



Meet the contributors of *Young Investigators in (Bio-)Analytical Chemistry 2023*

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This special issue features young investigators in (bio-)analytical science – it is the sixth edition presenting a unique collection of articles authored by rising stars in analytical sciences. 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 exceptional researchers who contributed to this paper collection.



Wentao Bi is Professor in the School of Chemistry and Materials Science at Nanjing Normal University, China. He received his BS degree from Beijing University of Chemical Technology (China), and MS and PhD degrees from Inha University (Korea). His research interests are ambient ionization mass spectrometry; chromatographic separation methods and technologies, including the use of green solvents to reduce environmental pollution; the use of special affinity functional materials to improve the separation of samples; the simplification of solid, semi-solid and highly viscous sample pretreatment; and the development of chromatographic and mass spectrometry devices.

Published in the topical collection *Young Investigators in (Bio-) Analytical Chemistry 2023* with guest editors Zhi-Yuan Gu, Beatriz Jurado-Sánchez, Thomas H. Linz, Leandro Wang Hantao, Nongnoot Wongkaew, and Peng Wu.

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Magdalena Borowska received her PhD from Warsaw University of Technology (Poland) in 2021, where she is currently Assistant Professor for Analytical Chemistry. During her PhD, she worked on the development of new analytical approaches, mainly based on microwave plasma and photochemical vapor generation of elements, and their application in nanochemistry. She received several awards, including the Committee of Analytical Chemistry Polish Academy of Science prize for the best PhD thesis in analytical spectrometry. Her main research interests focus on the development and application of spectrometric techniques to characterise nanomaterials.



Márcia Cristina Breitzkreitz has worked as Professor in the Chemistry Institute of the University of Campinas (UNICAMP) since 2014, coordinating the Laboratory of Pharmaceutical Research and Chemometrics (LabFarQui). Her major research interests are related to chemometrics applied to the development of pharmaceutical products and processes according to the strategy of quality by design (QbD); the development of analytical methods based on analytical quality by design (AQbD) and the use of vibrational spectroscopy for pharmaceutical development and troubleshooting. In addition to her research work and teaching (graduate and undergraduate levels), she is dedicated to courses and consultancy on relevant topics to the pharmaceutical industry, especially related to chemometrics within the context of quality by design. In 2021, she received the "Women in Life Sciences" award, granted by the PDA Brazil Chapter, as an outstanding professional in science, leadership, education and successful projects in the industry.



Jia Chen is Associate Professor in the Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences. She is a member of the Youth Innovation Promotion Association, Chinese Academy of Sciences. She is also the young editorial board member of *Chinese Chemical Letter* and *Journal of Analysis and Testing*. Her main research interest focuses

on the development of new functional nanomaterials and their application in chromatographic separation and biological sensing technologies.



Suticha Chunta received her PhD in chemistry from the University of Vienna, Austria, in 2019. She is currently Associate Professor at the Faculty of Medical Technology, Prince of Songkla University, Thailand. Her research mainly focuses on the development of molecularly imprinted polymers and using aptamers in analytical assays for biomedical applications.



Stefano Cinti is Associate Professor of Analytical Chemistry in the Department of Pharmacy, University of Naples "Federico II", where he leads the unianobiosensors lab (unianobiosensors.com) and his research interests include the development of electrochemical sensors, portable diagnostics, paper-based devices, nanomotors, and nanomaterials. During his research activity, he had the opportunity to spend a period abroad in Finland, the UK, USA, Germany, and Spain. He has published more than 70 papers in peer-reviewed journals, with an H-index of 30 and >3500 citations. Among all the prizes and certificates, in 2018, he was named Best Young Researcher in Bio-Analytical Chemistry; in 2019, he was named Best Young Researcher in Analytical Chemistry (both by the Italian Chemical Society); in

2022, he was awarded with the Early Career Award from International Society of Electrochemistry in Analytical Electrochemistry; and in 2021, he has been recognized as the World's Top 2% Scientists. He is the coordinator of the Chemical Cultural Diffusion group of the Italian Chemical Society. He is Chair of AMYC-BIOMED, a multidisciplinary conference for young chemists in the biomedical sciences. He is very active in communicating science to nonspecialized audiences through TV shows, radio, and magazines.



Kevin Clark joined Tufts University as Assistant Professor of Chemistry in August 2022. His research group develops sample preparation, separation, and mass spectrometry methods to profile RNA modifications in the central nervous system and single cells. His lab is particularly interested in understanding how these unusual epitranscriptomic marks influence neuronal homeostasis, learning and memory, and animal behavior.



Wendell K. T. Coltro received his master and PhD degrees in analytical chemistry from the Institute of Chemistry at São Carlos, University of São Paulo, with a visiting scholar period at the University of Kansas. He is currently Associate Professor of Analytical Chemistry at the Federal University of Goiás, Brazil. In the beginning of 2018, he was

nominated as an affiliate member of the Brazilian Academy of Sciences. His research interests involve the development of electrophoresis chips, chemical and electrochemical sensors, toner- and paper-based devices, digital microfluidics as well as 3D printed microfluidic chips for applications in bioanalytical and forensic chemistry.



Frank Nelson Crespilho has been Professor of Physical Chemistry at the Chemistry Institute of the University of Sao Paulo, since 2012. He was Visiting Associate in Chemistry at the California Institute of Technology, Caltech (EUA); Visiting Professor at the Max-Planck-Institute for Solid State Research, Stuttgart, Germany; and Visiting Professor at Harvard University. He is Coordinator of the COVID-19 Network in proteomics and diagnostics chemistry at the University of São Paulo. He was one of the inventors of the "Popular Fast Test of COVID-19", costing less than a dollar, for mass testing in developing countries. His research interests include fundamental and applied bioelectrochemistry with a distinctive focus on the chemistry of energy, life and health.



Ana Díaz-Fernández is a postdoctoral researcher at the University of Tor Vergata Rome (Italy). She received her PhD from the University of Oviedo (Spain) in 2020. Afterwards, she worked as a postdoctoral researcher at

the University of Bath (UK) and Aarhus University (Denmark). She has received several awards, including “PhD Extraordinary Award” from the University of Oviedo and the “best PhD thesis award” from the Instituto de Investigación Sanitaria del Principado Asturias (ISPA). Her research is focused on the selection characterization of new aptamers for cancer biomarkers and on the development of electrochemical sensors for the detection of clinically relevant targets, such as tumor biomarkers, antibodies, and cells.



Jeffrey E. Dick is Richard B. Wetherill Associate Professor at the Department of Chemistry at Elmore Family School of Electrical and Computer Engineering, Purdue University, West Lafayette. The main prizes he received were Pittcon Achievement Award, March 2023; Royce W. Murray Young Investigator Award (SEAC & Pittcon), March 2023; Alfred P. Sloan Research Fellow, Feb. 2021; NSF CAREER Award, Jan. 2021; NIH NIGMS MIRA R35 Outstanding Investigator Award, Sept. 2020; Forbes' 30 Under 30 (Science Category), Nov. 2018. His present interests are developing new measurement science tools to elucidate chemical reactivity in very tiny volumes and how nature uses such reactivity for the genesis and propagation of life.



Flavio Antonio Franchina was appointed in 2021 and currently is Assistant Professor of Analytical Chemistry at the University of Ferrara (Department of Chemical, Pharmaceutical, and Agricultural Sciences), where he is progressing novel research lines on a wide breadth of practical applications. His overall research focus has been to develop advanced chromatographic separation methods with significant levels of speed, resolution and (data) reliability. His developments in particular entail comprehensive couplings of different chromatographic methods with novel sample preparation methods, advanced detection and data elaboration strategies. His profile was recognized internationally twice among the ‘Top 40 under 40’ in analytical science by *The Analytical Scientist* magazine, and he received the prestigious John Phillips Award for comprehensive two-dimensional gas chromatography (GC × GC) in 2018.



Emanuela Gionfriddo is Assistant Professor of Chemistry at the Department of Chemistry and Biochemistry of the University of Toledo (OH, USA). Research work in the Gionfriddo lab focuses on developing advanced analytical separation tools for the analysis of complex biological and environmental samples using green extraction methodologies. She received her Ph.D. in analytical chemistry at the University of Calabria, Italy. She joined Prof. Pawliszyn's group at the University of Waterloo (Ontario, Canada) in 2014 as Post-Doctoral Fellow and manager of the Gas-Chromatography section of the Industrially Focused Analytical Research Laboratory (InFAReL). She is the recipient of the 2023 LCGC Emerging Leader in Chromatography Award, the 2023 Eastern Analytical Symposium Young Investigator Award and the 2022 ACS Analytical Division Satinder Ahuja Award for Young Investigators in Separation Science. She also serves as the Secretary of the ACS Analytical Chemistry Subdivision on Chromatography and Separation Chemistry. Her research program is currently funded by the National Science Foundation through the 2022 CAREER Award, the National Oceanic

and Atmospheric Administration, and several industrial partnerships.



Raquel Gonzalez de Vega is a postdoctoral researcher at the University of Graz, Austria. Her research is focused on the development and application of new methodologies based on mass spectrometry detection, including trace elements and speciation analysis, nanotechnology and bioimaging techniques combined with labelling protocols and immunohistochemical assays for elemental and molecular studies in life science.



James P. Grinias is Associate Professor of Chemistry & Biochemistry at Rowan University, where he teaches courses in general, analytical, and bioanalytical chemistry while also conducting research on UHPLC column performance and instrument miniaturization. His research has been recognized with awards from the American Chemical Society Subdivision on Chromatography & Separations Chemistry, the Chinese American Chromatography Association, and *LC-GC* and *The Analytical Scientist* magazines.



Yuanyuan Guo joined the Frontier Research Institute of Interdisciplinary Sciences (FRIS) at Tohoku University as Assistant Professor (PI) in 2018 and became Associate Professor in 2023. She is leading an independent group at FRIS to develop multimodal microelectronic fibers to interface with complex biological systems. She is a recipient of the innovators under 35 Japan 2022, Murasaki Sendai Hagi Award 2022, Tokin Science and Technology Award 2021, Young Scientist Award from ACCS2019, and 1st Place Winner in Falling Wall Lab Sendai among other honors.



Yehua Han is Professor in Chemical Engineering at the China University of Petroleum-Beijing, honored as the Top-Notch Young Scientist. She received her PhD in analytical chemistry from Peking University, and was a visiting researcher at the University of California, Berkeley. She is now Associate Editor of *Separation Science Plus*, *Petroleum Science Bulletin*, and on the editorial board member of *Petroleum Science*. Her research interests are innovation of MS ionization, development of multi-dimensional MS methodology, on-line study of reaction

mechanism, and their engineering application in petro-omics, renewable energy, and environmental chemistry.



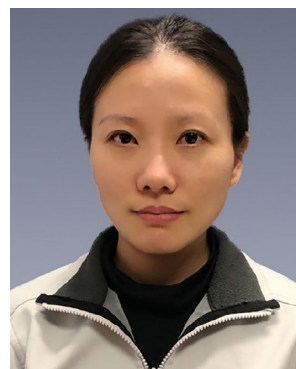
Rui Hao is Associate Professor of Chemistry at the Southern University of Science and Technology (SUSTech). His research interests include the development of new opto-electrochemical techniques for single entity analysis and spatiotemporal-resolved electrochemical imaging.



Kelly Hines is Assistant Professor of Chemistry at the University of Georgia. Her research group develops separation and high-throughput omics methods based on ion mobility-mass spectrometry (IM-MS) to improve the detection and understanding of antimicrobial resistance. She is the recipient of an ASMS Research Award and has been recognized as an Emerging Investigator (JASMS) and Female Role Model in Analytical Chemistry (ABC).



Bin Hu obtained his PhD in chemistry from Hong Kong Polytechnic University in 2015. He is now Associate Professor at Jinan University (Guangzhou, China). Currently, his research mainly focusses on the development of new sampling methods coupled with mass spectrometry approaches to address fundamental and applied problems in chemistry, biology, and environmental health science. He received the CAIA Award (First Prize) from the Chinese Association for Instrumental Analysis in 2022.



Yanyan Huang is Professor at the Institute of Chemistry, Chinese Academy of Sciences (CAS). She was awarded membership of the Youth Innovation Promotion Association CAS in 2015, and received the Excellent Young Scientists Fund from the National Natural Science Foundation of China in 2021. Her research is focused on peptide bioprobes and stimuli-responsive nanointerfaces for separation, biosensing and biomedical applications.



Itthipon Jeerapan is Assistant Professor in Analytical Chemistry at the Division of Physical Science at Prince of Songkla University, Thailand. He received his Ph.D. and M.S. degrees in nanoengineering from the University of California San Diego, USA, in 2019 and 2016, respectively, and his B.Sc. in chemistry (First Class Honor) from Prince of Songkla University in 2013. He was awarded a fully funded scholarship from the Development and Promotion of Science and Technology Talents Project and a research grant to study abroad (California, USA, and Linköping, Sweden). His research focuses on electrochemistry, bioelectronics, electrochemical sensors, and advanced materials for energy (such as enzymatic biofuel cells and supercapacitors), food, environmental, medical, and electrochemical applications. He has developed biomedical devices in various platforms, including wearable, ingestible, and implantable devices. He has authored over 50 publications in peer-reviewed journals and book chapters. He has received honors, such as the Distinguished Young Chemist Award (Analytical Chemistry) 2022 conferred by Chemical Society of Thailand, Jeunes Chercheurs Grant 2022 from the Embassy of France, and Outstanding Dissertation Award 2021 from the National Research Council of Thailand.



Lydia Kisley is the Warren E. Rupp Assistant Professor of Physics and Chemistry at Case Western Reserve

University in Cleveland, Ohio. Her lab develops and uses fluorescence microscopy to understand analytical and biophysical materials at the ultimate concentration limit of a single molecule. This includes designing chromatographic separations from the bottom up, detecting corrosion right when it starts, and resolving protein diffusion and folding dynamics in the extracellular matrix. Since starting her lab in 2019, she has been recognized with NSF CAREER (2022), Cottrell Scholar (2023), Allen Distinguished Investigator (2022), and NIH NIGMS MIRA (2021) awards.



Estelle Lebègue has been Assistant Professor in Chemistry at Nantes University, CEISAM Laboratory (France), since 2019. Her research deals with the electrochemistry of single impacts for bacteria sensing. In 2022, she was awarded the Young Investigator in Electrochemistry prize from the French Chemical Society and she was the first woman to get it.



Zuhai Lei received his PhD degree (2017) from the East China University of Science & Technology (ECUST) followed by 2 years postdoctoral experience at Fudan University. He is currently a tenure-track PI at Fudan University, where his research interests focus on the design and synthesis of NIR-I/II fluorescent dyes for bioimaging and biosensing.



Peter B. Lillehoj is Associate Professor in the Departments of Mechanical Engineering and Bioengineering, and holds the Shankle Chair in Mechanical Engineering at Rice University. He received a B.S. degree in mechanical engineering in 2006 from Johns Hopkins University and M.S. and Ph.D. degrees in mechanical engineering from the University of California, Los Angeles, in 2008 and 2011, respectively. His main research activities are focused on the development and translation of microfluidic and BioMEMS technologies for broad applications in medical diagnostics, point-of-care testing and global health. He was a recipient of the National Science Foundation CAREER Award in 2014, IEEE New Innovator in NANOMED Award in 2019, Wellcome Trust Innovator Award in 2020, and two Grand Challenges Explorations grants from the Bill & Melinda Gates Foundation.



Renato Sousa Lima received his PhD from the University of São Paulo (2013) in chemistry with focus on electrochemical bio/sensors, microfabrication, and microfluidics. He is currently a researcher at the Brazilian Center for Research in Energy and Materials

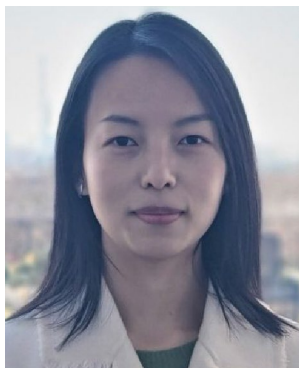
and Visiting Professor at the University of Campinas, University of São Paulo, and Federal University of ABC. He has been leading a young group that aims to (i) develop solutions in electrochemical devices and nanointerfaces and (ii) understand the ensuing phenomena at the nanoscale, with the ultimate goal of providing high-performance platforms that can be translated into practical use toward environment and clinical assays.



Thomas H. Linz is Assistant Professor in the Department of Chemistry at Wayne State University, Detroit, MI USA. His research interests include developing microfluidic separations and digital analysis systems to measure diverse biological analytes from biomedical samples.



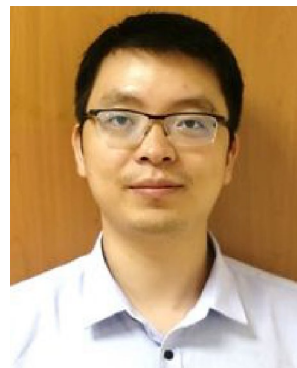
Long Luo is the Carl R. Johnson Assistant Professor in the Department of Chemistry at Wayne State University, Detroit, Michigan, USA. His current research interests include electrogenerated bubbles, electrochemical synthesis of functional materials and molecules, and electrokinetic phenomena.



Xiao Luo is Professor in the School of Chemistry and Molecular Engineering, East China Normal University, Shanghai, China. She obtained her PhD degree in pharmacy from the East China University of Science and Technology in 2018. Her recent research interests include the development of highly sensitive Hill-type pH probes, photoactivated xanthene dyes, and antibiotic lead compounds against resistant pathogens.



Mónica Benicia Mamián-López is a chemist, who has been working as Assistant Professor at the Federal University of ABC (São Paulo, Brazil) since 2018. Her research is focused on developing bioanalytical applications based on plasmonics, SERS spectroscopy, Raman imaging of living cells, and chemometrics applied to analytical problems. Also, she is interested in studying the interaction of DNA-related species with metal nanoparticles. During her Ph.D. research at the University of Campinas, she developed bioanalytical applications of SERS allied to chemometrics, and later, as a postdoctoral researcher at the Laboratory of Molecular Spectroscopy at the University of São Paulo (Brazil), worked on label-free Raman imaging for understanding the effect of metallodrugs in living cells and the hydrogen-bond cooperativity effect of nucleobases on gold nanoparticles.



Qingsong Mei received his Ph.D. degree in 2012 from the University of Science and Technology of China. After a short research period at the Institute of Intelligent Machines, Chinese Academy of Sciences, he moved to Hefei University of Technology as Associate Professor in 2013, and then worked as a postdoctoral researcher and visiting scholar at the National University of Singapore from 2017 to 2019. Since 2021, he has been Professor in the Department of Medical Biochemistry and Molecular Biology, Jinan University. His research interests focus on the design and preparation of novel upconversion nanosensors for chemo/biosensing and imaging applications.



Josias Merib obtained his PhD in analytical chemistry from the Federal University of Santa Catarina in 2016. He is Assistant Professor at the Federal University of Health Sciences of Porto Alegre (UFCSPA). His research group is focused on the development of sustainable analytical strategies employing environmentally friendly solvents, as well as high-throughput sample preparation approaches based on microextraction techniques for the analysis of biological and environmental samples.



Carmela Maria Montone is a postdoctoral fellow in analytical chemistry at the University of Rome La Sapienza. She received her Master's degree in Chemistry with the top score (110/110 cum laude), allowing her to win the award "Excellent graduated student of 2015/2016". She was awarded by the Italian Chemical Society, Division of Analytical Chemistry, Young Researcher in Separation Science (2021) and Young Researcher in Bioanalytical (2022). Her research activity is mainly focused on separation and omics science. In particular, she has been developing analytical workflow based on liquid chromatography coupled with high-resolution mass spectrometry for proteomics, peptidomics, metabolomics, and lipidomics in food, environmental and biological fields.



Honggang Nie received his B.S. degree in chemistry from Lanzhou University and his Ph.D. degree in analytical chemistry from Peking University. Now, he is a senior engineer in the Analytical Instrumentation Center, College of Chemistry and Molecular Engineering at Peking University. His main research interests are the development and application of new instruments and techniques for mass spectrometry imaging, reaction acceleration and monitoring, and metabolomics research.



Pavithra Pathirathna is Assistant Professor in the Department of Biomedical and Chemical Engineering and Sciences at the Florida Institute of Technology. Her interdisciplinary and translational research program centers on developing and optimizing electrochemical sensors for analyzing biologically and environmentally impactful metals and neurotransmitters with applications in point-of-care diagnostics.



Marloes Peeters is Senior Lecturer and Deputy Director of Chemical Engineering at the School of Engineering in Newcastle upon Tyne (UK). She leads the Bioinspired Materials research lab and envisages a future where natural recognition elements are replaced by (superior) artificial recognition elements developed by rational design. Her group has applied molecularly imprinted polymers to solve complicated medical and environmental problems, such as the development of portable sensor platforms that can monitor antimicrobial resistance, COVID-19, and food allergens. She has been granted five patents for her work on biosensing and works closely with industrial partners to develop novel polymer-based detection systems.



Francisco Pena-Pereira is Associate Professor in the Department of Analytical and Food Chemistry, University of Vigo, Spain. His research interests include the implementation of nanomaterials in miniaturized systems for analyte sensing, the design of paper-based microfluidic devices for on-site analysis with portable optical readout systems, as well as the assessment of chemical systems by metric tools. He has co-authored more than 75 papers, yielding an H-index of 34 (Scopus). He has been included in the ranking of Stanford University among the 2% most cited researchers in the world (2019–20, career long impact; 2018–20, single year impact).



Boone Prentice is Assistant Professor in the Department of Chemistry at the University of Florida. He received his Ph.D. in chemistry from Purdue University (West Lafayette, IN) in 2013 and completed his postdoctoral fellowship in biochemistry at Vanderbilt University (Nashville, TN) in 2018. His research develops gas-phase reactions and imaging mass spectrometry technologies to study disease pathophysiology and resolve biomedical challenges related to infectious disease, diabetes, neurodegeneration, and neuropharmacology. He was recently awarded the 2022 Young Investigator Award from Eli Lilly and Company, which is an unsolicited award given annually by Eli Lilly's Analytical

Chemistry Academic Contacts Committee to recognize a “rising star” in analytical chemistry.



Giorgia Purcaro has been Analytical Chemistry Professor at Gembloux Agro-Bio Tech (University of Liège, Belgium) since 2018. Her main areas of research are the development of multidimensional and comprehensive chromatography techniques (GC × GC, LC–GC, LC–GC × GC) and miniaturized sample preparation for food quality and safety applications. She studies mainly volatiles, lipids and contaminants in food. She was awarded the L.S. Ettore (2010) and the J. Philipps (2015) awards at the joint International Symposium on Capillary Chromatography & GC × GC Symposium for her contribution to the GC × GC field. She was included in the Top 40 under 40 list made by *The Analytical Scientist* magazine in 2015. She has authored or co-authored more than 110 peer-reviewed publications.



Liang Qiao received his B.S. degree in chemistry from Fudan University in 2006, his master's degree in chemistry from Fudan University in 2009, and his Ph.D. degree in chemistry from École Polytechnique Fédérale de Lausanne (EPFL) in 2013. Then, he continued as Postdoctoral Research Associate with Prof. Hubert Girault at EPFL from 2013 to 2015. In 2015, he was appointed as Professor in the Chemistry Department of Fudan University. His

current research interest mainly focuses on proteomics, microbial mass spectrometry, microfluidics coupled mass spectrometry, metabolomics, bioinformatics, etc.



Xiaoqiang Qiao is Vice President of the College of Pharmaceutical Sciences, Hebei University, China, and he is also Deputy Director of the Key Laboratory of Analytical Science and Technology of Hebei Province. He has been working for several years on the development of novel separation and enrichment techniques as well as their further applications in biological analysis and pharmaceutical analysis.



Guangyan Qing is a principal investigator in the CAS Key Laboratory of Separation Science for Analytical Chemistry, Dalian Institute of Chemical Physics, Chinese Academy of Sciences. His main research interests include biomolecule-responsive polymers, bio-interfaces, nanopore analysis, smart bio-separation materials and post-translational modification proteomics.



Tian-Bing Ren is currently Associate Professor of the College of Chemistry & Chemical Engineering at Hunan University. He received his B.S. in 2014 from Hubei Normal University and Ph.D. in 2019 from Hunan University. From 2019 to 2021, he was a postdoctoral fellow at Hunan University. His current research interests focus on developing functional dyes and probes for biomedical applications.



Gerrit Renner is a post-doctoral researcher and a junior research group leader for analytical data science in the Instrumental Analytical Chemistry Group, Faculty of Chemistry, University of Duisburg-Essen, Germany. He develops data processing & data analysis concepts, strategies, and algorithms. The current research topic is non-target screening (NTS), focusing on data processing in various programming languages. In this context, he is also an active member of the corresponding NTS expert committee of the German Chemical Society (GDCh). In addition, he received several awards, including dissertation prizes from the German Water Chemistry Society and the German Working Group for Analytical Spectroscopy (DAAS).



Murilo Santhiago is a researcher at the Brazilian Nanotechnology National Laboratory (LNNano), located in the Brazilian Center for Research in Energy and Materials (CNPEM) in Campinas, SP, Brazil. He received his PhD in chemistry from the University of Campinas (UNICAMP) in 2014. In 2020, he was awarded with a seed grant from the Serrapilheira Institute. His current research interest are flexible electrochemical nanodevices, electrochemical paper-based devices, micro-nanofabrication and 2D materials with applications in health, environmental, and energy fields.



Jandyson M. Santos is Professor in the Department of Chemistry of the Federal Rural University of Pernambuco (UFRPE) and leader of the Research Group in Petroleum, Energy and Mass Spectrometry (PEM). His research mainly focuses on the area of petroleum, forensic and environmental chemistry, with emphasis on the use of chromatography and mass spectrometry.



Rachel A. Saylor is Assistant Professor in the Department of Chemistry and Biochemistry at Oberlin College. She completed her BS at Wittenberg University, PhD at the University of Kansas, and postdoctoral studies at the University of South Carolina. The Saylor lab's interests include developing and refining separation-based methods for interrogating neurological diseases and disorders. She received the Society for Analytical Chemists of Pittsburgh Undergraduate Analytical Research Program Grant.



Bruno J. G. Silva is Head of the Chromatographic and Microextraction Techniques Laboratory at Parana Federal University, Curitiba, Brazil. He has been working on the development of new materials, such as hydrogel and conducting polymers, as the sorption phase for the extraction of organic compounds in complex matrices and determination by chromatography and mass spectrometry.



Israel Donizeti de Souza obtained his B.S. degree in chemistry in 2013, M.S. in 2015, and Ph.D. in analytical chemistry in 2019 from the University of Sao Paulo (Brazil). In 2018, he worked for several months with Prof. Dr. Anderson's group at Iowa State University (USA). Currently, he is working as a postdoctoral researcher under the supervision of Prof. Dr. Maria Eugênia Costa Queiroz at the University of Sao Paulo (Brazil) and in collaboration with Ribeirao Preto Medical School of the University of Sao Paulo. His research interests include the development of innovative sorbent materials (e.g. ionic liquids, molecularly imprinted polymer, and restricted access materials) for microextraction techniques and online chromatographic techniques focusing on biomarkers and bioanalysis.



Dalibor Stanković is Assistant Professor at the University of Belgrade—Faculty of Chemistry, at the Department of Analytical Chemistry. After obtaining the degree of doctor of chemical sciences, he spent 14 months on postdoctoral studies at the University of Graz, Austria, as a scholarship holder of three foundations (JoinSEE Penta, Coimbra group, Serbian government). The main research area of interest is electrochemistry: electroanalytical chemistry (sensors and biosensors), electrochemically improved oxidation processes and electrochemistry of organic and inorganic molecules. So far, he is the author of a large number of works in these areas, as well as two book chapters.

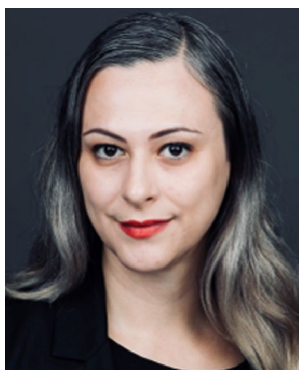


Nicole Strittmatter holds the Assistant Professorship for Analytical Chemistry at the Department of Biosciences, School of Natural Sciences of the Technical University of Munich (TUM). A chemist by training, she received her PhD from Imperial College London (2012–2015). She spent the next six years in the pharmaceutical industry, performing mass spectrometry imaging at AstraZeneca, Cambridge, UK (2015–2021), before eventually moving to TUM in October 2021. The central part of her research focuses on mass spectrometry imaging and multimodal imaging workflows in preclinical and clinical contexts to study tumour biology and drug delivery. Beyond this, her research generally aims at the development and application of in situ mass spectrometry methods in life sciences, especially using ambient MS methods with samples originating from medicine to biotechnology. In 2023, she received the Fachgruppenpreis Analytik of the German Society of Chemists (GDCh).



Liangliang Sun is Associate Professor of Chemistry at Michigan State University. He worked with Prof. Norman Dovichi at the University of Notre Dame as a postdoctoral fellow and later Research Assistant Professor (2011–2016). He received his Ph.D. degree in analytical chemistry in 2011 from Dalian Institute of Chemical Physics, Chinese Academy of Sciences, advised by Profs.

Yukui Zhang and Lihua Zhang. The Sun group at MSU aims to develop novel mass spectrometry (MS)-based analytical methodologies for bottom-up, top-down, and native proteomics with high throughput, high sensitivity, and single-cell resolution. He has published over 120 peer-reviewed papers with 3000 citations (Web of Science). He has received several awards, including Emerging Investigator by the *Journal of the American Society for Mass Spectrometry and Analytical Methods*, the National Science Foundation CAREER AWARD, the Rising Star in Proteomics and Metabolomics by the *Journal of Proteome Research*, top 2% of analytical chemists according to the citation impact during the single calendar year of 2019 and 2020, and the Thermo Fisher Scientific Early Career Award for breakthrough research advancing the field of microscale separations and bioanalysis by the 37th International Symposium on Microscale Separations and Bioanalysis (MSB 2021).



Alessandra Sussulini received her PhD in analytical chemistry from the University of Campinas (Unicamp), Brazil. Since 2014, she has been Assistant Professor at the same university. Previously, she was a postdoctoral fellow of the Alexander von Humboldt Foundation at the Research Centre Jülich, Germany. Her current research activities are focused on the integration of mass spectrometry-based omics (metabolomics/lipidomics/proteomics/metallomics) to study psychiatric/neurodegenerative disorders and alternative treatments for these illnesses. She is the author of more than 50 papers in peer-reviewed journals and has been the recipient of the “Young Researcher Award” at the IV International Conference on Analytical Proteomics (Caparica, Portugal) conferred by the PROTEOMASS Scientific Society in 2015.



Marek Tobiszewski is a researcher at Gdańsk University of Technology. His scientific interests include the application of microextraction techniques and green solvents. He works also on the development of metrics for greenness assessment in analytical chemistry.



Charlotte Uetrecht is Professor for Biochemistry at the University of Siegen and heads the group Dynamics of Viral Structures at the CSSB Centre for Structural Systems Biology in Hamburg, Germany. Her research focuses on the dynamics of viral structures using and developing structural mass spectrometry to investigate these. She coordinates the EU-funded MS SPIDOC consortium and the SPIDoc's MSCA DN. She received an ERC Starting Grant in 2017 and the Mattauch-Herzog Award by the DGMS (German Society for Mass Spectrometry) in 2022.



Leonhard H. Urner is an independent group leader at TU Dortmund University. He is interested in all aspects of detergent science and nanotechnology. He received scientific awards from the German Chemical Society, SEPAWA e.V., and was recently appointed as a young colleague of North Rhine-Westphalia's Academy of Sciences, Humanities and the Arts. His research group is financially supported by the Ministry of Culture and Science of the State of North Rhine-Westphalia (NRW return program) and the Fonds der Chemischen Industrie.



Boniek Gontijo Vaz, Associate Professor at the Federal University of Goiás (UFG), Brazil, stands at the forefront of analytical science, specializing in mass spectrometry to comprehensively identify molecules and biomolecules in complex mixtures. As the Head of the Chromatography and Mass Spectrometry Laboratory (LaCEM) at UFG, his work spans a broad spectrum of applications, from instrumental development to the formulation of innovative analytical methods and protocols. A significant aspect of his research involves chemical imaging, where he explores the molecular spatial distribution within animal or plant tissues to elucidate complex biological and chemical structures. In addition, he has made substantial strides in petroleum research, examining the composition and geochemical processes involved in its formation, to develop new molecular

indicators that can guide and reduce uncertainties in oil exploration and production. In recognition of his impactful contributions to the field, he was named one of the Top 40 under 40 by The Analytical Scientist in 2022, cementing his status as a leading figure in analytical science.



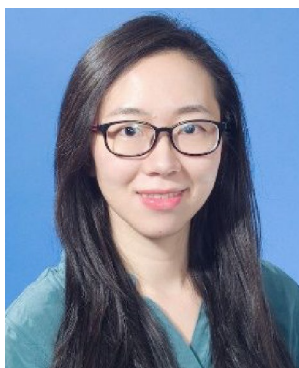
Lorena Vidal is Professor in the Department of Analytical Chemistry, Nutrition and Food Science at the University of Alicante (Spain). She received her degree in chemistry from the University of Alicante and her PhD in chemistry Cum Laude from the same University. In 2010, she received a grant for postdoctoral research in Helsinki University (Finland). Her research focuses on green analytical chemistry, mainly on the development of environmentally friendly methods for trace analysis of pollutants in environmental, food and clinic samples based on liquid-phase and solid-phase (micro)extraction techniques.



Javier Erick Lobatón Villa received his PhD degree in chemistry from the State University of Campinas (Brazil) and was a postdoctoral researcher at the São Paulo State University (Brazil) and at the CIC BiomaGUNE (Spain). He became Professor of Chemistry at the State University of Campinas in 2022, and his scientific interests include analytical applications of surface-enhanced Raman spectroscopy and machine learning. His research is also focused on the synthesis of metal nanoparticles and the fabrication of plasmonic sensors.



Jian Wang is Professor of Pharmaceutical Analytics, Southwest University College of Pharmaceutical Sciences, PR China. She received her PhD degree in analytical chemistry in 2012 from the College of Chemistry and Chemical Engineering at Southwest University, and worked as a joint PhD student at the University of Florida during 2010–2011 under the supervision of Professor Weihong Tan. Her research interest focuses on the sensitive and selective detection of biomarkers. By now, she has published more 80 papers, which have been cited more than 3000 times.



Yixian Wang was promoted in 2021 to Associate Professor in Analytical Chemistry at California State University, Los Angeles. Her research interests are primarily focused on the development and application of advanced microscopy techniques, such as scanning probe microscopy and surface plasmon resonance microscopy, for the study of single entities in various fields, including biomedicine, nanomaterials, and environmental science. She received the NIH Research Enhancement Award in 2020 and NSF CAREER Award in 2021.



Yong Wang received his PhD degree from Singapore Nanyang Technological University (NTU), and now he is Professor in the Chemistry Department and Associate Dean of the School of Science at Tianjin University. As project investigator, he undertook a series of significant programs, including the National Key Research and Development Program of China and National Natural Science Foundation for outstanding youth scholars, etc. His research interests focus on high-resolution chiral separation and sensing, semiconducting materials and devices.



Stefan Wilhelm is Assistant Professor of Biomedical Engineering at the University of Oklahoma. He received his doctoral degree in analytical chemistry from the University of Regensburg (Germany) and postdoctoral training at the Institute of Biomaterials and Biomedical Engineering (University of Toronto, Canada). His research interest is in the development of nanotechnology for bioanalytical and cancer applications. He received the NSF CAREER award and has been named a Scialog Fellow for Advancing Bioimaging by the Research Corporation for Science Advancement (RCSA).



Nongnoot Wongkaew is currently working towards her habilitation and leading the nanofiber group at the Institute of Analytical Chemistry, Chemo- and Biosensors, University of Regensburg, Germany. From 2014–2016, she was a postdoctoral fellow of the Alexander von Humboldt Foundation under the supervision of Prof. Antje J. Baeumner. Her research focuses on exploiting beneficial features of nanofibers in miniaturized analytical systems as separator, immobilized surface, and transducer both optically and electrochemically. The developed miniaturized devices with integrated nanofibers aim to be applied in food, clinical and environmental areas.



Xiaojiang Xie is currently Associate Professor at the Department of Chemistry of Southern University of Science and Technology (SUSTech) in Shenzhen, China. He has worked for several years on optical and electrochemical sensors for biological ions and other small molecules, including ROS, RNS, and RSS. He is also an experienced researcher in photoswitchable compounds, particularly interested in their bioanalytical applications. He was previously awarded the Prix Schl fli in 2018 by the Swiss Academy of Sciences.



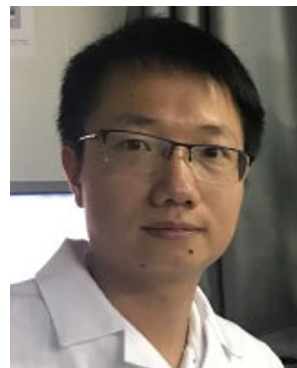
Tailin Xu is Associate Professor at the School of Biomedical Engineering, Shenzhen University Medical School. He joined the Research Center for Bioengineering & Sensing Technology research group at the University of Science & Technology Beijing to pursue his Ph.D. degree, where he studied until 2017. In 2013, he joined Joseph Wang's group as a joint Ph.D. student at the University of California, San Diego, where he studied until 2015. His research interests include biosensors, biointerfaces, and functional nanomotors.



Xin Yan is Assistant Professor in the Department of Chemistry at Texas A&M University. Her research program lies at the interface of analytical chemistry, chemical biology, and sustainable synthesis. Her research centers around developing novel microdroplet reactions that are coupled with mass spectrometry to address the limitations in the structural analysis of biomolecules and expedite the discovery of transition-metal catalysts.



Cheng-Xiong Yang is Professor in the School of Pharmaceutical Sciences at Shandong First Medical University. His research interests mainly focus on the design and synthesis of advanced porous materials for sample pretreatment and chromatography.



Kaisong Yuan is currently Professor at Shantou University Medical College (Bioanalytical Laboratory). His research mainly focuses on the development of micro/nanomotors and their potential applications, such as combined with smartphone-based portable devices for analytical purposes.



Ting Yang is currently Professor in Professor Jianhua Wang's group at Northeastern University (China). She was selected as a candidate for the Liaoning youth talent support program. Her research focuses mainly on biochemical analysis, liquid biopsy and phage-based sensing platforms.



Cuiling Zhang is Associate Professor at East China Normal University. She obtained her PhD degree in 2014 from Wuhan University. Her research is focused on near-infrared nanoprobe for cell imaging research and liquid biopsy marker detection (e.g., circulating tumor cells, exosomes).



Jinyi Zhang received his Ph.D. degree from Sichuan University in Chengdu, China, in 2018 under the direction of Professor Xiandeng Hou. From 2018 to 2020, he was working as a postdoctoral fellow at the University of Waterloo with Professor Juewen Liu. He is currently Associate Research Fellow in the Department of Chemistry, Sichuan University. Presently, his research interests include (a) the development of assays and sensors for biological targets based on photochemical reactions and (b) the regulation of nano-photosensitizers for environmental problems and biotherapy.



Kui Zhang obtained his Ph.D. degree from the University of Science and Technology of China in 2011 and worked as Research Assistant at the Institute of Intelligent Machines, Chinese Academy of Sciences (2011–2015), and as Hong Kong Scholar at the Center of Super-Diamond and Advanced Films (COSDAF) in the City University of Hong Kong (2015–2017). He is now Professor of the School of Chemistry and Chemical Engineering at Anhui University of Technology. His research interests are in analytical

chemistry, nanotechnology, the development of functional materials for chemo/bio sensing, environmental and energy application. In 2020, the project “Surface/Interface Reconstruction of Optical Nanoprobes for Visual Detection and Trace Analysis” directed by him won the first prize of the Natural Science Award of Anhui Province.



Mariosimone Zoccali has been Assistant Professor in Analytical Chemistry at the University of Messina (Department of Mathematical and Computer Science, Physical Sciences and Earth Sciences) since July 2022. His research is focused on the development of multidimensional chromatographic instrumentation and software (GC×GC, LC–GC, LC–GC×GC, SFE–SFC), coupled to state-of-the-art MS for the study of complex matrices constituents and contaminants. He has authored or co-authored more than 60 articles and book chapters. He has given award-winning presentations at multiple international meetings. He has been directly involved in the development of award-winning instrumentation. In particular, he assembled a five-dimensional instrument consisting of a liquid chromatography system combined with a comprehensive two-dimensional gas chromatography–triple quadrupole mass spectrometry instrument. He has been the recipient of the international “John B. Philips Award” at the International GC×GC symposium in 2022, of the national “2021 Young Researcher Award” conferred by the Analytical Chemistry Division of the Italian Chemical Society, and the “2018 Young Researcher Award” conferred by the Interdivisional Group of Separation Science of the Italian Chemical Society. He is also leader of working group three of the EuChemS-DAC Sample Preparation Study Group.

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