Meet the contributors

Nicola Oberbeckmann-Winter¹

Accepted: 22 November 2021 / Published online: 27 December 2021
© Springer-Verlag GmbH Germany, part of Springer Nature 2021

We celebrate the 20th anniversary of *Analytical and Bioanalytical Chemistry* (ABC) by proudly presenting this special paper collection showcasing current research of ABC's diverse and exceptional Editorial Board.

Meet members of ABC's International Advisory Board and the ABC Editors who are strongly committed and dedicated to this journal. Thanks to their support and contributions, ABC has become the society journal for rapid publication and global visibility of (bio-)analytical research. Based on its European roots, it has developed over the past 20 years into a truly international journal for publishing excellent and high-impact contributions. This Editorial Board Issue is certainly a case in point, and we would like to express our gratitude for the overwhelming number of contributions we have received, for excellent Research Articles, Trends, and Critical Reviews from the forefront of their research. Please read on and meet those who contributed to this exceptional collection – we hope you enjoy their work as much as we do.

Jared L. Anderson is the Alice Hudson Professor of Chemistry at Iowa State University and Faculty Scientist at Ames Laboratory. His research focuses on all aspects of separation science and the synthesis/preparation of sustainable solvents. He is particularly interested in the development of stationary phases for multidimensional chromatography, understanding alternative approaches for sample preparation including nucleic acid isolation and purification, and developing analytical tools for trace-level analysis within active pharmaceutical ingredients.

Antje Baeumner is Director of the Institute of Analytical Chemistry, Chemo- and Biosensors at the University of Regensburg. Prior to returning to Germany, she was Professor and Director of Graduate Studies in the Department of Biological and Environmental Engineering at Cornell University in Ithaca, NY, USA. She is Editor of the journal *Analytical and Bioanalytical Chemistry* and President of the International Association of Environmental Analytical Chemistry (IAEAC). Her research is focused on the development of biosensors and micrototal analysis systems for the detection of pathogens and toxins in food, the environment and for clinical diagnostics. Her research includes the development of novel nanomaterials, such as liposomes, nanofibers, and nanoparticles; microfluidic biosensors; sample preparation strategies; and point-of-care devices. She chaired the 2010 GRC Bioanalytical Sensors and will

Published in the topical collection celebrating *ABC's 20th Anniversary*.

✉ Nicola Oberbeckmann-Winter
nicola.oberbeckmann-winter@springer.com

¹ Springer, Tiergartenstrasse 17, 69121 Heidelberg, Germany

chair the 2022 GRC on Nanoscale Science & Engineering for Agricultural and Food Systems. She has received numerous awards for her research, including being a finalist of the Blavatnik Award, Senior Fellow of the Alexander-von-Humboldt Foundation, Mercator Professor of the German Science Foundation, and numerous teaching awards.

Erin S. Baker is Associate Professor at North Carolina State University in Raleigh, NC. To date, she has published over 140 peer-reviewed papers utilizing ion-mobility spectrometry in conjunction with mass spectrometry (IMS-MS) to study both environmental and biological systems. She has received seven US patents, two R&D 100 Awards, been named on the *Analytical Scientist* 2019 Top 100 Power List, aided in the commercialization of the Agilent 6560 IMS-QTOF MS, and was a recipient of the 2016 ACS Rising Star Award for Top Midcareer Women Chemists.

Lane A. Baker is Professor of Chemistry at Texas A&M University. His interests include electrochemistry, sensors, and instrumentation applied to problems in the realm of bioanalytical chemistry and materials science. Work in his group centers on analyses that make use of or are inspired by nanopores, often for electrochemical imaging. Additional areas of work include hydrogel mimics of the nuclear pore complex, single-entity electrochemistry, and high-throughput electrochemistry. He is Fellow of

the Royal Society of Chemistry and has won the Young Investigator Award from the Society for Electroanalytical Chemistry and the American Chemical Society Division of Analytical Chemistry Award in Electrochemistry, among other awards. He recently served as the chair for the Division of Analytical Chemistry for the American Chemical Society.

Detlev Belder is Full Professor of Analytical Chemistry at Leipzig University. His research is focused on lab-on-a-chip technology as an enabling science in chemistry. A particular focus in recent years has been on integrated chip laboratories that combine chemical reactors and analysis units on one chip. He has been recognized with several awards, such as the Gerhard Hesse Prize (2015), the Fresenius Prize (2019), and the SCIEX Innovation Award (2020).

Susana Campuzano is currently Head of the Electroanalysis and Electrochemical (Bio)Sensors Research Group at the Analytical Chemistry Department of the Chemistry Faculty of the Universidad Complutense de Madrid (Spain). Her areas of interest include the development of affinity-based electrochemical bioplatfroms with potential for multiplexed and/or multi-omics determinations in clinical and food safety. She is Associate Editor of the journal *Electroanalysis*.

Maria Careri has been Full Professor of Analytical Chemistry at the Department of Chemistry, Life Sciences and Environmental Sustainability of the University of Parma, Italy, since 2001 and was Head of the Department of Chemistry from 2011 to 2016. She was President of the Division of Analytical Chemistry of the Italian Society of Chemistry from 2007 to 2009. She is Scientific Director of the International Course METROFOOD-RI: Traceability and comparability of results in food measurements, organized by the School of Advanced Studies on Food and Nutrition, University of Parma, within the H2020 METROFOOD-RI Preparatory Phase project. Her primary research interests encompass the development and application of hyphenated methods in separation sciences, and the development of novel materials for miniaturized extraction techniques and ambient mass spectrometry techniques. She has also been working for several years on the development of innovative immunosensing devices in the field of food safety and clinical diagnostics. In 2018, she received the Arnaldo Liberti Medal for innovative work in the area of separation science from the Division of Analytical Chemistry of the Italian Society of Chemistry.

Rafael Cela Torrijos is Professor of Analytical Chemistry at the University of Santiago de Compostela, Spain, and Head of the Laboratory for Analytical Chemistry in the

research institute of Chemical and Biological Analyses in the same university. Previously, he was at the Universities of Madrid (Complutense) and Cádiz, belonging to the group of analytical chemists that started the development of chemometrics in Spain at the beginning of the 1980s. His research has been focused on the analytical applications of separation science, applied to environmental, food quality factors and safety, and particularly to emerging contaminants and the development and optimization of sample preparation techniques in chromatographic analysis, including experimental design and development of computer-assisted chromatographic methods, as the author of the Mchrom Scout software, distributed by Mestrelab Research S.L. Currently, he is the author or coauthor of more than 300 scientific papers and several textbooks.

Carole Chaix is Research Director at the Institut des Sciences Analytiques, Lyon, France, and Head of the Interfaces and Biosensors group. She has extensive experience in the functionalization of biomolecules and the surface chemistry of materials. Her research focuses on the development of bio-functionalized nanomaterials and bioanalytical systems, such as biosensors and biochips, for applications in nanomedicine and biological analysis.

Daniel Citterio is Head of the Laboratory for Analytical Chemistry at Keio University in Yokohama, Japan. His

research group is working on the development of (bio) chemical sensors, sensing devices, and functional materials (e.g., functional dyes) for use therein. He is particularly interested in creating low-cost and simple analytical devices that enable equipment-free onsite analysis of clinical and environmental samples.

Jose M. Costa-Fernandez is Full Professor of Analytical Chemistry, and he is Coordinator and Co-leader, along with Dr. Jorge Ruiz, of the Research Group in Analytical and Bioanalytical Spectrometry of the University of Oviedo, Spain. He has been working for several years on the development of optical (bio)chemical sensors, based on functionalized nanomaterials, and on the use of elemental mass spectrometry, coupled with separation techniques (such as asymmetrical flow field-flow fractionation, AF4), for the characterization and quantification of engineered inorganic nanoparticles.

Hua Cui is Full Professor of Analytical Chemistry, Department of Chemistry, University of Science and Technology of China. Her research interests are analytical chemiluminescence (CL) and electrochemiluminescence (ECL), and their applications in interdisciplinary fields including public health, food safety, and environmental monitoring.

Paola Donato is Associate Professor of Analytical chemistry at the University of Messina, Italy. Her research is focused on the development of hyphenated and multi-dimensional techniques in liquid and supercritical fluid chromatography coupled to mass spectrometry, for the analysis of foodstuffs. Further research is carried out on the coupling of liquid and gas chromatography to infrared detection, with applications in the field of flavour and fragrance, forensics, and toxicology. She has been an invited lecturer at several scientific national and international conferences, schools, and seminars.

Håkan Emteborg manages the Reference Material Processing facility at the European Commission's Joint Research Centre in Geel, Belgium, which has a wide range of different equipment for stabilising and homogenising raw materials (mainly) of biological origin. He also leads the Reference Material Production Laboratory that encompasses a wide range of analytical techniques. His main research interests are focussed on the development of new innovative types of reference materials and process analytical techniques.

Günter Gauglitz is Senior Professor at the Eberhard Karls University of Tübingen working on analytical and physical chemistry. For more than 25 years, his main scientific interests have centered on research and development in chemical and biochemical sensors, with special focus on the characterization of interfaces of polymers and biomembrane surfaces, spectroscopic techniques, use of spectral interferometry to monitor changes in the optical thickness of thin layers, and the effects of Fresnel reflectivity at interfaces. He is one of the founding editors of *Analytical and Bioanalytical Chemistry*.

Heidi Goenaga-Infante is Principal Scientist and Team Leader of the Inorganic Analysis team of 15 PhD and post-graduate scientists at the National Measurement Laboratory hosted by LGC in the United Kingdom. She is also Science Fellow of LGC. Her group expertise currently lies in trace-element speciation analysis, metallomics research, the characterisation of nanomaterials, high-accuracy isotope ratio analysis, quantitative elemental bio-imaging, and the characterisation of “speciated” reference materials and standards. She was awarded the 2020 Lester W. Strock Award from SAS.

Michal Holčapek is Head of the Lipidomics Group and Full Professor of Analytical Chemistry at the University of Pardubice in the Czech Republic. His research focus is on mass spectrometry and its coupling with chromatographic techniques, with applications in lipidomics analysis and cancer biomarker discovery. He is a coauthor of over 130 papers in peer-reviewed international journals, Editor of *Trends in Analytical Chemistry*, and member of the editorial advisory boards of *Analytical and Bioanalytical Chemistry* and *Lipids*. He was selected for the Power List of most influential people in the analytical sciences (2020, 2015, and 2013, *The Analytical Scientist*). He is one of the founding members of the Lipidomics Standards Initiative and the International Lipidomics Society, where he holds the position of Vice-President.

Lisa Holland is Professor of Chemistry at West Virginia University, specializing in microscale separations of biomolecules relevant to human health. She is the recipient of a National Science Foundation Faculty Early Career Development Award and a recipient of the Benedum Distinguished Scholar Award. In addition to serving as a member of the international advisory board of *Analytical and Bioanalytical Chemistry*, she has served as the chair of the American Chemical Society Subdivision of Chromatography and Separation Chemistry, as a standing

member of the NIH Instrumentation and Systems Development Study Section, and is a board member of the Society for Microscale Separations and Bioanalysis.

Gérard Hopfgartner is Professor of Analytical Chemistry and Mass Spectrometry in the Department of Inorganic and Analytical Chemistry of the University of Geneva. His research interests focus on the development and application of novel hyphenated mass spectrometry in the field of life sciences.

Yanxia Hou is a permanent scientific researcher at the French National Center for Scientific Research (CNRS). She has strong expertise in biosensors/biochips for health technology and she leads the development of novel optoelectronic noses and tongues based on surface plasmon resonance imaging (SPRi) in the laboratory of SyMMES, at the Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA) in Grenoble (France). She is one of the co-founders and scientific counselor of the start-up company Aryballe Technologies, created in 2014 for the miniaturization of the optoelectronic nose for digital olfaction, which was awarded second prize in the category "Impact delivered" by The EARTO (European Association of Research and Technology Organisations) Innovation Awards in 2018.

Glen P. Jackson is the Ming Hsieh Distinguished Professor of Forensic and Investigative Science at West Virginia University. He also holds a joint appointment in the C. Eugene Department of Chemistry. He has published more than 80 articles related to mass spectrometric instrumentation development and forensic and biological applications. Since 2016, he has served as co-founding co-Editor-in-Chief of the journal *Forensic Chemistry*, and he is a member of the international advisory board for *Analytical and Bioanalytical Chemistry*.

Maciej Jarosz is Head of the Chair of Analytical Chemistry at the Faculty of Chemistry, Warsaw University of Technology. His research interests are focused on developing analytical methodologies for the identification of natural dyestuffs in works of art, as well as examination of the interactions between metallocomplexes and nanomaterials (potential anti-cancer agents) with components of human fluids.

Gunda Koellensperger holds the Chair for Analytical Chemistry at the University Vienna. Currently, she is Head of the Institute of Analytical Chemistry, Deputy Head of the Center for Mass Spectrometry, Vice Chair of the Vienna metabolomics platform, and Vice Dean of the Faculty of Chemistry. She chairs/has chaired several symposia (e.g., the 6th international symposium on Metallomics, 2017; Feigl Symposium, 2016; Forum on Mass Spectrometry, annual event). She is an expert in methods based on mass spectrometry with more than 170 publications. Her research envisages the development of innovative analytical procedures with an emphasis on accurate quantification in omics-type of analysis and cutting-edge elemental mass spectrometry addressing single-cell analysis.

Fernando Mauro Lanças is Founder and Leader of the Chromatography Group and Full Professor at the Institute of Chemistry at São Carlos, University of São Paulo, Brazil. He started and is Chairman of several international meetings, including COLACRO and SIMCRO, and is co-Chairman of WARPA. He has supervised ca. 130 PhD and master theses; published more than 350 papers and 7 books. His main research interest at the moment is focused on the development and full miniaturization of sample preparation–chromatography–mass spectrometry and their online full automation towards unified chromatography.

Steven J. Lehotay is Lead Scientist with the USDA Agricultural Research Service at the Eastern Regional Research Center in Wyndmoor, PA (near Philadelphia). Since 1992, he has conducted scientific investigations and method development research involving improvement in the analysis of pesticides, veterinary drugs, and other contaminants in food and environmental samples. He has been awarded with numerous honors, including the AOAC International Harvey W. Wiley Award, and according to the Stanford c-score metric, he resides among the top 0.19% of published analytical chemists.

Lingjun Li is Vilas Distinguished Achievement Professor and the Charles Melbourne Johnson Distinguished Chair Professor of Pharmaceutical Sciences and Chemistry at the University of Wisconsin-Madison, USA. Her research interests include the development of novel MS-based tools for quantitative proteomics, peptidomics, and glycomics, and their applications in neuroscience and cancer research. She has been recognized with numerous awards, including the ASMS Research Award, NSF CAREER Award, Sloan Fellowship, PittCon Achievement Award, and ASMS Biemann Medal, and was named one of the Top 50 most influential women in the analytical sciences and was featured in the 2019 Top 100 Power List by *The Analytical Scientist*. She is Associate Editor for the *Journal of the American Society for Mass Spectrometry*.

and sits on the Advisory Board for *Analytical and Bioanalytical Chemistry*.

Peter Lieberzeit is Full Professor at the Department of Physical Chemistry of the University of Vienna. He is working on self-organized materials and matrices as artificial, biomimetic sensing receptors, mainly on molecularly imprinted polymers. He is interested both in better understanding the physicochemical aspects of sensor–analyte interactions and in bringing sensor systems closer to application/markets. Currently, he serves the sensor community as Editor of *Sensors and Actuators B: Chemical* and as Chairman of the International Steering Committee of IMCS conferences. He is also a member of the Scientific Board of CEST (Competence Center for Electrochemical Surface Technology). (Photo: Barbara Mair, © University of Vienna).

Huwei Liu is Professor of Analytical Chemistry at Peking University, Beijing and Wuchang University of Technology, Wuhan, China. He has been working for 30 years on the development of analytical bioanalytical methods, including chromatography and mass spectrometry methods in food, environmental, and clinical lipidomics analysis.

Maili Liu is Director of the National Center for Magnetic Resonance in Wuhan and Chief Researcher of the Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences, China. His research interests are in developing NMR techniques, methods and application to biological systems.

María Jesús Lobo-Castañón is Head of the Electroanalysis Research Group at the University of Oviedo in Spain. Since 2007, she has been Full Professor in Analytical Chemistry at this university. Her research interests focus on the development of electrochemical sensors for clinical diagnosis and food analysis, using different molecular recognition elements, such as enzymes, DNA, and aptamers. She is author of over 125 articles and book chapters in that field.

Miren López de Alda is Scientific Researcher and Head of the consolidated research group Water and Soil Quality Unit at the Institute of Environmental Assessment and Water Research (IDAEA), which is part of the Spanish Council for Scientific Research (CSIC), in Barcelona, Spain. She has been working for many years on the environmental analysis of emerging contaminants (estrogens, illicit drugs, cytostatics, polar pesticides...), where she has contributed many novel analytical methods and data in relation to their occurrence, risks for the environment and human health, and ways to eliminate them. Her mid- to long-term scientific interests focus on the investigation of anthropogenic contaminants and their transformation products; sewage-based epidemiology; water reuse; and contamination of the atmosphere, oceans, and polar regions as transversal areas of study and application.

Cosimino Malitesta is Scientific Responsible for the Laboratory of Analytical Chemistry of the University of Salento (Lecce-Italy), where he was appointed Full Professor in 2001. He has been Vice-President of the Analytical Chemistry Division of the Italian Chemical Society. His main research interests are relevant to the development of biosensors and biomimetic sensors based on electrosynthesized molecularly imprinted polymers (MIPs); development of X-ray photoelectron spectroscopy (XPS); and,

more recently, metabolomic investigations of bacterial infections of vegetables.

Juris Meija is Senior Research Officer at the National Research Council Canada. His work entails research to help improve the reliability of chemical measurements through the development of certified reference materials, better understanding of isotope ratio measurements, and evaluation of measurement uncertainty. He is an active member of IUPAC, where he also serves as Chairman of the Commission on Isotopic Abundances and Atomic Weights.

Junhong Min is Professor at the Department of Biomedical Engineering, School of Integrative Engineering, at Chung-Ang University in Seoul, South Korea. He has been working for several years on molecular diagnostics (the sensing principle, sample preparation, amplification) as well as optical/electrochemical biosensors (strip biosensors, nanobiosensors) to analyze pathogens in complex clinical, environmental, and food samples.

Luigi Mondello is Professor of Analytical Chemistry at the University of Messina, Italy. His research is focussed on the development of multidimensional chromatographic instrumentation and software (GC $\times$ GC, LC $\times$ LC, LC-GC $\times$ GC, LC-GC-GC-GC-prep.), coupled to state-of-the-art MS, for the study of complex matrices constituents and contaminants. He is the author of more than 500 scientific papers and more than 1300 conference presentations, with an H-index of 69. *The Analytical Scientist* has included him in the Top Ten worldwide scientists in the field of separation science and he has received the HTC Award, COLACRO Medal, Silver Jubilee Medal, Liberti Medal, TASIAS, IFEAT Medal, GC $\times$ GC Lifetime Achievement, Golay Award, Robert Kellner Lecture, the Herbert J. Dutton Award, the Giovanni Dugo Medal, Prof. A. Waksmundzki Medal Award, and the Canneri Medal.

María C. Moreno-Bondi has been Professor of Analytical Chemistry at the Complutense University of Madrid (UCM), Spain, since 2008. Her current research interests lie in the development of luminescent optical sensors and biosensors, molecularly imprinted polymers, nanomaterials, phage-display techniques, epitope-mimicking peptides, recombinant antibodies, and their applications to food, clinical, and environmental analysis.

David C. Muddiman is the Jacob and Betty Belin Distinguished Professor of Chemistry and Director, Molecular Education, Technology and Research Innovation Center (METRIC) at North Carolina State University. He was Editor of *Analytical and Bioanalytical Chemistry* (2015–2020) and he served as a member of the ASMS Board of Directors (2013–2015) and Treasurer (2013–2015) and President (2015–2017) of the United States Human Proteome Organization. His group has presented over 700 invited lectures and presentations and has published over 300 peer-reviewed papers and has received six US patents. He is the recipient of the 2016 Graduate School Outstanding Graduate Faculty Mentor Award in the Mathematical, Physical Sciences, and Engineering and the 2015 ACS Award in Chemical Instrumentation. His research is at the intersection of innovative mass spectrometry technologies, systems biology, environmental science, and model organisms to understand human disease and is funded by the National Institutes of Health.

Kevin Pagel is Full Professor for Bioorganic Chemistry at the Department of Biology, Chemistry, Pharmacy of Freie Universität Berlin and guest researcher at the Fritz Haber Institute of the Max Planck Society. Research in the Pagel group is focused on the structural analysis of biological macromolecules, in particular, glycans and glycoconjugates, using

ion-mobility mass spectrometry and gas-phase IR spectroscopy techniques.

Ulrich Panne is President of the Federal Institute for Materials Research and Testing (BAM) and holds the Chair for Instrumental Analytical Chemistry at the Humboldt University Berlin. He received the Fresenius Award of the GDCh and the Emich-Plakette of the ASAC. His scientific interest and work are focused on analytical instrumental development, especially spectroscopy.

Valérie Pichon is Full Professor at Sorbonne University and leads the Department of Analytical, Bioanalytical Sciences and Miniaturization at the ESPCI Paris, PSL University. Her major research interests include the synthesis, characterization, and miniaturization of stationary phases based on antibodies, aptamers, and molecularly imprinted polymers to selectively extract target organic molecules or ions in complex samples. She is the author of more than 130 publications and six book chapters and was rewarded in 2001 with the Analytical Chemistry Department of the French Society of Chemistry Prize.

Jürgen Popp holds the Chair for Physical Chemistry at the Friedrich-Schiller University Jena and is also Scientific Director of the Leibniz Institute of Photonic Technology, Jena. His research interests are mainly concerned with biophotonics. In particular, his expertise in the development and application of innovative Raman techniques for biomedical diagnosis should be emphasized. In 2012, he received an honorary doctoral degree from Babeş-Bolyai University in Cluj-Napoca, Romania, and is, among others, recipient of the prestigious 2016 Pittsburgh Spectroscopy Award.

Thomas Prohaska has been Chair for General and Analytical Chemistry at the Montanuniversität Leoben, Austria, since 2018. He studied technical chemistry at the Vienna University of Technology and received his PhD summa cum laude in 1995. In the same year, he became scientific researcher at the University of Natural Resources and Life Sciences (BOKU), Vienna, and was in charge of setting up a laboratory for elemental and isotopic analysis. He was Associate Professor until 2018. From 1998 to 2000, he was Researcher at the EC joint research center IRMM in Geel, Belgium. His current research focus is based on elemental and isotopic analysis using mass spectrometry, chemical imaging techniques, and metrology with more than 150 peer-reviewed publications.

Torsten C. Schmidt is Full Professor for Instrumental Analytical Chemistry at the University of Duisburg-Essen and Scientific Director at the IWW Water Centre in Muelheim an der Ruhr. Since 2013, he has been President of the German Water Chemistry Society. In 2013, he received the Fresenius Award of the German Chemical Society. His main research interests include the development and application of analytical methods with a focus on separation techniques (GC, LC), sample preparation, and compound-specific isotope analysis for process-oriented environmental chemistry and oxidation processes in water technology. (Photo: Frank Preuß, UDE).

Sabine Szunerits obtained her PhD from Queen Mary and Westfield College, University of London, UK, and since 2010 has been Full Professor of Chemistry at the University of Lille, France. Her research interests are in the area of materials science, with an emphasis on the development of novel nanostructures and approaches for nanomedical applications, as well as sensing-related issues. She is co-author of more than 380 research publications, has written 24 book chapters, and has nine patents. In 2018, she was awarded the Médaille d'argent CNRS for her contribution to sensing and nanomedicine.

Marcela Segundo is Professor at the Faculty of Pharmacy, University of Porto, and Head of the Analytical Development Group at REQUIMTE – PT Government Associate Laboratory. She received the FIA award for Science (2016) and she has been Secretary of the Division of Analytical Chemistry – EuChemS since 2018. She is author or coauthor of > 140 peer-reviewed publications. Her scientific interests are focused on sample treatment, miniaturization of analytical devices, and hyphenation of flow techniques for high-throughput analysis.

Frank Vanhaecke is Senior Full Professor in Analytical Chemistry at Ghent University (Belgium), where he also leads the Atomic & Mass Spectrometry – A&MS research group. A&MS-UGent is specialized in method development for the determination, speciation, and isotopic analysis of trace elements using ICP–mass spectrometry (ICP-MS). Current research lines include elemental bio-imaging using laser ablation ICP-MS, single-event ICP-MS for the characterization of single entities (engineered nanoparticles, microplastics, cells), and high-precision isotopic analysis of essential mineral elements in a biomedical context.

Qiuquan Wang is Head of the Institute of Analytical Science of College of Chemistry and Chemical Engineering at Xiamen University, and Vice Director of the Key Laboratory of Spectrochemical Analysis and Instrumentation, the Ministry of Education, China. He has been working for more than 20 years on the methodological development of atomic optical and mass spectrometry and HPLC-ESI-MS, as well as related environmental and biological analysis.

Wei Wang is Professor and Vice Dean of the School of Chemistry and Chemical Engineering at Nanjing University, China. He is also Fellow of the Royal Society of Chemistry. His current research involves electrochemical sensors, molecular spectroscopy, and advanced optical microscopy for single-cell imaging and single-molecule detection. He received the Young Chemist Award and the Electrochemistry Youth Award from the Chinese Chemical Society in 2017 and 2021, respectively, and the Particuology Youth Award from the Chinese Society of Particuology in 2020.

Thomas J. Wenzel is the Charles A. Dana Professor of Chemistry, Emeritus, at Bates College in Lewiston, ME, USA. His research accomplishments were recognized with the 2010 American Chemical Society National Award for Research at an Undergraduate Institution. He is active in efforts to reform the undergraduate analytical chemistry curriculum to include inquiry- and project-based experiences. His educational activities have been recognized through the George C. Pimentel National Award in Chemical Education from the American Chemical Society (2020) and the J. Calvin Giddings Excellence in Education Award from the Analytical Division of the American Chemical Society (1999). More information about his activities can be found at <http://www.bates.edu/chemistry/faculty/thomas-wenzel>.

Stephen A. Wise is Scientist Emeritus at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD, USA. During his career at NIST, he was involved in the development of Standard Reference Materials (SRMs) for trace organic constituents in environmental, clinical, food, and dietary supplement matrices. He is currently Scientific Consultant in the Office of Dietary Supplements at the National Institutes of Health (NIH-ODS), where he provides support for the Analytical Methods and Reference Materials Program. He is one of the founding editors of *Analytical and Bioanalytical Chemistry*.

Adam T. Woolley is Chair Editor of *Analytical and Bioanalytical Chemistry*, and Dean of Graduate Studies and University Professor in the Department of Chemistry and Biochemistry at Brigham Young University in Provo, UT, USA. His research focuses on 3D-printed integrated microfluidic devices for biomarker measurement, analytical systems for the identification of bacteria and antibiotic resistance genes in sepsis, and biotemplated fabrication of nanomaterials with electronics applications.

Guobao Xu is Deputy Director of the State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, P.R. China, and Director of Electrochemical Instrument Engineering and Technology Research Center of Jilin Province. He won the Second Class Award of the National Natural Science of China in 2009 (4th position) and 2015 (3rd position), and has received the Young Scholar Award of the Chinese Chemical Society, Excellent Youth Award of the Chinese Society of Electrochemistry, and Young Researcher Gold Award in Materials Science, and so on. His group is studying new materials, analytical methods, and devices for electrochemistry and chemiluminescence.

Guowang Xu is administrative vice-director of the Biotechnology Division, and director of the CAS Key Laboratory of Separation Science for Analytical Chemistry in Dalian Institute of Chemical Physics, Chinese Academy of Sciences (CAS). The main prizes that he received included the second prize of National Science and Technology Progress (2011), the second prize of Liaoning Province Science and Technology invention (2011), and the special prize of Science and Technology of China Association of Instrument Analysis (CAIA) (2020). His main research fields are chromatography-mass spectrometry (MS) and the MS-based metabolomics applications in disease biomarker discovery, traditional Chinese medicines and food safety.

Chaoyong Yang is Distinguished Professor in the Department of Chemical Biology, Xiamen University. He received many awards, including the CAPA Distinguished Faculty Award in 2012, the National Outstanding Young Investigator Award in 2013, the Chinese Young Analyst Award in 2015, the Chinese Chemical Society–Royal Society of Chemistry Young Chemist Award in 2016, and the 2021 ACS Advances in Measurement Science Lectureship Award. His research focuses on the development of novel chemical and microfluidic tools for life sciences research and disease diagnosis, which integrates molecular engineering approaches, bio-nanotechnologies, and microfluidics to develop novel

methods, smart materials, and functional miniaturized devices to address previously intractable bioanalytical and biomedical problems.

Joseph Zaia's research group focusses on analytical biochemistry of glycoproteins and proteoglycans. They have developed methods for combined glycomics, proteomics, and glycoproteomics from tissue slides. They have produced a set of bioinformatics tools for the interpretation of mass spectrometry based glycomics and glycoproteomics data sets. Their major goals are to track changes in protein glycosylation during biological mechanisms. Specific projects include (i) mapping changes in extracellular-matrix protein glycosylation during brain disease mechanisms and (ii) analysis of the roles of viral spike protein glycosylation in the evolution of pathogenic enveloped viruses. He has published more than 150 articles in peer-reviewed scientific

journals and has an H-index of 51. He is Editor of *Analytical and Bioanalytical Chemistry*.

Wenwan Zhong is Professor of Chemistry at the University of California, Riverside. The Zhong group focuses on the development of advanced separation and sensing methods using synthetic receptors, functional nucleic acids, and nanomaterials, to facilitate study of the epigenetic factors involved in disease development and exploration of the interactions between nanomaterials and biological systems.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.