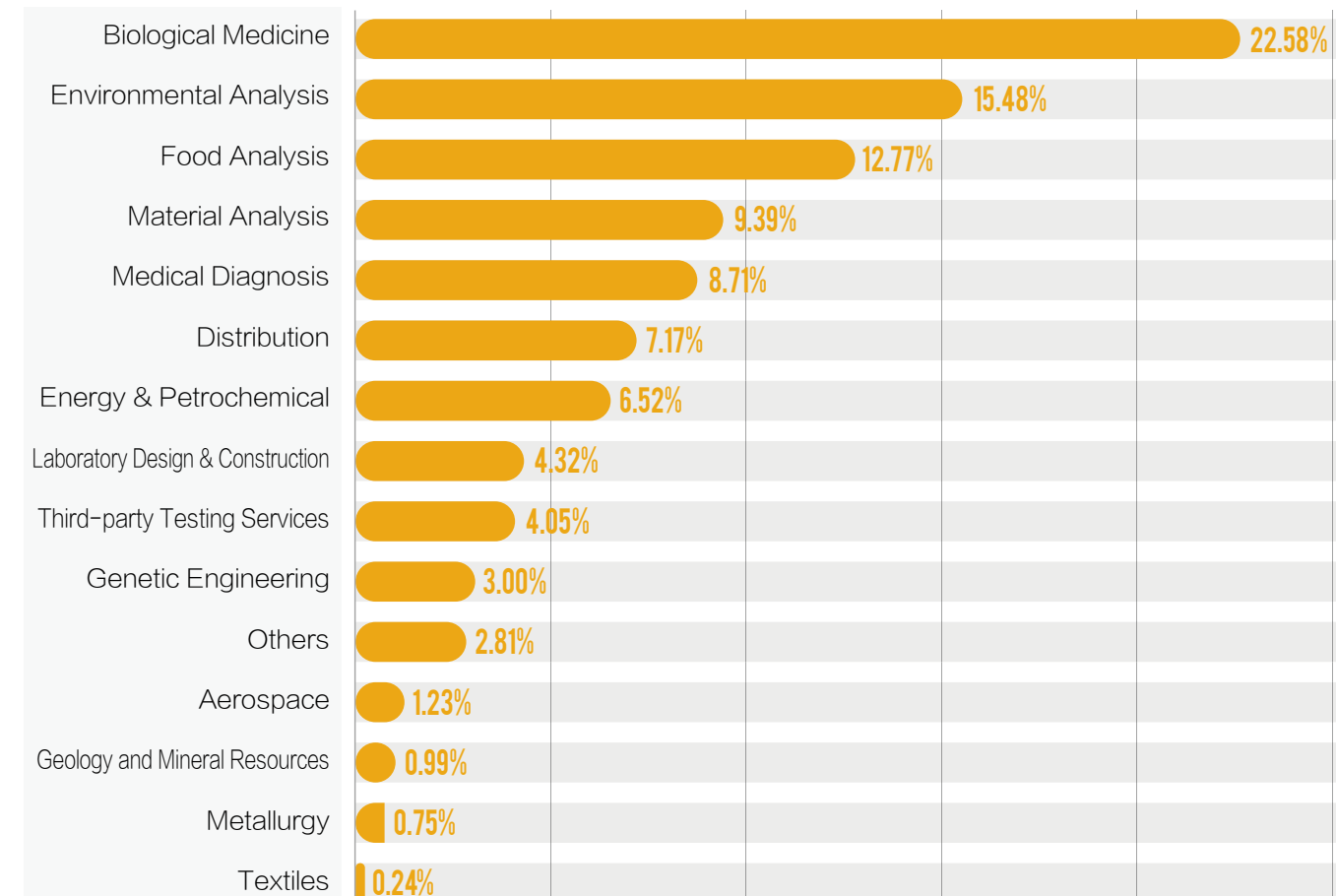
BCEIA 2023 AUDIENCE STATISTICS

+Visitors by Type of Organization+



BCEIA 2023 AUDIENCE STATISTICS

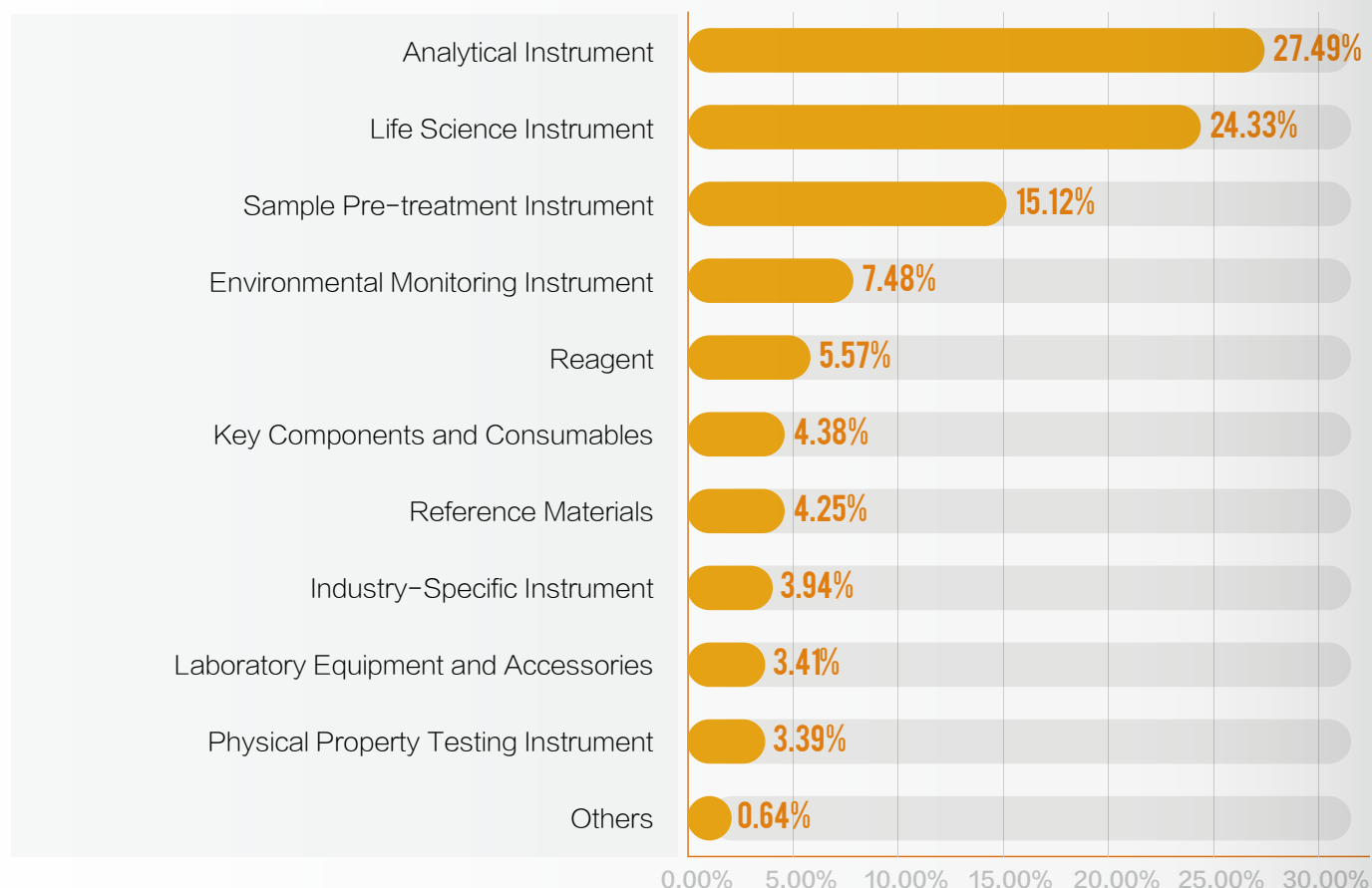
+Visitors by Industry/Field+





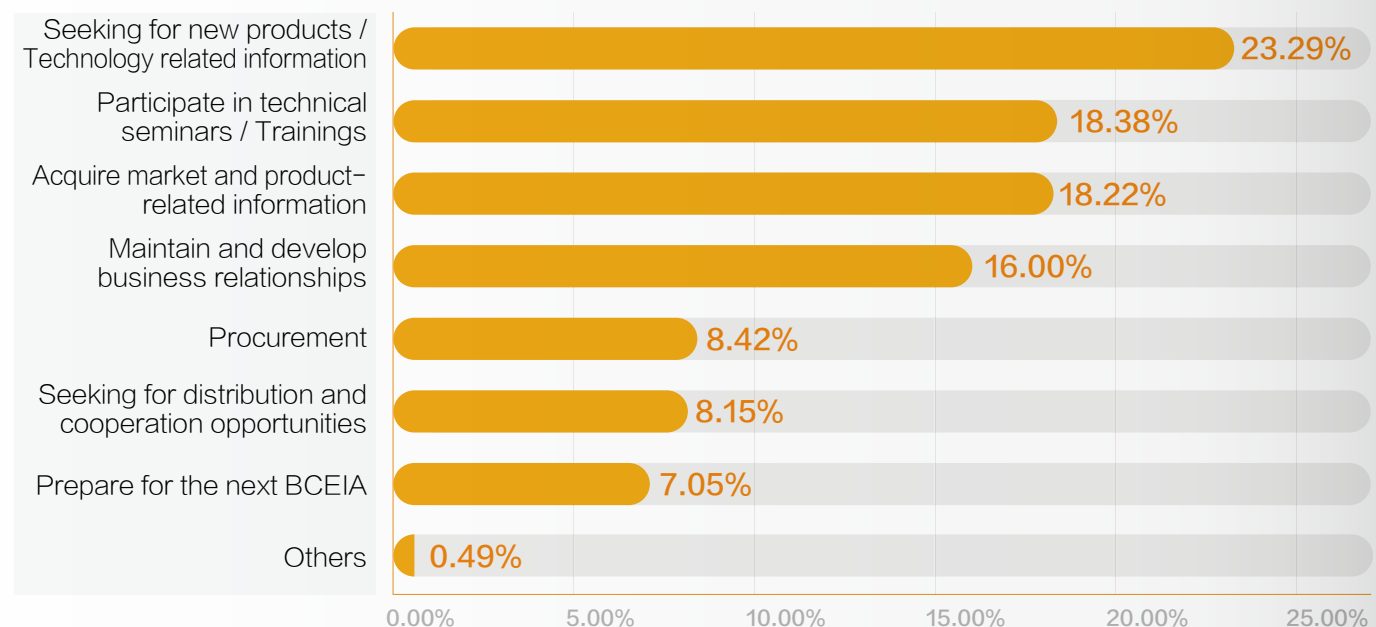
BCEIA 2023 AUDIENCE STATISTICS

+Products and Services Sought by Visitors+



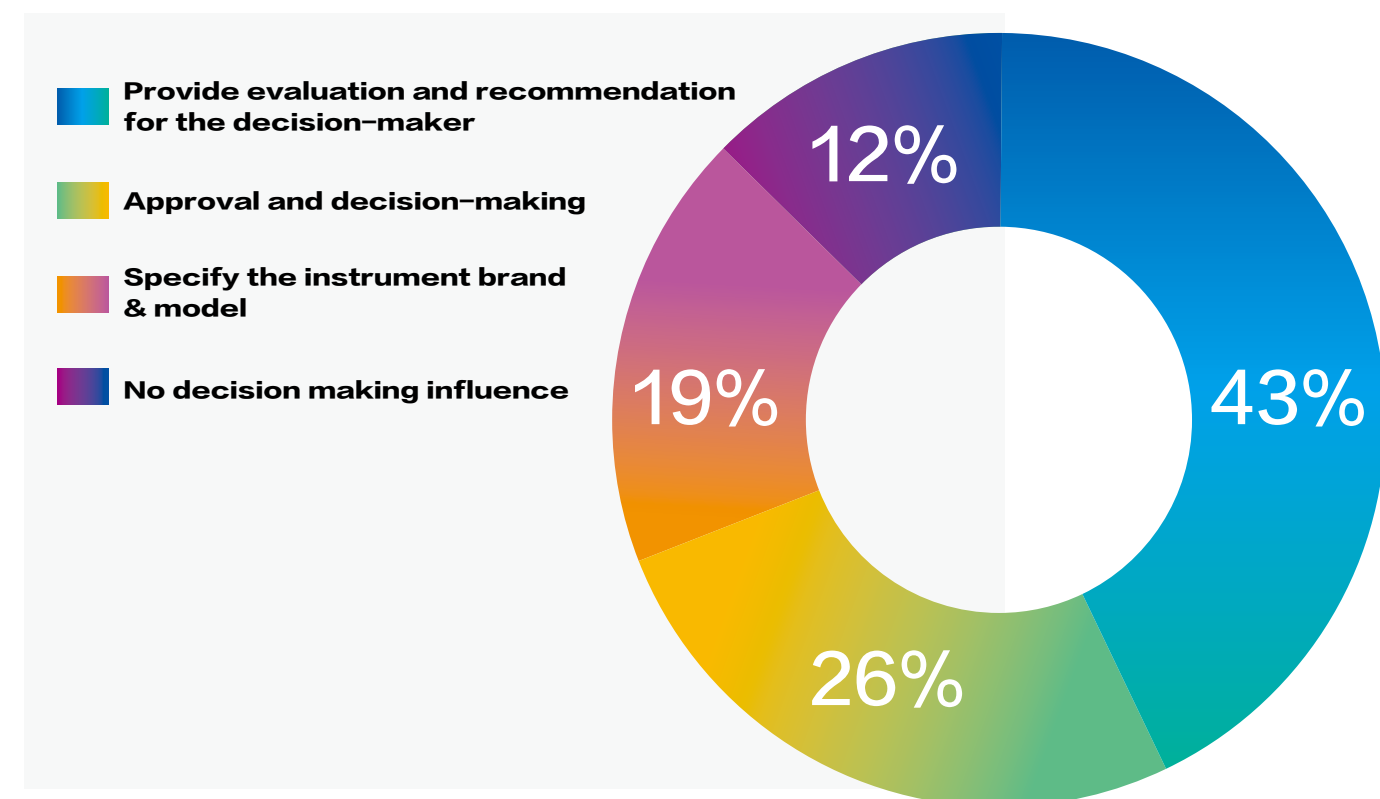
BCEIA 2023 AUDIENCE STATISTICS

+Purpose of Visit+



BCEIA 2023 AUDIENCE STATISTICS

+Participant's influence in decision-making when purchasing equipment+



BCEIA 2023 EXHIBITORS





BCEIA 40 YEARS SEE YOU IN BEIJING

EXHIBITION  REGISTRATION

Organizer: China Association for Instrumental Analysis





BCEIA 2025



SCAN QR CODE TO OBTAIN INFORMATION ON ANALYTICAL SCIENCES

BCEIA2025 Exhibition Registration

EXHIBITION: +86-10-68512208 expo@bceia.cn

ACADEMIC CONFERENCE: +86-10-68537066 conference@bceia.cn