Meet the Contributors

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This topical collection celebrates the 50th Anniversary of Chromatographia by highlighting current research from the Editorial Board. We are grateful for the overwhelming feedback we have received and thank all contributors for generously providing excellent research articles and critical reviews from the forefront of their research. Below, we invite you to meet those who contributed to this exceptional paper collection.

Daniel W. Armstrong is the Robert A. Welch Professor of Chemistry and Biochemistry at the University of Texas at Arlington. He has over 700 publications, including 33 book chapters, 1 book (Use of Ordered Media in Chemical Separations) and more than 34 patents. He has given over 570 invited seminars and

colloquia worldwide and received over 35 awards/honors for teaching and research. He has been named one of the top ten analytical scientists in the world. He was elected to the National Academy of Inventors in 2014. His work on chiral recognition and “chiral columns” was in part responsible for the chromatography and CE-led revolution in enantiomeric separations over the last 3 decades. This work provided the impetus for the FDA’s regulatory changes regarding chiral drug development in 1992. Over the last 15 years, Prof. Armstrong’s developed the most comprehensive solvation and characterization models for room-temperature ionic liquids

(RTILs) and pioneered their use in analytical chemistry. His work led to the commercialization of ionic liquids (ILs) as the first new class of GC stationary phases in decades. He also developed ILs as the most versatile MALDI-MS matrices, as additives for ultra-sensitive ESI-MS analysis of anions in the positive mode (PIESI-MS), and as novel electro-wetting components. His work has been cited over 40,000 times, and he has a Hirsch Index rating of 102. He has been on the Scientific Advisory Board of three companies and one university. He has started or co-started two companies and is currently President of AZYP, LLC. Approximately 170 graduate students and postgraduates have received their degrees and/or training under Prof. Armstrong’s tutelage.

Bogusław Buszewski is Full Professor of Analytical Chemistry and Head of the Chair of Environmental Chemistry & Bioanalytics at the Faculty of Chemistry, Nicolaus Copernicus University. He is also the President of the Central European Group for Separation Sciences and the Chairman of the Committee of Analytical

Chemistry of Polish Academy of Sciences. Formerly, he was the President of the Polish Chemical Society and European Society for Separation Science. He was awarded by numerous national and international organizations. His main scientific interests are concerned with separation science, including theoretical and practical aspects in chromatography and related techniques, adsorption, sample preparation, bioanalytics and bioanalysis (metabolomics, proteomics, biomarkers), nanotechnology, and chemometrics. He has authored or co-authored 15 books, numerous patents, and more than 550 scientific papers (over 10,000 citations, h-index of 45). He is a member of the editorial boards of 26 national and international journals in the fields of analytical chemistry and separation sciences.

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Deirdre Cabooter completed a Master of Science in Bioengineering at the Free University of Brussels in 2005, after which she obtained a Ph.D. in Chemical Engineering at the same university in 2009. The main topic of her Ph.D. was the comparison and evaluation of novel techniques in the field of liquid chromatography.

After her Ph.D., she obtained a post-doctoral fellowship from the Research Foundation Flanders (2009–2011) for which she spent 1 year at Stellenbosch University (South Africa), where her research was primarily focused on the analysis of natural products. In October 2011, she obtained a Research Professor position (tenure-track) at the University of Leuven at the Department of Pharmaceutical and Pharmacological Sciences. She was appointed Associate Professor (tenured) at the same department in October 2016. Her current research is directed towards a deeper understanding of the fundamentals of chromatography, the evaluation of novel supports in chromatography, the analysis of complex samples in diverse fields of application, retention modeling, and solutions for automated method development. She has 75 publications in international peer-reviewed journals and is currently (co-) promoter of six Ph.D. students and two post-docs. In 2016, she appeared in the Top 50 most influential women in analytical sciences of *The Analytical Scientist*. She is also the recipient of the 2017 LCGC Emerging Leader in Chromatography Award.

Alberto Cavazzini is Professor of Analytical Chemistry at the University of Ferrara (Ferrara, Italy). He graduated from the University of Ferrara with a Laurea in Chemistry (Hons.) in 1996 and a Ph.D. in Chemical Sciences (2000). He was research fellow at the University of Tennessee, Knoxville, USA, and

Oak Ridge National Laboratories, Oak Ridge in Tennessee (2000–2002), in the group of Georges Guiochon. In 2002, he returned to Italy after accepting an Assistant Professor position at the University of Ferrara, which he held until 2014. His research activities have been focused in the field of separation science, particularly in liquid chromatography and chromatography-like techniques. They include a variety of aspects associated with linear and nonlinear (preparative)

liquid chromatography, reaction chromatography, affinity chromatography, chiral chromatography, stationary phase characterization and development, mass transfer processes, study of retention mechanisms, chromatographic process modeling, flow chemistry, and heterogeneous catalysis. He is author or co-author of 80+ papers on peer-reviewed journals, 4 book chapters, and 1 patent, and he has lectured extensively at local national and international levels. Together with Massimo Morbidelli of ETH Zurich (Zurich, Switzerland) and Politecnico di Milano (Milan, Italy), he will be the Chairman of the International Conference HPLC-2019 (International Symposium on High-Performance Liquid Phase Separations and Related Techniques), which will be held in Milan, June 2019.

André de Villiers is a Professor in Analytical Chemistry at the Department of Chemistry and Polymer Science at Stellenbosch University, South Africa. He completed his B.Sc. degree at Stellenbosch University (SU) in 1997, and received the Merck Prize for the best final-year chemistry student in this year. He subsequently

received his B.Sc. degree in Chemistry in 1998, and was awarded the South African Chemical Institute (SACI) James Moir Medal. He completed his M.Sc. in 2000 and his Ph.D. in 2004, both under the supervision of Pat Sandra. This was followed by a post-doctoral fellowship at the Pfizer Analytical Research Centre (PARC) at Ghent University, Belgium (2004–2006). He was subsequently appointed as academic staff member at SU in August 2006, where he has recently been promoted to Professor. His research activities include fundamental studies and the practical application of chromatographic separations, with an emphasis on natural product analysis. His specific areas of interest include comprehensive two-dimensional liquid and gas chromatography, capillary electrophoresis, novel sample preparation methods, and advanced mass spectrometric methods in combination with separation methods. He is author or co-author of 72 scientific papers and the recipient of the 2009 Csaba Horváth Award, the 2012 Chromatographer of the Year Award from the South African Chromatographic Society, LCGC's Emerging Leader in Chromatography Award in 2014, and the South African Chemical Institute's (SACI's) Raikes Medal in 2015. André currently chairs the Western Cape board of the ChromSA and is an editorial board member of *J. Chromatogr. A*, *Chromatographia* and *LCGC*.

Sebastiaan Eeltink received his Ph.D. degree in Chemistry (specialization Analytical Chemistry) in 2005 from the University of Amsterdam, The Netherlands, for his dissertation “Packed and monolithic capillary columns for LC”. From 2005 to 2007, he conducted post-doctoral research at the University

of California, Berkeley, USA, and was a guest scientist at the Lawrence Berkeley National Laboratory. Afterwards, he joined Dionex (currently Thermo Fisher Scientific) to conduct research on packed and monolith column technology for ultrahigh-pressure LC, two-dimensional LC, and nanoLC. In 2009, the National Fund for Scientific Research (FWO, Belgium) awarded him an Odysseus grant, and currently he holds a position as Full Professor at the Vrije Universiteit Brussels, Belgium. His team is working on the development and characterization of novel column structures, including monolithic nanomaterials, the development of microfluidic chip technology, including chip modulation in LCxLC and chip devices for spatial 3D-LC, and the application of novel technology and approaches to advance (2D-)LC-MS analysis of contemporary biopharmaceutical and life-science mixtures. He is (co-)author of more than 90 peer-reviewed publications on chromatography in international scientific journals and has three patent applications on spatial three-dimensional liquid chromatography. In 2018, he joined the editorial advisory board of *Chromatographia*.

Maria Fedorova studied Biochemistry at Saint-Petersburg State University, Russia, and obtained her Ph.D. at Faculty of Chemistry and Mineralogy, Leipzig University, Germany. Now she is a group leader at the Institute of Bioanalytical Chemistry, Faculty of Chemistry and Mineralogy, at Leipzig University. Dr.

Fedorova's research is focused on the development and optimization of chromatography and mass spectrometry methods for analysis of lipids and their modified forms. Dr.

Fedorova's group works on the implementation of high-throughput LC-MS methods in discovery lipidomics targeting in-depth identification and quantification of human lipids in a variety of tissues. By combining lipidomics data with the investigation of related proteins and protein post-translational modifications via systems medicine approach, she aims for a deeper understanding of the pathophysiology of obesity, insulin resistance, type II diabetes, and cardiovascular disorders.

Kari Hartonen is a University Lecturer at the University of Helsinki, Department of Chemistry and Institute for Atmospheric and Earth System Research. He obtained his Ph.D. in Analytical Chemistry in 1999 and his Docent in Analytical Chemistry in 2000 at the University of Helsinki. His fields of interests are chro-

matography, mass spectrometry, environmental analysis, supercritical fluids, and extraction. He is (co-)author of 90 refereed publications including 6 book chapters. According to Web of Science, his h-index is 30.

Michael Lämmerhofer is a Full Professor for Pharmaceutical (Bio-)Analysis at the University of Tübingen, Germany (since 2011). He graduated in Pharmaceutical Sciences in 1992 and earned his Ph.D. in Pharmaceutical Chemistry in 1996 at the University of Graz, Austria (Supervisor: Wolfgang Lindner). Between 1997 and

2011, he was Assistant Professor, and since 2002, Associate Professor at the University of Vienna, Department of Analytical Chemistry. From 1999 to 2000, he spent a year of research as post-doc at the Department of Chemistry of the University of California, Berkeley. His research interests include the development of functionalized separation materials (chiral stationary phases, mixed-mode phases, chemo- and bioaffinity materials, nanoparticles, monoliths), metabolomics and lipidomics, pharmaceutical analysis

(impurity profiling), and biopharmaceuticals analysis (proteins, plasmids).

Steven J. Lehotay is a Lead Scientist at the Eastern Regional Research Center of the USDA Agricultural Research Service (ARS) near Philadelphia, Pennsylvania. Since earning his Ph.D. in Chemistry from the University of Florida in 1992, his scientific investigations and method development research with ARS

have involved improvement in the analysis of pesticides, veterinary drugs, and other contaminants in foods. His research has addressed sample processing and preparation, separations, quantitative and qualitative analysis, and data processing using many types of analytical techniques applied in novel and useful ways. In the past 7 years, he has been honored with Top 10 Public Defender by The Analytical Scientist, Innovation in Chemistry of Agriculture Award and Fellow by ACS-AGRO, Excellence Award in Sample Preparation (shared) by NACRW, Secretary's Honor Award (shared) and North Atlantic Area Senior Research Scientist of the Year by USDA, Highly Cited Researcher by Clarivate Analytics, Top Cited Article 2010 to 2011 (shared) by J. Chromatogr. A, and Harvey W. Wiley Award by AOAC International.

Philip Marriott obtained his Ph.D. in Chemistry from LaTrobe University, Australia. His post-doc was at the University of Bristol, UK in Organic Geochemistry, working on the high-temperature GC and GC-MS of porphyrin complexes. His first academic appointment was at the National University of Singapore, where he commenced his interest in the intriguing GC analysis of isomerization of interconverting compounds. Returning to Australia, he developed the first cryogenic modulation methods for comprehensive two-dimensional gas chromatography (GCGC) and multidimensional gas chromatography (MDGC) when at RMIT University. He is now Professor of Chemistry at Monash University, and continues his interests in MDGC, GCGC, fast GC-MS, spectroscopic methods for improved identification in GC, and liquid-phase separations.

Sibel A. Ozkan is currently working as a Full Professor of Analytical Chemistry at Ankara University, Faculty of Pharmacy. She is the active member of EuChemS-DAC on behalf of the Turkish Chemical Society. She is a member of the European Pharmacopoeia-EDQM-Chromatography Section. She has been involved in

several analytical chemistry projects related to LC methods, separation techniques, chiral separation, drug analysis in dosage forms and biological samples, electrochemical biosensors, nanosensors, DNA biosensors, enzyme biosensors, spectrophotometric drug assay, method development, and validation of drug assay. She has published more than 250 original and review papers and 4 scientific books from HNB Publishing (2012), Springer (2015), Bentham (2 volumes, 2018) and more than 30 book chapters in different years (Elsevier). She received the Ankara University Encouragement Award (2003), Turkish Pharmacists Association-Scientific Award (2008), and The Best Ph.D. Thesis Award (Health Sciences) of Turkey in 2017 from the High Council of Education of Turkey. She is the Regional Editor of Current Pharmaceutical Analysis, editorial board member of Talanta, Journal of Pharmaceutical and Biomedical Analysis, Chromatographia, Turkish Journal of Chemistry, and Journal of Research in Pharmacy, Current Drug Therapy, and others.

Brett Paull received his B.Sc., Ph.D., and D.Sc. from the University of Plymouth in the UK. He is currently a Professor of Analytical Chemistry at the University of Tasmania, Australia, and the current Director of both the Australian Centre for Research on Separation Science (ACROSS) and the ARC Training Centre for

Portable Analytical Separation Technologies (ASTech). His research is focused upon new materials and methods for advancing the analytical and separation sciences. Prof. Paull's research interests and achievements in these areas are documented within ~250 published research papers and book chapters.

Valérie Pichon has been a Full Professor at Sorbonne University (Paris) since 2010. She leads the Department of Analytical, Bioanalytical Sciences and Miniaturization (20 researchers), a part of the Institute of Chemistry Biology and Innovation (CBI) located at the ESPCI Paris, PSL University. She also co-

leads the CBI since January 2014 (more than 120 researchers). Her major research interests include the synthesis and characterization of stationary phases based on antibodies or aptamers and molecularly imprinted polymers to selectively extract target compounds (pesticides, pharmaceuticals, inorganic ions, natural toxins, proteins, etc.) present at trace level in complex samples (soils, sediments, foodstuff, biological fluids, etc.). She also works on the miniaturization of these sorbents to couple them on-line with nanoLC-MS or to develop lab-on-a-chip systems. She is author of more than 110 publications (h-factor 39, Google Scholar source) and 6 book chapters. She was rewarded in 2001 with the Analytical Chemistry Department of the French Society of Chemistry Prize. She is currently Vice-President of AfSep (French Association of Separation Sciences).

Colin F. Poole was born and educated in the UK, receiving a B.Sc. in Chemistry from the University of Leeds (1971) followed by graduate studies at the University of Bristol, M.Sc. in Analytical Chemistry (1972), and Ph.D. with E. D. Morgan at the University of Keele (1975) on the analysis of insect moulting hormones.

Since 1980, he has been at the Department of Chemistry, Wayne State University, Detroit, MI, USA, except for 1995–1996, spent as the Governors' Lecturer and Professor of Analytical Chemistry at Imperial College of Science, Technology & Medicine, London, in the United Kingdom. He is a former Science Advisor to the US Food and Drug Administration, a position he occupied for 25 years. Prof. Poole has broad interests in the separation and detection of small molecules in biological, environmental, and food samples using a range of sample preparation, chromatographic, and data analysis tools. He is the co-author of over 400 papers, 20 books, an editor of *Journal of Chromatography*

A, and a member of the editorial boards of 5 other analytical chemistry journals.

Ute Pyell received her Dr. rer. nat. (1991) and habilitation (1998) degrees from the University of Marburg (Germany). In 1998, she was awarded the academic title “Privatdozentin” (habilitation in Analytical Chemistry) and in 2004 the title Professor (apl) “außerplanmäßige Professorin”. She has been active in the

fields of undergraduate and postgraduate teaching of chemistry students at the Universities of Marburg, Kassel (Germany), Leipzig (Germany), and Siegen (Germany), and has authored more than 105 scientific publications including 91 published peer-reviewed articles and 7 book chapters in monographs. She is a member of the German Chemical Society (GDCh). Her research interests are centered around separation principles and on on-line focusing mechanisms in capillary electrophoresis, electrokinetic chromatography, and capillary electrochromatography, and around nanoparticle analysis via capillary electrophoresis, Taylor dispersion analysis, and field-flow fractionation.

Soledad Rubio, Ph.D. in Chemistry, is a Full Professor of Analytical Chemistry at the University of Córdoba (Spain) with more than 30 years of experience of research focused on the design and synthesis of supramolecular solvents and sorbents intended for the development of greener, cost-effective, and more

efficient extractions in chemical analysis and industrial processes. On these subjects, she has published around 170 peer-reviewed articles (h-index 39, normalized impact factor 2.51 for 2013–2017), has supervised 22 doctoral thesis, and has been involved in 24 national and international research projects. Her more recent research has focused on the design of supramolecular systems with targeted properties (magnetic, size-tailored assemblies, irreversible aggregates, etc.) that meet programmed, specific requirements for a particular purpose. Her research has contributed to developing innovative tailored solvents that constitute a valuable alternative to organic solvents for the extraction of contaminants and bioactive compounds in the agrifood sector.

Yoshihiro Saito, Professor, Department of Environmental and Life Sciences, Toyohashi University of Technology, was born in 1965. After graduation from the Department of Industrial Chemistry, Shiga Prefectural Junior College in 1986, he worked at the Analytical Center of Murata Electronics, Kyoto, Japan, as a research chemist

for 3 years. In 1989, he enrolled in the School of Materials Science, Toyohashi University of Technology, and graduated from the research group of Kiyokatsu Jinno. He received the Bachelor of Engineering (1991), Master of Engineering (1993), and Ph.D. in Analytical Chemistry (1996) from the university. After his post-doctoral work in the USA, he returned to Toyohashi as a Research Associate of Separation Science Laboratory in 1998, and was promoted to Associate Professor in 2008 and to a Professor in 2015. He has worked as an editorial member of several international journals, including: *Chromatographia* (2013 to present) and *Analytical and Bioanalytical Chemistry* (2014 to present). From 2012, he has been serving as Secretary General of The Society of Chromatographic Sciences, Japan. Prof. Saito's research interests include the development of microscale analytical systems such as microextraction and microcolumn separation techniques, and these hyphenated systems, new stationary phase design, and synthesis. He is the author or co-author of more than 150 research articles, including reviews and book chapters. He received The Society for Chromatographic Sciences Award for Young Scientists in 2002, the Tokai Chemical Industry Award in 2004, and The Society for Chromatographic Sciences Award in 2016.

Oliver J. Schmitz got a Full Professorship in Analytical Chemistry at the University of Wuppertal (BUW) in 2009. Between 2010 and 2012, he was the chair of the Analytical Chemistry Department at BUW. Since 2013, Schmitz has been a Full Professor at the University of Duisburg-Essen and is the chair of

the Institute of Applied Analytical Chemistry. In 2009, he co-founded the company iGenTraX UG, which develops new ion sources and units to couple separation techniques with mass spectrometers. Since 2013, Prof. Schmitz has been a consultant for various international companies and

organizing—together with national partners—Sino-German workshops and analytical conferences in China and Vietnam. In 2018, Prof. Schmitz founded the Teaching and Research Center for Separation (TRC) at the University of Duisburg-Essen, which belongs to Agilent's global network of world-class Centers of Excellence. He is the author/co-author of 1 textbook and 9 book chapters, 80 papers published in peer-reviewed journals, more than 130 lectures, and has 4 patents. Prof. Schmitz's main research area is separation science, with a particular focus on the analysis of complex samples, the development of ion sources, the use and optimization of multidimensional LC and GC, ion mobility-mass spectrometry, and coupling analytical techniques with mass spectrometers. He is a member of several editorial boards and was awarded the Scholar-in-Training Award of the American Association for Cancer Research in 2003, the Gerhard-Hesse Prize for Chromatography in 2013, and in the same year the Fresenius Lecturer.

Thorsten Teutenberg studied chemistry at Ruhr University, Bochum, Germany, where he pursued a doctorate in analytical chemistry, submitting a thesis on "High-temperature HPLC". In 2004, his career took him to the Institute of Energy and Environmental Technology (IUTA) in Duisburg, as a research associate.

Since 2012, he has been in charge of the Research Analysis Department, mainly working on the various aspects of high-temperature HPLC, miniaturized separation, and detection techniques, and multidimensional chromatography processes.

M. Farooq Wahab works as a Research Engineering Scientist-V at the University of Texas at Arlington. He received his Ph.D. degree from the University of Alberta, Canada, on a FS Chia Scholarship in the fall of 2013 on developing high-efficiency stationary phases, nonlinear phenomenon in ion chromatography,

and hydrophilic-interaction liquid chromatography on electrically conductive carbon phases. This work was done in close collaboration with Thermo Fischer Scientific (formerly Dionex). He completed his post-doctoral fellowship

with Daniel W. Armstrong in 2016. His current research interests include developing technologies for hyperfast chiral/achiral separations, the science of high-efficiency packed beds, ultrafast supercritical fluid chromatography, along with the development of peak-processing mathematics. With the help of analytical peak processing, one can reduce the analysis time from several minutes to a few seconds with intact quantitative information. He joined the *Chromatographia* editorial advisory board in January 2018 and serves as a reviewer for major analytical chemistry journals. He was recently included in the Top 40 Under 40 by The Analytical Scientist among 40 analytical chemists selected from all over the world.

Caroline West is an Associate Professor at the University of Orleans, France. She is also a Junior Member of the French University Institute, a service of the Ministry of Higher Education distinguishing a small number of university professors for excellent research. Her scientific interests lie in fundamentals of chromatographic

selectivity, both in the achiral and chiral modes, mainly in SFC, but also in HPLC. Her works are essentially devoted to improving the understanding of chromatographic separations to facilitate method development. For this purpose, she relies on extensive experiments and chemometric strategies. She has authored 4 book chapters and about 90 papers in international peer-reviewed journals, and has presented over 80 lectures in national and international conferences and seminars. She is a member of the editorial advisory board of *Chromatographia*.

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