



Meet the contributors

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This special issue features young investigators by highlighting recent research activities of rising stars in analytical and bioanalytical science. We are grateful for the overwhelming feedback we have received and thank all contributors for generously providing excellent research articles, critical reviews, and trend articles from the forefront of their research. Below, we invite you to meet those who contributed to this exceptional paper collection.



Christopher Baker is Assistant Professor in the Department of Chemistry at the University of Tennessee, Knoxville (UTK). He earned his PhD from Florida State University in 2012, and was a postdoctoral researcher at the University of Arizona (2012–2014), and Sandia National Labs (2014–2015). His research group at UTK develops microfluidics and separations-based technologies to characterize neuroendocrine mechanisms of neurodevelopmental and neurodegenerative disorders.



Francesca Bettazzi is a postdoctoral researcher at the Department of Chemistry of the University of Florence. Her research interests are the development of electrochemical biosensors for the detection of clinically and environmentally relevant molecules.



Francesco Cacciola is Associate Professor of Food Chemistry at the University of Messina. Since graduation, he has been involved in the application of innovative analytical techniques, in particular, comprehensive two-dimensional liquid chromatography, for the characterization of bioactive molecules in food and natural products. He was recently shortlisted for The Analytical Scientist's Top 40 Under 40 Power List, which aims to shine a light on young scientists shaping cutting-edge technologies.

Published in the topical collection *Young Investigators in (Bio-)Analytical Chemistry* with guest editors Erin Baker, Kerstin Leopold, Francesco Ricci, and Wei Wang.

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Stefano Cinti is a Marie Curie Postdoctoral Fellow in the Nanobioelectronics and Biosensors group headed by Prof. Arben Merckoci at ICN2, Barcelona. He obtained his PhD in chemical sciences in 2016 in the group headed by Prof. Giuseppe Palleschi at the Department of Chemical Science and Technologies, University of Rome Tor Vergata. His research interests include the development of electrochemical sensors, paper-based devices, nanomotors, and nanomaterials. He is a member of the board of the Chemical Cultural Diffusion group and of the Young Group of Italian Chemical Society.



Wendell K. T. Coltro is Associate Professor, Head of the Microfluidics and Electrophoresis Laboratory, and Director of the Chemistry Institute at the Federal University of Goias, Brazil. In the beginning of 2018, he was nominated as an affiliate member of the Brazilian Academy of Science as a young researcher. His research interests involve the development of electrophoresis chips, disposable electrochemical sensors, toner- and paper-based microfluidic devices, as well as 3D-printed droplet-based microfluidic chips for applications in analytical/bioanalytical and forensic chemistry.



Marta Costas Rodríguez received her PhD in chemistry from the University of Vigo (Galicia, Spain) in 2011. Her thesis project focused on method development for elemental analysis of biological samples by spectrometry, particularly for the authentication of seafood. From 2012 to date, she has been a postdoctoral researcher (currently with a fellowship from the Flemish Research Foundation FWO – Flanders) in the Atomic and Mass Spectrometry (A&MS) research group of Prof. Frank Vanhaecke at Ghent University, in Belgium. Currently, her main research interests are high-precision isotopic analysis by multicollector ICP-MS and bioimaging (spatially resolved elemental analysis) using laser ablation (MC)-ICP-MS; both for clinical applications.



Roberta D'Agata has a PhD in chemical sciences and is Assistant Professor at the Chemistry Department, University of Catania. In 2010, she was awarded the “Ambrogio Mazzucotelli Prize” for the novelty, relevance, and quality of the results she achieved in the analytical spectroscopic field. In 2013, she was awarded “Best Researcher”, University of Catania. The objective of her research is to employ surface plasmon resonance imaging (SPRI) and microfluidic-based platforms for DNA and RNA detection in various fields of life sciences, for both applicative and research purposes.



Chaoqing Dong is Associate Professor in the School of Chemistry and Chemical Engineering at Shanghai Jiao Tong University, China. He received his PhD degree in applied chemistry from Shanghai Jiao Tong University in 2007. He worked as Postdoctoral Associate at Purdue University in 2011–2012. His research interests are to develop single-molecule detection methods for application in single-cell assays.



Haifeng Dong is Vice Dean of the Research Center for Bioengineering and Sensing Technology, University of Science and Technology Beijing, China. He was recognized with a National Excellent 100 Doctoral Dissertation Award Nomination in 2013. He was also awarded the second-class Natural Science Prize by Education Ministry of China in 2018 and the first-class Scientific and Technological Prize by Chinese Association for Instrumental Analysis in 2018. He focuses on developing novel strategies for nucleic acid detection and nanotheranostic platforms.



Berta Esteban-Fernández de Ávila is Postdoctoral Scholar-Employee in the Department of Nanoengineering at the University of California, San Diego (USA). She received her European PhD degree in analytical chemistry from the Complutense University of Madrid (Spain) in July 2014 (Prof. Dr. José M. Pingarrón's group). Her PhD focused on the development of electrochemical immunosensors, DNA sensors, and analytical strategies for the determination of different bacteria and cardiac biomarkers. During her PhD, she spent four months as Visiting Scholar at the University of Rome Tor Vergata (Italy) in the research group of Prof. Giuseppe Palleschi, where she specialized in DNA sensors. After completing her PhD, she moved to the Department of Nanoengineering at the UCSD as Postdoctoral Researcher in Prof. Joseph Wang's group. She is currently working on the preparation of advanced nanomotors and nanosensors with applications in the fields of biomedicine, healthcare, and security.



Zuzana Gajdosechova joined NRC Metrology in Ottawa after receiving her PhD degree in environmental and analytical chemistry from the University of Aberdeen in 2016. She was awarded the Thermo-Hilger Award in 2016 for her contribution to analytical atomic spectroscopy and the Seal of Excellence by the European Commission in 2018. Her research focuses on studies of biotransformation of metals and metalloids by using novel elemental speciation methods.



Timothy J Garrett is currently Associate Professor in the Department of Pathology at the University of Florida and Associate Director for the Southeast Center for Integrated Metabolomics (SECIM). His research involves the application of lipidomic and metabolomics, from the development of MALDI-based approaches to analyze lipids and small molecules with imaging mass spectrometry to deep metabolome discovery using liquid chromatography–high resolution mass spectrometry. Other current interests are in the application of direct tissue analysis approaches, such as MALDI, DESI, and LMJSSP, as well as the use of high-resolution mass spectrometry in metabolomics and routine diagnostics. He enjoys the interplay between technological advancement and clinical analysis, providing unique opportunities and experiences to develop future diagnostics.



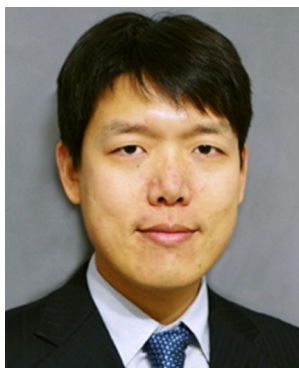
Joseph Genereux is Assistant Professor in the Department of Chemistry at the University of California, Riverside. Joey received his Ph.D. at Caltech in 2010 and completed his postdoctoral training at The Scripps Research Institute. His group develops analytical approaches that apply mass spectrometry to questions of protein conformation, stability, and trafficking. He is a recipient of a Starter Grant from the Society of Analytical Chemists of Pittsburgh.



Bienvenida Gilbert López is a postdoctoral researcher at the University of Jaén (UJA), Spain. She has received awards from the Andalusian and Spanish Analytical Chemistry Societies (GRASEQA and SEQA), and the Extraordinary Award 2010–2011 from the Faculty of Experimental Sciences of UJA for her PhD thesis. Her research is focused on the development of greener analytical methods for the extraction and analysis of low-mass organic compounds (especially those of interest in food science) by mass spectrometry, with experience in the use of novel ionization sources.



David Giménez-Romero is Assistant Professor of Chemistry at the University of Valencia, Spain. His research is focused on the development of new multiparameter biological analysis technologies to monitor conformational dynamics of protein–protein interactions. The reaction pathways of these interactions are used for the diagnosis and prognosis of autoimmune diseases, since they change depending on the studied disease.



Zhi-Yuan Gu is Jiangsu Distinguished Professor at Nanjing Normal University, China. He is the recipient of an award from the Young Elite Scholar Sponsorship program, China Association of Science and Technology. His research interest is in the design of porous materials for sample preparation and chromatographic separation.



Davy Guillarme is a senior lecturer at the Analytical Sciences Department of the University of Geneva, Switzerland. His expertise includes HPLC, UHPLC, HILIC, LC-MS, SFC, SFC-MS, analysis of proteins, mAbs, and ADCs. He is Associate Editor of the Journal of Chromatography B. He was the recipient of the LC-GC Emerging Leader Award in Chromatography in 2013 and the jubilee medal from the Chromatographic Society in 2018.



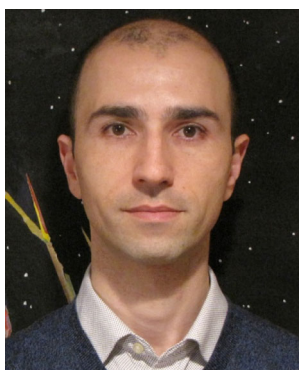
Zsuzsanna Heiner is Head of the Photonics Lab and a Julia Lermontova Fellow in optical microspectroscopy at the School of Analytical Sciences Adlershof, Humboldt Universität zu Berlin, Germany. She is developing next-generation ultrashort mid-infrared laser sources and nonlinear spectrometers for vibrational sum-frequency generation spectroscopy, and applies them to the spectroscopic investigation of organic molecules at surfaces and interfaces. In recognition of her outstanding work in this research field, she received the Bunsen-Kirchhoff Award for Analytical Spectroscopy from the Gesellschaft Deutscher Chemiker (GDCh) in 2018.



Weihua Hu is currently Professor at the Institute for Clean Energy and Advanced Materials, Faculty of Materials and Energy, Southwest University. His current research interests lie in the development of label-free optical techniques and chips for bioanalysis.



Andrea Idili is a postdoctoral researcher at the Institute of Collaborative Biotechnologies (ICB), University of California Santa Barbara. He received his PhD degree in analytical chemistry under the supervision of Prof. Francesco Ricci at the University of Rome Tor Vergata in 2016. His current research focuses on the design and characterization of electrochemical aptamer-based (E-AB) sensors supporting the real-time, continuous monitoring of diagnostically relevant molecules both *in vitro* and *in vivo*.



Kaveh Jorabchi established his independent research group at Georgetown University (Washington, DC) in 2011. He is currently Associate Professor in the Department of Chemistry. His research interests include developing instrumentation and methods for high-sensitivity detection and standard-free absolute quantification of analytes using elemental tags, with applications in environmental, biomedical, and forensic analyses.



Ajith Karunarathne is Assistant Professor in the Department of Chemistry and Biochemistry at the University of Toledo, Ohio, USA. He developed G protein coupled receptor (GPCR)-based optogenetic tools to control subcellular signaling and cell behavior using light. He also develops imaging-based methods to measure signaling in single cells and subcellular regions. One of his publications was recently recognized as a top 100 paper of 2018 by Altmetric. He is the institutional coordinator for the ACS-Project SEED program, under which the Department of Chemistry and Biochemistry hosts local high school student during summer months to conduct STEM research.



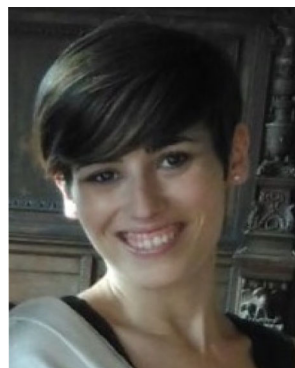
Ryan T. Kelly is Associate Professor in the Department of Chemistry and Biochemistry at Brigham Young University with a joint appointment as Senior Research Scientist at Pacific Northwest National Laboratory. His research interests focus on the development of microfluidic sample handling, advanced separations, and ultrasensitive mass spectrometry to increase the sensitivity and throughput of biochemical analyses.



Conggang Li is Head of the In Situ Biomacromolecular Spectroscopy Team at the State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics in Wuhan, China. He has been working on the development of tools, especially NMR spectroscopy methods to analyze protein structure, stability, and interactions in complex environments.



Feng Li is Assistant Professor with cross appointments at the Department of Chemistry and Centre for Biotechnology, Brock University (St. Catharines, Canada). His research is at the interface of bioanalytical chemistry and DNA nanotechnology, and his current interests include fabricating analytical devices and portable equipment for field-deployable molecular testing, developing DNA-assembled functional nanomaterials and nanodevices, and simulation-guided designing of nucleic acid hybridization probes for diagnostic and medical applications.



Eleonora Macchia is Project Researcher at the Abo Akademy University, Turku (Finland). She received her Master's degree in physics 110/110 cum laude from the University of Bari in 2014 and her PhD in chemical and molecular sciences summa cum laude from the same institution in 2018, under the supervision of Prof. Luisa Torsi. She was a postdoctoral fellow at the University of Bari from December 2017 to February 2019. Her research activity has been focused on the development of biosensing platforms based on organic thin-film transistors. She has published 16 papers in international journals (12 articles and 4 proceeding) and she is the first author on 10 of them. She is co-author of a European Patent (PCT International Application PCT/IB2018/050491). Additionally, she is co-author of three book chapters and she participated in 12 National and International Conferences, with 9 oral contributions and 3 posters. She was awarded four national and international scientific grants and awards.



Monica Mattarozzi is a researcher at the Department of Chemistry, Life Sciences and Environmental Sustainability of the University of Parma, Italy. In 2018, she received the Best Young Researcher award by the Analytical Chemistry Division of the Italian Chemical Society. Her research interests mainly focus on the development and validation of innovative analytical methods based on chromatography, mass spectrometry techniques, and biosensing devices. Recent

research activities include the use of environmental scanning electron microscopy applied to the characterization of materials and tissues, and to environmental, biological, and food samples for analytical purposes.



Björn Meermann is currently working as Junior Research Group Leader (“Habilitation”) in Analytical Chemistry within the Department of Aquatic Chemistry at the Federal Institute of Hydrology (BfG) in Koblenz (Germany), in association with the University of Koblenz-Landau (Germany). From June 1, 2019, he will be Head of the Department of Inorganic Trace Analysis at the Federal Institute of Materials Research and Testing (BAM) in Berlin/Germany. In 2009, he received his PhD in analytical chemistry from the University of Münster in the group of Uwe Karst. Afterwards, he worked for almost two years as a postdoctoral researcher with Frank Vanhaecke at Ghent University (Belgium). His research interests are focused on method development for the analysis of nanoparticles (NPs)/single cells by means of AF4/ICP-(SF)MS and single-cell ICP-(ToF)-MS, method development for speciation analysis of chemical elemental species in environmental samples by means of HPLC, CE on-line with ICP-(SF)MS, application of stable isotopes for tracing and on-line isotope dilution for quantification of NPs/species, and method development for the analysis of non-metals (e.g., fluorine) by means of high-resolution continuum source graphite furnace molecular absorption spectrometry (HR-CS GF MAS).



Márcia Foster Mesko is Associate Professor at the Federal University of Pelotas (UFPEL), Brazil (since 2009). Currently, she is Director of the Analytical Chemistry Division of the Brazilian Chemical Society; Coordinator of the Chemistry Committee at the Foundation for Supporting Research of Rio Grande do Sul state, Brazil (FAPERGS); and Coordinator of the Biochemistry and Bioprospecting Postgraduate Program at UFPEL. She has received several national and international awards, including one from L’Oreal Brazil (Young Woman in Science, Brazilian Academy of Science, UNESCO). She was recognized as Young Analytical Scientist, in the special edition of the Journal of Analytical Atomic Spectrometry, 2017, and participated in the special edition Celebrating Excellence in Research: 100 Women of Chemistry, from the Royal Society of Chemistry (RSC). Recently, she was awarded a JAAS Emerging Investigator Lectureship from the Journal of Analytical Atomic Spectrometry (RSC) and asked by IUPAC to represent one of the elements of the Periodic Table of Younger Chemists (Bromine) for the celebration of 100 years of IUPAC and the International Year of the Periodic Table. She has supervised 11 Master’s and 3 PhD students, and published 90 peer-reviewed international papers. She has experience in the development of methods, especially for halogen determination, using atomic spectrometry and chromatography techniques.



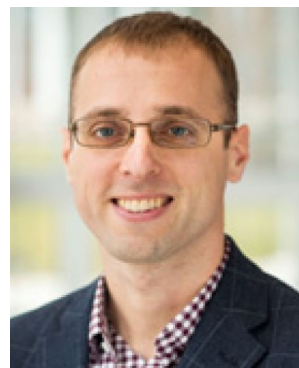
Markus R. Meyer is Full Professor of Pharmacology and Toxicology at the Faculty of Medicine and at the Faculty of Natural Sciences and Technology, Saarland University (Germany). He is also Head of the Department of Experimental and Clinical Toxicology of Saarland University. He has received several international awards for his scientific work, such as the TIAFT Mid-Career Achievement Award, the IATDMCT Victor Armstrong Young Investigator Award, and the GTFCh Young Scientists award. His research is focused on applied mass spectrometry in the field of analytical pharmacology and toxicology.



Rebeca Miranda-Castro is Assistant Professor in the Department of Physical and Analytical Chemistry at the Universidad de Oviedo (Spain). She spent a postdoctoral period in the Laboratoire d'Electrochimie Moléculaire at the Université Paris-Diderot (France), working under the supervision of Dr. Limoges on the electrochemical study of enzymatic mechanisms for homogeneous and immobilized redox enzymes. Her current research interests focus on the development of electrochemical biosensing platforms for clinical diagnosis and food analysis using molecular recognition elements based on nucleic acids (genosensors and aptasensors).



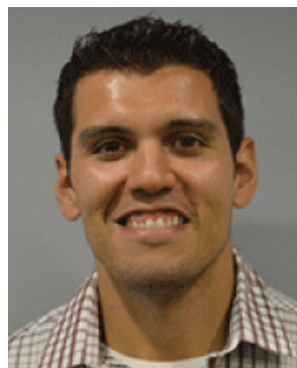
Elisa Michelini is Associate Professor in Analytical Chemistry at the Department of Chemistry “Giacomo Ciamician” of the University of Bologna. Her scientific activity is mainly focused on the development of bioanalytical methods, including bioluminescent whole-cell biosensors with applications in drug screening, environmental monitoring, forensics, and diagnostics. She is an author and co-author of over 75 scientific publications and recipient of the Marlene De Luca Prize (2012) and Genelux Award (2014).



Peter Nemes is Associate Professor in the Department of Chemistry and Biochemistry at the University of Maryland, College Park. His laboratory develops next-generation micro-analytical mass spectrometry technologies to detect important proteins, peptides, and metabolites during early embryonic development and formation of the nervous system.



Kevin Pagel is Associate Professor at the Freie Universität Berlin and guest researcher at the Fritz Haber Institute. The central topic of his research is the structural analysis of biological macromolecules and their complexes using gas-phase techniques, in particular, glycans and glycoconjugates.



Johnny Perez is a research chemist working for the United States Department of Agriculture-Agricultural Research Service in Wyndmoor, PA, on food safety. He has been working for a couple of years on antibiotic-resistant microorganisms and their link to chemical residues using mass spectrometry. His recent work has focused on exploring the organism's proteome targeting and validating proteotypic biomarkers for rapid detection.



Andrew Patterson is Associate Professor of Molecular Toxicology at the Pennsylvania State University, University Park, PA, and Scientific Director of Metabolomics. He and his students, postdocs, and collaborators focus on understanding the host-metabolite-microbiota communication network, specifically how the manipulation of gut microbiota by diet and/or xenobiotics impacts on host metabolites (e.g., bile acids, short-chain fatty acids), their metabolism, and how these co-metabolites interact with host nuclear/soluble receptors (e.g., farnesoid X receptor, aryl hydrocarbon receptor). His lab employs a variety of tools, including NMR and mass spectrometry based metabolomics, genomics, and conventional and gnotobiotic transgenic mice, to facilitate the study of these pathways and understand their impact on human health and disease.



Ásta H. Pétursdóttir is a research scientist and project leader at Matis, Iceland. She has received numerous prizes, awards and scholarships including SORSAS award (2010) and two RSC awards, the Allan Ure Memorial Bursary (2013) and the Thermo-Hilger award (2018), both awarded for major contribution to analytical atomic spectroscopy. Her research has focused on arsenic speciation with an emphasis on seaweed.



Susy Piovesana has been Research Fellow in the Department of Chemistry at the University of Rome La Sapienza, Italy, since 2017. She is part of the group of Prof. Aldo Laganà and her research interests include the development of analytical methods in the fields of proteomics; small-molecule analysis in environmental and food matrices; and, much more recently, metabolomics, and lipidomics. She is co-author of 57 publications and was awarded the Young Researcher Awards in Analytical Chemistry and Bioanalytical Chemistry by the Italian Chemical Society in 2017 and the Genzo Shimadzu Best Oral Award in 2016.



Alessandro Porchetta is Senior Researcher at the Chemistry Department of the University of Rome, Tor Vergata. His research activities explore the possibility of using DNA-based nanodevices for diagnostic and drug-monitoring applications. He received the Primo Levi Award (2014) from the Italian Society of Chemistry (SCI) and was a recent recipient of the European Young Chemist Award (2018).



Jessica E. Prenni is Associate Professor in the Department of Horticulture at Colorado State University. She also served as Director of the CSU Proteomics and Metabolomics Facility from 2007 to 2018. She has over 16 years' of experience in biological mass spectrometry and her research is currently focused on the application of mass spectrometry approaches to address important questions in food quality and safety.



Stefania Rapino is a young associate professor in the Department of Chemistry "Giacomo Ciamician" at the University of Bologna. She received her PhD in chemistry in 2006. Her research is mainly focused on the development of electrochemical and microstructuring tools for applications in life sciences and cancer research. She is a recognized researcher in the field of scanning electrochemical microscopy applied to biomedical research. She was mentioned in 2011 by the Women and Technologies Association as one of the best young innovative female scientists in the field of bio- and nanotechnologies. She was awarded with research grants as a young scientist by the Italian Ministry of Health and the Italian Association for Cancer Research (AIRC).



Emma Schymanski is Associate Professor and Head of the Environmental Cheminformatics group at the Luxembourg Centre for Systems Biomedicine, University of Luxembourg, and a Luxembourg National Research Fund (FNR) ATTRACT Fellowship awardee. Her research combines open science, cheminformatics, and computational mass spectrometry approaches to elucidate the unknowns in complex samples and relate these to environmental causes of disease, along with supporting several European and worldwide activities to improve the exchange of data, information, and ideas between scientists.



Pablo Sinues is Tenure-Track Assistant Professor at the University of Basel (Department of Biomedical Engineering) and his research group is established at the University Children's Hospital Basel. His research focuses on the development of novel instrumentation for real-time analysis of trace gases, with a focus on breath metabolomics for clinical diagnosis and therapeutic drug monitoring. He was the recipient of an Eccellenza grant from the Swiss National Science Foundation in 2018.



Michael Seidel is Head of the Bioanalytics and Microanalytical Systems group at the Institute of Hydrochemistry and Chair of Analytical Chemistry and Water Chemistry, Technical University of Munich, Germany. His research interests are with in bioanalytical methods for environmental and food analytical chemistry. His expertise is in rapid detection methods; chemiluminescence microarrays; surface chemistry; selective concentration methods for bioanalytics; detection of pathogens, toxins, and micropollutants; molecular biological methods; and immunoassays.



Bradley B. Stocks is Research Officer in Organic Chemical Metrology at the National Research Council Canada. He received his PhD from the University of Western Ontario under the supervision of Lars Konermann, and completed a postdoctoral fellowship at Northeastern University and an NSERC visiting fellowship at Health Canada. His current research is focused on structural characterization and quantitation of peptides and proteins with mass spectrometry, and the development of protein reference materials.



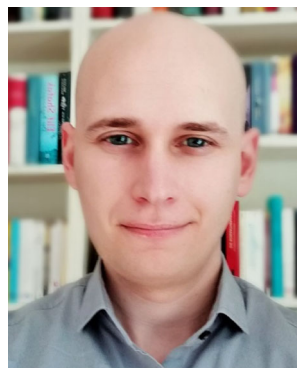
Christophe Stove is Associate Professor at the Department of Bioanalysis at Ghent University (Belgium). After a cell and molecular biology oriented PhD and postdoc, he embarked upon bioanalysis in 2007 and became Head of the Laboratory of Toxicology at the Faculty of Pharmaceutical Sciences in 2014. Besides teaching several courses, he directs the Lab's service activities (forensic toxicology and reference lab activities (Ref4U)) and steers the research. The latter covers applied cell biology, as well as bioanalysis, with topics linked to the development of bioassays as an alternative drug-screening approach in forensic toxicology, to vitamer analysis, or to microsampling applications and associated challenges.



Marek Tobiszewski works in the Department of Analytical Chemistry, Faculty of Chemistry, Gdańsk University of Technology. He is the author of more than 50 scientific papers, published in JCR list journals. He was awarded with the Jan Uphagen prize for outstanding young scientists in 2013 and the prize for the best habilitation given by the Committee of Analytical Chemistry of the Polish Academy of Sciences in 2017. His scientific interests include the determination of organic compounds in environmental samples, green chemistry, and the application of chemometric and multicriteria decision analysis techniques in the optimization of chemical processes.



Giovanni Valenti is a young assistant professor (fixed-term) in the Department of Chemistry "G. Ciamician" at the University of Bologna. He received his PhD in chemistry from the University of Bologna in 2010. His research is mainly focused on the fields of electrochemistry and electrochemiluminescence (ECL), also spatially resolved ECL microscopy, for biosensor application. He was a visiting researcher at the University of Texas at Austin and Dublin City University, and he has received several awards, including the "Premio Levi" awards by the Italian Chemical Society for the best publication, from a young researcher, in 2016.



Stijn J. M. Van Malderen is a postdoctoral researcher, working at the Deutsches Elektronen-Synchrotron (DESY), and he is associated with Ghent University as part of the X-ray Microspectroscopy and Imaging and Atomic and Mass Spectrometry research units. His work has focused on developing and improving hardware and software for LA-ICP-MS (spatial deconvolution, ablation cells design, and commercial products ARIS, COBALT, HDIP). He is currently developing online data analysis software for synchrotron-based X-ray analysis.



Ying Wan is Associate Professor in the Bio-Micro-Electro-Mechanical-Systems (Bio-MEMS) Team at the Laboratory of Intelligence Microsystem in Nanjing University of Science and Technology, in Nanjing, China. She has published more than 30 scientific papers (H index: 15). Her research interests are in development of biosensors (electrochemical, electroluminescent, and surface acoustic wave biosensors) for the analysis of cancer biomarkers (DNA, protein, ncRNA, circulating tumor cells, etc.)



Nongnoot Wongkaew is Assistant Professor at the Institute of Analytical Chemistry, Chemo- and Biosensors, University of Regensburg, Germany. She was a postdoctoral fellow of the Alexander von Humboldt Foundation under the supervision of Prof. Antje J. Baeumner from 2014 to 2016, and is currently leading the nanofiber research group at the institute. Her research focuses on developing and implementing electrospun nanofibers as a smart 3D nanointerface in miniaturized analytical systems for applications towards point-of-care diagnostics and biomedical fields.



Caroline West is Associate Professor at the University of Orleans, France. Her works are essentially devoted to improving the understanding of chromatographic separations in liquid and supercritical fluids, to facilitate method development. She received the Emerging Leader in Chromatography award from LC-GC in 2015 and was recognized twice in the Top 40 under 40 list by The Analytical Scientist (2014 & 2018). She is also a junior member of the French University Institute, a service of the Ministry of Higher Education and Research, distinguishing a small number of university professors for excellent research.



Peng Wu is Professor of Analytical Chemistry at Sichuan University. He obtained his PhD in chemistry from Nankai University in 2011. He was a recipient of the Chinese National Science Fund for Excellent Young Scholars of China in 2015. His current research interests focus on the development of new optosensing and bioanalytical methods for disease-related biomolecules/pathogens based on photosensitization and room-temperature phosphorescence.



Fan Xia obtained his PhD degree from the Institute of Chemistry, Chinese Academy of Sciences, China, in 2008, under the direction Professor Lei Jiang. He then went to the University of California, Santa Barbara, for his postdoctoral training in Professor Alan J. Heeger's group. In 2012, he returned to China and took a position as Professor at Huazhong University of Science and Technology. In 2016, he joined the Faculty of Materials Science and Chemistry, China University of Geosciences, China, as Dean and Professor. His main research interests are focused on bioanalytical chemistry.



Lehui Xiao is now Professor of Chemistry at the College of Chemistry of Nankai University, China. His lab applies and develops optical microscopic methods to explore problems in analytical chemistry, biomedicine, and nanoscience. One of the main focus areas is to understand those vital biological processes with functionalized nanomaterials in living cell with high spatial and temporal resolution. Meanwhile, he is also interested in the exploration of fundamental photophysical properties of novel functional nanomaterials and their potential applications in analytical chemistry for ultrasensitive detection.



Yu Xia is Professor in the Department of Chemistry, Tsinghua University, Beijing, China. Her research aims broadly to developing mass spectrometry methods and instrumentation for bioanalysis. Her recent research efforts emphasize utilizing radical reactions to resolve structural isomers of biomolecules, such as lipid double-bond location isomers. She received a Research Award (2013) from the American Society for Mass Spectrometry and an Excellent Young Scientists Fund (2017) from the National Natural Science Foundation of China.



Min Xue is Assistant Professor in the Department of Chemistry at the University of California, Riverside. His group is interested in developing fluorescent probes that enable novel bioanalytical methods, especially at single-cell resolution. Specific research projects include the implement chemical methods for single-cell metabolic assays that can be integrated to single-cell proteomic/transcriptomic platforms, the use of peptide-based probes to dynamically monitor intracellular signaling activities, and the construction of topologically complex multicyclic peptides for specific recognition of protein epitopes and small molecules.



Yi-Lun Ying is Associate Professor of Analytical Chemistry at the School of Chemistry and Molecular Engineering at East China University of Science and Technology. As an active and emerging investigator in analytical chemistry, she has received six awards and honors, including the L’Oreal-UNESCO International Rising Talents (2016) and RSC Analyst Emerging Investigator (2018). Her research interests focus on nano-spectroelectrochemistry to reveal the heterogeneous structure–activity relationship of single molecules that involves nanopores and nanoelectrodes.



Wataru Yoshida is Senior Assistant Professor at the School of Bioscience and Biotechnology, Graduate School of Bionics, Tokyo University of Technology. In 2008, he received his doctorate in engineering from the Tokyo University of Agriculture and Technology. He was honored with the Elsevier Biosensors and Bioelectronics Award 2008 (1st runner-up) during the 18th Anniversary World Congress on Biosensors. His research group is interested in biomolecular engineering to develop biosensing technologies for epigenetic modifications, such as CpG methylation and histone modifications in human genomic DNA.



Yong-Liang Yu has been Professor in Analytical Chemistry, in the Department of Chemistry, Northeastern University, since 2015. He was supported by the Program of New Century Excellent Talents in University in 2013. His current research focuses on sample pretreatment, spectroscopic analysis, and the development of biosensors.



Zheng-Jiang Zhu is Professor and leader of the Metabolomics Research Group in Interdisciplinary Research Center on Biology and Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China. His research focuses on mass spectrometry based metabolomics, bioinformatics, cheminformatics, and metabolic regulation in disease. He has published 50 peer-reviewed papers in prestigious journals with over 3000 citations.

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