

# THE '42<sup>nd</sup> INTERNATIONAL SYMPOSIUM ON CAPILLARY CHROMATOGRAPHY'

and

## THE '15<sup>th</sup> GC×GC SYMPOSIUM'

May 13 – 18, 2018

Riva del Garda Fierecongressi, Riva del Garda, Italy

The 'M.J.E. Golay Award 2018'

The 'Leslie S. Ettre Award 2018'

The 'Giorgio Nota Award 2018'

The 'John Phillips Award 2018'

The 'GCxGC Lifetime Achievement Award 2018'

The 'Giovanni Dugo Award 2018'

The 'Best Journal of Chromatography A: Young Scientist Award 2018'

The 'Genzo Shimadzu Best Oral/Poster Award 2018'

The 'Richard Sacks Best Poster Award 2018'

The 'Chromatographia-Springer Best Poster Award 2018'

The 'Analytical Methods Best Poster Awards 2018'

will be presented

- Conference Address -

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Riva del Garda Fierecongressi  
Parco Lido  
I-38066 Riva del Garda,  
Italy

Tel.: +39-0464-520000 (Info Desk)  
Fax: +39-0464-555255  
E-mail: [meeting@riva.fc.it](mailto:meeting@riva.fc.it)  
Web: <http://www.rivadelgardafierecongressi.it>

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- Symposium Office -

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The Symposium Office is located in the entrance hall of the Congress Center.

Opening Hours:

Sunday, May 13	08:00 until 16:00	GC×GC and LC×LC Courses
	10:00 until 18:00	15 <sup>th</sup> GC×GC Symposium
Monday, May 14	08:00 until 11:30	15 <sup>th</sup> GC×GC Symposium
	16:00 until 19:00	42 <sup>nd</sup> ISCC
Thereafter	08:30 until 16:00	

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## - Posters -

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With the exception of the plenary and keynote lectures, all contributions are posters.

Posters will not be introduced by oral presentation.

For the **42<sup>nd</sup> ISCC**, the posters will be shown from **Tuesday to Friday (till 11:00)**.

For the **15<sup>th</sup> GC×GC**, the posters will be shown from **Monday to Friday (till 11:00)**.

For discussion, please meet the authors at their numbered poster board at the time indicated in the scientific program.

**Special stickers to hang up the posters are available at the Registration Desk. The use of pins is not allowed.**

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## - Submission of Manuscripts -

Participants are invited to contribute manuscripts connected to their presented work at the RIVA 2018 Conference for possible publication in either the Journal of Chromatography A with the intention of eventual publication in a Virtual Special Issue (VSI) that is dedicated to the meeting.

A Virtual Special Issue is a new concept which essentially rules out possible delays in publication for contributors to the special issue and will make this conference special issue more complete and accessible than it has ever been. Please see below its advantageous characteristics:

- Accepted papers are published individually as soon as they are accepted in regular journal volumes at Science Direct avoiding the possible delays inherent with tradition special issues;
- Footnotes indicating at which conference they were presented will be the source for selection and linking to the virtual special issue;
- Conference papers will appear together as part of a dedicated collection on Science Direct;

Authors are advised to read carefully the aims and scope of the journal before deciding whether or not to submit their manuscript.

### **Full-manuscript submission instructions:**

- Submission link: *Journal of Chromatography A*: <http://ees.elsevier.com/chroma>.
- Click on the "Submit Paper" option from the top menu;
- Enter your user name and password (first time users will need to register);
- After entering the title of your manuscript, please select article type "VSI: RIVA 2018" from the drop-down menu;
- Follow the remaining step-by-step instructions to submit your paper.
- Submission deadline **30<sup>th</sup> September 2018**.

When preparing your manuscript(s), please carefully follow the Guide to Authors of the journal, which you can find on the online submission site. In the cover letter please mention

that your manuscript is intended for the RIVA 2018 Virtual Special Issue. Please note that all manuscripts will be subjected to the mandatory selection process for the journal selected, including the strict peer review procedure; therefore acceptance for presentation at the meeting is not a guarantee for publication in the journal. If you experience any technical problems during the submission process, please contact Elsevier Author's Support authorsupport@elsevier.com. For any queries regarding the VSI publication, please contact Ms. Angela Yuan by a.yuan@elsevier.com. We would like to thank you in advance for your contribution.

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### **Book of Abstracts**

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The book of abstracts will be delivered on a USB upon registration

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### **- Badges -**

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**Delegates are requested to wear their badges at all times. Failure to do so will result in refusal of admission to the scientific and social activities. Only yellow badges have access to the Scientific Program of GC×GC and blue badges to the Scientific Program of ISCC. Red badges have access only to the exhibition area as booth personnel. Participants registered to the GC×GC and LC×LC short courses will receive an additional badge valid only for Sunday MAY 13, 2018. White badges for accompanying persons have no access to the scientific activities.**

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### **- Coffee and Lunch Breaks -**

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Coffee and soft drinks will be served in the exhibition hall during the coffee break times only. Italian style "Panini" with typical ("PDO") regional products will be offered everyday in the exhibition hall during the lunch break times, accompanied by a selection of Italian soft drinks.

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### **- Exhibition -**

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#### **Exhibition opening hours:**

Tuesday, May 15	10:00 – 17:30
Wednesday, May 16	09:00 – 17:30
Thursday, May 17	09:00 – 17:00
Friday, May 18	09:00 – 11:00

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## Exhibiting Companies

Agilent Technologies	LabService analytica
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Chromaleont	PAS Technology
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GL Sciences B.V.	The Analytical Scientist
HyperChrom SA	Thermo Fisher Scientific
JEOL	VICI AG International
J&X Technologies	VUV Analytics
Jsb-ZOEX Europe	Waters

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## - Social Program -

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The following program is offered to the delegates:

All Days		Coffee Breaks offered by the Diamond Sponsor Shimadzu Europa GmbH
All Days		Lunch Breaks
Sunday, May 13	18:30	Short Courses Cocktail offered by Shimadzu Europa GmbH Location: First floor Congress Centre
Monday, May 14	19:00	Welcome Reception offered by DANI Instruments Location: Exhibition Hall
Tuesday, May 15	21:00	Concert offered by PerkinElmer Inc., Location: Room 1000, Congress Centre
	22:15	Cocktail offered by Gerstel GmbH & Co. KG Location: Congress Centre
Wednesday, May 16	12:00	Prosecco offered by Wiley-WCH to celebrate the launch of the journal "Separation Science Plus" Location: Congress Centre
	18:45	Wine and Cheese offered by Agilent Technologies Location: Hotel Sole, Riva del Garda
	21:00	Disco Night offered by Thermo Scientific, Location: Spiaggia degli Olivi
Friday, May 18	13:15	Farewell Cocktail offered by Waters, Location: Congress Centre

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## - Company Dinners -

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Sunday, May 13	19:00	Invited SILEP program Dinner offered by Merck KGaA Location: Hotel Du Lac et Du Park Please bring your invitation card
Thursday, May 17	19:00	Invited Speaker Dinner offered by Shimadzu Europa GmbH Location: Hotel Du Lac et Du Park Please bring your invitation card

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**- Guest Program -**

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Guided tours will be organized by Travel Agency Rivatour.  
The registration and the purchase of the tickets will take place **at the Congress Hall Desk**.

**- Travel -**

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Symposium coaches from Riva del Garda to the main Airports will be organized.  
For reservation and tickets, please contact **the Congress Hall desk**.

**- COMMITTEE MEMBERS -**

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**- Scientific Committee 42<sup>nd</sup> ISCC -**

Daniel Armstrong (U.S.A.)  
Carlo Bicchi (Italy)  
Salvatore Fanali (Italy)  
Christian Huber (Austria)  
Hans-Gerd Janssen (The Netherlands)  
Kyokatsu Jinno (Japan)  
James Jorgenson (U.S.A.)  
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Milton L. Lee (U.S.A.)  
Luigi Mondello (Italy)  
Milos V. Novotny (U.S.A.)  
Michael Ramsey (U.S.A.)  
Pat Sandra (Belgium)  
Frantisek Svec (U.S.A.)  
Guowang Xu (China)

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**- Organizing Committee 42<sup>nd</sup> ISCC -**

Flavio Bedini (Italy)  
Achille Cappiello (Italy)  
Frank David (Belgium)  
Paola Dugo (Italy)  
Peter Myers (United Kingdom)  
Albino Sironi (Italy)

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**- Honorary Committee 42<sup>nd</sup> ISCC -**

Keith D. Bartle (United Kingdom)  
Carel A. Cramers (The Netherlands)  
Rudolf E. Kaiser (Germany)  
Harold M. McNair (U.S.A.)  
Gerhard Schomburg (Germany)  
Shigeru Terabe (Japan)  
Sorin Trestianu (Italy)

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**- Scientific Committee 15<sup>th</sup> GC×GC -**

John Dimandja (U.S.A.)  
Tadeusz Gorecki (Canada)  
Hans-Gerd Janssen (The Netherlands)  
Philip Marriott (Australia)  
Luigi Mondello (Italy)  
John Seeley (U.S.A.)  
Robert Synovec (U.S.A.)  
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**- Organizing Committee 15<sup>th</sup> GC×GC -**

Chiara Cordero (Italy)  
Frank Dorman (U.S.A.)  
James Harynuk (Canada)  
Hans-Georg Schmarr (Germany)  
Peter Q. Tranchida (Italy)

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**- CHAIRMAN -**

**Luigi Mondello**

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**- LOCAL ORGANIZATION -**

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TecnoEdizioni

The Analytical Scientist

TKS (Teknoscienze Publisher)

## **SUPPORTING ORGANIZATIONS**

Association Francophone des Sciences Séparatives  
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Chinese American Chromatography Association  
Chromatography and Electrophoresis Group of the Czech Chemical Society  
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Interdivisional Group of Separation Science of the Italian Chemical Society  
Hungarian Society for Separation Sciences  
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Slovenian Chemical Society  
Sociedad Española de Cromatografía y Técnicas Afines  
The Japanese Society for Chromatographic Sciences  
Ukrainian Chromatographic Society

## **SCHOLARSHIPS**

### **CASSS**

Martina Hakova, Charles University, Czech Republic  
Nirved Upadhyay, University of Tasmania, Australia

### **CHROMALEONT**

Guilherme Alexandrino, University of Copenhagen, Denmark  
Ahmet Dursun, Mustafa Kemal University, Turkey  
Ocsana Izosimova, Russian Academy of Science, Russia  
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Ioannis Sampsonidis, University of Glasgow, UK  
Vasic Vesna, University of Belgrade, Serbia

### **ISCC & GCxGC, FORT WORTH, Texas, USA – May 2019**

Marco Beccaria, Dartmouth College, USA  
Haleigh Boswell, University of Waterloo, Canada  
Oleg Karaduta, University of Arkansas, USA  
Kyra Murrel, The Pennsylvania State University, USA  
Joao Raul de Souza, Institute of Chemistry – UNICAMP, Brazil

### **DIVISIONE DI CHIMICA ANALITICA – Società Chimica Italiana**

Martina Catani, University of Ferrara, Italy  
Placido Franco, University of Bologna, Italy

### **INTERDIVISIONAL GROUP OF SEPARATION SCIENCE OF THE ITALIAN CHEMICAL SOCIETY**

Giorgia La Barbera, University of Rome La Sapienza, Italy  
Eduardo Sommella, University of Salerno, Italy

# Comprehensive Two-Dimensional Chromatography (GC×GC and LC×LC) Courses: Introduction, Advances, and Applications

**Sunday, May 13, 2018**

## GC×GC COURSE

08:00 – 09:00 On-site registration/Welcome - Room 300

09:00 – 09:45 **INTRODUCTION**  
*Tadeus Gorecki*  
*University of Waterloo, Waterloo, Canada*

09:45 – 10:30 **METHOD OPTIMIZATION**  
*Hans-Gerd Janssen*  
*Unilever, Vlaardingen, The Netherlands*

10:30 – 11:00 **Coffee Break**

11:00 – 11:45 **CHEMIOMETRICS**  
*Robert Synovec*  
*University of Washington, Seattle, WA, United States*

11:45 – 12:45 **APPLICATIONS**  
*Philip Marriott*  
*Monash University, Clayton, Victoria, Australia*

12:45 – 13:15 **Q/A SESSION**

13:15 – 14:15 **Lunch**

## LC×LC COURSE

13:30 – 14:15 On-site registration/Welcome - Room 300

14:15 – 14:55 **INTRODUCTION – BASIC PRINCIPLES**  
*Paola Dugo*  
*University of Messina, Italy*

14:55 – 15:45 **INSTRUMENTATION**  
*Miguel Herrero*  
*Institute of Food Science Research (CIAL), National Research Council (CSIC), Madrid, Spain*

15:45 – 16:10 **Coffee Break**

16:10 – 17:00 **OPTIMIZATION**  
*André de Villiers*  
*University of Stellenbosch, South Africa*

17:00 – 17:30 **SELECTED APPLICATIONS: BIO/PHARMA**  
*Pat Sandra*  
*R.I.C., Kortrijk, Belgium*

17:30 – 18:00 **SELECTED APPLICATIONS: FOOD & NATURAL PRODUCTS**  
*Paola Dugo*  
*University of Messina, Italy*

18:00 – 18:30 **Q/A SESSION**

18:30 **Cocktail offered by SHIMADZU Europa GmbH for the GC×GC and LC×LC Courses Participants**

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# SCIENTIFIC PROGRAM 15<sup>th</sup> GC×GC

Monday, May 14, 2018

**08:30 – 08:45** **Opening Address 15<sup>th</sup> GC×GC - Room 1000**  
**Lifetime Achievement Award Presentation – Sponsored by LECO**  
*Chairpersons:*  
*Luigi Mondello*  
*University of Messina, Messina, Italy*  
*John Dimandja*  
*Georgia Institute of Technology, USA*  
*Philip Marriott*  
*Monash University, Clayton, Victoria, Australia*

**08:45 – 09:10** **Lifetime Achievement Award Lecture**  
*Chairperson:*  
*John Dimandja, Georgia Institute of Technology, USA*

**Le.01 Award Lecture**  
**GC×GC-(HR)TOFMS : FROM EXPECTATIONS TO PRACTICAL APPLICATIONS**  
*Jean-Francois F. Focant*  
*University of Liège, Liège, Belgium*

**09:10 – 10:30** **GC×GC Session 1 - FUNDAMENTALS 1- Room 1000**  
*Chairpersons:*  
*John Dimandja, Georgia Institute of Technology, USA*  
*Tadeusz Gorecki, University of Waterloo, Canada*

**09:10** **Le.02**  
**DEVELOPMENT OF ULTRAFAST SEPARATIONS ENABLING EFFICIENCY OPTIMIZED MULTIDIMENSIONAL GAS CHROMATOGRAPHY**  
*Robert Synovec, Daniel Bahaghighat, Chris Freye*  
*Chemistry - University of Washington, Seattle, WA, United States*

**09:30** **Le.03**  
**ADVANCES IN INSTRUMENTATION AND DATA ANALYSIS TO ENHANCE THE BENEFITS OF GCXGC-TOFMS FOR COMPLEX SAMPLE ANALYSIS**  
*Frank Dorman*  
*Forensic Science - Penn State University, Whitmore Laboratory, University Park, PA, United States*

**09:50** **Le.04**  
**THERMODYNAMIC-BASED GC×GC RETENTION MAPS: A NEW TOOL FOR GC×GC OPTIMIZATION**  
*James J. Harynuk<sup>1</sup>, Keisean A. Stevenson<sup>1</sup>, Leonid M. Blumberg<sup>2</sup>*  
*<sup>1</sup>Chemistry - University of Alberta, Edmonton, AB, Canada*  
*<sup>2</sup>Advachrom, PO Wilmington, United States*

**10:10** **Le.05**  
**IS COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY A 'SUPERRESOLUTION' TECHNIQUE?**  
*Philip J. Marriott, Yada Novalchai*  
*Australian Centre for Research on Separation Science, School of Chemistry - Monash University, Clayton, Victoria, Australia*

**10:30-11:00** **Coffee Break**

**11:00 – 13:00** **GC×GC Session 2 – APPLICATIONS - Food - Room 1000**  
*Chairpersons:*  
*Robert A. Shellie, Trajan Scientific and Medical, Australia*  
*Peter Q. Tranchida, University of Messina, Italy*

**GC×GC Session 3 – APPLICATIONS - Environmental - Room 300 + Belvedere**  
*Chairpersons:*  
*Marco Gomes da Silva, Universidade Nova de Lisboa, Portugal*  
*Peter Haglund, Umea University, Sweden*

<p>11:00</p>	<p><b>Le.06</b>  <b>COMPREHENSIVE GCxGC A POWERFUL TOOL FOR UNTARGETED SCREENING OF NON-INTENTIONALLY ADDED SUBSTANCES (NIAS) OF FOOD CONTACT MATERIALS</b>  Maurus Biedermann  GC - Official Food Control Authority of the Canton of Zurich, Zurich, Switzerland</p>	<p><b>Le.12</b>  <b>GCxGC-MS AND BAYESIAN TESTING IN FORENSICS: TOWARDS THE IDENTIFICATION OF SUSPECTS THROUGH THEIR ODOR</b>  <i>Didier Thiebaut<sup>1</sup>, Vincent Cuzuel<sup>2</sup>, Roman Leconte<sup>2</sup>, Guillaume Cognon<sup>2</sup>, Charles Sauleau<sup>2</sup>, Isabelle Rivals<sup>1</sup>, Jerome Vial<sup>1</sup></i>  <sup>1</sup> CBI-LSABM - ESPCI Paris, PARIS, France  <sup>2</sup> Institut de Recherche Criminelle de la Gendarmerie Nationale, Cergy Pontoise, France</p>
<p>11:20</p>	<p><b>Le.07</b>  <b>COMPREHENSIVE GCxGC – ACCURATE MASS MS/MS IN THE ANALYSIS OF FOOD (OFF-)FLAVOURS</b>  <i>Hans-Gerd Janssen<sup>1,2</sup>, Martijn Brandt<sup>1</sup>, Herral Steenbergen<sup>1</sup></i>  <sup>1</sup> Central Analytical Science Unit - Unilever Research Laboratory, Vlaardingen, Netherlands  <sup>2</sup> Analytical-Chemistry Group - University of Amsterdam, Amsterdam, Netherlands</p>	<p><b>Le.13</b>  <b>PHYTOSCREENING OF MICRO-POLLUTANTS IN DECIDUOUS TREE CORE SAMPLES ENABLED BY GCXGC-TOFMS</b>  <i>Caroline Gauchotte-Lindsay<sup>1</sup>, Hélène Rousset<sup>2</sup>, Jean Christophe Balouet<sup>3</sup>, Umer Z. Ijaz<sup>1</sup>, Christopher Gallacher<sup>4</sup>, Robert M. Kalin<sup>4</sup>, Michel Chalot<sup>5</sup></i>  <sup>1</sup> School of Engineering - University of Glasgow, Glasgow, United Kingdom  <sup>2</sup> Urban brownfield and polluted sites department - ADEME, Angers, France  <sup>3</sup> Environnement International, Orrouy, France  <sup>4</sup> Department of Civil and Environmental Engineering - University of Strathclyde, Glasgow, United Kingdom  <sup>5</sup> Laboratoire Chrono-Environnement, Université de Bourgogne Franche-Comté, Pôle Universitaire du Pays de Montbéliard, Montbéliard, France</p>
<p>11:40</p>	<p><b>Le.08</b>  <b>EXPLORING “EXTRA-DIMENSIONS” TO CAPTURE METABOLITE FINGERPRINTS IN METABOLICALLY HEALTHY AND UNHEALTHY OBESE PATIENTS BY GCxGC TANDEM IONIZATION-TOFMS</b>  <i>Chiara Cordero<sup>1</sup>, Marta Cialè Rosso<sup>1</sup>, Erica Liberto<sup>1</sup>, Massimo Collino<sup>1</sup>, Gianluca Aimaretti<sup>2</sup>, Paolo Marzullo<sup>2,3</sup>, Chiara Mele<sup>2,3</sup>, Stephen E. Reichenbach<sup>4,5</sup>, Qingping Tao<sup>6</sup>, Carlo Bicchi<sup>1</sup></i>  <sup>1</sup> Dipartimento di Scienza e Tecnologia del Farmaco - University of Turin, Turin, Italy  <sup>2</sup> Department of Translational Medicine - University of Piemonte Orientale, Novara, Italy  <sup>3</sup> Division of General Medicine - IRCCS Istituto Auxologico Italiano Ospedale S.Giuseppe, Piancavallo (VB), Italy  <sup>4</sup> Computer Science and Engineering Department - University of Nebraska, Lincoln, United States  <sup>5</sup> GC Image LCC - GC Image LCC, Lincoln, United States</p>	<p><b>Le.14</b>  <b>GCxGC AND FAST-GCxGC APPLIED TO BIO-OIL ANALYSIS</b>  <i>Elna B. Caramao<sup>1</sup>, Nathalia M. Conrado<sup>2</sup>, Anne Raquel T. Cardoso<sup>2</sup>, Tiago Schena<sup>1</sup>, Thiago R. Bjerck<sup>2</sup>, Laiza C. Krause<sup>2</sup>, Carin von Muhlen<sup>3</sup></i>  <sup>1</sup> Instituto de Química - UFRGS, Porto Alegre, RS, Brazil  <sup>2</sup> Universidade Tiradentes, Aracaju, Brazil  <sup>3</sup> Universidade Estadual do Rio de Janeiro, Resende, Brazil</p>
<p>12:00</p>	<p><b>Le.09</b>  <b>UNDERSTANDING WINE AROMA: CHALLENGES POSED BY CHROMATOGRAPHIC COELUTIONS OF VOLATILE COMPOUNDS</b>  <i>Claudia A. Zini<sup>1</sup>, Juliane E. Welke<sup>2</sup>, Karine P. Nicoll<sup>2</sup>, Janaina A. Barbara<sup>1</sup>, Aline T. Marques<sup>3</sup></i>  <sup>1</sup> Instituto de Química - Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil  <sup>2</sup> Instituto de Ciência e Tecnologia de Alimentos, Avenida Bento Gonçalves, Porto Alegre, Brazil  <sup>3</sup> Empresa Brasileira de Pesquisa Agropecuária, Embrapa Semiárido, Petrolina, Brazil</p>	<p><b>Le.15</b>  <b>UNRAVELLING THE STRUCTURE OF UNKNOWN COMPOUNDS IN DRINKING WATER: CAN THE COMBINATION OF ON-LINE SPE GCXGC-HIGH RESOLUTION TOFMS AND GC-ATMOSPHERIC PRESSURE IONIZATION MS/MS DO THE TRICK?</b>  <i>Pieter E. Joos<sup>1,2</sup>, Els Van Meenen<sup>2</sup>, Katleen Van Den Steen<sup>2</sup>, Elena Borregar<sup>3</sup></i>  <sup>1</sup> Department of Bioscience Engineering - University of Antwerp, Antwerp, Belgium  <sup>2</sup> Laboratory - water-link, Rumst, Belgium  <sup>3</sup> Institute of Environment and Sustainable Development - University of Antwerp, Antwerp, Belgium</p>

12:20	<p><b>Le.10</b>  <b>UNTANGLING THE COMPLEX PROFILE OF CHINESE LIQUOR VOLATILES: FROM ONE DIMENSIONAL TO COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY</b>  <u>Henryk H. Jelen</u><sup>1</sup>, Xi He, Monika Marcinkowska, Anna Gaca  Faculty of Food Science and Nutrition - Poznan University of Life Sciences, Poznan, Poland</p>	<p><b>Le.16</b>  <b>A NOVEL ANALYTICAL METHOD OF SHORT CHAIN CHLORINATED PARAFFINS (SCCPs) USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY COUPLED WITH LOW RESOLUTION MASS SPECTROMETRY</b>  <u>Yun Zou</u><sup>1</sup>, Naoki Hamada<sup>1</sup>, Yuki Hashi<sup>2</sup>, Liang Dong<sup>2</sup>, Shan Niu<sup>2</sup>, Wenlong Yang<sup>2</sup>, Pengjun Xu<sup>2</sup>  <sup>1</sup> MS Center - Shimadzu Co. LTD, Beijing, China  <sup>2</sup> Shimadzu Co. LTD, Shanghai, China  <sup>2</sup> National Research Center for Environmental Analysis and Measurement, Beijing, China</p>
12:40	<p><b>Le.11</b>  <b>HIGH-CAPACITY SORPTIVE EXTRACTION AND TD-GC×GC-TOF MS FOR COMPREHENSIVE FLAVOUR AND AROMA PROFILING</b>  <u>Laura McGregor</u><sup>1</sup>, Rebecca Preston<sup>1</sup>, Aaron Parker<sup>1</sup>, Matthew Edwards<sup>1</sup>, Lara Kelly<sup>2</sup>, Massimo Santoro<sup>2</sup>, Nick Bukowski<sup>1</sup>  <sup>1</sup> SepSolve Analytical, Peterborough, United Kingdom  <sup>2</sup> Markes International, Gwaun Elai Medi-Science Campus, Llantrisant, United Kingdom</p>	<p><b>Le.17</b>  <b>COMPREHENSIVE NON-TARGET CHARACTERIZATION OF EXPOSOME SAMPLES USING GC×GC AND HIGH RESOLUTION MASS SPECTROMETRY</b>  <u>Lorne Fell</u>, Todd Richards, Joe Binkley, Christina Kelly, David Alonso  LECO Corporation - LECO Corporation, United States</p>
13:00-14:00	Lunch Break	
14:00-15:40	<p><b>GC×GC Session 4: APPLICATIONS- BIO - Room 1000</b>  Chairpersons:  Jean-Francois F. Focant, University of Liège, Belgium  Katelynn A. Perrault, Chamaine University of Honolulu, USA</p>	<p><b>GC×GC Session 5: APPLICATIONS Petrochemical - Room 300 + Belvedere</b>  Chairpersons:  Fabio Augusto, University of Campinas, Brazil  James J. Harynyuk, University of Alberta, Canada</p>
14:00	<p><b>Le.18</b>  <b>HYPHENATED SEPARATION TECHNIQUES (SPME-GC/MS AND GC×GC TOF MS) IN SEARCHING OF DISEASES BIOMARKERS</b>  <u>Boguslaw Buszewski</u><sup>1,2</sup>, Andreea Ratiu<sup>2</sup>, Maciej Milanowski<sup>1,2</sup>, Tomasz Ligor<sup>1,2</sup>  <sup>1</sup> Department of Environmental Chemistry and Bioanalytics - Faculty of Chemistry, Nicolaus Copernicus University, Torun, Poland  <sup>2</sup> Centre for Modern Interdisciplinary Technologies - Nicolaus Copernicus University, Torun, Poland</p>	<p><b>Le.23</b>  <b>GC×GC-HRMS (SOFT VS. CLASSICAL ELECTRON IONISATION) AND LC-ION MOBILITY-HRMS TO IDENTIFY POLLUTANTS IN CONTAMINATED SEDIMENTS</b>  <u>Christine Gallampois</u><sup>1</sup>, Sebastian Buchinger<sup>2</sup>, Timo Hamers<sup>3</sup>, Stefan Örn<sup>1</sup>, Georg Reifferscheid<sup>2</sup>, Peter Haglund<sup>1</sup>  <sup>1</sup> Umeå University, Linnaeus vägen, Umeå, Sweden  <sup>2</sup> Referat Biochemie, Ökotoxikologie (G3), Koblenz, Germany  <sup>3</sup> Vrije Universiteit Amsterdam, Netherlands  <sup>4</sup> SLU-Sveriges lantbruksuniversitet, Patologi, UPPSALA, Sweden</p>
14:20	<p><b>Le.19</b>  <b>BREATH ANALYSIS USING GC×GC TOF -MS: ADVANCES MADE IN ANIMAL AND HUMAN CLINICAL STUDIES</b>  <u>Jane E. Hill</u><sup>1</sup>, Theodore R. Mellors<sup>1</sup>, Marco Beccaria<sup>1</sup>, Flavio A. Franchina<sup>1</sup>, Christiaan A. Rees<sup>1</sup>, Mavra Nasir<sup>1</sup>, JoAnne L. Flynn<sup>2</sup>, Charles A. Scanga<sup>2</sup>, Philana L. Lin<sup>2</sup>, Daniel J. Fillmore<sup>2</sup>, Jaime Tomko<sup>2</sup>, Melanie O' Malley<sup>2</sup>, Pauline Maiello<sup>2</sup>, Bart Curry<sup>2</sup>, Mark Mayo<sup>3</sup>  <sup>1</sup> School of Engineering - Dartmouth College, Hanover, United States  <sup>2</sup> School of Medicine - Children's Hospital of UPMC, Pittsburgh, United States  <sup>3</sup> Menzies School of Health Research - Charles Darwin University, Darwin, Australia</p>	<p><b>Le.24</b>  <b>NONTARGET GC×GC-QTOF-MS ANALYSIS OF SEDIMENT SAMPLES FROM COPENHAGEN, DENMARK</b>  Josephine S. Luebeck<sup>1</sup>, Guilherme L. Alexandrino<sup>1,2</sup>, <u>Jan H. Christensen</u><sup>1</sup>  <sup>1</sup> Department of Plant and Environmental Sciences - University of Copenhagen, Frederiksberg, Denmark  <sup>2</sup> Institute of Chemistry - University of Campinas, Cidade Universitaria Zeferino Vaz, Campinas, Brazil</p>

<p>14:40 <b>Le.20</b>  <b>DEVELOPMENT OF A METHOD FOR THE ANALYSIS OF VOLATILE ORGANIC PROFILES IN STEM CELLS BY COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY WITH TIME-OF-FLIGHT MASS SPECTROMETRY</b>  <u>Jean-Marie M. Dimandja</u><sup>1</sup>, Milad N. Navae<sup>2</sup>, Pierre-Hugues Stefanuto<sup>3</sup>  <sup>1</sup> School of Mechanical Engineering - Georgia Institute of Technology, Atlanta, United States  <sup>2</sup> Georgia Tech Research Institute, Atlanta, United State  <sup>3</sup> University of Liege, Liege, Belgium</p>	<p><b>Le.25</b>  <b>SEPARATION AND SPECIATION OF NITROGEN COMPOUND IN COKER DIESEL</b>  <u>Dejun Shi</u>, Fei Chen, Chenfei Ma, Chunyan Wang, Zhanmin Xiao  Department of Analysis - Petrochemical Research Institute of PetroChina, Science Base Petrochina, Shahe Town, Beijing, China</p>
<p>15:00 <b>Le.21</b>  <b>VIRAL INFECTION SIGNATURE USING GC×GC TOF MS</b>  <u>Giorgia Purcaro</u><sup>1</sup>, Karen A. Kormuth<sup>2</sup>, Seema Lakdawala<sup>2</sup>, Flavio A. Franchina<sup>3</sup>, Christiaan A. Rees<sup>3</sup>, Mavra Nasir<sup>4</sup>, Jane E. Hill<sup>3</sup>  <sup>1</sup> Dartmouth College, Hannover, United States  <sup>2</sup> University of Pittsburgh, Pittsburgh, United States  <sup>3</sup> Thayer School of Engineering-Dartmouth College, Hanover, United States  <sup>4</sup> Geisel School of Medicine-Dartmouth College, Hanover, United States</p>	<p><b>Le.26</b>  <b>ENVIRONMENTAL FORENSIC ANALYSIS OF CRUDE OILS FROM THE GULF OF MEXICO UTILIZING GC×GC-FID, GC×GC-TOF-MS, AND GC×GC-HRT-MS</b>  Robert K. Nelson  Marine Chemistry &amp; Geochemistry - Woods Hole Oceanographic Institution, Falmouth, United States</p>
<p>15:20 <b>Le.22</b>  <b>INVESTIGATING METABOLIC SELECTION IN P. AERUGINOSA INFECTIONS USING GC×GC-TOFMS</b>  Trenton J. Davis, <u>Heather D. Bean</u>  School of Life Sciences - Arizona State University, Tempe, United States</p>	<p><b>Le.27</b>  <b>PETROLEUM PRODUCTS SULFUR SPECIATION USING TWO-DIMENSIONAL GAS CHROMATOGRAPHY SYSTEM WITH SULFUR CHEMILUMINESCENCE DETECTOR (GC×GC-SCD) COMPLEMENTED BY TWO-DIMENSIONAL GAS CHROMATOGRAPHY SYSTEM WITH A TIME OF FLIGHT DETECTOR (GCXGC-TOF)</b>  <u>Hassan A. Al-Rabiah</u>, Latifa Al-Ostad, Tahani Al-Shamary, Abdullwahab Al-Hendi, Hisham AlHenayyan, Roaya Khazemi  Petroleum Research Centre - Kuwait Institute for Scientific Research, Kuwait</p>
<p>15:40-16:10 <b>Coffee Break</b></p>	
<p>16:10-18:25 <b>GC×GC KEYNOTE LECTURES: 1 - Room 1000</b>  Chairpersons:  Heather Bean, Arizona State University, USA  Hans-Gerd Janssen, Unilever Research Laboratory, Netherlands</p>	<p><b>GC×GC KEYNOTE LECTURES: 2- Room 300 + Belvedere</b>  Chairpersons:  Elina B. Caramao, Instituto de Quimica, Brazil  Frank Dorman, Penn State University, USA</p>
<p>16:10 <b>KNLe.01</b>  <b>TOWARDS A THERMODYNAMIC-BASED TOOL FOR GC(×GC) PREDICTION, SIMULATION AND OPTIMIZATION: PARAMETER LIBRARY AND RETENTION MAPS</b>  <u>Keisean A. Stevenson</u><sup>1</sup>, James J. Harynuk<sup>1</sup>, Leonid M. Blumberg<sup>2</sup>  <sup>1</sup> Chemistry - University of Alberta, Edmonton, AB, Canada  <sup>2</sup> Advachrom, Wilmington, United States</p>	<p><b>KNLe.10</b>  <b>FLOW-MODULATION COMPREHENSIVE 2D GC COMBINED WITH TRIPLE-QUADRUPOLE MASS SPECTROMETRY: A VERY POWERFUL AND FLEXIBLE ANALYTICAL TOOL</b>  <u>Ivan Aloisi</u><sup>1</sup>, Mariosimone Zoccali<sup>1</sup>, Peter Q. Tranchida<sup>1</sup>, Luigi Mondello<sup>1,2</sup>  <sup>1</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy  <sup>2</sup> Chromaleont S.r.L. - c/o University of Messina, Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Messina, Italy</p>



16:25	<p><b>KNLe.02</b>  <b>HANDLING COMPLEX GCXGC DATA: ANALYZING TIME-SERIES DATA OBTAINED THROUGH PASSIVE DIFFUSION SAMPLERS</b>  <u>Luca Narduzzi<sup>1</sup></u>, <u>Silvia Carlin<sup>1</sup></u>, <u>Fulvio Mattivi<sup>2</sup></u>  <sup>1</sup> Department of food quality and nutrition, metabolomics group - Fondazione Edmund Mach, San Michele all'Adige, Italy  <sup>2</sup> Centre agriculture, food environment - University of Trento, San Michele all'Adige, Italy</p>	<p><b>KNLe.11</b>  <b>DEVELOPING A COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY STRATEGY FOR ANALYSIS OF SYNTHETIC GREENHOUSE GASES AND OZONE DEPLETING SUBSTANCES IN AMBIENT AIR</b>  <u>Blagoj Mitrevski<sup>1</sup></u>, <u>Paul Steele<sup>1</sup></u>, <u>Paul Krummel<sup>1</sup></u>, <u>Paul Fraser<sup>1</sup></u>, <u>Peter Salameh<sup>2</sup></u>, <u>Philip Marriott<sup>2</sup></u>  <sup>1</sup> Climate Science Centre - CSIRO, Aspendale, Australia  <sup>2</sup> Scripps Institution of Oceanography - University of California San Diego, La Jolla, United States  <sup>3</sup> School of Chemistry - Monash University, Clayton, Australia</p>
16:40	<p><b>KNLe.03</b>  <b>BOTTLENECKS OF ORTHOGONALITY EVALUATION</b>  <u>Jaroslava Jacova<sup>1,2</sup></u>, <u>Alzbeta Gardlo<sup>1,2</sup></u>, <u>David Friedecky<sup>1,2</sup></u>, <u>Jean-Marie M. Dimandja<sup>3</sup></u>, <u>Tomas Adam<sup>1,2</sup></u>  <sup>1</sup> Laboratory of Metabolomics - Palacky University Olomouc, Olomouc, Czech Republic  <sup>2</sup> Department of Clinical Chemistry - University Hospital Olomouc, Olomouc, Czech Republic  <sup>3</sup> School of Mechanical Engineering - Georgia Institute of Technology, Atlanta, United States</p>	<p><b>KNLe.12</b>  <b>AN INVESTIGATION OF CONTAMINANTS OF EMERGING CONCERN IN WASTEWATER: CHARACTERIZATION AND IDENTIFICATION OF BENZOTRIAZOLE DERIVATIVES BY GCXGC-TOFMS</b>  <u>Kyra A. Murrell<sup>1</sup></u>, <u>Frank L. Dorman<sup>2</sup></u>  <sup>1</sup> Department of Chemistry - The Pennsylvania State University, University Park, United States  <sup>2</sup> Biochemistry and Molecular Biology - The Pennsylvania State University, University Park, United States</p>
16:55	<p><b>KNLe.04</b>  <b>PRESSURE TUNING COUPLED COLUMN ENSEMBLE IN GCXGC MECHANISM, DIMENSIONS AND RETENTION INDEX ALIGNMENT</b>  <u>Mohammad Sharif Khan</u>, <u>Philip J. Marriott</u>  Department of Chemistry - Monash University, Clayton, Australia</p>	<p><b>KNLe.13</b>  <b>EMERGING ORGANIC CONTAMINANTS FROM ANTHROPOGENIC FLUIDS AND THEIR EFFECT ON LOLIUM PERENNE, A COMPREHENSIVE STUDY</b>  <u>Benedikt A. Weggler</u>, <u>Paige Teehan</u>, <u>Beate Gruber</u>, <u>Frank L. Dorman</u>  Department of Biochemistry and Molecular Biology - The Pennsylvania State University, University Park, State College, United States</p>
17:10	<p><b>KNLe.05</b>  <b>A GCXGC-TOFMS METHOD FOR THE QUANTIFICATION OF 54 ALLERGENS IN FRAGRANCE MATERIALS</b>  <u>Sebastiano Pantò</u>  LECO European Application and Technology Center, Biotechpark, Berlin, Germany</p>	<p><b>KNLe.14</b>  <b>FORENSIC DIESEL SPILL INVESTIGATIONS INTO THE ENVIRONMENT USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY – HIGH RESOLUTION MASS SPECTROMETRY (GC x GC – HRMS) AND CHEMOMETRICS: NEW PERSPECTIVES IN THE ABSENCE OF RECALCITRANT BIOMARKERS</b>  <u>Guilherme L. Alexandrino<sup>1,2</sup></u>, <u>Giorgio Tomasi<sup>1</sup></u>, <u>Fabio Augusto<sup>2</sup></u>, <u>Jan H. Christensen<sup>1</sup></u>  <sup>1</sup> Dep. Plant and Environmental Sciences - University of Copenhagen, Thorvaldsensvej, Frederiksberg C, Denmark  <sup>2</sup> Department of Analytical Chemistry - University of Campinas, Cid. Universitária Zeferino Vaz, Campinas, Brazil</p>
17:25	<p><b>KNLe.06</b>  <b>ADDING EXTRA-DIMENSIONS TO PRIMARY METABOLOME PROFILING BY GCXGC - TANDEM IONIZATION TOFMS: INSIGHTS ON HAZELNUT (CORYLUS AVELLANA L.) AROMA POTENTIAL</b>  <u>Marta Ciale' Rosso<sup>1</sup></u>, <u>Carlo Bicchi<sup>1</sup></u>, <u>Erica Liberto<sup>1</sup></u>, <u>Melanie Charron<sup>2</sup></u>, <u>Federica Mann<sup>2</sup></u>, <u>Roberto Menta<sup>2</sup></u>, <u>Chiara Cordero<sup>1</sup></u>  <sup>1</sup> Department of Drug Science and Technology - University of Turin, Turin, Italy  <sup>2</sup> Nutrition Department - SOREMARTEC ITALIA S.r.l, Ferrero Group, Alba, Italy</p>	<p><b>KNLe.15</b>  <b>COMPARISON OF THERMAL AND FLOW BASED MODULATION IN COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY-TIME-OF-FLIGHT MASS SPECTROMETRY (GCXGC-TOFMS) FOR THE ANALYSIS OF BASE OILS</b>  <u>Haleigh Boswell<sup>1</sup></u>, <u>Matthew Edwards<sup>2</sup></u>, <u>Tadeusz Gorecki<sup>1</sup></u>  <sup>1</sup> Department of Chemistry - University of Waterloo, Waterloo, Ontario, Canada  <sup>2</sup> SepSolve Analytical Ltd, Peterborough, United Kingdom</p>

<p>17:40 <b>KNLe.07</b>  <b>COMPARISON OF SAMPLE PREPARATION METHODS FOR COMPREHENSIVE METABOLOMICS PROFILING OF PLASMA AND SERUM BY GC×GC-TOFMS</b>  <u>A. Paulina de la Mata</u>, Seo Lin Nam, James J. Harynyk  Department of Chemistry - University of Alberta, Edmonton, Canada</p>	<p><b>KNLe.16</b>  <b>CHARACTERISATION OF SEMI-VOLATILE ORGANIC COMPOUNDS IN WASTEWATER PRODUCED DURING UNDERGROUND COAL GASIFICATION USING GCXGCTOFMS</b>  <u>Ioannis Sampsonidis</u>, Caroline Gauchotte  Lindsay School of Engineering - University of Glasgow, Glasgow, United Kingdom</p>
<p>17:55 <b>KNLe.08</b>  <b>ASTHMA PHENOTYPING USING BREATH-GC×GC-HRTOFMS</b>  <u>Delphine Zanella</u><sup>1</sup>, Pierre-Hugues Stefanuto<sup>1</sup>, Lena M. Dubois<sup>1</sup>, Romain Pesesse<sup>1</sup>, Florence Schleich<sup>2</sup>, Renaud Louis<sup>2</sup>, Jean-François Focant<sup>1</sup>  <sup>1</sup> Organic &amp; Biological Analytical Chemistry Group - University of Liege, Liege, Belgium  <sup>2</sup> Respiratory Medicine, GIGA I3, Liege, Belgium</p>	<p><b>KNLe.17</b>  <b>COMPARISON OF FAST AND CONVENTIONAL GC×GC/TOFMS USING LIQUID CRYOGEN-FREE THERMAL MODULATOR FOR ANALYSIS OF COCONUT SHELL FIBER BIO-OIL</b>  <u>Thiago R. Bjerk</u><sup>1</sup>, Tiago Schena<sup>2</sup>, Carin Von Muhlen<sup>3</sup>, Elina B. Caramão<sup>1,2</sup>  <sup>1</sup> Programa de Pós Graduação em Biotecnologia Industrial - Universidade Tiradentes, Aracaju, Brazil  <sup>2</sup> Instituto de Química – UFRGS, Porto alegre, Brazil  <sup>3</sup> Faculdade de Tecnologia, Polo Industrial, Resende, Brazil</p>
<p>18:10 <b>KNLe.09</b>  <b>PRELIMINARY INVESTIGATION OF HUMAN EXHALED BREATH FOR TUBERCULOSIS DIAGNOSIS BY GC×GC-TOF MS</b>  <u>Marco Beccaria</u><sup>1</sup>, Theodore R. Mellors<sup>1</sup>, Christiaan Rees<sup>2</sup>, Mavra Nasir<sup>2</sup>, Jacky Petion<sup>3</sup>, Peter Wright<sup>4</sup>, Jane E. Hill<sup>1</sup>  <sup>1</sup> Thayer School of Engineering - Dartmouth College, Hanover, United States  <sup>2</sup> Geisel School of Medicine - Dartmouth College, Hanover, United States  <sup>3</sup> GHESKIO, Port-au-Prince, Haiti  <sup>4</sup> DHMC medical center, Lebanon, United States</p>	<p><b>KNLe.18</b>  <b>METHOD EVALUATION AND QUANTITATIVE ASSESSMENT OF FAST PYROLYSIS BIO-OIL SAMPLES USING GCXGC-TOFMS</b>  <u>Vinicius B. Pereira</u><sup>1</sup>, Raquel V. Silva<sup>1</sup>, Nathalia S. Tessarolo<sup>1</sup>, Vitor L. Ximenes<sup>2</sup>, Fabio L. Mendes<sup>2</sup>, Marlon B. Almeida<sup>2</sup>, Andea R. Pinto<sup>2</sup>, Débora A. Azevedo<sup>1</sup>  <sup>1</sup> Institute of Chemistry - Federal University of Rio De Janeiro, Rio De Janeiro, Brazil  <sup>2</sup> Cenpes, PETROBRAS, Cidade Universitária, Rio de Janeiro, Brazil</p>
<p>19:00 <b>Welcome Reception offered by DANI Instruments - Exhibition Hall</b></p>	

## Tuesday, May 15, 2018

08:45 – 10.20

ISCC Opening Address Award and  
Opening Lecture  
See page 23 for details

10:20-10:50 Coffee Break - Exhibition

10:50-12.45 **GC×GC Session 6 – John Phillips Award lecture and FUNDAMENTALS 2 - Room 300 + Belvedere**  
Chairpersons:  
*Philip J. Marriott, Monash University, Australia*  
*Claudia A. Zini, Universidade Federal do Rio Grande do Sul, Brazil*

ISCC Session 1 - MICROCOLUMN SEPARATIONS - Room 1000  
*See page 23 for details*

10:50-11.00 **John Phillips Award Presentation**  
*Sponsored by LECO*

**Giorgio Nota Award Presentation**  
*Sponsored by Waters*

11:00 **Le.28 Phillips Award Lecture**  
**THE REWARDING CHALLENGE OF GC×GC-MS METHOD DEVELOPMENT FOR VALUABLE LIFESCIENCE APPLICATIONS**  
*Flavio A. Franchina*  
*Thayer School of Engineering - Dartmouth College, Hanover, United States*

11:25 **Le.29**  
**ENHANCING THE IDENTIFICATION POTENTIAL OF COMPREHENSIVE 2D GC-MS BY USING SOFT IONIZATION**  
*Peter Q. Tranchida<sup>1</sup>, Ivan Aloisi<sup>1</sup>, Barbara Giocastro<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
<sup>1</sup> *Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy*  
<sup>2</sup> *Chromaleont S.r.L., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy*

11:45 **Le.30**  
**A COMPREHENSIVE LOOK AT COMPREHENSIVE MULTIDIMENSIONAL SEPARATIONS**  
*Tadeusz Gorecki<sup>1</sup>, Hei-Yin Chow<sup>1</sup>, Alshymaa A. Aly<sup>1,2</sup>*  
<sup>1</sup> *Department of Chemistry - University of Waterloo, 200 University Avenue W., Ontario, Canada*  
<sup>2</sup> *Analytical Chemistry Department - Minia University, Minia, Egypt*

12:05	<p><b>Le.31</b>  <b>VISUALIZATIONS OF MACHINE LEARNING WITH UNTARGETED AND TARGETED FEATURES FROM COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY</b>  <i>Stephen E. Reichenbach<sup>1,2</sup>, Claudia A. Zini<sup>3</sup>, Juliane E. Welke<sup>3</sup>, Chiara Cordero<sup>4</sup>, Qingping Tao<sup>4</sup></i>  <sup>1</sup> Computer Science &amp; Engineering Department - University of Nebraska, Lincoln, United States  <sup>2</sup> GC Image, LLC - GC Image, LLC, Lincoln, United States  <sup>3</sup> Universidade Federal do Rio Grande do Sul, Institute of Chemistry, Porto Alegre, Brazil  <sup>4</sup> Università degli Studi di Torino, Dipartimento di Scienza e Tecnologia del Farmaco, Turin, Italy</p>	
12:25	<p><b>Le.32</b>  <b>SILICONE RUBBER CONCENTRATING SAMPLERS - FROM ENVIRONMENTAL AND AROMA APPLICATIONS TO THE ANALYSIS OF HUMAN SKIN VOLATILES BY GCXGCMS</b>  <i>Egmont Rohwer<sup>1</sup>, Yvette Naudé<sup>1</sup>, Alexis P. Roodt<sup>1</sup>, Portia Makhubela<sup>1</sup>, Anton Stoltz<sup>2</sup></i>  <sup>1</sup> Department of Chemistry, Faculty of Natural and Agricultural Sciences - University of Pretoria, Pretoria, South Africa  <sup>2</sup> Department of Internal Medicine, Faculty of Health Sciences - University of Pretoria, Hatfield, South Africa</p>	
12:45-14:00	Lunch Break	
14:00 – 15:20	<p><b>GCxGC Session 7 – FUNDAMENTALS 3 - Room 300 + Belvedere</b>  Chairpersons:  <i>Robert Synovec, University of Washington USA</i>  <i>Boguslaw Buszewski, Nicolaus Copernicus University, Poland</i></p>	<p><b>ISCC Session 2 - BIO-ANALYTICAL - Room 1000</b>   See page 24 for details</p>
14:00	<p><b>Le.33</b>  <b>TARGET AND NON-TARGET SCREENING OF ENVIRONMENTAL CONTAMINANTS USING STATE-OF-THE-ART GCxGC HIGH-RESOLUTION TIME-OF-FLIGHT MASS SPECTROMETRY</b>  <i>Peter Haglund<sup>1</sup>, Cathrin Veenaas<sup>1</sup>, Sofia Nieto<sup>2</sup>, Nathan Eno<sup>2</sup></i>  <sup>1</sup> Department of Chemistry - Umea University, Umea, Sweden  <sup>2</sup> Agilent technologies, Stevens Creek Blvd, United States</p>	
14:20	<p><b>Le.34</b>  <b>A DIRECT COMPARISON OF THERMAL MODULATION AND TWO MODES OF FLOW MODULATION FOR GCXGC</b>  <i>David J. Borton<sup>1</sup>, Mark Merrick<sup>1</sup>, John Seeley<sup>2</sup>, Viatcheslav Artaev<sup>1</sup></i>  <sup>1</sup> LECO corporation, Lakeview Ave, United States  <sup>2</sup> Department of Chemistry - Oakland University, Rochester, United States</p>	

14:40	<p><b>Le.35</b>  <b>A SWITCHABLE GCXGC AND HEART-CUT 2DGC SYSTEM SHARING MASS SPECTROMETRY DETECTION IN ALL MODES</b>  <i>Xiaosheng Guan, Ziwei Yu</i>  <i>J&amp;X Technologies, Inc., Shanghai, China</i></p>	
15:00	<p><b>Le.36</b>  <b>IMPROVED IDENTIFICATION OF COMPONENTS IN HYDROCARBON SAMPLES THROUGH ENHANCED CAPABILITIES OF A LOW ENERGY EI HIGH-RESOLUTION MASS SPECTROMETER</b>  <i>Courtney Milner, Nathan Eno, Kai Chen, Sofia Nieto</i>  <i>Agilent Technologies Inc, Santa Clara, United States</i></p>	
15:20 – 16:50 Coffee Break – Exhibition – Seminars – Posters A, B, L, K, K*		
15:45 – 16:45	<p><b>Room 1000 Seminar</b></p> <p><b>SHIMADZU</b>  <i>See page 40 for details</i></p>	<p><b>Room 300 Seminar</b></p> <p><b>LECO</b>  <i>See page 40 for details</i></p>
15:45 – 16:45	<p><b>Room 100 Seminar</b></p> <p><b>ZOEX Europe</b>  <i>See page 40 for details</i></p>	
16:50 – 18:30	<p><b>GCxGC Session 8 - APPLICATIONS – Industry - Room 300 + Belvedere</b>  <i>Chairpersons:</i>  <i>Jane E. Hill, Dartmouth College, USA</i>  <i>Didier Thiebaut, CBI-LSABM, France</i></p>	<p><b>ISCC Session 3 - MICROSCALE LC - Room 1000</b>  <i>See page 25 for details</i></p>
16:50	<p><b>Le.37</b>  <b>IMPROVED CHARACTERIZATION OF POLYMERS WITH PYROLYSIS-GCxGC-MS</b>  <i>Daniela Peronj<sup>1,2</sup></i>  <sup>1</sup> <i>Zoex Europe, Eindhoven, Netherlands</i>  <sup>2</sup> <i>JSB Nederland, Lelystad, Netherlands</i></p>	
17:10	<p><b>Le.38</b>  <b>PYROLYSIS OF BIOMASS IN A PTV-INJECTOR WITH DIRECT ANALYSIS AND IDENTIFICATION OF THE PYROLYSATES BY GC-MS AND GCXGC-FID</b>  <i>Jan Henk Marsman<sup>1,2</sup>, Léon Rohrbach<sup>1</sup>, Hero J. Heeres<sup>1</sup></i>  <sup>1</sup> <i>Chem. Engineering - University Groningen, Groningen, Netherlands</i>  <sup>2</sup> <i>University Labs - CS Aspa, Netherlands</i></p>	

17:30	<p><b>Le.39</b>  <b>QUANTIFICATION OF THE COMPOSITION OF LIQUID HYDROCARBON STREAMS: COMPARING THE GC-VUV TO ESTABLISHED METHODS</b>  <i>Melissa Dunkle<sup>1</sup>, Pascal Pijcke<sup>1</sup>, William Winniford<sup>2</sup>, George Bellos<sup>1</sup></i>  <sup>1</sup> <i>Dow Benelux, Hoek, Netherlands</i>  <sup>2</sup> <i>The Dow Chemical Company, Freeport, United States</i></p>
17:50	<p><b>Le.40</b>  <b>DISCOVERY BASED PHOTO-IONIZATION MS COUPLED TO GCxGC FOR ISOMERIC COMPOUND IDENTIFICATION</b>  <i>Anupam Giri<sup>1</sup>, Eric Brander<sup>1</sup>, Christoph Roosen<sup>2</sup>, Safa Farajzadeh<sup>2</sup></i>  <sup>1</sup> <i>Analytical GTC - SABIC, Bergen op Zoom, Netherlands</i>  <sup>2</sup> <i>Feedstock &amp; Cracker EU AMR - SABIC Technology Center, Geleen, Netherlands</i></p>
18:10	<p><b>Le.41</b>  <b>DIFFERENTIATION OF MINERAL OIL AND SYNTHETIC HYDROCARBONS BY GCXGC-MS</b>  <i>Martin Lommatzsch, Sebastian Säger</i>  <i>GC - Laboratory Lommatzsch &amp; Säger, Cologne, Germany</i></p>

**18:30 - 18:45**    **Closing Address 15<sup>th</sup> GC x GC– Room 300**  
**Chairperson:**  
*Philip Marriott, Monash University, Clayton, Victoria, Australia*  
*Luigi Mondello, University of Messina, Italy*

18.30 – 18.45	<p><b>Presentation of the Best Poster/Oral Awards:</b>  <b>Richard Sacks Best Poster Award</b>  <b>Genzo Shimadzu Best Oral/Poster Award</b>  <b>Chromatographia-Springer Best Poster Award</b>  <b>Closing Address 15<sup>th</sup> GCxGC Symposium</b></p>
18:45 – 20:00	<p><b>Agilent Technologies Users Meeting</b>  <b>Room 100 - see page 40 for details</b></p>
21:00	<p><b>Concert offered by PERKINELMER, Inc.,</b>  <b>Room 1000, Congress Centre</b></p>
22:15	<p><b>Cocktail offered by GERSTEL GmbH &amp; Co. KG,</b>  <b>Congress Centre</b></p>

# SCIENTIFIC PROGRAM 42<sup>nd</sup> ISCC

Tuesday, May 15, 2018

08:45 – 09:15 **Opening Address 42<sup>nd</sup> ISCC - Room 1000**

*Luigi Mondello*  
*University of Messina, Messina, Italy*  
*Adalberto Mosaner*  
*Mayor of Riva del Garda, Italy*

09:15 – 09:25 **M.J.E. Golay Award Presentation**

*Sponsored by PerkinElmer, Inc.*  
*Chairperson:*  
*Milos Novotny*  
*Department of Chemistry - Indiana University, Bloomington, IN, United States*

09:25 – 09:55 **LE.01 M.J.E. Golay Award Lecture  
PRACTICAL IMPLICATIONS OF CHROMATOGRAPHIC THEORY**

*Leonid M. Blumberg*  
*Advachrom, Wilmington, DE, United States*

09:55 – 10:20

**LE.02 ISCC Opening Lecture  
NOVEL COLUMN TECHNOLOGIES FOR PORTABLE CAPILLARY CHROMATOGRAPHY**

*Milton L. Lee<sup>1</sup>, Abhijit Ghosh<sup>1</sup>, Austin R. Foster<sup>2</sup>, Carlos R. Vilorio<sup>3</sup>, Jacob C. Johnson<sup>2</sup>, Xiaofeng Xie<sup>1</sup>, Leena M. Patil<sup>1</sup>, Luke T. Tolley<sup>1</sup>, H. Dennis Tolley<sup>4</sup>, Aaron R. Hawkins<sup>3</sup>, Brian D. Iversen<sup>2</sup>*

<sup>1</sup> *Department of Chemistry/Biochemistry - Brigham Young University, Provo, UT, United States*

<sup>2</sup> *Department of Mechanical Engineering - Brigham Young University, Provo, UT, United States*

<sup>3</sup> *Department of Electrical and Computer Engineering - Brigham Young University, Provo, UT, United States*

<sup>4</sup> *Department of Statistics - Brigham Young University, Provo, UT, United States*

10:20-10:50 **Coffee Break - Exhibition**

10:50 – 12:45 **ISCC Session 1 - MICROCOLUMN SEPARATIONS - Room 1000**

*Chairpersons:*  
*Purnendu K. Dasgupta, University of Texas at Arlington, United States*  
*Peter Myers, University of Liverpool, United Kingdom*

**GCxGC Session 6 – John Phillips Award and FUNDAMENTALS 2 - Room 300 + Belvedere**

*See page 19 for details*

10:50 **Giorgio Nota Award Presentation**

*Sponsored by Waters*  
*Chairperson: Purnendu K. Dasgupta*

**John Phillips Award Presentation**  
*Sponsored by LECO*

11:00 **LE.03 Giorgio Nota Award Lecture  
MICROCOLUMN LIQUID CHROMATOGRAPHY. THEN AND NOW**

*Hernan J. Cortes*  
*Hernan Cortes Consulting LLC, Springbrook Court, Midland, United States*

11:25 **LE.04  
ON THE FABRICATION OF PERFECTLY ORDERED CHROMATOGRAPHIC MEDIA**

*Gert Desmet*  
*Vrije Universiteit Brussel, Brussels, Belgium*

11:45 **LE.05  
OPEN TUBULAR LIQUID CHROMATOGRAPHY FOR HIGH EFFICIENCY SEPARATIONS**

*Shaorong Liu*  
*University of Oklahoma, Department of Chemistry and Biochemistry, OK, United States*

12:05	<p><b>LE.06</b>  <b>EXPERIMENTAL EVALUATION OF MICROFLUIDIC LC COLUMN PERFORMANCE: STRAIGHT VERSUS SERPENTINE CHANNELS</b>  <i>Martin Gilar</i>  <i>Waters Corporation, Milford, United States</i></p>	
12:25	<p><b>LE.07</b>  <b>3D PRINTED MICROFLUIDIC SYSTEMS FOR SEPARATION SCIENCE</b>  <i>Adam T. Woolley<sup>1</sup>, Michael J. Beauchamp<sup>1</sup>, Ellen K. Parker<sup>1</sup>, Haifa Almughamsi<sup>1</sup>, Anna V. Nielsen<sup>1</sup>, Daniel J. Ballif<sup>1</sup>, Hua Gong<sup>2</sup>, Gregory P. Nordin<sup>2</sup></i>  <sup>1</sup> Department of Chemistry/Biochemistry - Brigham Young University, Provo, UT, United States  <sup>2</sup> Department of Electrical Engineering - Brigham Young University, Provo, UT, United States</p>	
<b>12:45 - 14:00 Lunch Break</b>		
14:00 - 15:20	<p><b>ISCC Session 2 - BIO-ANALYTICAL - Room 1000</b>  <i>Chairpersons:</i>  <i>Gerard Hopfgartner, University of Geneva, Switzerland</i>  <i>Christian Huber, University of Salzburg, Austria</i></p>	<p><b>GCxGC Session 7 – FUNDAMENTALS 3 - Room 300 + Belvedere</b>   <i>See page 20 for details</i></p>
14:00	<p><b>LE.08</b>  <b>CHARACTERIZATION OF THE EFFECT OF EARLY-LIFE ENVIRONMENTAL EXPOSURE ON HUMAN METABOLOME AND HEALTH</b>  <i>Tuulia Hyötyläinen<sup>1</sup>, Dawei Geng<sup>1</sup>, Tim Siniöja<sup>1</sup>, Cecilia Carlsson<sup>1</sup>, Mikael Knip<sup>2</sup>, Matej Oresic<sup>3</sup></i>  <sup>1</sup> School of Science and Technology - Örebro Universitet, Örebro, Sweden  <sup>2</sup> Children's Hospital, University of Helsinki and Helsinki University Hospital, Finland  <sup>3</sup> Department of Chemistry - Örebro University, Örebro, Sweden</p>	
14:20	<p><b>LE.09</b>  <b>SPONGY MONOLITH AS A NOVEL SEPARATION MEDIUM FOR BIOGENIC ANALYSIS</b>  <i>Takuya Kubo, Kei Kubota, Naoki Nishimura, Toyohiro Naito, Koji Otsuka</i>  <i>Department of Material Chemistry, Graduate School of Engineering - Kyoto University, Katsura, Kyoto, Japan</i></p>	
14:40	<p><b>LE.10</b>  <b>MULTI-DIMENSIONAL LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY METHOD DEVELOPMENT TO IMPROVE THE COVERAGE OF METABOLOME</b>  <i>Guowang Xu, Shuangyuan Wang, Wangjie Lv, Zianzhe Shi</i>  <i>CAS Key Laboratory of Separation Science for Analytical Chemistry, - Dalian Institute of Chemical Physics, Chinese Academy of Science, China</i></p>	



15:00	<p><b>LE.11 PANCREATIC CANCER SCREENING BASED ON MASS SPECTROMETRIC ANALYSIS OF LIPIDS: FICTION OR NEAR FUTURE?</b> <i>Michal Holcapek<sup>1</sup>, Denise Wolrab<sup>1</sup>, Eva Cifkova<sup>1</sup>, Robert Jirasko<sup>1</sup>, Tereza Hrnciarova<sup>1</sup>, Ladislav Kuchar<sup>2</sup>, Roman Hrstka<sup>3</sup></i> <i><sup>1</sup> Department of Analytical Chemistry, Faculty of Chemical Technology - University of Pardubice, Czech Republic</i> <i><sup>2</sup> Institute of Inherited Metabolic Disorders, First Faculty of Medicine, Charles University and General University Hospital, Prague, Czech Republic</i> <i><sup>3</sup> Masaryk Memorial Cancer Institute, Regional Centre for Applied Molecular Oncology, Brno, Czech Republic</i></p>	
<b>15:20 – 16:50 Coffee Break – Exhibition – Seminars – Posters A, B, L, K, K*</b>		
15:45 – 16:45	<p><b>Room 1000 Seminar</b></p> <p style="text-align: center;"><b>SHIMADZU</b> <i>See page 40 for details</i></p>	<p><b>Room 300 Seminar</b></p> <p style="text-align: center;"><b>LECO</b> <i>See page 40 for details</i></p>
15:45 – 16:45	<p><b>Room 100 Seminar</b></p> <p style="text-align: center;"><b>JSB/ZOEX</b> <i>See page 40 for details</i></p>	
16:50 – 18:30	<p><b>ISCC Session 3 - MICROSCALE LC - Room 1000</b> <i>Chairpersons: Hernan Cortes, Hernan Cortes Consulting LLC, USA Frantisek Svec, Lawrence Berkeley Nat. Lab., USA</i></p>	<p><b>GCxGC Session 8 - APPLICATIONS – Industry - Room 300 + Belvedere</b></p> <p><i>See page 21 for details</i></p>
16:50	<p><b>LE.12 DETECTION APPROACHES TO CAPILLARY LIQUID CHROMATOGRAPHY: MIRAGES AND OASES</b> <i>Purnendu K. Dasgupta Department of Chemistry and Biochemistry - The University of Texas at Arlington, Arlington, United States</i></p>	
17:10	<p><b>LE.13 REVERSED-PHASE FUNCTIONALIZED MULTI-LUMEN CAPILLARY AS COMBINED CONCENTRATOR, SEPARATION COLUMN AND ELECTROSPRAY EMITTER IN CAPILLARY-LC-MS</b> <i>Brett Paull, Estrella Sanz Rofiguez, Shing C. Lam, Paul R. Haddad School of Natural Sciences and Australian Centre for Research on Separation Sciences (ACROSS) - University of Tasmania, Hobart, Australia</i></p>	

17:30 **LE.14**  
**SEPARATION OF ENANTIOMERS BY**  
**NANO-LC AND CEC: USE OF SILICA-**  
**BASED POLYSACCHARIDE AND**  
**GLYCOPEPTIDE ANTIBIOTICS**  
**CAPILLARY COLUMNS**  
*Salvatore Fanali<sup>1</sup>, Giovanni D'Orazio<sup>1</sup>,*  
*Bezhn Chankvetadze<sup>2</sup>*  
*<sup>1</sup> Institute of Chemical Methodologies -*  
*Italian National Research Council-C.N.R.,*  
*Monterotondo, Italy*  
*<sup>2</sup> Institute of Physical and Analytical*  
*Chemistry - Tbilisi State University, Tbilisi,*  
*Georgia*

17:50 **LE.15**  
**LIQUID-EI PROJECT: A NEW FRONTIER**  
**FOR LIQUID CHROMATOGRAPHY**  
**ELECTRON IONIZATION MASS**  
**SPECTROMETRY**  
*Achille Cappiello*  
*University of Urbino, Urbino, Italy*

18:10 **LE.16**  
**THE USE OF ULTRA-HIGH PRESSURES**  
**IN LIQUID CHROMATOGRAPHY: WHAT**  
**REDUCTION IN COLUMN ID IS NEEDED**  
**TO HANDLE VISCOUS HEATING?**  
*Ken Broeckhoven, Sander Deridder, Gert*  
*Desmet*  
*Department of Chemical Engineering - Vrije*  
*Universiteit Brussel, Brussels, Belgium*

18:45 – 20:00 **Agilent Technologies Users Meeting – Room 100 see page 40 for details**

21:00 **Concert offered by PERKIN ELMER, Inc., Room 1000, Congress Centre**

22:15 **Cocktail offered by GERSTEL GmbH & Co. KG, Congress Centre**

## Wednesday, May 16, 2018

08:30 – 10:30	<p><b>ISCC Session 4 - CAPILLARY GC-MS and IRMS - Room 1000</b>  <i>Chairpersons:</i>  <i>Frank David, R.I.C. Belgium</i>  <i>Kevin Shug, University of Texas, USA</i></p>	<p><b>ISCC Session 5 – BIO/PHARMA - Room 300</b>  <i>Chairpersons:</i>  <i>Gert Desmet, Vrije Universiteit Brussel</i>  <i>Michal Holcapek, University of Pardubice, Czech Republic</i></p>
08:30	<p><b>LE.17 GC-MS WITH COLD EI-EXTENDING THE RANGE OF COMPOUNDS AND APPLICATIONS AMENABLE FOR GC-MS ANALYSIS</b>  <i>Aviv Amirav, Alexander B. Fialkov, Tal Alon, Uri Keshet</i>  <i>Department of Chemistry - Tel Aviv University, Ramat Aviv, Tel Aviv, Israel</i></p>	<p><b>LE.23 SEPARATION STRATEGIES FOR COMPREHENSIVE COVERAGE OF HUMAN GLYCOME</b>  <i>Milos Novotny<sup>1,2</sup></i>  <sup>1</sup> <i>Department of Chemistry - Indiana University, Bloomington, United States</i>  <sup>2</sup> <i>Regional Centre for Applied Molecular Oncology - Masaryk Memorial Oncological Institute, Brno, Czech Republic</i></p>
08:50	<p><b>LE.18 SPEEDING UP GC-MS ANALYSIS – FROM FEW MINUTES DOWN TO REAL-TIME ANALYSIS</b>  <i>Alexander B. Fialkov, Uri Keshet, Tal Alon, Aviv Amirav</i>  <i>Department of Chemistry - Tel Aviv University, Ramat Aviv, Tel Aviv, Israel</i></p>	<p><b>LE.24 FUNCTIONALIZED NANOPARTICLES FOR SAMPLE PREPARATION IN PROTEIN ANALYTICS</b>  <i>Michael Laemmerhofer</i>  <i>University of Tuebingen - Institute of Pharmaceutical Sciences, Tuebingen, Germany</i></p>
09:10	<p><b>LE.19 IMPROVED GC/MS IDENTIFICATION RESULTS FOR UNTARGETED SCREENING DUE TO ADVANCED DECONVOLUTION TOOLS</b>  <i>Marco Ruijken</i>  <i>R&amp;D - MsMatrix, Doornhoecklaan, Netherlands</i></p>	<p><b>LE.25 MICROSCALE AND CAPILLARY SCALE HPLC-MS METHODS FOR BIOPHARMACEUTICAL ANALYSIS</b>  <i>Christian Huber<sup>1,2</sup>, Christof Regl<sup>2</sup>, Marius Segl<sup>2</sup>, Therese Wohlschlagel<sup>2</sup></i>  <sup>1</sup> <i>Department of Molecular Biology - University of Salzburg, Salzburg, Austria</i>  <sup>2</sup> <i>Christian Doppler Laboratory for Biosimilar Characterization, University of Salzburg, Salzburg, Austria</i></p>
09:30	<p><b>LE.20 SAMPLE INTRODUCTION IN COMPOUND-SPECIFIC STABLE ISOTOPE ANALYSIS: THE QUEST FOR ISOTOPE INTEGRITY</b>  <i>Torsten C. Schmidt<sup>1</sup>, Nenad Stojanovic<sup>1</sup>, Michaela Blessing<sup>2</sup>, Maik A. Jochmann<sup>1</sup></i>  <sup>1</sup> <i>Instrumental Analytical Chemistry - University Duisburg-Essen, Essen, Germany</i>  <sup>2</sup> <i>LAB/ISO - BRGM, Orléans cedex 2, France</i></p>	<p><b>LE.26 MICROLC AND DIFFERENTIAL ION MOBILITY SPECTROMETRY FOR THE MASS SPECTROMETRIC ANALYSIS OF PHARMACEUTICALS AND PEPTIDES IN BIOLOGICAL MATRICES</b>  <i>David Ruskic, Gerard Hopfgartner</i>  <i>Life Science Mass Spectrometry - University of Geneva, Geneva, Switzerland</i></p>
09:50	<p><b>LE.21 ANALYSIS OF <sup>15</sup>N/<sup>14</sup>N IN AMINO ACIDS: AS A POTENTIAL POWERFUL TOOL FOR STUDYING BIOLOGY, ECOLOGY, AND GEOCHEMISTRY</b>  <i>Yoshito Chikaraishi<sup>1,2</sup></i>  <sup>1</sup> <i>Institute of Low Temperature Science - Hokkaido University, Sapporo, Japan</i>  <sup>2</sup> <i>Japan Agency Marine-Earth Science and Technology (JAMSTEC), Yokosuka, Japan</i></p>	<p><b>LE.27 LIPIDOMICS WORKFLOWS IN CLINICAL RESEARCH – PRACTICAL CONSIDERATIONS</b>  <i>Matej Oresic, Tuulia Hyötyläinen</i>  <i>Department of Chemistry - Örebro University, Örebro, Sweden</i></p>

10:10	<p><b>LE.22</b>  <b>THE COMBINATION OF DIFFERENT THERMAL/CHROMATOGRAPHIC ANALYSIS TECHNIQUES BASED ON HIGH RESOLUTION MASS SPECTROMETRY FOR THE INVESTIGATION OF MEDIUM-HEAVY AND HEAVY PETROLEUM MATRICES</b>  <i>Ralf Zimmermann<sup>1,2</sup>, Uwe Kafer<sup>1,2</sup>, Maximilian Jennerwein<sup>3</sup>, Markus Eschner<sup>3</sup>, Thomas Wilharm<sup>3</sup>, Thomas Groger<sup>1,2</sup></i>  <sup>1</sup> Comprehensive Molecular Analytics (CMA) Helmholtz Zentrum München, Neuherberg, Germany  <sup>2</sup> Institute of Chemistry, Chair for Analytical Chemistry - University of Rostock, Rostock, Germany  <sup>3</sup> ASG Analytik Service GmbH, Neusäss, Germany</p>	<p><b>LE.28</b>  <b>QUANTITATIVE STRUCTURE-RETENTION RELATIONSHIPS FOR RETENTION PREDICTION IN RPLC AND ITS APPLICATION TO EARLY STAGE DRUG DEVELOPMENT AND NON-TARGETED METABOLOMICS</b>  <i>Paul Haddad<sup>1</sup>, Yabin Wen<sup>1</sup>, Mohammad Talebi<sup>1</sup>, Ruth Amos<sup>1</sup>, Roman Szucs<sup>2</sup>, Christopher Pohf<sup>1</sup>, John Dolan<sup>1</sup></i>  <sup>1</sup> School of Chemistry - ACROSS, University of Tasmania, Hobart, Tasmania, Australia  <sup>2</sup> Pfizer Global R&amp;D - Pfizer Global R&amp;D, Kent, United Kingdom  <sup>3</sup> ThermoFisher Scientific, Sunnyvale, United States  <sup>4</sup> LC Resources, McMinnville, United States</p>
10:30 – 12:00 Coffee Break – Seminars – Exhibition – Posters C, D, I		
10:45 – 11:45	<p><b>Room 1000 Seminar</b></p> <p><b>AGILE TECHNOLOGIES</b>  <i>See page 40 for detail</i></p>	<p><b>Room 300 Seminar</b></p> <p><b>DANI INSTRUMENTS</b>  <i>See page 41 for details</i></p>
12:00 – 14:00 Lunch Break		
12:00 – 14:00 Prosecco offered by Wiley-WCH to celebrate the launch of the journal "Separation Science Plus"		
11:45 – 12:45	<p><b>Room 1000 Seminar</b></p> <p><b>WATERS</b>  <i>See page 41 for details</i></p>	<p><b>Room 300 Seminar</b></p> <p><b>SepSolve</b>  <i>See page 41 for details</i></p>
	<p><b>Room 100</b></p> <p><b>JEOL</b>  <i>See page 41 for details</i></p>	
14:00 – 15:40	<p><b>ISCC Session 6 - CAPILLARY GC 1 Room 1000</b>  <i>Chairpersons:</i>  <i>Carlo Bicchi, University of Torino, Italy</i>  <i>Milton Lee, Brigham Young University, USA</i></p>	<p><b>ISCC Session 7 – Multidimensional and other Comprehensive Techniques - Room 300</b>  <i>Chairpersons:</i>  <i>Paola Donato, University of Messina, Italy</i>  <i>Pat Sandra, Research Institute for Chromatography, Belgium</i></p>
14:00	<p><b>LE.29</b>  <b>GAS CHROMATOGRAPHY WITH SEQUENTIAL MOLECULAR SPECTROSCOPIC, FLAME IONIZATION, AND MASS SPECTROMETRIC DETECTIONS</b>  <i>Jim Luong<sup>1,2</sup>, Ronda Gras<sup>1,3</sup>, Paul R. Haddad<sup>3,2</sup>, Robert A. Shellie<sup>4</sup></i>  <sup>1</sup> Analytical Science, Core R&amp;D - Dow Chemical, Fort Saskatchewan, Canada  <sup>2</sup> Australian Centre for Research on Separation Science (ACROSS), - University of Tasmania, Hobart, Australia  <sup>3</sup> ARC Training Centre for Portable Analytical Separation Technologies (ASTech), - University of Tasmania, Hobart,  <sup>4</sup> Trajan Scientific and Medical, Victoria, Australia</p>	<p><b>LE.34</b>  <b>COMPREHENSIVE 2D-LC IN THE ANALYSIS OF FOOD PRODUCTS</b>  <i>Paola Dugo<sup>1,2</sup></i>  <sup>1</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli studi di Messina, Messina, Italy  <sup>2</sup> Chromaleont S.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy</p>

14:20	<p><b>LE.30</b>  <b>DUAL TEMPERATURE CONTROLLED THERMAL GRADIENT GAS CHROMATOGRAPHY</b>  <i>Edgar D. Lee</i>  <i>DAS/Chrom &amp; Portable GCMS - PerkinElmer, American Fork, United States</i></p>	<p><b>LE.35</b>  <b>POLAR COLUMNS WITH DUAL-MODE RETENTION MECHANISM IN COMPREHENSIVE HILICXRP AND RPXRP LIQUID CHROMATOGRAPHY</b>  <i>Pavel Jandera, Tomas Hajek, Marie Ruzickova</i>  <i>Department of Analytical Chemistry - University of Pardubice, Pardubice, Czech Republic</i></p>
14:40	<p><b>LE.31</b>  <b>HYPER-FAST –NEW DEVELOPMENTS IN FLOW-FIELD THERMAL GRADIENT GC</b>  <i>Peter Boeker<sup>1,2</sup></i>  <sup>1</sup> <i>Workgroup on trace gas measurements - University of Bonn, Bonn, Germany</i>  <sup>2</sup> <i>HyperChrom S.A., Luxembourg</i></p>	<p><b>LE.36</b>  <b>COMPREHENSIVE 3-DIMENSIONAL LCxLCxION MOBILITY SEPARATIONS</b>  <i>Andre De Villiers<sup>1</sup>, Pieter Venter<sup>1</sup>, Magriet Muller<sup>1</sup>, Jochen Vestner<sup>2</sup>, Maria A. Stander<sup>1</sup>, Andreas G. Tredoux<sup>1</sup>, Harald Pasch<sup>1</sup></i>  <sup>1</sup> <i>Department of Chemistry and Polymer Science - Stellenbosch University Stellenbosch, South Africa</i>  <sup>2</sup> <i>Institute of Viticulture and Oenology - DLR Rheinland, Neustadt, Germany</i></p>
15:00	<p><b>LE.32</b>  <b>FUNDAMENTAL SUBSTITUENT EFFECTS IN GAS PHASE VACUUM ULTRAVIOLET ABSORPTION SPECTRAL DETECTION FOR GAS CHROMATOGRAPHY</b>  <i>Kevin A. Schug<sup>1</sup>, Ines C. Santos<sup>1</sup>, James X. Mao<sup>1</sup>, Jonathan Smuts<sup>2</sup></i>  <sup>1</sup> <i>Chemistry and Biochemistry - University of Texas at Arlington, Arlington, United States</i>  <sup>2</sup> <i>VUV Analytics, Inc., Cedar Park, United States</i></p>	<p><b>LE.37</b>  <b>ENHANCING SEPARATION COMPATIBILITY IN 2D-LC THROUGH ACTIVE SOLVENT MODULATION</b>  <i>Monika Dittmann<sup>1</sup>, Konstantin Shoykhet<sup>1</sup>, Stephan Buckenmaier<sup>1</sup>, Dwight Stoll<sup>2</sup></i>  <sup>1</sup> <i>Agilent Technologies, Waldbronn, Germany</i>  <sup>2</sup> <i>Department of Chemistry - Gustavus Adolphus College, St. Peter, United States</i></p>
15:20	<p><b>LE.33</b>  <b>HYPHENATION OF HIGH RESOLUTION CGC WITH CONDENSED-PHASE FTIR: OPTIMIZATION OF RESOLUTION, SENSITIVITY AND SOLUTE CAPACITY</b>  <i>Tatiana Cucu, Frank David, Christophe Devos, Lucas Herman, Pat Sandra</i>  <i>R.I.C., President Kennedypark, Kortrijk, Belgium</i></p>	<p><b>LE.38</b>  <b>DEVELOPING METHODS AND DEVICES FOR MULTI-DIMENSIONAL LIQUID CHROMATOGRAPHY</b>  <i>Peter Schoenmakers</i>  <i>University of Amsterdam, Amsterdam, Netherlands</i></p>
15.40 – 17:00	<b>Coffee Break – Seminars – Exhibition – Posters E, F, G, H, N, Q</b>	
15:45 – 16:45	<p><b>Room 1000 Seminar</b></p> <p style="text-align: center;"><b>Thermo Fisher Scientific</b>  <i>See page 41 for details</i></p>	<p><b>Room 300 Seminar</b></p> <p style="text-align: center;"><b>GERSTEL</b>  <i>See page 42 for details</i></p>
	<p><b>Room 100 Seminar</b></p> <p style="text-align: center;"><b>VUV Analytics</b>  <i>See page 42 for details</i></p>	
17:00 – 18.27	<p><b>ISCC KEYNOTE LECTURES: Young Scientists 1 – Room 1000</b>  <i>Chairpersons:</i>  <i>Tullia Hyotylainen, Orebro Universitet, Sweden</i>  <i>Ralf Zimmermann University of Rostock, Germany</i></p>	<p><b>ISCC KEYNOTE LECTURES: Young Scientists 2 – Room 300</b>  <i>Chairpersons:</i>  <i>André De Villiers, University of Stellenbosch, South Africa</i>  <i>Peter Schoenmaker, University of Amsterdam, Netherlands</i></p>

17:00	<p><b>KNL.01</b>  <b>HYPHENATED BIOASSAYS AFTER THE CAPILLARY SEPARATION - ON-LINE MICROFLUIDICS, MICROARRAY PICOFRAGMENTATION AND GC-MS BIOASSAYING</b>  <i>Barbara M. Zietek, Willem Jonker, Reka A. Otvos, Ben Bruyneel, Dick v. Iperen, Tinco J. Brouwer, Matthijs Luger, Marja Lamoree, Pim Leonards, Govert W. Somsen, <u>Jeroen Kooij</u></i>  <i>Vrije Universiteit, Amsterdam, Netherlands</i></p>	<p><b>KNL.08</b>  <b>ENHANCEMENT OF LC x LC SEPARATION OF FOOD AND FOOD-RELATED SAMPLES BY USING FOCUSING MODULATION APPROACHES</b>  <i>Lidia Montero, Alejandro Cifuentes, Elena Ibáñez, <u>Miquel Herrero</u></i>  <i>Foodomics Laboratory - Institute of Food Science Research-CIAL (CSIC-UAM), Madrid, Spain</i></p>
17:15	<p><b>KNL.02</b>  <b>GAS CHROMATOGRAPHY WITH VACUUM ULTRAVIOLET DETECTION FOR MINERAL OIL ANALYSIS IN CONSUMER PRODUCTS</b>  <i><u>Alan Rodrigo Garcia Cicourel</u><sup>1</sup>, Hans-Gerd Janssen<sup>1,2</sup></i>  <sup>1</sup> Department of Analytical Chemistry - University of Amsterdam, Amsterdam, Netherlands  <sup>2</sup> Unilever Research and Development, Central Analytical Science, Vlaardingen, Netherlands</p>	<p><b>KNL.09</b>  <b>CAPILLARY AND CHIP-BASED MICROREACTORS FOR MULTI-DIMENSIONAL ANALYSIS SYSTEMS</b>  <i><u>Bob W. Pirok</u><sup>1,2</sup>, Bert Wouters<sup>1,2</sup>, Rocio Garmendia<sup>1,2</sup>, Noor Abdulhussain<sup>1</sup>, Ron A. Peters<sup>3,1</sup>, Peter J. Schoenmakers<sup>1</sup></i>  <sup>1</sup> Analytical-Chemistry Group - University of Amsterdam, Amsterdam, Netherlands  <sup>2</sup> TI-COAST, Amsterdam, Netherlands  <sup>3</sup> Analytics - DSM Coating Resins, Waalwijk, Netherlands</p>
17:27	<p><b>KNL.03</b>  <b>MULTIPLEXING GAS CHROMATOGRAPHY FOR PROCESS ANALYTICS</b>  <i><u>Marco Wunsch</u><sup>1</sup>, Rudolf Lehnig<sup>1</sup>, Christiane Janke<sup>2</sup>, Oliver Trapp<sup>3</sup></i>  <sup>1</sup> Process Analytical Technology - BASF SE, Ludwigshafen, Germany  <sup>2</sup> Catalysts for Syngas Prod. &amp; Processing - BASF SE, Ludwigshafen, Germany  <sup>3</sup> Department Chemie - Ludwig-Maximilians-Universität München, Munich, Germany</p>	<p><b>KNL.10</b>  <b>ON-LINE COUPLED LIQUID CHROMATOGRAPHY – COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY WITH DUAL DETECTION FOR THE ANALYSIS OF MINERAL OIL AND SYNTHETIC HYDROCARBONS IN COSMETIC LIP PRODUCTS</b>  <i><u>Mariosimone Zoccali</u><sup>1</sup>, Luigi Mondello<sup>1,2</sup></i>  <sup>1</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy  <sup>2</sup> Chromaleont S.r.L. - c/o University of Messina, Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Messina, Italy</p>
17:39	<p><b>KNL.04</b>  <b>QUANTIFICATION OF ISOMERICALLY SUMMED HYDROCARBON CONTRIBUTIONS TO CRUDE OIL BY CARBON NUMBER, DOUBLE BOND EQUIVALENT, AND AROMATICITY USING GAS CHROMATOGRAPHY WITH TUNABLE VACUUM ULTRAVIOLET IONIZATION</b>  <i><u>Jeremy Nowak</u><sup>1</sup>, Robert Weber<sup>2</sup>, Allen Goldstein<sup>2,3</sup></i>  <sup>1</sup> College of Chemistry - UC-Berkeley, United States  <sup>2</sup> Environmental Science, Policy, and Management - UC-Berkeley, United States  <sup>3</sup> Civil and Environmental Engineering - UC-Berkeley, United States</p>	<p><b>KNL.11</b>  <b>ENRICHMENT, IDENTIFICATION AND QUANTIFICATION OF ORGANIC SELENOCOMPOUNDS IN OILS BY ENANTIOSELECTIVE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY COUPLED TO MASS SPECTROMETRY</b>  <i><u>Giorgia La Barbera</u>, Michela Antonelli, Carmela M. Montone, Susy Piovesana, Aldo Laganà</i>  <i>University of Rome La Sapienza, Rome, Italy</i></p>

17:51	<p><b>KNL.05</b>  <b>MYLTIPLEX GAS CHROMATOGRAPHY WITH A BARRIER IONIZATION DISCHARGE DETECTOR</b>  <u>María Antoniadou</u>, Erwin Rosenberg  <i>Institute of Chemical Technologies and Analytics - Vienna University of Technology, VIENNA, Austria</i></p>	<p><b>KNL.12</b>  <b>GOLD NANOPARTICLE MODIFIED MULTI-LUMEN CAPILLARIES FOR SOLID PHASE EXTRACTION OF PROTEINS</b>  <u>Nirved Upadhyay</u><sup>1</sup>, Vipul Gupta<sup>2,3</sup>, Mirek Macká<sup>2</sup>, Pavel Nesterenko<sup>2</sup>, Brett Paulf<sup>3</sup>  <sup>1</sup> University of Tasmania, School of Physical Science, Hobart, Tasmania, Australia.,  <sup>2</sup> Australian Centre for Research on Separation Science - University of Tasmania, School of Physical Science, Australia.  <sup>3</sup> ARC Centre of Excellence for Electromaterials Science - University of Tasmania, School of Natural Science, University Australia</p>
18:03	<p><b>KNL.06</b>  <b>PROFILING URINARY VOLATOMIC COMPOSITION USING NTME/GC-MS AND MULTIVARIATE STATISTICAL ANALYSIS TO DISCRIMINATE DIFFERENT FORMS OF CANCER</b>  <u>Priscilla Porto-Figueira</u><sup>1</sup>, <u>Jorge A. Pereira</u><sup>1</sup>, José S. Câmara<sup>1,2</sup>  <sup>1</sup> Centro de Química da Madeira, - Universidade da Madeira, Campus da Penteada, Funchal, Portugal  <sup>2</sup> Faculdade de Ciências Exatas e da Engenharia - Universidade da Madeira, Campus da Penteada, Funchal, Portugal</p>	<p><b>KNL.13</b>  <b>CARBON AND HYDROGEN CSIA OF GROUNDWATER CONTAMINANTS IN LOW MICROGRAM PER LITER RANGE. POWER OF PAL SPME ARROW COMBINED WITH MULTIPLE EXTRACTION APPROACH</b>  <u>Nenad Stojanovic</u><sup>1</sup>, Maik A. Jochmann<sup>1</sup>, Torsten C. Schmidt<sup>1,2</sup>  <sup>1</sup> Instrumental Analytical Chemistry - University of Duisburg-Essen, Essen, Germany  <sup>2</sup> Centre for Water and Environmental Research (ZWU) - University of Duisburg-Essen, Essen, Germany</p>
18:15	<p><b>KNL.07</b>  <b>ULTRA-SENSITIVE TRACE GAS DETECTION BY GAS CHROMATOGRAPHY – ION MOBILITY SPECTROMETRY EMPLOYING IONIC LIQUID STATIONARY PHASES</b>  <u>Ansgar T. Kirk</u>, Maximilian Kueddelsmann, Stefan Zimmermann  <i>Institute of Electrical Engineering and Measurement Technology, Department of Sensors and Measurement Technology - Leibniz Universität Hannover, Hannover, Germany</i></p>	<p><b>KNL.14</b>  <b>DEVELOPMENT AND APPLICATION OF A C7-C20 N-ALKANES GENERATING VIAL AND THIN FILM SPME MEMBRANES FOR RELIABLE AND SENSITIVE ON-SITE IDENTIFICATION OF UNKNOWN POLLUTANTS FROM SURFACE WATER USING HAND PORTABLE GC/MS</b>  <u>Jonathan J. Grandy</u><sup>1</sup>, Hamed Piri-Moghadam<sup>2</sup>, Emanuela Gionfriddo<sup>3</sup>, Janusz Pawliszyn<sup>1</sup>  <sup>1</sup> Department of Chemistry - University of Waterloo, Waterloo, Canada  <sup>2</sup> Department of Chemistry - Memorial University of Newfoundland, St John's, Canada  <sup>3</sup> University of Toledo, Toledo, United States</p>
18:45 Wine and Cheese offered by Agilent Technologies, Terrace Hotel Sole		
21.00 Disco Night by Thermo Scientific, Spiaggia degli Olivi		

## Thursday May 17, 2018

08:30 – 10:30	<p><b>ISCC Session 8 – MICROFLUIDICS - Room 1000</b>  <b>Chairpersons:</b>  <i>Michael C. Breadmore, University of Tasmania, Australia</i>  <i>Adam T. Woolley, Brigham Young University, USA</i></p>	<p><b>ISCC Session 9 COLUMN TECHNOLOGY - Room 300</b>  <b>Chairpersons:</b>  <i>Emily Hilder, University of South Australia, Australia</i>  <i>Jean-Luc Veuthey, University of Geneva, Switzerland</i></p>
08:30	<p><b>LE.39</b>  <b>SIZING OF SINGLE VIRUS PARTICLES WITH MULTI-PORE NANOFUIDIC DEVICES</b>  <i>Panagiotis Kondylis<sup>1</sup>, Jinsheng Zhou<sup>1</sup>, Lye Siang Lee<sup>2</sup>, Adam Zlotnick<sup>2</sup>, <u>Stephen C. Jacobson<sup>1</sup></u></i>  <sup>1</sup> Department of Chemistry - Indiana University, Bloomington, IN, United States  <sup>2</sup> Department of Molecular and Cellular Biochemistry - Indiana University, Bloomington, United States</p>	<p><b>LE.45</b>  <b>ORGANIC POLYMER-BASED MONOLITHIC COLUMNS FOR EFFICIENT SEPARATIONS IN GAS CHROMATOGRAPHY</b>  <i>Frantisek Svec</i>  <i>Lawrence Berkeley Nat. Lab., CA, Berkeley, United States</i></p>
08:50	<p><b>LE.40</b>  <b>DEVELOPMENT OF A MODULAR MICROFLUIDIC PLATFORM TARGETING SCREENING OF ANIONS IN MINUTE AMOUNT OF SAMPLE</b>  <i>Sam Wouters, <u>Sebastiaan Eeltink</u></i>  <i>Vrije Universiteit Brussel, Brussels, Belgium</i></p>	<p><b>LE.46</b>  <b>THE USE OF DYNAMIC SWITCHING LIQUID CRYSTALS AS A REPLACEMENT FOR GAS CHROMATOGRAPHY</b>  <i>Peter Myers</i>  <i>Department of Chemistry - University of Liverpool, Liverpool, United Kingdom</i></p>
09:10	<p><b>LE.41</b>  <b>PORTABLE CAPILLARY LIQUID CHROMATOGRAPHY: UV-LED DETECTION WITH Z-CELL DESIGNS</b>  <i>Mirek Macka<sup>1</sup>, Shing C. Lam<sup>1,2</sup>, Paull Brett<sup>1,2</sup>, Pavel N. Nesterenko<sup>1,2</sup>, Roger Stanley<sup>2</sup>, Paul R. Haddad<sup>1,2</sup></i>  <sup>1</sup> School of Physical Sciences and Australian Centre for Research on Separation Sciences (ACROSS) - University of Tasmania, Hobart, Australia  <sup>2</sup> ARC Training Centre for Portable Analytical Separation Technologies (ASTech) and School of Physical Sciences, University of Tasmania, Hobart, Australia  <sup>3</sup> Centre for Food Innovation - University of Tasmania, Launceston, Australia</p>	<p><b>LE.47</b>  <b>CONTINUING THE STUDY OF THE UNIQUE SELECTIVITY OF IONIC LIQUID GC STATIONARY PHASES</b>  <i>Len Sidisky, Jamie Desorcie, Greg Baney, Mike Halpenny, Kathy Kiefer</i>  <i>Gas Separations R&amp;D - MilliporeSigma, Bellefonte, United States</i></p>
09:30	<p><b>LE.42</b>  <b>CHIP-BASED LIQUID CHROMATOGRAPHY ANALYSIS FOR BIOLOGICAL COMPOUNDS</b>  <i>Makoto Tsunoda</i>  <i>University of Tokyo, Bunkyo, Tokyo, Japan</i></p>	<p><b>LE.48</b>  <b>NEW QUINOLINIUM IONIC LIQUIDS AS STATIONARY LIQUID PHASES FOR CAPILLARY GAS CHROMATOGRAPHY</b>  <i>Mikhail V. Shashkov<sup>1,2</sup>, Vladimir N. Sidelnikov<sup>2</sup>, Alina A. Bratchikova<sup>1</sup></i>  <sup>1</sup> Department of Natural Sciences - Novosibirsk State University, Pirogova, Novosibirsk, Russia  <sup>2</sup> Analytical Laboratory - Borekov Institute of Catalysis SB RAS, Novosibirsk, Russia</p>



09:50	<p><b>LE.43</b>  <b>MULTI-MECHANISM DETECTIONS WITH MINIATURIZED MICROMACHINED GAS CHROMATOGRAPHY</b>  <i>Ronda Gras<sup>1,2</sup>, Jim Luong<sup>1,3</sup>, Paul R. Haddad<sup>2</sup>, Robert A. Shellie<sup>2,4</sup></i>  <sup>1</sup> <i>Analytical Sciences - Dow Chemical, Fort Saskatchewan, Canada</i>  <sup>2</sup> <i>ARC Training Center for Portable Analytical Separation Technologies (ASTech) - University of Tasmania, Hobart, Australia</i>  <sup>3</sup> <i>Australian Center for Research on Separation Science (ACROSS) - University of Tasmania, Hobart, Australia</i>  <sup>4</sup> <i>Trajan Scientific and Medical, Victoria, Australia</i></p>	<p><b>LE.49</b>  <b>A NEW LOW-BLEED, INERT, AND HIGHLY EFFICIENT 65% PHENYL-CONTAINING POLYSILOXANE STATIONARY PHASE</b>  <i>Shawn L. Reese</i>  <i>R &amp; D - Restek, Shingle Springs, United States</i></p>
10:10	<p><b>LE.44</b>  <b>A NOVEL ROBUST LCMS PROTEOMICS APPROACH USING MICRO PILLAR ARRAY COLUMNS (µPAC™)</b>  <i>Paul Jacobs<sup>1</sup>, Jeff Op de Beeck<sup>1</sup>, Wim De Malsche<sup>2</sup>, Gert Desmet<sup>2</sup>, Pamela Saliba<sup>2</sup>, Tabiwang Arrey<sup>3</sup>, Aaron Gajadhar<sup>2</sup>, Aran Paulus<sup>3</sup></i>  <sup>1</sup> <i>PharmaFluidics - PharmaFluidics, Technologiepark, Gent, Belgium</i>  <sup>2</sup> <i>Vrije Universiteit Brussel, Brussel, Belgium</i>  <sup>3</sup> <i>Thermo Fisher Scientific, Dreieich, Germany</i>  <sup>4</sup> <i>Thermo Fisher Scientific Inc, CA, San Jose, United States</i></p>	<p><b>LE.50</b>  <b>UNIQUE AND EFFICIENT SEPARATIONS USING ORDERED CARBON STATIONARY PHASES</b>  <i>Susan V. Olesik</i>  <i>Department of Chemistry and Biochemistry - The Ohio State University, Columbus, United States</i></p>
<p><b>10:30 – 12:00 Coffee Break – Seminars – Exhibition – Posters J, P</b></p>		
10:45 – 11:45	<p><b>Room 1000 Seminar</b></p> <p><b>PERKINELMER</b>  <i>See page 42 for details</i></p>	<p><b>Room 300 Seminar</b></p> <p><b>BRECHBUELER</b>  <i>See page 42 for details</i></p>
<p><b>12:00 – 13:30 Room 300</b>  <b>Short Course: Scientific writing and publishing</b>          Presenter: Paul Haddad, Frantisek Svec, Emily Hilder</p> <p>12:00 – 12:10: Brief introduction to the presenters and aims of the session;          12:10 – 12:35: Preparation of a scientific manuscript;          12:35 – 13:05: The editorial process and how to respond to reviewers;          13:05 – 13:15: Preparation and presentation of posters;          13:15 – 13:30: Questions and panel discussion</p>		
<p><b>12:00 – 14:00 Lunch Break</b></p>		
14:00 – 15:40	<p><b>ISCC Session 10 – SAMPLE PREPARATION 1 - Room 1000</b>  <i>Chairpersons:</i>  <i>Abdul Malik, University of South Florida, Tampa, United States</i>  <i>Eleftheria Psillakis, Technical University of Crete, Greece</i></p>	<p><b>ISCC Session 11 – ELECTRODRIVEN TECHNIQUES - Room 300</b>  <i>Chairpersons:</i>  <i>Ken Broeckhoven, Vrije Universiteit Brussel, Brussels, Belgium</i>  <i>Paul Haddad, University of Tasmania, Australia</i></p>

<p>14:00</p>	<p><b>LE.51</b>  <b>NEW SPME DEVELOPMENTS FOR ON-SITE ANALYSIS</b>  Janusz Pawliszyn  Chemistry Department - University of Waterloo, Waterloo, ON, Canada</p>	<p><b>LE.56</b>  <b>SENDING A SMS: SNAIL-MAIL SEPARATIONS</b>  Pavisara Nanthasurasak<sup>1</sup>, Hong Heng See<sup>2</sup>, Rosanne Guijt<sup>3</sup>, <u>Michael C. Breadmore</u><sup>4,5</sup>  <sup>1</sup> University of Tasmania, School of Natural Sciences, Australia  <sup>2</sup> Universiti Teknologi Malaysia, Centre for Sustainable Nanomaterials, Ibnu Sina Institute for Scientific and Industrial Research, Malaysia  <sup>3</sup> Deakin University, Centre for Rural and Regional Futures, Australia  <sup>4</sup> School of Physical Sciences and Australian Centre for Research on Separation Science (ACROSS) - University of Tasmania, Australia  <sup>5</sup> ARC Centre of Excellence for Electromaterials Science and School of Physical Sciences - University of Tasmania, Australia</p>
<p>14:20</p>	<p><b>LE.52</b>  <b>EXPLORING THE APPLICATION OF GRAPHENE OXIDE NANOPARTICLES AS DISPERSIVE SOLID-PHASE EXTRACTION SORBENT FOR PHTHALIC ACID ESTERS EXTRACTION</b>  Álvaro Santana-Mayor, Bárbara Socas-Rodríguez, <u>Javier Hernández-Borges</u>, Miguel Ángel Rodríguez-Delgado  Departamento de Química - Universidad de La Laguna, La Laguna, Spain</p>	<p><b>LE.57</b>  <b>A MICROFLUIDIC PLATFORM FOR ELECTROCHEMICAL CONCENTRATION AND DETECTION OF LANTHANIDES AND ACTINIDES</b>  <u>Cornelius F. Ivory</u>, Daniel E. Molina, Adan Medina, Haluk Beyenal  Voiland School of Chemical Engineering and Bioengineering - Washington State University, Pullman, United States</p>
<p>14:40</p>	<p><b>LE.53</b>  <b>EXPLORING THE UNIQUE CHROMATOGRAPHIC AND EXTRACTION PROPERTIES OFFERED BY METAL-CONTAINING IONIC LIQUIDS</b>  Jared L. Anderson  Department of Chemistry - Iowa State University, Ames, United States</p>	<p><b>LE.58</b>  <b>HYPHENATED AND ELECTROMIGRATION TECHNIQUES IN THE STUDY OF RHODIUM COMPLEXES POLYCONDENSATION</b>  <u>Olga V. Shuvaeva</u><sup>1,2</sup>, Victoria V. Volchek<sup>1</sup>, Valentina A. Podolinnaya<sup>2</sup>, Semen N. Berdyugin<sup>1</sup>  <sup>1</sup> Analytical laboratory - Nikolaev Institute of Inorganic chemistry, Novosibirsk, Russia  <sup>2</sup> Novosibirsk State University, Novosibirsk, Oblast, Russia</p>
<p>15:00</p>	<p><b>LE.54</b>  <b>VERSATILITY AND FLEXIBILITY OF SOLID-PHASE MICROEXTRACTION BASED SAMPLING SYSTEMS</b>  <u>Maria-Liisa Riekkola</u><sup>1,2</sup>, Luis M. Barreira<sup>1,2</sup>, Hangzhen Lan<sup>1,2</sup>, Jevgeni Parshintsev<sup>1,2</sup>, Kari Hartonen<sup>1,2</sup>, Matti Jussila<sup>1,2</sup>, Jaana Back<sup>1,2</sup>  <sup>1</sup> Department of Chemistry and INAR, Institute for Atmospheric and Earth System Research - University of Helsinki, Helsinki, Finland  <sup>2</sup> Department of Forest Sciences - University of Helsinki, Helsinki, Finland</p>	<p><b>LE.59</b>  <b>CAPILLARY ELECTROPHORESIS HYPHENATED TO ICP-MS: METHOD DEVELOPMENT FOR ANALYZING METALLOTHIONEINS, SILVER IONS AND SILVER NANOPARTICLES</b>  <u>Bernhard Michalke</u><sup>1</sup>, Ivana Vinkovic-Vrcek<sup>2</sup>  <sup>1</sup> Research Unit Analytical BioGeoChemistry - Helmholtz Zentrum München GmbH, Neuherberg, Germany  <sup>2</sup> Analytical Toxicology and Mineral Metabolism Unit - Institute for Medical Research and Occupational Health, Zagreb, Croatia</p>
<p>15:20</p>	<p><b>LE.55</b>  <b>MICROSCALE SAMPLING COUPLED TO LC-MS/MS FOR HIGHLY SELECTIVE DETERMINATION OF MINOR ANALYTES IN FOOD AND ENVIRONMENTAL MATRICES</b>  Fernando M. Lencas  Institute of Chemistry at Sao Carlos - University of Sao Paulo, Sao Carlos, Brazil</p>	<p><b>LE.60</b>  <b>DEVELOPMENT OF HIGH EFFICIENCY COMPREHENSIVE LIQUID CHROMATOGRAPHY AND CAPILLARY ELECTROPHORESIS APPROACHES FOR ENHANCED NATURAL AND SYNTHETIC OLIGONUCLEOTIDE ANALYSIS</b>  <u>Frederic Lynen</u>, Mathijs Baert, Ravindra S. Hegade  Separation Science Group - Ghent University, Ghent, Belgium</p>

<p>15:45 – 16:45</p>	<p><b>Room 1000 Seminar</b></p> <p><b>MERCK</b> See page 42 for details</p>	<p><b>Room 300 Seminar</b></p> <p><b>RESTEK</b> See page 472 for details</p>
	<p><b>Room 100 Seminar</b></p> <p><b>ELEMENTAR</b> See page 42 for details</p>	
<p>17:00 – 18:30</p>	<p><b>ISCC KEYNOTE LECTURES: 1 - Room 1000</b> Chairpersons: Jared L. Anderson, Iowa State University, USA Javier Hernández-Borges, Universidad de La Laguna, Spain</p>	<p><b>ISCC KEYNOTE LECTURES: 2 - Room 300</b> Chairpersons: Frederic Lynen, Ghent University, Belgium Marja-Liisa Riekkola, University of Helsinki, Finland</p>
<p>17:00</p>	<p><b>KNL.15 ONLINE SAMPLE PREPARATION METHOD FOR COMPLEX SAMPLE ANALYSIS</b> Gongke Li School of Chemistry and Chemical Engineering - Sun Yat-sen University, Guangzhou, China</p>	<p><b>KNL.21 VERY HIGH EFFICIENCY OPEN-TUBULAR CAPILLARY COLUMN FOR THE SEPARATION OF PEPTIDES AND TRYPTIC DIGEST OF CYTOCHROME C</b> Ali Ashraf Inha University, Korea</p>
<p>17:15</p>	<p><b>KNL.16 ANALYTICAL CHALLENGES IN PHOTODEGRADATION STUDIES</b> <u>Alessandro Casilli</u><sup>1</sup>, Valerie Hewins<sup>1</sup>, Matthew Emberger<sup>1</sup>, Alain D. Jaquier<sup>2</sup>, Jianming Lin<sup>1</sup> <sup>1</sup> Corporate R&amp;D Division - Firmenich Inc., Plainsboro, United States <sup>2</sup> Corporate R&amp;D Division - Firmenich SA, Geneva, Switzerland</p>	<p><b>KNL.22 MASS SPECTROMETRY SOLUTIONS USING TANDEM ELECTRON IONISATION TO IMPROVE RAW DATA QUALITY IN METABOLOMIC STUDIES</b> Anne-Lise Royer<sup>1</sup>, Emmanuelle Bichon<sup>1</sup>, Aaron Parker<sup>2</sup>, Yann Guillon<sup>1</sup>, Bruno Le Bizec<sup>1</sup> <sup>1</sup> LABCERCA/INRA UMR 1329 - ONIRIS, Nantes, France <sup>2</sup> SepSolve Analytical Ltd, Peterborough, United Kingdom</p>
<p>17:30</p>	<p><b>KNL.17 GAS CHROMATOGRAPHY COUPLED WITH CONDENSED PHASE FTIR: A NOVEL AND RELIABLE TECHNIQUE FOR FLAVOR AND FRAGRANCE ANALYSIS</b> <u>Marqita Utczás</u><sup>1,2</sup>, Emanuela Trovato<sup>2</sup>, Filippo Alibrando<sup>3</sup>, Federica Vento<sup>2</sup>, Luigi Mondello<sup>3,2</sup> <sup>1</sup> Center of Sports Nutrition Science - University of Physical Education, Budapest, Hungary <sup>2</sup> Chromaleont s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Polo Annunziata, Viale Annunziata, 98168 Messina, Italy <sup>3</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Polo Annunziata, Viale Annunziata, 98168 Messina, Italy</p>	<p><b>KNL.23 CHARACTERIZATION OF FUNCTIONAL BARRIER PROPERTIES FOR FOOD CONTACT MATERIALS</b> <u>Andrea Walzl</u><sup>1</sup>, Samir Kopacic<sup>2</sup>, Wolfgang Bauer<sup>2</sup>, Erich Leitner<sup>1</sup> <sup>1</sup> Institute of Analytical Chemistry and Food Chemistry - University of Technology Graz, Graz, Austria <sup>2</sup> Institute of Paper, Pulp and Fibre Technology - University of Technology Graz, Graz, Austria</p>

17:45	<p><b>KNL.18</b>  <b>VACUUM ULTRAVIOLET DETECTION IN GAS CHROMATOGRAPHY: IS IT A COMPLIMENTARY TOOL TO MASS SPECTROMETRY?</b>  <u>Ben Baars</u><sup>1</sup>, Kevin A. Schug<sup>2</sup>, Sjaak de Koning<sup>3</sup>  <sup>1</sup> VUV Analytics - EU Business Development, Cedar Park, Cedar Park, United States  <sup>2</sup> Analytical Chemistry Department of Chemistry &amp; Biochemistry - University of Texas at Arlington, Arlington, United States  <sup>3</sup> Da Vinci Laboratory Solutions, Rotterdam, Netherlands</p>	<p><b>KNL.24</b>  <b>MULTIDIMENSIONAL LIQUID-GAS CHROMATOGRAPHY COUPLED TO A SIMULTANEOUS DETECTION BY ISOTOPE RATIO MASS SPECTROMETRY AND QUADRUPOLE MASS SPECTROMETRY FOR OLIVE OIL TRIGLYCERIDES ANALYSIS</b>  <u>Danilo Sciarrone</u><sup>1</sup>, Antonino Schepis<sup>1</sup>, Luigi Mondello<sup>1,2</sup>  <sup>1</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli studi di Messina, Messina, Italy  <sup>2</sup> Chromaleont s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Messina, Italy</p>
18:00	<p><b>KNL.19</b>  <b>TRACING THE THERMAL HISTORY OF SEAFOOD PRODUCTS THROUGH LYSOPHOSPHOLIPID ANALYSIS BY HYDROPHILIC INTERACTION LIQUID CHROMATOGRAPHY-ELECTROSPRAY IONIZATION AND FOURIER-TRANSFORM MASS SPECTROMETRY</b>  <u>Ilario Losito</u><sup>1,2</sup>, Laura Facchini<sup>1</sup>, Rosa Catucci<sup>1</sup>, Tommaso Cataldi<sup>1,2</sup>, Francesco Palmisano<sup>1,2</sup>  <sup>1</sup> Department of Chemistry - University of Bari Aldo Moro, Bari, Italy  <sup>2</sup> SMART Inter-department Research Center - University of Bari Aldo Moro, Bari, Italy</p>	<p><b>KNL.25</b>  <b>VOLATILE ORGANIC COMPOUND PROFILING FROM POSTMORTEM MICROBES TO ASSIST IN FORENSIC SEARCH AND RECOVERY</b>  Kevin E. Eckert, Terezie Cernosek, David O. Carter, <u>Katelynn A. Perrault</u>  Forensic Sciences Unit, Division of Natural Sciences and Mathematics - Chaminade University of Honolulu, Honolulu, United States</p>
18:15	<p><b>KNL.20</b>  <b>COMBINED STRATEGIES OF ANALYTICAL TECHNIQUES AND BIOCHEMICAL METHODS FOR THE CHARACTERIZATION OF BIOACTIVE COMPONENTS IN VEGETABLE MATRICES</b>  <u>Nicola Marchetti</u><sup>1</sup>, Alberto Cavazzini<sup>1</sup>, Caterina Bergantini<sup>1</sup>, Annalisa Maietti<sup>1</sup>, Giordana Feriotto<sup>1</sup>, Carlo Mischiati<sup>2</sup>  <sup>1</sup> Department of Chemistry and Pharmaceutical Sciences - University of Ferrara, Ferrara, Italy  <sup>2</sup> Department of Biomedical Sciences and Surgical Specialties - University of Ferrara, Ferrara, Italy</p>	<p><b>KNL.26</b>  <b>STATIONARY PHASES FOR GAS CHROMATOGRAPHY BASED ON POLYMERS WITH INTRINSIC POROSITY - THEORY AND PRACTICE</b>  Alexander Kurganov<sup>1</sup>, Alexander Korolev<sup>1</sup>, Maxim Bermeshev<sup>2</sup>, Valeriya Shiryayeva<sup>1</sup>, <u>Anastasiia Kanateva</u><sup>1</sup>  <sup>1</sup> Chromatography lab - Inst. Petrochem. Sint., Lenin av., Moscow, Russia  <sup>2</sup> Sil.polymers lab - Inst. Petrochem. Sint., Lenin av., Moscow, Russia</p>
21:00 – 23:00 Discussion - Comprehensive Techniques, Conference Centre - Room 1000		

## Friday, May 18, 2018

08:30 – 10:10	<p><b>ISCC Session 12 - CAPILLARY GC 2 - Room 1000</b>  <b>Chairpersons:</b>  <i>Jim Luong, University of Tasmania, Australia</i>  <i>Danilo Sciarone, University of Messina, Italy</i></p>	<p><b>ISCC Session 13 – Sample Preparation 2 - Room 300</b>  <b>Chairpersons:</b>  <i>Torsten Schmidt, University Duisburg-Essen, Germany</i>  <i>Len Sidisky, Gas Separations R&amp;D – MilliporeSigma, USA</i></p>
08:30	<p><b>LE.61  ADVANCES IN THE CHARACTERIZATION OF PERFUME INGREDIENTS: FOCUS ON WOODY SUBSTANCES</b>  <i>Jean-Jacques Filippi</i>  <i>Institut de Chimie de Nice - Université Nice-Sophia Antipolis, Nice Cedex 2, France</i></p>	<p><b>LE.66  DEMONSTRATING THE APPLICATION OF NATURAL DEEP EUTECTIC SOLVENTS FOR EXTRACTION AND GREEN CHROMATOGRAPHY</b>  <i>Adam Sutton<sup>1</sup>, Cristiano Funari<sup>2</sup>, Dario Arrua<sup>1</sup>, Karina Fraige<sup>3</sup>, Gabriel M. Leme<sup>4</sup>, Alberto Cavaleiro<sup>1</sup>, Vanderlan Bolzan<sup>1</sup>, Emily Hilder<sup>1</sup></i>  <sup>1</sup> <i>University of South Australia, Adelaide, Australia</i>  <sup>2</sup> <i>School of Agricultural Sciences - São Paulo State University, Botucatu, Brazil</i>  <sup>3</sup> <i>Institute of Chemistry - São Paulo State University, Araraquara, Brazil</i>  <sup>4</sup> <i>São Paulo State University, Araraquara, Brazil</i></p>
08:50	<p><b>LE.62  IDENTIFICATION OF 'CHARACTERISING FLAVOUR' IN TOBACCO PRODUCTS</b>  <i>Zuzana Zelinkova, Thomas Wenzl</i>  <i>Joint Research Centre - European Commission, Geel, Belgium</i></p>	<p><b>LE.67  IN-TUBE EXTRACTION: OPTIMIZATION STRATEGIES AND APPLICATIONS IN FOOD AND ENVIRONMENTAL SCIENCE</b>  <i>Maik A. Jochmann<sup>1</sup>, Beat Schilling<sup>2</sup>, Wiebke Kaziur<sup>1</sup>, Torsten C. Schmidt<sup>1,3</sup></i>  <sup>1</sup> <i>Instrumental Analytical Chemistry - University of Duisburg-Essen, Essen, Germany</i>  <sup>2</sup> <i>BGB Analytik AG, Adliswil, Switzerland</i>  <sup>3</sup> <i>ZWU, University of Duisburg-Essen, Essen, Germany</i></p>
09:10	<p><b>LE.63  HOW CHROMATOGRAPHY LISTENS TO PLANT-PLANT AND PLANT-INSECT COMMUNICATION</b>  <i>Elena Stashenko, Fausto Prada, Jairo R. Martínez</i>  <i>Cenivam-Chemistry - Industrial University of Santander, Bucaramanga, Colombia</i></p>	<p><b>LE.68  ANALYSIS OF POLYFUNCTIONAL THIOLS IN WINE BY SOLVENT-ASSISTED STIR BAR SORPTIVE EXTRACTION WITH IN-SITU DERIVATIZATION AND THERMAL DESORPTION-GAS CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY ( DER - SA-SBSE-TD-GC-MS/MS)</b>  <i>Nobuo Ochiai<sup>1</sup>, Kikyo Sasamoto<sup>1</sup>, Frank David<sup>2</sup>, Pat Sandra<sup>2</sup></i>  <sup>1</sup> <i>Gerstel K.K., Tokyo, Japan</i>  <sup>2</sup> <i>Research Institute for Chromatography, Kortrijk, Belgium</i></p>
09:30	<p><b>LE.64  INVESTIGATION OF TRIGLYCERIDE AND FATTY ACID COMPOSITION OF EDIBLE OILS BY OFFLINE LC-GC</b>  <i>Pierluigi Delmonte<sup>1</sup>, Andrea Milan<sup>1,2</sup></i>  <sup>1</sup> <i>US Food and Drug Administration, College Park, United States</i>  <sup>2</sup> <i>Dip. Scienze degli Alimenti - University of Udine, Sondrio, Italy</i></p>	<p><b>LE.69  EXPLORING THE POTENTIAL OF WATER COMPATIBLE STATIONARY PHASES FOR THE DETERMINATION OF BIOACTIVE COMPOUNDS IN AQUEOUS SAMPLES IN PLANT AND FRAGRANCE FIELDS</b>  <i>Cecilia Caqliero, Carlo Bicchi, Chiara Cordero, Erica Liberto, Patrizia Rubiolo, Barbara Sgorbini</i>  <i>Dipartimento di Scienza e Tecnologia del Farmaco - Università di Torino, Torino, Italy</i></p>

09:50	<p><b>LE.65</b>  <b>MDGC SPARKED REVIVAL OF MICROWAVE-INDUCED HELIUM PLASMA ATOMIC EMISSION SPECTROSCOPY DETECTION</b>  <u>Robert A. Shellie</u><sup>1,2</sup>, Ronda Gras<sup>3,2</sup>, Jim Luong<sup>3,2</sup>  <sup>1</sup> Trajan Scientific and Medical, Ringwood, Australia  <sup>2</sup> ASTech - University of Tasmania, Hobart, Australia  <sup>3</sup> Dow Chemical Canada, Fort Saskatchewan, Canada</p>	<p><b>LE.70</b>  <b>VACUUM-ASSISTED HEADSPACE (MICRO)EXTRACTION EXPANDS INTO NEW EXTRACTION METHODS, COMPLEX MATRICES AND AUTOMATION</b>  Maria Vakinti<sup>1</sup>, Nicoleta Solomou<sup>1</sup>, Sofia M. Mela<sup>1</sup>, Niki Koutela<sup>1</sup>, Emanuela Gionfriddo<sup>2,3</sup>, Janusz Pawliszyn<sup>2</sup>, <u>Eleftheria Psillakis</u><sup>1</sup>  <sup>1</sup> Department of Environmental Engineering - Technical University of Crete, Polytechnioupolis, Chania Crete, Greece  <sup>2</sup> Department of Chemistry - University of Waterloo, University campus, Waterloo, Canada  <sup>3</sup> Department of Chemistry and Biochemistry - University of Toledo, Toledo, United States</p>
10:10 – 10:40 Coffee Break - Exhibition		
10:40 – 12:20	<p><b>ISCC Session 14 – LC and SFC ADVANCES - Room 1000</b>  Chairpersons:  Salvatore Fanali, Institute of Chemical Methodologies, Italy  Susan V. Olesik, The Ohio State University, USA</p>	<p><b>ISCC Session 15 – SAMPLE PREPARATION 3 - Room 300</b>  Chairpersons:  Fernando M. Lancas, University of Sao Paulo, Brazil  Janusz Pawliszyn, University of Waterloo, Canada</p>
10:40	<p><b>LE.71</b>  <b>SFC-MS FROM NON-POLAR TO HIGHLY POLAR COMPOUNDS: APPLICATION IN METABOLOMICS</b>  <u>Jean-Luc Veuthey</u>, Vincent Desfontaine, Davy Guillaume  School of Pharmaceutical Sciences - University of Geneva, Geneva, Switzerland</p>	<p><b>LE.76</b>  <b>AUTOMATED SAMPLE PREPARATION HYPHENATED TO GC-MS: FROM FAST FOOD TO "HAUTE CUISINE"</b>  <u>Frank David</u>, Christophe Devos, Tatiana Cucu, Bart Tienpont, Pat Sandra  R.I.C. , Kortrijk, Belgium</p>
11:00	<p><b>LE.72</b>  <b>ULTRAFAST CHROMATOGRAPHY WITH MODERN CHIRAL STATIONARY PHASES</b>  <u>Alberto Cavazzini</u><sup>1</sup>, Martina Catani<sup>1</sup>, Omar H. Ismail<sup>2</sup>, Francesco Gasparrin<sup>2</sup>  <sup>1</sup> Department of Chemistry and Pharmaceutical Sciences - University of Ferrara, Ferrara, Italy  <sup>2</sup> Department of Drug Chemistry and Technology - "Sapienza" University of Rome, Rome, Italy</p>	<p><b>LE.77</b>  <b>TRANSITION METAL OXIDE-BASED SOL-GEL STATIONARY PHASES AND EXTRACTION MEDIA FOR ANALYTICAL SEPARATIONS AND SAMPLE PREPARATIONS IN THE CAPILLARY FORMAT</b>  Abdul Malik  Chemistry - University of South Florida, Tampa , United States</p>
11:20	<p><b>LE.73</b>  <b>TURBULENT SUPERCRITICAL FLUID CHROMATOGRAPHY IN OPEN TUBULAR COLUMNS. THEORY AND EXPERIMENTAL PROMISES</b>  Fabrice Griitti  Instrument/Core Research/Fundamental - Waters Corporation, Milford, United States</p>	<p><b>LE.78</b>  <b>MINIATURIZED EXTRACTION APPROACHES FOLLOWED BY GC-MS/MS AND LCMS/MS FOR THE DETERMINATION OF PERSONAL CARE PRODUCTS IN COSMETICS AND IN THE ENVIRONMENT. PHOTODEGRADATION STUDIES</b>  <u>Maria Llompart</u><sup>1</sup>, Marlene Vila<sup>1</sup>, Maria Celeiro<sup>1</sup>, Carmen Garcia-Jares<sup>1</sup>, Rocio Facorro<sup>2</sup>, Thierry Dagnac<sup>2</sup>  <sup>1</sup> Department of Analytical Chemistry, Nutrition and Food Science - University of Santiago de Compostela, Campus Vida, Santiago de Compostela, Spain  <sup>2</sup> INGACAL. CIAM. XUNTA DE GALICIA, CORUÑA, Spain</p>

11:40	<p><b>LE.74</b>  <b>CAPILLARY COLUMNS IN SFC: PAST, CURRENT, AND FUTURE</b>  <i>Lucie Nováková</i>  <i>Department of Analytical Chemistry,</i>  <i>Faculty of Pharmacy - Charles University in Prague, Hradec Králové, Czech Republic</i></p>	<p><b>LE.79</b>  <b>IN-TUBE SPME (BIFUNCTIONAL MONOLITHIC PHASE) DIRECTLY COUPLED TO MS/MS TO DETERMINE AMINO ACIDS AND NEUROTRANSMITTERS IN PLASMA SAMPLES FROM SCHIZOPHRENIC PATIENTS</b>  <i>Maria Eugênia Queiroz Nassur, Luis F. Cabral Miranda</i>  <i>Química - Universidade de Sao Paulo/FFCLRP, Sao Paulo, Brazil</i></p>
12:00	<p><b>LE.75</b>  <b>INTERACTION BETWEEN PLANTS AND XENOBIOTICS: UPTAKE AND METABOLIZATION OF SEVERAL CLASSES OF WIDELY USED DRUGS BY EDIBLE PLANTS</b>  <i>Christian W. Klampfl<sup>1</sup>, Lisa Emhofer<sup>1</sup>, Franz Mlynek<sup>1</sup>, Bernd Reichl<sup>1</sup>, Markus Himmelsbach<sup>1</sup>, <u>Wolfgang Buchberger<sup>1</sup></u>, Spephan Zezulka<sup>2</sup>, Jan Triska<sup>2</sup></i>  <sup>1</sup> Johannes Kepler University Linz, Altenbergerstrass, Linz, Austria  <sup>2</sup> Masaryk University, Brno, Czech Republic  <sup>3</sup> Academy of Sciences of the Czech Republic, Brno, Czech Republic</p>	<p><b>LE.80</b>  <b>COMPREHENSIVE ANALYSIS OF PAH, ALKYLATED PAH AND PCBS</b>  <i>Albert Robbat<sup>1</sup>, Benjamin Nicolaysen</i>  <i>Department of Chemistry - Tufts University, Medford, United States</i></p>
<p><b>12:20 – 12:30 Giovanni Dugo Award presentation – Room 1000</b>  <b>Chairpersons:</b>  <i>Pat Sandra, R.I.C. , Kortrijk, Belgium</i>  <i>Giovanni Dugo, University of Messina, Italy</i></p>		
12:30 – 12:50	<p><b>LE. 81 'Giovanni Dugo' Award Lecture</b>  <b>IONIC LIQUIDS AS GC STATIONARY PHASES IN THE FLAVOUR AND FRAGRANCE FIELD</b>  <i>Carlo Bicchi<sup>1</sup>, Jared Anderson<sup>2</sup>, Stefano Galli<sup>3</sup>, Maria Mazzucotelli<sup>1</sup>, Barbara Sgorbini<sup>1</sup>, Cecilia Cagliari<sup>1</sup></i>  <sup>1</sup> DSTF - University of Torino, Torino, Italy  <sup>2</sup> Department of Chemistry - Iowa State University, United States  <sup>3</sup> MEGA S.r.l., Legnano (MI), Italy</p>	
<p><b>12:50-13:10 Closing Address 42<sup>nd</sup> ISCC – Room 1000</b>  <b>Chairperson:</b>  <i>Luigi Mondello, University of Messina, Italy</i></p>		
<p><b>12:50 – 13:10 Presentation of the Leslie S. Etre Award sponsored by PERKINELMER, Inc.</b></p> <p><b>Presentation of the Best Poster/Oral Awards:</b>  <b>Genzo Shimadzu Best Oral/Poster Award</b>  <b>Chromatographia-Springer Best Poster Award</b>  <b>Analytical Methods Best Poster Award</b>  <b>Journal of Chromatography A: Young Scientist Award</b></p> <p><b>Closing Address</b></p>		
<p><b>13:15 Farewell Cocktail, offered by Waters Corporation, Conference Center</b></p>		

## -VENDOR SEMINARS-

**Tuesday, May 15, 2018**

Timing	Location	Vendor seminar by
15:45 – 16:45	Room 1000	<p><b>SHIMADZU</b>  <b>Next Generation solutions for complex samples</b></p> <ul style="list-style-type: none"> <li>- Shimadzu's new GC with cutting edge micro-flow technologies Haruhiko Miyagawa – Shimadzu Corporation, Japan</li> <li>- Resolving complex analytical issues by using powerful GCxGC-MS methodologies with the support of novel mass spectral databases Peter Tranchida – University of Messina, Italy</li> <li>- Nexera Mikros – Micro Scale. Mega Features Stephane Moreau – Shimadzu Europa GmbH, Germany</li> </ul>
15:45 – 16:45	Room 300	<p><b>LECO</b></p> <ul style="list-style-type: none"> <li>- GCxGC-(HR) TOFMS : A Key Player in Your Toolbox Jean-François Focant, University of Liège, Belgium</li> </ul>
15:45 – 16:45	Room 100	<p><b>JSB/ZOEX</b></p> <ul style="list-style-type: none"> <li>- Advantages of using MSD HES source as a detector for GCXGC in relation to diverse analytical challenges</li> <li>- Update on new features in GC image software Version 2.7, Release 3 Daniela Peroni, JSB-Zoex Europe – Eindhoven, Netherlands</li> </ul>
18:45-20:00	Room 100	<p><b>Agilent Technologies Users meeting</b></p>

**Wednesday, May 16, 2018**

Timing	Location	Vendor seminar by
10:45 – 11:45	Room 1000	<p><b>AGILENT TECHNOLOGIES</b>  <b>Purposeful innovation for Practical Analytical Improvement</b></p> <ul style="list-style-type: none"> <li>- Lipid and fatty acid analysis using state-of-art gas chromatography Frank David, Research Institute for Chromatography, Belgium</li> <li>- Comprehensive 2D-GC a "gestalt" in separation science Chiara Emilia Cordero, Dipartimento di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Italy</li> <li>- INTUVO GC: High- Throughput and Flexibility for Fast Fragrance Analysis Alessandro Casilli, R&amp;D North America, Firmenich Inc, US</li> </ul>



10:45 – 11:45	Room 300	<p><b>DANI</b></p> <ul style="list-style-type: none"> <li>- <i>The Ultimate Flavor &amp; Fragrance Characterization Solution: GCTOFMS Condensed Phase FTIR with an extensive F&amp;F library</i> Bill Carson, DANI Instruments</li> <li>- <i>New Master MTAS: a robotic multi technique autosampler with dual simultaneous liquid injection and SPME</i> Albino Sironi – Stefano Dugheri, DANI Instruments and University of Florence, Italy</li> <li>- <i>Peak Blade 77: a revolutionary approach to LN2-free comprehensive GCxGC TOFMS</i> William Carson, DANI Instruments</li> </ul>
11:45 – 12:45	Room 1000	<p><b>WATERS</b></p> <ul style="list-style-type: none"> <li>- <i>Non-Target Profiling of Complex Petroleum-Derived Mixtures by Comprehensive Two-Dimensional Gas Chromatography/High Resolution Mass Spectrometry</i> Dave Bowman, University of Toronto, Canada</li> <li>- <i>Improvements in Analyte Range and Detection Using Triple Quadrupoles and Comprehensive GCxGC</i> Frank Dorman, The Pennsylvania State University, USA</li> <li>- <i>Multi-Dimensional Chromatography-Mass Spectrometry with MS as the Extra Dimension</i> Steve Preece, Waters Corporation, UK</li> </ul>
11:45 – 12:45	Room 300	<p><b>SEPSOLVE</b> <b>Chromatographic Space, the final frontier</b></p> <ul style="list-style-type: none"> <li>- <i>Take a tour through the chromatographic space as we demonstrate our ChromSpace software for GCxGC.</i> Laura McGregor, SepSolve Analytical</li> <li>- <i>Find out about our GCxGC product packages – no method development required!</i> Aaron Parker, SepSolve Analytical</li> <li>- <i>15 minutes of FAME(s) – Hear about how GCxGC-TOF MS/FID can be used for robust and detailed profiling of fatty acids.</i> Matthew Edwards, SepSolve Analytical</li> </ul>
11:45 – 12:45	Room 100	<p><b>JEOL</b> <b>Recent developments in JEOL Mass Instruments and GCxGC equipment/software</b></p> <ul style="list-style-type: none"> <li>- <i>GCxGC now and in the (recent) future. Latest developments in GCxGC devices and software</i> Jean-François Focant, University of Liège, Belgium</li> <li>- <i>Update on results with the JEOL InfiTOF</i> John Dane, JEOL USA</li> <li>- <i>Update on results with the JEOL AccuTOF GCX and PI</i> Anupam Giri, Sabc Analytical GTC-Europe T&amp;I</li> </ul>
15:45 – 16:45	Room 1000	<p><b>THERMO FISHER SCIENTIFIC</b></p> <ul style="list-style-type: none"> <li>- <i>The unstoppable GC-MS generation</i> Fausto Pigozzo, Thermo Fisher Scientific</li> <li>- <i>Fully automated GC-MS/MS analysis on environmental contaminants in surface waters: a recipe for lower cost in your lab</i> Cees Bijsterbosch, Het Waterlaboratorium, Haarlem, the Netherlands</li> <li>- <i>Accelerated Solvent Extraction with in-cell clean-up for PCB analysis with GC-HRMS and GC-MS/MS</i> Werner Tirlir, Eco-Research Bolzano, Italy</li> <li>- <i>Analytical achievements with the Orbitrap GC-MS in the Public Environmental Agency in Bozen</i> Flavio Ciesa, ARPA, Bolzano, Italy</li> </ul>

15:45 – 16:45	Room 300	<p><b>GERSTEL</b>  <i>New developments in automated sample-preparation using the GERSTEL platform</i></p> <p>- <i>Application of Stir Bar Sorptive Extraction GC-MS/MS to Water Analysis guided by EU Water Framework Directive</i>  Carlos Gil - Gerstel GmbH &amp; Co.KG, Mülheim an der Ruhr, Germany</p> <p>- <i>Solutions for Volatile Organic Compounds in Environmental and Food samples based on Headspace Techniques</i>  Frank David, Research Institute for Chromatography, Belgium</p>
15:45 – 16:45	Room 100	<p><b>VUV Analytics</b></p> <p>- <i>GC-VUV Analysis from R&amp;D to Production</i>  Alex Hodgson, VUV Analytics, Business Development EU, Cedar Park, Texas, USA  Ben Baars, VUV Analytics, Business Development EU, Cedar Park, Texas, USA</p>

## Thursday, May 17, 2018

Timing	Location	Vendor seminar by
10.45 – 11.45	Room 1000	<p><b>PERKINELMER</b></p> <p>- <i>Improved sampling techniques for person portable GC/MS</i>  Samuel Tolley, PerkinElmer</p>
10:45 – 11:45	Room 300	<p><b>BRECHBUEHLER</b></p> <p>- <i>Brechbuehler 9100 Series, new features enhanced capabilities</i>  Philippe Mottay, Roger Simon, Brechbuehler</p>
15:45 – 16:45	Room 1000	<p><b>MERCK</b></p> <p>- <i>Recent Developments in Chromatography at MilliporeSigma</i>  Len Sidisky - Merck, Bellefonte, PA, USA</p> <p>- <i>How can ionic liquids influence routine analysis in the flavour and fragrance fields?</i>  Cecilia Cagliero, Dipartimento di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Italy</p>
15:45 – 16:45	Room 300	<p><b>RESTEK</b></p> <p>- <i>Experience the power of Pro EZGC and Accelerate your separations without the need of a GC or a Column</i>  Jaap de Zeeuw and Chris Rattray, Restek Corporation</p>
15:45 – 16:45	Room 100	<p><b>ELEMENTAR</b></p> <p>- <i>Improving the user experience in GC-IRMS for authenticity and provenancing of natural components: Databasing and automatic data evaluation tools</i>  Filip Volders, Elementar, Hanau, Germany</p> <p>- <i>Simultaneous detection by isotope ratio mass spectrometry and quadrupole mass spectrometry coupled to multidimensional gas chromatography for the analysis of complex samples</i>  Danilo Sciarone, University of Messina, Messina, Italy</p>

**-POSTER LIST-**

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## A. FUNDAMENTALS

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**A.01 PROBING SELECTIVITY OF MIXED-MODE REVERSED-PHASE / WEAK-ANION-EXCHANGE LIQUID CHROMATOGRAPHY COLUMNS TO ADVANCE METHOD DEVELOPMENT**

*José L. Dores-Sousa, Sebastiaan Eeltink*

Department of Chemical Engineering - Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, Belgium

**A.02 DISCRIMINATION EFFECTS DURING LOW SPLIT INJECTIONS INTO MEGABORE CAPILLARY COLUMNS**

*Igor G. Zenkevich, Dmitrii A. Olisov*

Chemical - State University, Universitetskii prosp., 26, 198504 St. Petersburg, Russia

**A.03 SIMULATION OF THERMAL GRADIENT GC SEPARATION**

*Jan Leppert<sup>1</sup>, Peter Boeker<sup>1,2</sup>*

<sup>1</sup> Institute of Agricultural Engineering - University of Bonn, Nussallee 5, 53115 Bonn, Germany

<sup>2</sup> HyperChrom SA, Avenue de la Faïencerie 21, 1511 Luxembourg, Luxembourg

**A.04 STOCHASTIC VAN'T HOFF ANALYSIS IN CHIRAL CHROMATOGRAPHY**

*Annamária Sepsey<sup>1</sup>, Attila Felinger<sup>1,2</sup>*

<sup>1</sup> Department of Analytical and Environmental Chemistry - University of Pécs, Ifjúság útja 6., 7624 Pécs, Hungary

<sup>2</sup> Molecular Interactions in Separation Science Research Group - MTA-PTE, Ifjúság útja 6, H-7624 Pécs, Hungary

**A.05 EFFECT OF ANALYTE RETENTION ON THE MAXIMUM PERMISSIBLE SAMPLE INJECTION VOLUME FOR GRADIENT ELUTION SEPARATIONS ON POROUS GRAPHITIC CARBON**

*Katherine Simpson<sup>1</sup>, Emily Imes<sup>2</sup>, James Jorgenson<sup>2</sup>*

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## B. COLUMN TECHNOLOGY

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**B.01 CONFINED MONOLITHIC STATIONARY PHASES PREPARED BY THERMAL POLYMERIZATION**

*Marta Passamonti, Suhas H. Nawada, Noor Abdhussain, Peter J. Schoenmakers*

Van 't Hoff Institute for Molecular Sciences (HIMS) - University of Amsterdam, Science Park 904, 1098XH Amsterdam, Netherlands

**B.02 MODELLING RETENTION OF SMALL POLAR SOLUTES IN METHACRYLATE MONOLITHIC COLUMNS BY NANO-HPLC**

*José Antonio Navarro Huerta, Enrique J. Carrasco-Correa, José R. Torres-Lapasí, José M. Herrero-Martínez, María C. García-Alvarez-Coque*

Department of Analytical Chemistry - University of Valencia, Facultad de Química, c/Dr. Moliner 50, 46100 Burjassot, Spain

- B.03 IONIC LIQUID CAPILLARY COLUMNS FOR THE ANALYSIS OF FAME ISOMERS**  
*Len Sidisky, Greg A. Baney, James L. Desorcie, Kathleen Kiefer*  
 Gas Separations R&D - MilliporeSigma, 595 North Harrison Road, 16823 Bellefonte, United States
- B.04 SETTING A NEW HIGH IN WAX GC COLUMNS WITH AGILENT'S DB-HEAVYWAX**  
*Ngoc-A Dang<sup>1</sup>, John Oostdijk<sup>1</sup>, Frans Biermans<sup>1</sup>, Allen Vickers<sup>2</sup>, Vanessa Abercrombie<sup>2</sup>*  
<sup>1</sup> R&D - Agilent Technologies, Herculesweg 8, 4338 PL Middelburg, Netherlands  
<sup>2</sup> Supply Chain - Agilent Technologies, Blue Ravine Rd 91, 95630 Folsom, United States
- B.05 EVALUATION OF A NEW ULTRA INERT WAX GC COLUMN FOR THE ANALYSIS OF ORGANIC ACIDS, UNDERIVATIZED FATTY ACIDS, AND FAMES**  
*Gustavo Serrano Izaquirre, Phil Stremple, Allen Vickers, Yun Zou*  
 Agilent CrossLab Group - Chemistries and Supplies Division, 2850 Centerville rd, 19808 Wilmington, United States
- B.06 UNIQUE SELECTIVITY: THE POWER OF IONIC LIQUID CAPILLARY COLUMNS FOR ESSENTIAL OIL ANALYSIS**  
*Len Sidisky, Kathy Kiefer, Jamie Desorcie, Greg A. Baney*  
 MilliporeSigma, 595 North Harrison Road, 16823 Bellefonte, United States
- B.07 COMPARING IONIC LIQUID AND POLYSILOXANE STATIONARY PHASE SELECTIVITY FOR THE ANALYSIS OF POLYCYCLIC AROMATIC HYDROCARBONS**  
*Len Sidisky, Jamie Desorcie, Greg A. Baney*  
 MilliporeSigma, 595 North Harrison Road, 16823 Bellefonte, United States
- B.08 THE QUANTITATIVE MEASUREMENT OF WATER BY GAS CHROMATOGRAPHY USING IONIC LIQUID CAPILLARY COLUMNS**  
*Len Sidisky, Jamie Desorcie, Greg A. Baney, Michael Halpenny*  
 MilliporeSigma, 595 North Harrison Road, 16823 Bellefonte, United States
- B.09 SPLIT-INTEIN MEDIATED AFFINITY CHROMATOGRAPHY FOR THE PURIFICATION OF A C-INTEIN TAGGED PROTEIN**  
*Simona Felletti<sup>1</sup>, Nicole Ulmer<sup>2</sup>, Oliver Rammo<sup>3</sup>, Michael Schulte<sup>3</sup>, Alberto Cavazzini<sup>1</sup>, Massimo Morbidelli<sup>2</sup>*  
<sup>1</sup> Department of Chemistry and Pharmaceutical Sciences - University of Ferrara, via L. Borsari 46, 44121 Ferrara, Italy  
<sup>2</sup> Institute for Chemical and Bioengineering - ETH Zürich, Vladimir -Prelog -Weg 1/10, 8093 Zürich, Switzerland  
<sup>3</sup> Biopharm Process Solutions - Life Science - Merck KGaA, Frankfurter Strasse 250, 64293 Darmstadt, Germany
- B.10 CHARACTERISATION OF A NEW CAPILLARY GC COLUMN COATED WITH 1,7-DICARBACLOSO-DODECARBORANE PHENYLMETHYL SILOXANE COPOLYMER STATIONARY PHASE FOR GC-MS ANALYSIS OF POLYCHLORINATED BIPHENYL CONGENERS**  
*Robert A. Shellie<sup>1,2</sup>, Kannan Ragunathan<sup>1</sup>, Andrew Gooley<sup>1</sup>, Ruth Jones<sup>1</sup>*  
<sup>1</sup> Trajan Scientific and Medical, 7 Argent Place, 3134 Ringwood, Australia  
<sup>2</sup> ASTech - University of Tasmania, Private Bag 75, 7001 Hobart, Australia
- B.11 DIRECTED DEPOSITION OF MATERIALS FOR USE IN SELECTIVE SEPARATIONS AND ANALYSIS**  
*Matthew H. Kremer, Gayan C. Bandara, Vincent T. Remcho*  
 Chemistry Department - Oregon State University, 153 Gilbert Hall, 97331 Corvallis, United States

- B.12 PREPARATION OF QUININE- AND QUINIDINE BASED ZWITTERIONIC CHIRAL STATIONARY PHASES FOR HPLC USING A THIOL-CLICK REACTION, AND THEIR CHROMATOGRAPHIC CHARACTERIZATION**  
*Martina Ferri<sup>1,2</sup>, Tohru Ikegami<sup>3,2</sup>, Stefanie Bäurer<sup>2</sup>, Michael Lämmerhofer<sup>2</sup>*  
<sup>1</sup> Department of Pharmaceutical Sciences, University of Perugia, Via Fabretti 48, 06123 Perugia, Italy  
<sup>2</sup> Eberhard-Karls-University Tuebingen, Auf der Morgenstelle 8, 7204 Tübingen, Germany  
<sup>3</sup> Kyoto Institute of Technology, Matugasaki, Sakyo-ku, 606-8585 Kyoto, Japan
- B.13 INVESTIGATION OF ADSORPTION EQUILIBRIA OF ENANTIOMERS ON NEW CHIRAL STATIONARY PHASES FOR ULTRAFAST ENANTIOSEPARATIONS**  
*Martina Catani<sup>1</sup>, Simona Felletti<sup>1</sup>, Chiara De Luca<sup>1</sup>, Omar H. Ismail<sup>2</sup>, Francesco Gasparri<sup>2</sup>, Alberto Cavazzini<sup>1</sup>*  
<sup>1</sup> Department of Chemistry and Pharmaceutical Sciences - University of Ferrara, via L. Borsari 46, 44121 Ferrara, Italy  
<sup>2</sup> Department of Drug Chemistry and Technology - "Sapienza" University of Rome, P.le Aldo Moro 5, 00185 Rome, Italy
- B.14 THERMAL STABILITY OF GC STATIONARY PHASE BASED ON POLY [3-(TRIMETHYLSILYL)-1-PROPOYNE]**  
*Valeriya Shiryayeva, Tamara Popova, Alexander Korolev, Anastasiia Kanateva, Alexander Kurganov*  
Chromatography lab - Inst. Petrochem. Sint., Lenin av., 29, 119991 Moscow, Russia
- B.15 MONOLITHIC LAYERS BASED ON ORGANIC POLYMERS OF DIFFERENT POLARITY FOR THIN-LAYER CHROMATOGRAPHY COUPLED WITH MALDI-MS**  
*Elizaveta Kucherenko, Anastasiia Kanateva, Alexander Kurganov*  
Chromatography lab - Inst. Petrochem. Sint., Lenin av., 29, 119991 Moscow, Russia

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## C. SAMPLE PREPARATION

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- C.01 A RAPID MAGNETIC SOLID PHASE EXTRACTION METHOD FOLLOWED BY LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY ANALYSIS FOR THE DETERMINATION OF MYCOTOXINS IN CEREALS**  
*Carmela Maria Montone, Michela Antonelli, Giorgia La Barbera, Susy Piovesana, Roberto Samperi, Aldo Lagana<sup>1</sup>*  
Department of Chemistry - Sapienza University, Piazzale Aldo Moro 5, 00185 Roma, Italy
- C.02 A COMBINATION OF STANDARD (SBSE) AND SOLVENT-ASSISTED (SA-SBSE) STIR BAR SORPTIVE EXTRACTION FOR COMPREHENSIVE ANALYSIS OF FLAVOUR COMPOUNDS IN BEVERAGES**  
*Kevin MacNamara<sup>1,2</sup>, Nobuo Ochiai<sup>1</sup>, Kikuo Sasamoto<sup>1</sup>, Andreas Hoffmann<sup>3</sup>*  
<sup>1</sup> Gerstel K.K., 1-3-1 Nakane, Meguro-ku, 152-0031 Tokyo, Japan  
<sup>2</sup> Seanchill, Aubrey-16, Dublin 18, Ireland  
<sup>3</sup> Gerstel GmbH & Co.KG, Eberhard-Gerstel-Platz 1, 45473 Mülheim an der Ruhr, Germany
- C.03 CHARACTERIZATION OF THE ENDOGENOUS PHOSHOPEPTIDES IN SALIVA BY METAL OXIDE AFFINITY CHROMATOGRAPHY AND SHOTGUN PEPTIDOMICS**  
*Susy Piovesana, Michela Antonelli, Chiara Cavaliere, Carmela M. Montone, Giorgia La Barbera, Aldo Lagana<sup>1</sup>*  
Dipartimento di Chimica - Sapienza Università di Roma, Piazzale Aldo Moro 5, 185 Rome, Italy

- C.04 AROMATIC AMINES IN HUMAN URINE: SAMPLE PREPARATION USING LIQUID PHASE-MICRO EXTRACTION (LPME)**  
*Nerea Lorenzo Parodi<sup>1</sup>, Wiebke Kaziur<sup>1</sup>, Astrid Gjelstad<sup>2</sup>, Torsten C. Schmidt<sup>1,3</sup>*  
<sup>1</sup> Instrumental Analytical Chemistry - Faculty of Chemistry, University of Duisburg-Essen, Universitätsstraße 5, 45141 Essen, Germany  
<sup>2</sup> Department of Pharmaceutical Chemistry - School of Pharmacy, University of Oslo, Sem Sælands vei 3, Farmasibyngningen, 0371 Oslo, Norway  
<sup>3</sup> IWW Water Centre, Moritzstr. 26, 45476 Muelheim an der Ruhr, Germany
- C.05 APPLICATION OF STIR BAR SORPTIVE EXTRACTION GC-MS/MS FOR HIGHLY SENSITIVE WATER ANALYSIS GUIDED BY EU WATER FRAMEWORK DIRECTIVE**  
*Oliver Lerch, Jasmin Zboron, Andreas Hoffmann*  
 Gerstel GmbH & Co.KG, Eberhard-Gerstel-Platz 1, 45473 Mülheim an der Ruhr, Germany
- C.06 IMPROVED CLEANUP FOR GC/MS/MS ANALYSIS OF PESTICIDES IN TURMERIC POWDER USING A NOVEL DUAL-LAYER SPE CARTRIDGE**  
*Katherine K. Stenerson<sup>1</sup>, Jennifer Claus<sup>1</sup>, Lisa McCombie<sup>1</sup>, Olga Shimelis<sup>1</sup>, Frank Michel<sup>2</sup>, Michael Ye<sup>1</sup>*  
<sup>1</sup> MilliporeSigma, 595 N. Harrison Rd, PA 16823 Bellefonte, United States  
<sup>2</sup> Sigma-Aldrich, Eschenstr. 5, 82024 Taufkirchen, Germany
- C.07 AN INNOVATIVE EXTRACTION TECHNOLOGY FOR ISOLATION OF CANNABINOIDS FROM HEMP USING NAVIGLIO EXTRACTOR AND THEIR IDENTIFICATION BY HPLC-UV**  
*Daniele Naviglio<sup>1</sup>, Martina Ciaravolo<sup>1</sup>, Silvia Sposito<sup>1</sup>, Michelina Catauro<sup>2</sup>, Monica Gallo<sup>3</sup>*  
<sup>1</sup> Department of Chemical Sciences - University of Naples Federico II, Via Cintia, 4 - Monte S. Angelo Complex, 80126 Naples, Italy  
<sup>2</sup> Dipartimento di Ingegneria - Università degli Studi della Campania Luigi Vanvitelli, via Roma 29, 81031 Aversa (Caserta), Italy  
<sup>3</sup> Dipartimento di Medicina Molecolare e Biotecnologie Mediche - University of Naples Federico II, via Pansini, 5, 80131 Naples, Italy
- C.08 HIGH SENSITIVITY ENVIRONMENTAL PFAS ANALYSIS BY AUTOMATED MICRO-SPE**  
*Thomas Lockwood<sup>1</sup>, David Bishop<sup>1</sup>, Simin Maleknia<sup>1</sup>, Andrew Minett<sup>2</sup>, Philip Doble<sup>1</sup>, Peter Dawes<sup>2</sup>*  
<sup>1</sup> School of Mathematical and Physical Sciences - University of Technology Sydney, 638 Jones Street, 2007 Ultimo, Australia  
<sup>2</sup> EPREP Pty.Ltd., 14/35 Dunlop Road, 3170 Mulgrave, Australia
- C.09 AUTOMATED RAPID DRUG EXTRACTION AT TRACE LEVELS FROM SALIVA, BLOOD, SERUM AND URINE USING A NOVEL SMALL PARTICLE MICRO-SPE CARTRIDGE**  
*Matthew Diplock<sup>1</sup>, Simin Maleknia<sup>1</sup>, Andrew Minett<sup>2</sup>, Peter Dawes<sup>2</sup>, Philip Doble<sup>1</sup>*  
<sup>1</sup> School of Mathematical and Physical Sciences - University of Technology Sydney, 638 Jones Street, 2007 Ultimo, Australia  
<sup>2</sup> EPREP Pty.Ltd., 14/35 Dunlop Road, 3170 Mulgrave, Australia
- C.10 ANALYSIS OF COMPLEX WASTE WATER FROM HYDROTHERMAL LIQUEFACTION OF BIOMASS USING ONLINE METHYL ESTERIFICATION AND FULLY EVAPORATIVE DYNAMIC HEADSPACE COMBINED WITH GC-MS**  
*Rene B. Madsen<sup>1</sup>, Jens Glastrup<sup>2</sup>, Marianne Glasius<sup>1</sup>*  
<sup>1</sup> Department of Chemistry - Aarhus University, Langelandsgade 140, 8000 Aarhus, Denmark  
<sup>2</sup> R&D - MSci, Boegesvinget 8, 2740 Skovlunde, Denmark
- C.11 SOLID-PHASE EXTRACTION OF DIMETHOATE USING CARBON AEROGEL-BASED SORBENT AND ITS APPLICATION TO THE ANALYSIS OF HONEY SAMPLES**  
*Piia Jõul, Grete Vain, Maria Kuhtinskaja*  
 Department of Chemistry and Biotechnology - Tallinn University of Technology, Akadeemia tee 15, 12618 Tallinn, Estonia



- C.12 ANALYSIS OF PHYTOGENIC COMPOUNDS IN CHICKEN BREAST MUSCLE, SKIN AND FAT: A QUECHERS AND GC-MS/MS APPROACH**  
*Federico Cozzi, Jutta Kesselring, Michaela Mohnl, Georg Weingart*  
 Biomim GmbH, Technopark 1, 3430 Tulln an der Donau, Austria
- C.13 BASOLITE® F300 METAL-ORGANIC FRAMEWORK FOR THE DISPERSIVE SOLID-PHASE EXTRACTION OF PHTHALIC ACID ESTERS FROM WATER SAMPLES PRIOR TO LC-MS DETERMINATION**  
*Javier González-Sálamo<sup>1</sup>, Miguel Á. González-Curbelo<sup>2</sup>, Javier Hernández-Borges<sup>1</sup>, Miguel Á. Rodríguez-Delgado<sup>1</sup>*  
<sup>1</sup> Department of Chemistry, Analytical Chemistry Division, Faculty of Sciences - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain  
<sup>2</sup> Department of Basic Sciences - Faculty of Engineering, Calle 79 n° 11-45, 110221 Universidad EAN, Colombia
- C.14 DETERMINATION OF PHTHALIC ACID ESTERS IN PLASTIC BOTTLED BEVERAGES USING MULTI-WALLED CARBON NANOTUBES AS EXTRACTION SORBENT AND HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY COUPLED TO MASS SPECTROMETRY**  
*Javier González-Sálamo<sup>1</sup>, Javier Hernández-Borges<sup>1</sup>, María del Mar Afonso<sup>2</sup>, Miguel Ángel Rodríguez-Delgado<sup>1</sup>*  
<sup>1</sup> Department of Chemistry, Analytical Chemistry Division, Faculty of Sciences - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain  
<sup>2</sup> Department of Organic Chemistry, Instituto Universitario de Bio-Orgánica Antonio González - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain
- C.15 SOLVENT-ASSISTED STIR BAR SORPTIVE EXTRACTION (SA-SBSE) FOR ANALYSIS OF AROMA COMPOUNDS IN STOUT BEER.**  
*Kikuo Sasamoto<sup>1</sup>, Nobuo Ochiai<sup>1</sup>, Frank David<sup>2</sup>, Pat Sandra<sup>2</sup>*  
<sup>1</sup> GERSTEL K.K., 1-3-1 Nakane, Meguro-ku, 152-0031 Tokyo, Japan  
<sup>2</sup> Research Institute for Chromatography (RIC), Kennedypark 26, B-8500, Kortrijk, Belgium
- C.16 OPTIMIZED EXTRACTION AND CLEANUP METHOD FOR THE DETERMINATION OF MEDIUM-CHAIN CHLORINATED PARAFFINS (MCCPs) IN MUSSELS BY GAS CHROMATOGRAPHY-TRIPLE QUADRUPOLE TANDEM MASS SPECTROMETRY**  
*Nieves Carro, Isabel García, Ana Mouteira, María Ignacio, Julio Cobas*  
 Chemical Contamination - INTECMAR, Peirao de Vilaxoán s/n, 36611 Santiago, Spain
- C.17 POLYCYCLIC AROMATIC HYDROCARBONS IN SEA WATER: EXTRACTION BY MAGNETIC MOLECULAR IMPRINTED MICROPARTICLES FOR THEIR DETERMINATION BY GC-MS**  
*Barbara Benedetti, Marina Di Carro, Emanuele Magi*  
 Department of Chemistry and Industrial Chemistry - University of Genova, Via Dodecaneso, 31, 16146 Genova, Italy
- C.18 DETERMINATION OF PHTHALIC ACID ESTERS IN BABY FOOD SAMPLES USING THE QuEChERS METHOD COMBINED WITH GAS CHROMATOGRAPHY TANDEM MASS SPECTROMETRY**  
*Bárbara Socas-Rodríguez<sup>1</sup>, Javier González-Sálamo<sup>2</sup>, Antonio V. Herrera-Herrera<sup>3</sup>, Álvaro Santana-Mayor<sup>2</sup>, Javier Hernández-Borges<sup>2</sup>*  
<sup>1</sup> Servicio General de Apoyo a la Investigación (SEGAI) - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain  
<sup>2</sup> Department of Chemistry, Analytical Chemistry Division, Faculty of Sciences - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain  
<sup>3</sup> Instituto Universitario de Bio-Orgánica Antonio González - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, s/n, 38206 San Cristóbal de La Laguna, Tenerife, Spain

- C.19 NOVEL METAL-ORGANIC FRAMEWORK CIM-81 AS EFFICIENT SORBENT IN MINIATURIZED DISPERSIVE SOLID-PHASE EXTRACTION FOR THE MONITORING OF PERSONAL CARE PRODUCTS IN WATER**  
*Providencia Gonzalez-Hernandez<sup>1</sup>, Ana Belén Lago<sup>2</sup>, Jorge Pasán<sup>2</sup>, Verónica Pino<sup>1</sup>, Catalina Ruíz-Pérez<sup>2</sup>, Juan Heliodoro Ayala<sup>1</sup>, Ana María Afonso<sup>1</sup>*  
<sup>1</sup> Departamento de Química, Unidad Departamental de Química Analítica - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, S/N., 38205 La Laguna, Spain  
<sup>2</sup> Laboratorio de Rayos X y Materiales Moleculares, Departamento de Física - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez, S/N., 38205 La Laguna, Spain
- C.20 EVALUATION AND APPLICATION OF LARGE VOLUME SPME FIBERS**  
*Jason S. Harrington, Colton Myers, Gary Stidsen, Steve Kozel, Jaap de Zeeuw, Christopher Rattray*  
 Restek, 110 Benner Circle, 16823 Bellefonte, United States
- C.21 SOLVENT-FREE EXTRACTION TECHNIQUE FOR DETERMINATION OF SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) IN WATER SAMPLES BY EPA METHOD 8270**  
*Daniel B. Cardin*  
 Analytical Instrumentation - Entech Instruments, Inc., 2207 Agate Ct., 93065 Simi Valley, United States
- C.22 NOVEL GEOMETRY FOR SOLID-PHASE MICROEXTRACTION SUPPORTS COMBINED WITH NANOMATERIALS: BRAID-SPME FIBERS USING METAL NANOPARTICLES**  
*Adrián Gutierrez-Serpa, Daniel Schorn-García, Verónica Pino, Ana I. Jiménez-Abizanda, Francisco Jiménez-Moreno*  
 Sección de Química| Unidad Departamental de Química Analítica - Universidad de La Laguna, Avda. Astrofísico Fco. Sánchez s/n, 38206 La Laguna, Spain
- C.23 EFFECT OF ADDING SALT TO SAMPLE ON DETERMINATION OF VOLATILE COMPOUNDS (VCs) IN SESAME SEEDS BY SOLID PHASE MICRO EXTRACTION TECHNIQUE**  
*Ahmet Dursun, Dilek Özkan, Zehra Güler*  
 Department of Food Engineering - Mustafa Kemal University, Agriculture Faculty, Tayfur Sökmen Campus, 31060 Hatay, Turkey
- C.24 EVALUATION OF SOLID PHASE MICROEXTRACTION METHOD BASED ON TWO-TEMPERATURE SORPTION APPROACH FOR ANALYSIS OF HOPS VOLATILE PROFILES**  
*Martin Adam, Karolina Adamkova, Ales Eisner, Karel Ventura*  
 University of Pardubice, Faculty of Chemical Technology - Department of Analytical Chemistry, Studentská 573, 53210 Pardubice, Czech Republic
- C.25 ELECTROSPUN NANOFIBERS AS PERSPECTIVE SORBENTS FOR ON-LINE EXTRACTION IN CHROMATOGRAPHY TECHNIQUES**  
*Martina Háková<sup>1</sup>, Lucie Chocholeusová Havlíková<sup>1</sup>, Jiri Chvojka<sup>2</sup>, Dalibor Satinsky<sup>1</sup>*  
<sup>1</sup> Department of Analytical Chemistry - Charles University, Faculty of Pharmacy in Hradec Králové, Akademičtí Heyrovského 1203, 500 05 Hradec Králové, Czech Republic  
<sup>2</sup> The Institute for Nanomaterials, Advanced Technology and Innovation - Technical University of Liberec, Bendlova 1409/7, 460 01 Liberec 1, Czech Republic
- C.26 PROFILING OF EUGENIA UNIFLORA L. FRUITS AN EFFECTIVE TOOL TO DISCRIMINATE BETWEEN VARIETIES AND RIPENING STAGES**  
*Priscilla Porto-Figueira<sup>1</sup>, José A. Figueira<sup>1</sup>, Jorge Pereira<sup>1</sup>, José S. Câmara<sup>1,2</sup>*  
<sup>1</sup> CQM - Centro de Química da Madeira, Madeira University, Campus da Penteada, 9020-105 Funchal, Portugal  
<sup>2</sup> Faculdade das Ciências Exatas e da Engenharia, Madeira University, Campus da Penteada, 9020-105 Funchal, Portugal

- C.27 EXPLORING INNOVATIVE STRATEGY NTME/GC-MS AND MULTIVARIATE ANALYSIS TO ESTABLISH THE VOLATOMIC PROFILE OF LEMON ( CITRUS LIMONUM )**  
*Priscilla Porto-Figueira<sup>1</sup>, José A. Figueira<sup>1</sup>, Jorge A. Pereira<sup>1</sup>, José S. Câmara<sup>1,2</sup>*  
<sup>1</sup> CQM - Centro de Química da Madeira, Madeira University, Campus da Penteada, 9020-105 Funchal, Portugal  
<sup>2</sup> Faculdade das Ciências Exatas e da Engenharia - Madeira University, Campus da Penteada, 9020-105 Funchal, Portugal
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## D. SAMPLING SYSTEMS

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- D.01 SURVEY OF ENVIRONMENTAL AND OPERATIONALLY RELEVANT ATMOSPHERES WITH ACTIVE AND PASSIVE VAPOR SAMPLERS**  
*Bruce King, Roberta Xega*  
US Army Edgewood Chemical Biological Center, E3400, 5182 Blackhawk Rd, 21010 Aberdeen Proving Ground, United States
- D.02 ANALYSIS OF ETHANOL IN BLOOD USING STATIC HEADSPACE SAMPLER GC-FID AND MASS SPECTROMETER FOR POSITIVE CONFIRMATION**  
*Maira Zanaboni, Roberta Lariccia, Albino Sironi*  
Dani Instruments, Viale Brianza, 87, 20093 Cologno Monzese, Italy
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## E. CAPILLARY GAS CHROMATOGRAPHY - MASS SPECTROMETRY

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- E.01 THE IMPORTANCE OF ENHANCED MOLECULAR IONS IN GC-MS**  
*Alexander B. Fialkov<sup>1</sup>, Uri Keshet<sup>1</sup>, Tal Alon<sup>1</sup>, Aviv Amirav<sup>1,2</sup>*  
<sup>1</sup> School of Chemistry - Tel Aviv University, Ramat Aviv, 69978 Tel Aviv, Israel  
<sup>2</sup> Aviv Analytical Ltd, 3 Haarad Street, 69710 Tel Aviv, Israel
- E.02 MsCompare: AN UNTARGETED GC/MS METABOLOMICS PLATFORM FOR QUALITY CONTROL, PRECISE DECONVOLUTION AND DATA ANALYSIS**  
*Marco Ruijken*  
R&D - MsMetrix, Doornhoecklaan 81, 3601JT Maarssen, Netherlands
- E.03 ULTRA-TRACE ANALYSIS OF NITROSAMINES IN DRINKING WATER USING ADVANCED ELECTRON IONIZATION TRIPLE QUADRUPOLE GC-MS/MS TECHNOLOGY**  
*Aaron J. Lamb<sup>1</sup>, Cristian Cojocariu<sup>1</sup>, Sara Insa<sup>2</sup>, Maria Jose Farre<sup>2</sup>*  
<sup>1</sup> Applied technologies - Thermo Fisher Scientific, Tudor Road, Manor Park, Runcorn, WA7 1TA, WA7 1TA Runcorn, United Kingdom  
<sup>2</sup> Catalan Institute for Water Research (ICRA), Catalan Institute for Water Research (ICRA), Parc Científic i Tecnològic de la Universitat de Girona, 17003 Girona, Spain, 17003 Girona, Spain
- E.04 INTRODUCTION OF REFERENCE SOLUTIONS FOR THERMAL DESORPTION – GAS CHROMATOGRAPHY**  
*Adissu A. Asfaw, Kris Wolfs, Erwin Adams*  
Pharmaceutical analysis - KU Leuven, Herestraat 49, O&N2, PB 923, 3000 Leuven, Belgium

- E.05 USE OF HEADSPACE SOLID PHASE MICROEXTRACTION AND GC-MS FOR QUALITATIVE AND QUANTITATIVE ANALYSIS OF TERPENES IN CANNABIS**  
*Katherine K. Stenerson, Michael Halpenny, Leonard Sidisky, Craig Aurand, Lisa McCombie*  
MilliporeSigma, 595 N. Harrison Rd, PA 16823 Bellefonte, United States
- E.06 GC-MS CHARACTERIZATION OF NEW HOMOLOGOUS SERIES. DIALKYL PHOSPHONATES**  
*Igor G. Zenkevich, Vlada E. Nosova*  
Chemical - State University, Universitetskii prosp., 26, 198504 St. Petersburg, Russia
- E.07 SUBSTANCE IDENTIFICATION FOR REACH REGISTRATION BY GC-FID AND GC-MS**  
*Eva Tudela Palomar, Ad Kimenai, Andreas Schweizer-Theobaldt*  
Analytical Sciences - Dow Benelux NV, P.O. Box 48, 4530 AA Terneuzen, Netherlands
- E.08 METHOD OPTIMIZATION FOR ELUCIDATION OF HUMAN BLOOD FATTY ACID METHYL ESTERS BY GAS CHROMATOGRAPHY**  
*Giuseppe Micalizzi<sup>1</sup>, Emanuela Ragosta<sup>2</sup>, Paola Dugo<sup>1,2</sup>, Luigi Mondello<sup>1,2</sup>*  
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- E.09 IDENTIFICATION OF FRAGRANCE ALLERGENS BY GC-TOF ANALYSIS**  
*Federica Vento<sup>1</sup>, Emanuela Trovato<sup>1</sup>, Margita Utczas<sup>1,2</sup>, Luigi Mondello<sup>1,3</sup>*  
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- E.10 GAS CHROMATOGRAPHIC COMPUTER MODELING SOFTWARE FOR OPTIMIZED METHOD DEVELOPMENT**  
*Chris Nelson, Christopher Ratray, Jaap de Zeeuw, Kristi Sellers*  
Restek Corporation, 110 benner circle, 16823 bellefonte, United States
- E.11 FASTER GC-MS ANALYSIS WITH SHORT NARROW BORE COLUMN AND METHOD TRANSLATION**  
*Christopher Ratray, Jaap de Zeeuw, Mark Badger*  
Restek Corporation, 110 Benner Circle, 16823 Bellefonte, United States
- E.12 EVALUATION OF DRAWOUT/EXTRACTOR LENS DIAMETER FOR THE ANALYSIS OF PAH COMPOUNDS BY SINGLE-QUAD GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GCMS-SQ)**  
*Abbey Fausett, Rebecca Veeneman, Matthew Giardina, James McCurry*  
Gas Phase Separations Division - Agilent Technologies, 2850 Centerville Road, 19808 Wilmington, United States

- E.13 A METABOLOMIC APPROACH USING PARAFAC2 FOR THE IDENTIFICATION OF VOLATILE MARKERS FOR VINEYARD AGE, RIPENING STAGE AND CONSERVATION TEMPERATURE IN WHITE WINES**  
*José M. Muñoz-Redondo<sup>1</sup>, María V. Jiménez-Povedano<sup>2</sup>, Emma Cantos-Villar<sup>2</sup>, Belén Puertas<sup>2</sup>, Manuel J. Valcárcel-Muñoz<sup>3</sup>, Beltrán Peña-Parra<sup>3</sup>, José M. Moreno-Rojas<sup>1</sup>*  
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<sup>3</sup> Bodegas Fundador, S.L.U., C/ San Ildefonso, 3, 11403 Jerez de la Frontera, Spain
- E.14 INVERSE GAS CHROMATOGRAPHY AS A POSSIBLE TOOL TO DETERMINE A MATERIAL'S QUALITY**  
*Xochitli L. Osorio Barajas, Regis Nguyen, Torsten C. Schmidt, Maik A. Jochmann, Eva M. Fruehauf*  
 Analytical Sciences - Dow Stadel Produkt. GmbH&Co OHG, Bützflathersand 1, 21683 Stade, Germany
- E.15 GC-MS AS A KEY TOOL IN THE BIOPROSPECTION OF MACROALGAE**  
*Sonia Santos<sup>1</sup>, Silvia Rocha<sup>2</sup>, Armando Silvestre<sup>1</sup>*  
<sup>1</sup> CICECO-Department of Chemistry - University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal  
<sup>2</sup> QOPNA - University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal
- E.16 DETERMINATION OF 59 POTENTIAL ALLERGENS IN PERFUMES BY TWIN-LINE FAST GCMSMS**  
*Xaver Mönninghoff, Waldemar Weber, Hans-Ulrich Baier*  
 Center of Innovation & Product Support - GCMS - Shimadzu Europa, Albert-Hahn-Straße 6-10, 47269 Duisburg, Germany
- E.17 METABOLITE PROFILING OF ARABIDOPSIS TISSUE EXTRACTS USING GC-MS/MS TECHNOLOGY**  
*Vladimir Shulaev<sup>1</sup>, Feroza Kaneez Choudhury<sup>1</sup>, Amit Guja<sup>2</sup>, Ron Mittler<sup>1</sup>*  
<sup>1</sup> Biological Sciences - University of North Texas, 1155 Union Circle #305220, 76203 Denton, United States  
<sup>2</sup> Thermo Fisher Scientific, 2215 Grand Ave Pkwy, 78728 Austin, United States
- E.18 IDENTIFICATION OF IMPROVISED EXPLOSIVES RESIDUES USING GC METHODS UNDER REAL CONDITIONS AFTER AN EXPLOSION**  
*Ivo Beroun<sup>1</sup>, Bohumil Mares<sup>2</sup>*  
<sup>1</sup> Dpt. chemistry - Institute of Criminalistics Prague, Strojnická 27, P.O.Box 62/KÚP, 170 89 Prague, Czech Republic  
<sup>2</sup> University of Pardubice, Studentska 573, 532 10 Pardubice, Czech Republic
- E.19 DEVELOPMENT OF THERMALLY ROBUST CHEMICALLY SPECIFIC POLYMERS FOR THE EXTRACTION AND ANALYSIS OF PAHS**  
*Shane Maquire<sup>1</sup>, Leanne Garvey<sup>2</sup>, Aaron Flanagan gannon<sup>2</sup>, Brian Regan<sup>1,3</sup>, David Faulkner<sup>1,3</sup>, David Collins<sup>1,3</sup>*  
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<sup>2</sup> School of Chemical Sciences - Dublin City University, Glasnevin, Dublin 9, Dublin, 0000 Dublin, Ireland  
<sup>3</sup> NCSR, Glasnevin, Dublin 9, Dublin, 0000 Dublin, Ireland
- E.20 SENSITIVE DETECTION OF THE ADULTERATION OF BEESWAX BY GC/MS**  
*Erwin Rosenberg*  
 Institute of Chemical Technologies and Analytics - Vienna University of Technology, Getreidemarkt 9/164 AC, A-1060 Vienna, Austria

- E.21 CANNABIS TERPENE PROFILING IN MEDICINAL PRODUCTS BY GAS CHROMATOGRAPHY COUPLED WITH MASS SPECTROMETRY AND LINEAR RETENTION INDEX**  
*Emanuela Trovato<sup>1</sup>, Margita Utczás<sup>1,2</sup>, Luigi Mondello<sup>1,3</sup>*  
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<sup>3</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Polo Annunziata, viale Annunziata, 98168 Messina, Italy
- E.22 HYPER-FAST DETERMINATION OF BOAR TAIN T WITH SPME-HEADSPACE AND FLOW FIELD THERMAL GRADIENT GC/MS**  
*Jan Leppert<sup>1</sup>, Christoph Gerlach<sup>2,3</sup>, Jochen Fischer<sup>3</sup>, Peter Boeker<sup>1,4</sup>*  
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<sup>3</sup> ELFI Analytik GbR, Massenhausener Straße 18a, 85375 Neufahrn, Germany  
<sup>4</sup> HyperChrom SA, Avenue de la Faiencerie 21, 1511 Luxembourg, Luxembourg
- E.23 EXPLORING DIFFERENT IONIZATION ENERGY FOR BACTERIAL FATTY ACID ANALYSIS IN GC-MS**  
*Flavio A. Franchina, Marco Beccaria, Mavra Nasir, Jane E. Hill, Giorgia Purcaro*  
 Dartmouth College, 14 Engineering Dr, 03755 Hannover, United States
- E.24 A NEW METHOD BASED ON COMPREHENSIVE DATA EVALUATION (CDE) OF <sup>13</sup>C FOR QUALITY ASSESSMENT AND TRACEABILITY OF NATURAL COMPOUNDS**  
*Ivana Bonaccorsi<sup>1</sup>, Luisa Schipilliti<sup>1</sup>, Peter Q. Tranchida<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
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- E.25 UNIVOCAL IDENTIFICATION OF FLAVOR AND FRAGRANCE COMPOUNDS USING GC-MS (TOF) / CONDENSED PHASE FTIR WITH AN EXTENSIVE LIBRARY**  
*Margita Utczás<sup>1,2</sup>, William W. Carsor<sup>3</sup>, Luigi Mondello<sup>2</sup>*  
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<sup>3</sup> DANI Instruments Inc, 257 Simarano Drive, 01752 Marlborough, United States
- E.26 COUPLING OF GC-IRMS WITH HIGH-RESOLUTION MASS SPECTROMETRY FOR FINAL CONFIRMATION IN FOOD AUTHENTICATION AND SPORTS DRUG TESTING**  
*Dirk Krumwiede, Dieter Juchelka, Mario Tuthorn*  
 Thermo Fisher Scientific, Hanna-Kunath-Str. 11, 28199 Bremen, Germany
- E.27 GC METHOD VALIDATION FOR QUANTITATIVE DETERMINATION OF FORMIC ACID PRODUCED FROM THE REACTION OF GLYCEROL CATALYZED BY NIOBIUM COMPOUNDS IN FLOW**  
*Gabriela S. Caldeira<sup>1</sup>, Miriany M. Fernandez<sup>2</sup>, Zenilda L. Cardeal<sup>2</sup>, Marcia M. Carneiro<sup>3</sup>, Leiliane Andre<sup>4</sup>*  
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**E.28 HYDRODYNAMIC CHROMATOGRAPHY OF POLYSTYRENES ON THE OPEN CAPILLARY COLUMNS**

*Alexander Korolev, Elena Victorova, Anastasiia Kanateva, Alexander Kurganov*  
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**E.29 ROLE OF LIPIDS IN FEMALE INFERTILITY: DETERMINATION OF THE FATTY ACID METHYL ESTERS PROFILE IN FOLLICULAR FLUID BY GC ANALYSIS**

*Emanuela Ragosta<sup>1</sup>, Giuseppe Micalizzi<sup>2</sup>, Sara Farnetti<sup>3</sup>, Paola Dugo<sup>1,2</sup>, Luigi Mondello<sup>1,2</sup>*

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<sup>3</sup> Diabetes Research Institute Division of Cellular Transplantation of Surgery - University of Miami, 1450 NW 10th Ave, 33136 Miami, United States

**E.30 GC-MS DETERMINATION OF FREE FATTY ACIDS FROM DBS SAMPLES**

*Robert A. Shellie<sup>1,2</sup>, Ricardo Neto<sup>3,4</sup>, Wei B. Hon<sup>3,1</sup>, Andrew Gooley<sup>3,1</sup>, R. Dario Arua<sup>3,4</sup>, Emily F. Hilder<sup>3,4</sup>*

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## F. (MICRO)LIQUID CHROMATOGRAPHY

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**F.01 RETENTION MODELLING OF CAPILLARY HILIC SEPARATIONS FOR THE ANALYSIS OF PROTEIN DIGESTS**

*Liana S. Foca<sup>1</sup>, Bob W. Pirok<sup>1,2</sup>, Michelle Camenzuli<sup>1</sup>, Peter J. Schoenmakers<sup>1</sup>*

<sup>1</sup> Analytical-Chemistry Group, van't Hoff Institute for Molecular Science - University of Amsterdam, Science Park 904, 1098XH Amsterdam, Netherlands

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**F.02 NOVEL CAPILLARY-FLOW LC-MS PLATFORM FOR ROBUST PROTEOMICS PROFILING OF CELL LYSATES AND BIO-FLUIDS**

*Robert van Ling<sup>1</sup>, Alexander Boychenko<sup>2</sup>, Mike Baynham<sup>2</sup>, Martin Ruehl<sup>2</sup>, Alexander Harder<sup>2</sup>, Remco Swart<sup>2</sup>*

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<sup>2</sup> Thermo Fisher Scientific, Dornierstrasse 4, 82110 Germering, Germany

**F.03 USING HIGH-EFFICIENCY, LONG CAPILLARY ULTRAHIGH PRESSURE LIQUID CHROMATOGRAPHY COLUMNS TO SEPARATE COMPLEX PHOSPHOLIPID MIXTURES**

*Kelsey E. Miller, James W. Jorgenson*

Department of Chemistry - University of North Carolina at Chapel Hill, 125 South Road, 27599 Chapel Hill, United States

**F.04 GREEN EXTRACTION METHODS AND HPLC-UV ANALYSIS IN THE DETERMINATION OF SEVERAL BENZODIAZEPINES IN SELECTED BEVERAGES**

*Pierangela Palma<sup>1</sup>, Maurizio Piergiovanni<sup>2</sup>, Giorgio Famigliini<sup>2</sup>, Veronica Termopoli<sup>2</sup>, Achille Cappiello<sup>2</sup>*

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<sup>2</sup> Department of Pure and Applied Sciences - University of Urbino, Piazza Rinascimento 6, 61029 Urbino, Italy

- F.05 THE PERFLUOROALKYL SUBSTANCES (PFASs) DETERMINATION IN MILK AND MILK PRODUCTS USING MICRO-HPLC-MS/MS**  
*Magdalena Surma<sup>1</sup>, Katarzyna Sznajder-Katarzynska<sup>1</sup>, Wieslaw Wiczkowski<sup>2</sup>, Ewa Cieslik<sup>1</sup>*  
<sup>1</sup> Malopolska Centre of Food Monitoring - University of Agriculture in Krakow, Balicka str. 122, 30-149 Krakow, Poland  
<sup>2</sup> Department of Chemistry and Biodynamics of Food - Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences, Tuwima St.10, 10-748 Olsztyn, Poland
- F.06 HIGH SENSITIVE LC-MS/MS BIOANALYTICAL PLATFORM FOR THERAPEUTIC MONOCLONAL ANTIBODIES USING LOW MICRO FLOW LC-MS/MS ALONG WITH nSMOL™ ANTIBODY BA KIT**  
*Stephane Moreau<sup>1</sup>, Atsuhiko Toyama<sup>2</sup>, Masateru Oguri<sup>2</sup>, Toshiya Matsubara<sup>2</sup>, Wataru Fukui<sup>2</sup>, Shinya Imamura<sup>2</sup>, Takashi Shimada<sup>2</sup>*  
<sup>1</sup> Shimadzu Europa GmbH, Albert Hahn Strasse 6-10, 47269 DUISBURG, Germany  
<sup>2</sup> Shimadzu Corporation, 1, Nishinokyo Kuwabara-cho, Nakagyo-ku., 604-8511 Kyoto, Japan
- F.07 TAYLOR-ARIS DISPERSION FOR GENERATION OF BINARY GRADIENT OF MOBILE PHASE COMPOSITION FOR CAPILLARY LIQUID CHROMATOGRAPHY**  
*Vladislav Kahle, Jozef Sesták*  
Institute of Analytical Chemistry of the Czech Academy of Sciences, Veveří 97, 60200 Brno, Czech Republic
- F.08 EVALUATION OF OPEN TUBULAR CAPILLARY LIQUID CHROMATOGRAPHY COLUMNS UNDER TEMPERATURE PROGRAMMING (OT-TP-CLC) CONDITIONS**  
*Vivane L. Leal, Karen S. Carmona, Marcela J. Sinisterra, Fernando M. Lencas*  
Institute of Chemistry at Sao Carlos - University of Sao Paulo, Postal Code 780, 13560-970 Sao Carlos, Brazil
- F.09 SMALL SCALE PURIFICATION OF FRACTIONS FROM A COMPLEX PHARMACEUTICAL FORMULATION USING AN ANALYTICAL FRACTION COLLECTOR AND A UHPLC-MS SYSTEM**  
*Fadi Alkhateeb*  
Waters Corp., 34 Maple Street, 01757 Milford, United States

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## G. SUPERCRITICAL FLUID CHROMATOGRAPHY AND EXTRACTION

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- G.01 CHARACTERIZATION OF CAROTENOIDS AND APOCAROTENOIDS IN HUMAN BLOOD SAMPLES BY MEANS OF ONLINE SUPERCRITICAL FLUID EXTRACTION SUPERCRITICAL FLUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY**  
*Fabio Salafia<sup>1</sup>, Daniele Giuffrida<sup>2</sup>, Mariosimone Zoccali<sup>1</sup>, Paola Dugo<sup>1,3</sup>, Luigi Mondello<sup>1,3</sup>*  
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- G.02 BIOACTIVE COMPOUNDS IN ORANGE PEEL FROM A BRAZILIAN VARIETY ('PERA')**  
*Daniele Giuffrida*<sup>1</sup>, *Daniella C. Murador*<sup>2,3</sup>, *Fabio Salafia*<sup>3</sup>, *Mariosimone Zoccali*<sup>3</sup>, *Adriana Arigo*<sup>4</sup>, *Veridiana V. De Rosso*<sup>2</sup>, *Paola Dugo*<sup>3,4</sup>, *Luigi Mondello*<sup>3,4</sup>  
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- G.03 SUPERCRITICAL FLUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY TO CHARACTERIZE LIMONOID AGLYCONES IN CITRUS ESSENTIAL OILS**  
*Adriana Arigo*<sup>1</sup>, *Mariosimone Zoccali*<sup>2</sup>, *Fabio Salafia*<sup>2</sup>, *Paola Dugo*<sup>2,1</sup>, *Luigi Mondello*<sup>2,1</sup>  
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<sup>2</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, University of Messina, Polo Annunziata, Viale Annunziata s.n. 98168 Messina, Italy
- G.04 APPLICATION OF SUPERCRITICAL CHROMATOGRAPHY COULPED TO MASS SPECTROMETRY FOR PESTICIDE ANALYSIS IN FRUITS AND VEGETABLES**  
*Victor Cutillas*<sup>1</sup>, *Sigrid Baumgarten*<sup>2</sup>, *Amadeo R. Fernández-Alba*<sup>1</sup>  
<sup>1</sup> European Union Reference Laboratory for Pesticide Residues in Fruit and Vegetables, Agrifood Campus of International Excellence (CeIA3), Department of Chemistry and Physics, University of Almería, University of Almería, 04120 Almería, Spain  
<sup>2</sup> Shimadzu Europa, Albert-Hahn-Straße 6-10, D-47269 Duisburg, Germany
- G.05 EXTRACTION AND CHARACTERIZATION OF CAROTENOIDS AND APO-CAROTENOIDS FROM MICROALGAE BY MEANS OF SUPERCRITICAL FLUID EXTRACTION-SUPERCRITICAL FLUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY**  
*Mariosimone Zoccali*<sup>1</sup>, *Fabio Salafia*<sup>1</sup>, *Daniele Giuffrida*<sup>2</sup>, *Carmen Socaci*<sup>3</sup>, *Paola Dugo*<sup>1,4</sup>, *Luigi Mondello*<sup>1,4</sup>  
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## H. ELECTROMIGRATION METHODS

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- H.01 DEVELOPMENT OF NONAQUEOUS CAPILLARY ELECTROPHORESIS METHOD WITH CONDUCTIVITY DETECTION FOR THE ANALYSIS OF PERFLUORINATED COMPOUNDS**  
*Heidi Lees*, *Kristjan Siilak*, *Merike Vaher*  
Institute of Chemistry and Biotechnology - Tallinn University of Technology, Akadeemia tee 15, 12618 Tallinn, Estonia
- H.02 THREAD BASED ELECTROFLUIDICS: FROM NOVEL ON-FIBRE ELECTROPHORESIS AND ISOTACHOPHORESIS BASED DIAGNOSTICS TO BIOACTIVE DELIVERY.**  
*Joan-Marc Cabot*, *Michael C. Breadmore*, *Brett Paul*  
School of Physical Sciences and Australian Centre for Research on Separation Sciences (ACROSS) - University of Tasmania, School of Physical Sciences, Chemistry, University of Tasmania, 7001 Sandy Bay, Hobart, Australia

- H.03 NEW APPROACHES TO DETERMINE ACID FUNCTIONALITY DISTRIBUTIONS**  
*Pascal Breuer<sup>1</sup>, Ton Brooijmans<sup>2</sup>, Ron Peters<sup>2,1</sup>*  
<sup>1</sup> Department of Analytical Chemistry - Van 't Hoff Institute for Molecular Sciences (HIMS), Science Park 904, 1098 XH Amsterdam, Netherlands  
<sup>2</sup> Department of Molecular Characterization - DSM, Sluisweg 12, 5145 PE Waalwijk, Netherlands
- H.04 BIOCONJUGATION OF UPCONVERSION NANOPARTICLE CHARACTERIZED BY CAPILLARY ELECTROPHORESIS**  
*Tereza Vaneckova, Kristyna Smerkova, Jan Zitka, David Hynek, Marketa Vaculovicova, Lukas Nejd<sup>l</sup>*  
Department of Chemistry and Biochemistry - Mendel University in Brno, Zemedelska 1, 61300 Brno, Czech Republic
- H.05 USE OF IONIC LIQUIDS FOR SEPARATION AND ON-LINE PRECONCENTRATION OF BIOACTIVE ANALYTES IN COMPLEX BIOLOGICAL MATRIX IN MICELLAR AND MICROEMULSION ELECTROKINETIC CHROMATOGRAPHY**  
*Liudmila A. Kartsova, Elena A. Bessonova, Danil O. Moskvichev*  
Institute of Chemistry - Saint-Petersburg St. Univ., Universitetskii pr. 26, Peterhof, 198504 Saint-Petersburg, Russia
- H.06 NEW FLUORESCENCE LABELING STRATEGY BY STIMULI RESPONSIVE QUANTUM DOTS**  
*Lukas Nejd<sup>l</sup>, Vojtech Adam<sup>1</sup>, Marketa Vaculovicova<sup>1</sup>*  
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<sup>2</sup> Central European Institute of Technology - Brno University of Technology, Purkynova 123, 61200 Brno, Czech Republic
- H.07 HOW CAPILLARY ZONE ELECTROPHORESIS AND RELATED TECHNIQUES CAN BE USED FOR IDENTIFICATION OF PATHOGENS ?**  
*Pawel P. Pomastowski, Anna Krol, Malgorzata Szultka-Mlynska, Boguslaw Buszewski*  
Chair of Environmental Chemistry and Bioanalytics, Faculty of Chemistry, - Nicolaus Copernicus University, J. Gagarin 11, 87-100 Torun, Poland
- H.08 GENERATION OF LIQUID AND GAS CHROMATOGRAPHY PROFILES OF URINE AND BLOOD PLASMA SAMPLES FOR THE TUBERCULOSIS AND PROSTATE CANCER DETECTION**  
*Svetlana A. Soloveva, Elena A. Bessonova, Liudmila A. Kartsova*  
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## I. INSTRUMENTATION AND AUTOMATION

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- I.01 TAMI SOFTWARE FOR THE PROVISION OF ELEMENTAL FORMULA FROM YOUR SINGLE QUADRUPOLE GC-MS DATA**  
*Aviv Amirav, Tal Alon*  
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- I.02 IN SITU AUTOMATIC AIR MONITORING ANALYSER**  
*Sjaak de Koning<sup>1</sup>, John Maurits<sup>2</sup>*  
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<sup>2</sup> Dept. of Environmental Analysis - Provincie Limburg, Nijverheidsstraat 3, 6135KJ Sittard, Netherlands
- I.03 LOW-COST, OPEN-SOURCE CHROMATOGRAPHIC DATA ACQUISITION SYSTEMS**  
*James P. Grinias*  
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- I.04 AUTOMATION AND MINIATURIZATION OF THE DERIVATIZATION OF AROMATIC AMINES**  
*Wibke Kaziur<sup>1</sup>, Nerea Lorenzo Parodi<sup>1</sup>, Torsten C. Schmidt<sup>1,2</sup>*  
<sup>1</sup> Instrumental Analytical Chemistry - University of Duisburg-Essen, Universitätsstrasse 5, 45141 Essen, Germany  
<sup>2</sup> IWW Water Centre, Moritzstraße 26, 45476 Muelheim an der Ruhr, Germany
- I.05 ONLINE MONITORING OF VOCs FROM WASTE EFFLUENT BY GC-FID AND GC-TOF MS**  
*Anthony Buchanan, Rebecca Preston, Matthew Edwards, Laura McGregor, Aaron Parker, Bob Green*  
 SepSolve Analytical, 22 Commerce Road, PE26LR Peterborough, United Kingdom
- I.06 AN IMPROVED HYPHENATED GC-FTIR/MS DESIGN AND PRELIMINARY RESULTS FOR INTEGRATED COMPOUND IDENTIFICATION**  
*Junaida Shezmin Z. Ismail<sup>1</sup>, Jamieson S. Smith<sup>1</sup>, Scott Blundell<sup>2</sup>, Habtewold D. Waktola<sup>1</sup>, Yada Nolvachai<sup>1</sup>, Bayden R. Wood<sup>3</sup>, Philip J. Marriott<sup>1</sup>*  
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<sup>3</sup> Centre for Biospectroscopy, School of Chemistry - Monash University, Wellington Road, 3800 Clayton, Australia
- I.07 DEVELOPMENT OF A BLEED CRYO-TRAP SYSTEM USING A PTV INLET AND A SEPARATING GC COLUMN WITH MASS SPECTROMETRY DETECTION**  
*John Oostdijk, Ngoc-A Dang, Frans Biermans*  
 Agilent Crosslab R&D group - Agilent Technologies, Herculesweg 8, 4338 PL Middelburg, Netherlands
- I.08 IMPROVING THE CHROMATOGRAPHIC CAPABILITIES OF AN ATMOSPHERIC PRESSURE CHEMICAL IONISATION SOURCE**  
*Steve Preece, Rhys Jones, Dave Douce*  
 Waters - Waters Corporation, Stamford Ave, SK9 4AX Wilmslow, United Kingdom
- I.09 GAS ANALYSIS USING A MULTI-TURN HIGH-RESOLUTION MASS SPECTROMETER WITH THREE DIFFERENT SAMPLING METHODS**  
*Masahiro Hashimoto<sup>1</sup>, M.J.(Marcel) van der Schans<sup>2</sup>, J.A. (Jeroen) Van der Meer<sup>2</sup>, Bram Van der Meer<sup>3</sup>*  
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<sup>2</sup> TNO, Lange Kleiweg 137, 2288 GJ Rijswijk, Netherlands  
<sup>3</sup> JEOL(EUROPE)B.V., Lireweg 4, 2153 PH Nieuw-Vennep, Netherlands
- I.10 OPTIMIZING INLET DISCRIMINATION FOR GAS CHROMATOGRAPHS WITH COMPLEX FLOW PATHS**  
*James McCurry, Matthew Giardina, Rebecca Veeneman, Abbey Fausett*  
 Gas Phase Division - Agilent Technologies, 2850 Centerville Road, 19808 Wilmington, United States

- I.11 ENDURANCE TEST WITH A PAL SPME ARROW EXTRACTION TOOL NBSP**  
*Beat Schilling<sup>1</sup>, Guenter Boehm<sup>2</sup>*  
<sup>1</sup> BGB Analytik AG, Webereistrasse 56, 8134 Adliswil, Switzerland  
<sup>2</sup> CTC Analytics AG, Industriestrasse 20, 4222 Zwingen, Switzerland
- I.12 LOW FIELD THERMAL GRADIENT GC (FF-TG-GC) BENEFITS DEMONSTRATED ON A HYPER-FAST SIMDIST APPLICATION AND COMPLEX FAME MEASUREMENTS**  
*Peter Müller<sup>1</sup>, Peter Boeker<sup>1,2</sup>, Jan Leppert<sup>1</sup>*  
<sup>1</sup> IfL, Abt. Sensorik - University of Bonn, Nussallee 5, 53115 Bonn, Germany  
<sup>2</sup> HyperChrom SA, 21 Avenue de la Faiencerie, 1511 Luxembourg, Luxembourg
- I.13 DEMONSTRATING METHOD EQUIVALENCY WITH A NEW GC PLATFORM**  
*Abbey Fausett, Rebecca Veeman, Matthew Giardina, James McCurry*  
 Gas Phase Separations Division - Agilent Technologies, 2850 Centerville Road, 19808 Wilmington, United States
- I.14 THE COMBINATION OF 3 NEW SAMPLING TECHNIQUES PAIRED WITH GCMS FOR DETERMINATION OF UPTAKE RATES AND ACCURATE MONITORING OF SVOC ENDOCRINE DISRUPTORS IN INDOOR AIR**  
*Daniel B. Cardin*  
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- I.15 POST COLUMN REACTION GAS CHROMATOGRAPHY WITH A 3D PRINTED STEEL DUAL STAGE MICROREACTOR**  
*Yujuan Hua<sup>1</sup>, Ronda Gras<sup>1</sup>, Peilin Yang<sup>2</sup>, Jim Luong<sup>1</sup>*  
<sup>1</sup> Analytical Sciences, Core R&D - Dow Chemical Canada, Highway 15 PO BAG 16, T8L 2P4 Fort Saskatchewan, Canada  
<sup>2</sup> Analytical Sciences, Core R&D - The Dow Chemical Company, 400 Arcola Road, 19426 Collegeville, United States
- I.16 VACUUM ULTRAVIOLET SPECTROSCOPY AS A NEW TOOL FOR GC ANALYSIS OF TERPENES IN FLAVORS AND FRAGRANCES**  
*Alex Hodgson, Jack Cochran*  
 VUV Analytics, Inc, 715 Discovery Blvd, Suite 502, 78613 Cedar Park, United States
- I.17 PULSED ELECTRON CAPTURE DETECTOR WITH NON-RADIOACTIVE ELECTRON SOURCE**  
*Erik Buner<sup>1</sup>, Ansgar T. Kirk, Niklas Deutsch, Maria Allers, Stefan Zimmermann*  
 Institute of Electrical Engineering and Measurement Technology - Leibniz Universität Hannover, Appelstr. 9A, 30167 Hannover, Germany
- I.18 LAB-IN-SYRINGE: AUTOMATED LIQUID-LIQUID EXTRACTION**  
*Robert A. Shellie<sup>1,2</sup>, Masoomah T. Rokh<sup>2</sup>, Marcel Van den Bronk<sup>1</sup>, Andrew Uhe<sup>1</sup>, Andrew Gooley<sup>2,1</sup>, Jason Hon<sup>2,1</sup>, Michael C. Bredmore<sup>2,3</sup>*  
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<sup>3</sup> Australian Centre of Research on Separation Science, School of Physical Science - University of Tasmania, Private Bag 75, 7001 Hobart, Australia
- I.19 A NEW VERSATILE AUTOSAMPLER FOR LIQUIDS TO INCREASE PRODUCTIVITY AND SELECTIVITY THROUGH DUAL INJECTION MODE.**  
*Maira Zanaboni, Ornella Crispu, Michela Gasperini, Albino Sironi*  
 Dani Instruments, Viale Brianza, 87, 20093 Cologno Monzese, Italy

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## J. COUPLED AND MULTIDIMENSIONAL TECHNIQUES

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- J.01 GAS CHROMATOGRAPHY - VACUUM ULTRAVIOLET SPECTROSCOPY FOR THE IDENTIFICATION OF BACTERIA BY FATTY ACID ANALYSIS**  
*Kevin A. Schug<sup>1</sup>, Ines C. Santos<sup>1</sup>, Jonathan Smuts<sup>2</sup>, Woo-Sik Cho<sup>3</sup>, Younghoon Kim<sup>3</sup>, Soung B. Kim<sup>3</sup>*  
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<sup>2</sup> VUV Analytics, Inc., 715 Discovery Blvd Suite 502, 78613 Cedar Park, United States  
<sup>3</sup> Industrial Management Engineering - Korea University, 145, Anam-ro, Seongbuk-gu, 02841 Seoul, Korea, (South) Rep. of
- J.02 COMPREHENSIVE FRACTION COLLECTION AFTER GC SEPARATION**  
*Sjaak de Koning<sup>1</sup>, Jaap Schaap<sup>1</sup>, Jeroen Koo<sup>2</sup>*  
<sup>1</sup> Da Vinci Laboratory Solutions, Sydneystraat 5, 3047BP Rotterdam, Netherlands  
<sup>2</sup> Division of BioAnalytical Chemistry - Vrije Universiteit Amsterdam, De Boelelaan 1108, 1081HV Amsterdam, Netherlands
- J.03 PREP-MDGC ISOLATION OF FRAGRANCE INGREDIENT PHOTOPRODUCTS FOR NMR CHARACTERIZATION**  
*Alain D. Jaquier<sup>1</sup>, Jianming Lin<sup>2</sup>, Robin Huber<sup>1</sup>, Alessandro Casilli<sup>2</sup>*  
<sup>1</sup> Corporate R&D Division - Firmenich SA, 1 rte des Jeunes, 1211 Geneva 8, Switzerland  
<sup>2</sup> Corporate R&D Division - Firmenich Inc., 250 Plainsboro Road, 08536 Plainsboro, United States
- J.04 MULTIDIMENSIONAL LIQUID CHROMATOGRAPHY COUPLED TO MASS SPECTROMETRY FOR PURIFICATION AND IDENTIFICATION OF POTENTIAL ACE-INHIBITORY AND ANTIOXIDANT PEPTIDES IN *TETRADESMUS OBLIQUUS* MICROALGAE**  
*Chiara Cavaliere, Michela Antonelli, Giorgia La Barbera, Carmela Maria Montone, Riccardo Zenezini Chiozzi, Aldo Lagana*  
Dipartimento di Chimica - Sapienza Universita di Roma, Piazzale Aldo Moro 5, 185 Rome, Italy
- J.05 COMPLEX NATURAL SAMPLES: MARIJUANA & CANNABINOIDS WITH GC+GC-APCI-IMS**  
*Christian Lipok, Oliver Schmitz*  
Applied Analytical Chemistry - University of Duisburg-Essen, UniversitaetsstraÙe 5, 45141 Essen, Germany
- J.06 DETERMINATION OF ANANDAMIDE AND 2-ARACHIDONOYLGLYCEROL IN PLASMA AND CEREBROSPINAL FLUID SAMPLES BY A COLUMN SWITCHING ULTRA HIGH PERFORMANCE LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY METHOD**  
*Camila Marchionj, José A. Crippa, Vitor Tumas, Maria E. Queiroz Nassur*  
Faculdade de Ciências Farmacêuticas de Ribeirão Preto - Universidade de São Paulo (USP), , Avenida Bandeirantes, 3900, 14040-901 Ribeirão Preto, Brazil
- J.07 COMPACT ANALYZER SOLUTION DETERMINING OXYGENATES IN GASOLINE**  
*Shigeaki Shibamoto<sup>1</sup>, Masanori Nishino<sup>1</sup>, Shingo Masuda<sup>2</sup>, Franz Kramp<sup>3</sup>*  
<sup>1</sup> Technology Research Laboratory - Shimadzu Corporation, Nakagyo-ku, 604-8511 Kyoto, Japan  
<sup>2</sup> GC & TA Business Unit - Shimadzu Corporation, Nakagyo-ku, 604-8511 Kyoto, Japan  
<sup>3</sup> GC-GCMS - Shimadzu Europa GmbH, Albert-Hahn-Strasse 6-10, 47269 Duisburg, Germany

- J.08 ANALYSIS OF STABLE ISOTOPE RATIOS IN AMINO ACIDS: TWO-DIMENSIONAL GC SEPARATION, A PLAN FOR GC-GC/IRMS**  
*Yoshito Chikaraishi*<sup>1,2</sup>, *Yuko Takizawa*<sup>1</sup>  
<sup>1</sup> Institute of Low Temperature Science - Hokkaido University, N19W8 Kitaku, 0600819 Sapporo, Japan  
<sup>2</sup> Japan Agency Marine-Earth Science and Technology (JAMSTEC), 2-15 Natsushima-cho, 237-0061 Yokosuka, Japan
- J.09 DETERMINATION OF CAFFEINE IN COFFEE, TEA AND COCOA USING ONLINE EXTRACTION COUPLED TO LIQUID CHROMATOGRAPHY.**  
*Marina Russo*<sup>1</sup>, *Chiara Fanali*<sup>1</sup>, *Laura Dugo*<sup>1</sup>, *Paola Dugo*<sup>2,3</sup>, *Luigi Mondello*<sup>2,3</sup>, *Laura De Gara*<sup>1</sup>  
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<sup>3</sup> Chromaleont S.r.L. - c/o University of Messina, Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Viale Annunziata, Polo Annunziata, 98168 Messina, Italy
- J.10 EVALUATION OF MINIATURIZED EXTRACTION COLUMNS FOR ONLINE SAMPLE PREPARATION-LC-MS/MS**  
*Edvaldo V. Maciel*, *Ana L. de Toffoli*, *Luis F. da Silva*, *Fernando M. Lancas*  
 Institute of Chemistry at Sao Carlos - University of Sao Paulo, Postal Code 780, 13560-970 Sao Carlos, Brazil
- J.11 SIMULTANEOUS DETECTION BY ISOTOPE RATIO MASS SPECTROMETRY AND QUADRUPOLE MASS SPECTROMETRY COUPLED TO MULTIDIMENSIONAL GAS CHROMATOGRAPHY FOR ANALYSIS OF TRUFFLE AROMATIZED FOOD PRODUCTS**  
*Antonino Schepis*<sup>1</sup>, *Danilo Sciarrone*<sup>1</sup>, *Gemma De Grazia*<sup>1</sup>, *Luigi Mondello*<sup>1,2</sup>  
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- J.12 PREPARATIVE THREE DIMENSIONAL GAS CHROMATOGRAPHY: A POWERFUL APPROACH FOR THE ISOLATION OF PURE MOLECULES**  
*Antonino Schepis*<sup>1</sup>, *Danilo Sciarrone*<sup>1</sup>, *Gemma De Grazia*<sup>1</sup>, *Luigi Mondello*<sup>1,2</sup>  
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- J.13 MULTIDIMENSIONAL GAS CHROMATOGRAPHY WITH SIMULTANEOUS DETECTION BY QUADRUPOLE MASS SPECTROMETRY AND ISOTOPE RATIO MASS SPECTROMETRY FOR THE INVESTIGATION OF VANILLA AROMATIZED ICE-CREAM ADULTERATION**  
*Antonino Schepis*<sup>1</sup>, *Danilo Sciarrone*<sup>1</sup>, *Luigi Mondello*<sup>1,2</sup>  
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- J.14 HEART-CUTTING MDGC-PREP COUPLED TO SPECTROSCOPIC ANALYSIS: A TOOL FOR STRUCTURAL IDENTIFICATION OF UNKNOWN MOLECULES**  
*Antonino Schepis*<sup>1</sup>, *Danilo Sciarrone*<sup>1</sup>, *Luigi Mondello*<sup>1,2</sup>  
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- J.15      ADVANCED GENUINENESS ASSESSMENT CAPABILITY IN FLAVOR AND FRAGRANCE FIELD EXPLOITING MULTIDIMENSIONAL GAS CHROMATOGRAPHY COUPLED TO ISOTOPE RATIO MASS SPECTROMETRY**  
*Antonino Schepis<sup>1</sup>, Danilo Sciarrone<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
<sup>1</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Polo Annunziata, Viale Annunziata s.n., 98168 Messina, Italy  
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- J.16      ANALYSIS OF STABLE ISOTOPE RATIOS IN AMINO ACIDS: DUAL-COLUMN COUPLING IN A SINGLE GC-IRMS**  
*Yuko Takizawa<sup>1</sup>, Yoshito Chikaraishi<sup>1,2</sup>*  
<sup>1</sup> Institute of Low Temperature Science - Hokkaido University, N19W8 Kitaku, 0600819 Sapporo, Japan  
<sup>2</sup> Japan Agency Marine-Earth Science and Technology (JAMSTEC), 2-15 Natsushima-cho, 237-0061 Yokosuka, Japan
- J.17      INNOVATIVE ALL-IN-ONE MDGC SYSTEM FOR FAST HEART-CUT ANALYSIS OF COMPLEX SAMPLES**  
*Danilo Sciarrone<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
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## **K. COMPREHENSIVE GC**

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- K.01      GC × GC-MS STUDY OF THE VOLATILE METABOLOME OF SACCHAROMYCES CEREVISAE STRAINS WITH ACTIVITY AGAINST PHYTOPATHOGEN PENICILIUM DIGITATUM**  
*Joao Raul B. De Souza, Fabio Augusto*  
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- K.02      FAST DETERMINATION OF BIOMARKERS IN OIL SOURCE ROCKS BY DIRECT HS-SPME COMBINED TO GC×GC-MS(/MS)**  
*Breno J. Pollo, Fabio Augusto*  
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- K.03      CONTRIBUTION OF GC×GC-(HR) TOFMS TO MEDICAL APPLICATIONS**  
*Jean-Francois F. Focant<sup>1</sup>, Pierre-Hugues Stefanuto<sup>1</sup>, Delphine Zanella<sup>1</sup>, Marie A. Meuwis<sup>2</sup>, Edouard Louis<sup>2</sup>, Florence Schleich<sup>3</sup>, Renauld Louis<sup>3</sup>*  
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<sup>3</sup> Respiratory Medicine, GIGA I3, B-4000 CHU Sart-Tilman, Belgium

- K.04 DETERMINING TERPENE PROFILES OF CANNABIS STRAINS USING GC AND GCXGC WITH HIGH PERFORMANCE TOFMS**  
*David Alonso<sup>1</sup>, Julie Kowalski<sup>2</sup>, Joe Binkley<sup>1</sup>*  
<sup>1</sup> LECO Corporation, 3000 Lakeview Avenue, 49085 St. Joseph, United States  
<sup>2</sup> Trace Analytics, 908 N Howard St @101, 99201 Spokane, United States
- K.05 SMOKER'S AND NON-SMOKER'S URINE COMPARISON USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY-HIGH PERFORMANCE TIME-OF-FLIGHT MASS SPECTROMETRY**  
*David Alonso, Joe Binkley*  
 LECO Corporation, 3000 Lakeview Avenue, 49085 St. Joseph, United States
- K.06 VOLATILE ORGANIC COMPOUNDS AS MARKER OF AUTHENTICITY OF HONEYDEW HONEY**  
*Vesna Vasic<sup>1</sup>, Vladimir Beskoski<sup>1</sup>, Kristina Dacic<sup>1</sup>, Drazen Lucic<sup>2</sup>, Dusanka Milojkovic Opsenica<sup>1</sup>, Jelena Trifkovic<sup>1</sup>*  
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<sup>2</sup> Faculty of Medicine - University of Rijeka, Braće Branchetta 20/1, 51000 Rijeka, Croatia
- K.07 FAST COMPREHENSIVE 2D GC-MS USING A 10-m COLUMN COMBINATION**  
*Barbara Giocastro<sup>1</sup>, Marco Piparo<sup>1</sup>, Peter Q. Tranchida<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
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- K.08 CRYOGENICALLY-MODULATED COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY-HIGH RESOLUTION TIME-OF-FLIGHT MASS SPECTROMETRY: DETAILED QUALITATIVE PROFILING OF THE UNSAPONIFIABLE FRACTION OF VEGETABLE OILS**  
*Ivan Aloisi<sup>1</sup>, Peter Q. Tranchida<sup>1</sup>, Luigi Mondello<sup>1,2</sup>*  
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- K.09 COMPREHENSIVE HIGH TEMPERATURE GAS CHROMATOGRAPHY/ GAS CHROMATOGRAPHY USING A UNIQUE CARBON STATIONARY PHASE**  
*Jiayi Liu, Susan V. Olesik*  
 Department of Chemistry and Biochemistry - The Ohio State University, 100 West 18th Avenue, 43210 Columbus, United States
- K.10 AROMA PROFILING OF COFFEE WITH GC, GCXGC, AND TOFMS**  
*Joe Binkley, Elizabeth M. Humston-Fulmer*  
 LECO Corporation, 3000 Lakeview Avenue, 49085 Saint Joseph, MI, United States
- K.11 GC-TOFMS ANALYSIS OF THE LIQUID FRACTIONS FROM SLOW PYROLYSIS OF CRAMBE SEED**  
*Raquel V. Silva<sup>1</sup>, Vinicius B. Pereira<sup>1</sup>, Karen T. Stelzer<sup>1</sup>, Gilberto A. Romeiro<sup>2</sup>, Débora A. Azevedo<sup>1</sup>*  
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- K.12 CHARACTERIZATION OF THE SCENT OF THE MAIN PLANT SPECIES FROM THE MOUNTAIN GRASSLANDS IN MONTE BONDONE**  
Luca Narduzzi<sup>1</sup>, Ilaria Grigoletto<sup>2</sup>, Urska Vrhovsek<sup>1</sup>  
<sup>1</sup> Department of food quality and nutrition, metabolomics group - Fondazione Edmund Mach, Via e.Mach, 1, 38010 San Michele all'Adige, Italy  
<sup>2</sup> University of Padova, via 8 febbraio, 35122 Padova, Italy
- K.13 SOLID STATE MODULATED GCxGC**  
Sjaak de Koning<sup>1</sup>, Lena M. Dubois<sup>2</sup>, Delphine Zanella<sup>2</sup>, Pierre-Hugues Stefanuto<sup>2</sup>, Jean-François Focant<sup>2</sup>  
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<sup>2</sup> Organic and Biological Analytical Chemistry Group, MolSys - University of Liège, Allée du 6 Aout (15 - B6c), 4000 Liège, Belgium
- K.14 PYROLYSIS-GCxGC-QTOF FOR THE IMPROVED CHARACTERIZATION OF CRUDE OIL**  
Daniela Peroni<sup>1,2</sup>  
<sup>1</sup> Zoex Europe, Parklaan 54A, 5613 BH Eindhoven, Netherlands  
<sup>2</sup> JSB Nederland, Apolloweg 2B, 8239DA Lelystad, Netherlands
- K.15 HIGH QUALITY COCOA FINGERPRINTING - PART I UNTARGETED AND TARGETED (UT) FINGERPRINTING OF COCOA VOLATILES BY COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY - TIME-OF-FLIGHT MASS SPECTROMETRY AND TANDEM IONIZATION**  
Alessandro Guglielmetti<sup>1</sup>, Carlo Bicchi<sup>1</sup>, Erica Liberto<sup>1</sup>, Lucie Baroux<sup>2</sup>, Philippe Merle<sup>2</sup>, Stephen E. Reichenbach<sup>3,4</sup>, Elena Allegrucci<sup>5</sup>, Guido Gobino<sup>5</sup>, Chiara Cordero<sup>1</sup>  
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- K.16 APPLICATION OF A MULTI-CHANNEL POLYDIMETHYLSILOXANE DENUDER DEVICE FOR THE DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN DIESEL EXHAUST EMISSIONS**  
Genna-Leigh Schoonraad<sup>1,2</sup>, Cecilia Pretorius<sup>3</sup>, Patricia Forbes<sup>1</sup>  
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- K.17 CHEMICAL CHARACTERIZATION OF BOCAIÚVA AND SOURSOP SEED CAKE PYROLYSIS BIO-OILS USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY WITH TIME-OF-FLIGHT MASS SPECTROMETRY**  
Vanessa O. Nunes, Raquel V. da Silva, Débora A. Azevedo  
 Chemistry Institute - Federal University of Rio de Janeiro, Athos da Silveira Ramos Avenue, 149, 21044-020 Rio de Janeiro, Brazil
- K.18 UNTARGETED SCREENING OF DRINKING WATERS USING ON-LINE SPE GCxGC-TOF MS, HOW TO CONTROL THE QUALITY FOR ROUTINE ANALYSIS IN AN ISO 17025 ACCREDITED ENVIRONMENT?**  
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- K.19 FAST AND EFFICIENT GROUP-TYPE ANALYSIS BY GC×GC**  
 Aaron Parker, *Laura McGregor*, Matthew Edwards, Nick Bukowski  
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- K.20 FIELD PORTABLE MICRO-GC AND MICRO-GCXGC SYSTEM DEVELOPMENT FOR CHEMICALS AND BIOGENIC VOCs**  
 Ronald P. Manginell, Matthew W. Moorman, Robert J. Simonson, John M. Anderson, Jason P. Sammon, Phillip R. Miller, Joshua J. Whiting  
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- K.21 CHALLENGING ODOR ZONES IN COCOA NIBS: THE KEY-ROLE OF MULTIDIMENSIONAL GAS CHROMATOGRAPHY COUPLED WITH MASS SPECTROMETRY AND OLFACTOMETRY**  
*Lucie Baroux*  
 Analytical Innovation - Firmenich SA, Route des jeunes, 1|, 1227 Geneva, Switzerland
- K.22 HIGH QUALITY COCOA FINGERPRINTING - PART II  
 CHALLENGING ODOR ZONES IN COCOA NIBS: THE KEY-ROLE OF MULTIDIMENSIONAL GAS CHROMATOGRAPHY COUPLED WITH MASS SPECTROMETRY AND OLFACTOMETRY**  
*Lucie Baroux*<sup>1</sup>, Alessandro Casilli<sup>2</sup>, Chiara Cordero<sup>3</sup>, Sabine Leocata<sup>1</sup>, Emilie Belhassen<sup>1</sup>, Philippe Merle<sup>1</sup>, Carlo Bicchi<sup>3</sup>  
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- K.23 MULTIDIMENSIONAL CHROMATOGRAPHIC TECHNIQUES APPLIED TO CHEMICAL ECOLOGY**  
 Marco Gomes da Silva<sup>1</sup>, Eduardo Mateus<sup>2</sup>, Sofia Branco<sup>2</sup>, Davide Mendes<sup>1</sup>, Maria R. Paiva<sup>2</sup>  
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- K.24 CHARACTERIZATION OF OXYGENATED COMPOUNDS IN FISCHER-TROPSCH PRODUCT SAMPLES BY TWO-DIMENSIONAL GAS CHROMATOGRAPHY**  
 Vinicius B. Pereira, Bárbara M. Ávila, Daniella R. Fernandes, Francisco R. Aquino Neto, Débora A. Azevedo  
 INSTITUTE OF CHEMISTRY - FEDERAL UNIVERSITY OF RIO DE JANEIRO, AV. HORACIO MACEDO 1281, 21941598 RIO DE JANEIRO, Brazil
- K.25 AN ALTERNATIVE SOFTWARE SOLUTION FOR GC×GC-MS DATA PROCESSING**  
 Lena Dubois, Pierre-Hugues Stefanuto, Delphine Zanella, Jean-Francois Focant  
 Department of Chemistry - University of Liège, Allée du 6 Aout 11, B6c, 4000 Liege, Belgium
- K.26 TOWARDS A BETTER CHARACTERIZATION OF SULFUR COMPOUNDS IN GASOLINES WITH GC×GC-SCD**  
 Stéphane Clavel<sup>1</sup>, Philibert Leflaive<sup>2</sup>, Vincent Souchon<sup>1</sup>  
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<sup>2</sup> Catalysis Division - IFP Energies Nouvelles, Rond-point de l'échangeur de Solaize - BP3, 69360 Solaize, France

- K.27 COMPREHENSIVE ANALYSIS OF ATMOSPHERIC VOCS BY SINGLE CHANNEL GCXGC-QMS**  
*Xiaosheng Guan, Zhiyun Zhao*  
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- K.28 GCXGC-HRTOFMS ANALYSIS OF A COMPLEX LIPID PROFILE IN HUMAN SEBUM**  
*Masahiro Hashimoto<sup>1</sup>, Koji Okuda<sup>2</sup>, A. John Dane<sup>2</sup>, Robert B. Cody<sup>2</sup>, Bram Van der Meer<sup>3</sup>*  
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<sup>3</sup> JEOL(EUROPE)B.V., Lireweg 4, 2153 PH Nieuw-Vennep, Netherlands
- K.29 HANDLING WEATHERING EFFECTS IN LIGHT DIESELS FOR OIL SPILLS INVESTIGATIONS USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY – HIGH RESOLUTION MASS SPECTROMETRY AND CHEMOMETRICS**  
*Guilherme L. Alexandrino<sup>1,2</sup>, Giorgio Tomasi<sup>1</sup>, Fabio Augusto<sup>2</sup>, Jan H. Christensen<sup>1</sup>*  
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- K.30 GCxGC-TOFMS FOR THE INVESTIGATION OF ORGAN SPECIFIC DECOMPOSITION ODOR PROFILES**  
*Lena M. Dubois<sup>1</sup>, Pierre-Hugues Stefanuto<sup>1</sup>, Rebecca Lloyd<sup>2</sup>, Jean-Francois Focant<sup>1</sup>*  
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<sup>2</sup> University of Leicester, University Road, LE1 7RH Leicester, United Kingdom
- K.31 INVESTIGATION OF SEMI-VOLATILE NON-INTENTIONALLY ADDED SUBSTANCES (NIAS) EXTRACTED FROM FOOD CONTACT MATERIALS BY MONO-DIMENSIONAL AND COMPREHENSIVE TWO-DIMENSIONAL GC-MS**  
*Elsa Omer<sup>1,2</sup>, Ronan Cariou<sup>3</sup>, Hélène Germon<sup>2</sup>, Fabrice Monteau<sup>3</sup>, Emmanuelle Bichon<sup>3</sup>, Gaud Dervilly-Pine<sup>3</sup>, Gérald Rемаud<sup>4</sup>, Bruno Le Bizec<sup>3</sup>*  
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- K.32 DEVELOPMENT AND VALIDATION OF A NON-TARGETED SCREENING APPROACH FOR THE CHARACTERIZATION OF LUNG FLUIDS**  
*Pierre-Hugues Stefanuto<sup>1</sup>, Delphine Zanella<sup>1</sup>, Lena Dubois<sup>1</sup>, Florence Schleich<sup>2</sup>, Renaud Louis<sup>2</sup>, Jean-François Focant<sup>1</sup>*  
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- K.33 TD-GCxGC-LRTOFMS/FID AND TD-GCxGC-HRTOFMS FOR THE ANALYSIS OF VAPOUR PHASE OF CIGARETTE SMOKE AND TOBACCO HEATING PRODUCT AEROSOL**  
*Benjamin Savareear<sup>1</sup>, Juan Escobar-Arnanz<sup>1</sup>, Michal Brok<sup>2</sup>, Malcom J. Saxton<sup>2</sup>, Christopher Wright<sup>2</sup>, Chuan Liu<sup>2</sup>, Jean-Francois Focant<sup>1</sup>*  
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<sup>2</sup> Group Research and Development - British American Tobacco, Regents Park Rd, SO158TL Southampton, United Kingdom

- K.34 ETHYLENE PROPYLENE DIENE MONOMER RUBBER ANALYSIS BY USING PYROLYSIS COMPREHENSIVE TWO-DIMENSIONAL GC (PY/GCXGC) AND HIGH-RESOLUTION TOFMS WITH ELECTRON IONIZATION, FIELD IONIZATION AND PHOTO IONIZATION**  
*Masaaki Ubukata<sup>1</sup>, Takaya Satoh<sup>1</sup>, Roger Seyger<sup>2</sup>*  
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<sup>2</sup> Ruma Rubber B.V., Lindberghstraat 49, 7903 BM Hoogeveen, Netherlands
- K.35 ION EXCHANGE RESIN ANALYSIS BY USING PYROLYSIS COMPREHENSIVE TWO-DIMENSIONAL GC (PY/GCXGC) AND HIGH-RESOLUTION TOFMS WITH ELECTRON IONIZATION AND PHOTO IONIZATION**  
*Masaaki Ubukata<sup>1</sup>, Takaya Satoh<sup>1</sup>, Ryuichi Kana<sup>2</sup>*  
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<sup>2</sup> Chiyoda Corporations, Moriya-cho 3-13, 221-0022 Yokohama, Japan
- K.36 DETERMINATION OF 59 POTENTIAL ALLERGENS IN FRAGRANCES BY COMPREHENSIVE GCxGC(QMS)**  
*Xaver Mönnighoff, Waldemar Weber, Hans-Ulrich Baier*  
Center of Innovation & Product Support - GCMS - Shimadzu Europa, Albert-Hahn-Straße 6-10, 47269 Duisburg, Germany
- K.37 INTEGRATED COMPREHENSIVE GAS-CHROMATOGRAPHIC AND SPECTROSCOPIC CHARACTERIZATION OF VETIVERYL ACETATES**  
*Loïc Tissandie<sup>1</sup>, Hugues Brevard<sup>2</sup>, Uwe J. Meierhenrich<sup>1</sup>, Jean-Jacques Filippi<sup>1</sup>*  
<sup>1</sup> Institut de Chimie de Nice - Université Côte d'Azur, UMR 7272 CNRS, Parc Valrose, 06108 Nice Cedex 2, France  
<sup>2</sup> Robertet S.A., 37 avenue Sidi Brahim, 06130 GRASSE, France
- K.38 FINGERPRINTING OF EXTRA VIRGIN OLIVE OIL VOLATILES BY GCxGC: METHOD TRANSLATION AND METADATA TRANSFER FROM THERMAL TO DIFFERENTIAL FLOW MODULATED PLATF**  
*Federico Stilo<sup>1</sup>, Marta Cialliè Rosso<sup>1</sup>, Erica Liberto<sup>1</sup>, Andrea Carretta<sup>2</sup>, Gigi Cobelli<sup>2</sup>, Armando Miliazza<sup>2</sup>, Stephen E. Reichenbach<sup>3,4</sup>, Qingping Tao<sup>4</sup>, Matthew Giardina<sup>5</sup>, Carlo Bicchi<sup>1</sup>, Chiara Cordero<sup>1</sup>*  
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<sup>5</sup> Agilent Technologies - Agilent Technologies, 2850 Centerville Rd, 19808 Wilmington, United States
- K.39 COMPREHENSIVE GCxGC-HR TOFMS: ON THE WAY TOWARDS FULL CHEMICAL CHARACTERIZATION OF PETROLEUM PRODUCTS**  
*Tomas Kovalczuk<sup>1</sup>, Jana Langova<sup>2</sup>*  
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<sup>2</sup> Unipetrol Centre for Research and Education, Revoluční 1521/84, 40001 Usti nad Labem, Czech Republic
- K.40 USING GCxGC/HRTOFMS WITH EI/FI/PI FOR COMPONENT IDENTIFICATION AND TIME VARIATION ANALYSIS OF PERFUME**  
*John Dane<sup>1</sup>, Koji Okuda<sup>1</sup>, Michael Long<sup>2</sup>, Robert B. Cody<sup>1</sup>*  
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- K.41 EXPOSURE AND SECONDARY EVAPORATION OF SELECTED CHEMICAL WARFARE AGENTS AND PESTICIDES FROM TILLANDSIA PLANT SPECIES**  
*Roberta Xega, Bruce E. King*  
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- K.42 GCXGC-TOF MS ANALYSIS OF PETROCHEMICAL SAMPLES: FINE TUNING OF SEPARATION**  
*Tomas Kovalczuk<sup>1</sup>, Jitka Zrostlikova<sup>1</sup>, Jana Langova<sup>2</sup>*  
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- K.43 REVISITING GCxGC-(HR)TOFMS FOR DIOXINS ANALYSIS. WHERE ARE WE NOW?**  
*Pierre-Hugues Stefanuto, Lena Dubois, Delphine Zanella, Jean-François Focant*  
 Department of Chemistry - University of Liège, Allée du 6 Août 11, B6c, 4000 Liège, Belgium
- K.44 COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY-FLAME IONIZATION DETECTION FOR IDENTIFICATION OF MYCOBACTERIUM TUBERCULOSIS IN SPUTUM AND CULTURES BASED ON THERMALLY ASSISTED HYDROLYSIS AND METHYLATION**  
*Fatma Nur Arslan<sup>1,2</sup>, Hans-Gerd Janssen<sup>3,1</sup>, Arend Kolk<sup>1</sup>*  
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- K.45 PROGRAMMED TEMPERATURE VAPORIZING (PTV): A VERSATILE SOLUTION FOR A NON-DISCRIMINATION OF VACUUM GAS OIL**  
*Marco Piparo<sup>1,2</sup>, Gaëlle Jousse<sup>2</sup>, Pierre Giusti<sup>2</sup>, Cardinael Pascal<sup>1</sup>*  
<sup>1</sup> Sciences et Methodes Separatives - Normandie University, 1 rue Tesniere, 76821 Mont Saint Aignan Cedex, France  
<sup>2</sup> TOTAL TRTG, BP 27, 76700 Hartfleury, France
- K.46 GCxGC- TANDEM IONIZATION-TOFMS WITH COMBINED UNTARGETED AND TARGETED (UT) FINGERPRINTING OF VOLATILES FROM EXTRA VIRGIN OLIVE OIL: CHALLENGES FOR DATA ALIGNMENT AND RESPONSE NORMALIZATION**  
*Federico Stilo<sup>1</sup>, Erica Liberto<sup>1</sup>, Cecilia Cagliero<sup>1</sup>, Patrizia Rubiolo<sup>1</sup>, Barbara Sgorbini<sup>1</sup>, Stephen E. Reichenbach<sup>2</sup>, Qingping Tao<sup>3</sup>, Carlo Bicchi<sup>1</sup>, Chiara Cordero<sup>1</sup>*  
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- K.47 OPTIMIZING GCXGC METHODS THROUGH THERMODYNAMIC MODELING**  
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- K.48 NON-TARGETED ANALYSIS OF PERSISTENT ORGANIC POLLUTANTS IN YOUNG OF THE YEAR SMALLMOUTH BASS UTILIZING GCxGC-TOFMS**  
*Beate Gruber<sup>1</sup>, Benedikt A. Weggler<sup>1</sup>, Paige Teehan<sup>1</sup>, Megan Keppler Schall<sup>2</sup>, Vicki Blazer<sup>3</sup>, Frank Dorman<sup>1</sup>*  
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- K.49 CHARACTERIZATION OF CRUDE OIL REFINING PRODUCTS USING A GCXGC-HRMS WITH AN INTEGRATED DIRECT INLET PROBE**  
Juergen Wendt<sup>1</sup>, Uwe Kaefer<sup>2</sup>, Thomas Groeger<sup>2</sup>  
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- K.50 EVALUATION AND USE OF A NOVEL CONSUMABLE-FREE THERMAL MODULATOR AND A BENCH-TOP TIME-OF-FLIGHT MASS SPECTROMETER IN COMPREHENSIVE 2D GC APPLICATIONS**  
Barbara Giocastro<sup>1</sup>, Mariosimone Zoccali<sup>1</sup>, Peter Q. Tranchida<sup>1</sup>, Luigi Mondello<sup>1,2</sup>  
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- K.51 PRODUCTION OPTIMIZATION OF COFFEE SILVERSKIN BIO-OIL AND CHEMICAL CHARACTERIZATION OF THE ORGANIC FRACTION BY COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY**  
Rosângela A. Jacques<sup>1</sup>, Allan d. Polidoro<sup>1</sup>, Anaí L. dos Santos<sup>1</sup>, Enelise Scapin<sup>1</sup>, Eliane Lazzari<sup>1</sup>, Aline N. Silva<sup>1</sup>, Elina B. Caramão<sup>2</sup>  
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<sup>2</sup> Universidade Tiradentes, Rua Lagarto, 264, 49032-390 Aracaju, Brazil
- K.52 NEW PEAK-BASED DIFFERENCING TOOLS FOR SIDE-BY-SIDE COMPARISON OF TWO SAMPLES WITH GCXGC-MS**  
Qingping Tao<sup>1</sup>, Chase Heble<sup>1</sup>, Stephen E. Reichenbach<sup>2,1</sup>  
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<sup>2</sup> Computer Science and Engineering Department - University of Nebraska, 1400 R Street, 68588-0115 Lincoln, United States
- K.53 INCLUDING GC×GC-HRTOFMS AS A POWERFUL TOOL IN THE METHODOLOGY FOR THE SELECTION OF SUITABLE ADDITIVES TO REDUCE UNDESIRABLE ODOUR / VOC FROM BIOCOSMETIC MATERIALS**  
Catherine Brasseur<sup>1</sup>, Marie Demeyer<sup>1</sup>, Tiphaine Pacary<sup>1</sup>, Pierre Le Maitre<sup>1</sup>, Vincent Clause<sup>1</sup>, Stéphane Denis<sup>1</sup>, Emmanuel Novak<sup>1</sup>, Lena Dubois<sup>2</sup>, Jean-François Focant<sup>2</sup>  
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- K.54 PERFORMANCE EVALUATION OF A SOLID STATE MODULATOR**  
Lena M. Dubois<sup>1</sup>, Delphine Zanella<sup>1</sup>, Pierre-Hugues Stefanuto<sup>1</sup>, Jean-Francois Focant<sup>1</sup>, Sjaak de Koning<sup>2</sup>  
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- K.55 COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY APPLIED TO DRY DOG FOOD: COMPARISON OF THE EFFICIENCY OF DIFFERENT CONCENTRATIVE HEADSPACE TECHNIQUES TO TARGET POTENTIAL VOLATILE COMPOUNDS OF PALATABILITY**  
Caroline Basque<sup>1,2</sup>, Stéphanie Cambou<sup>2</sup>, Cécile Marzin<sup>1</sup>, Karine Hanaoka<sup>2</sup>, Laure Le Pailh<sup>2</sup>, Franck Péron<sup>2</sup>, Laurence Callejon<sup>2</sup>, Carole Prost<sup>1</sup>, Laurent Lethuaut<sup>1</sup>  
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- K.56 INNOVATIVE MATHEMATICAL APPROACH TO NON-TARGETED CROSS-SAMPLE ANALYSIS OF DATA GENERATED BY COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY WITH FOCUS ON PEAK ALIGNMENT**  
*Anna Jirosova<sup>1</sup>, Milan Lstiburek<sup>1</sup>, Vaclav Bittner<sup>2</sup>, Jaromir Hradecky<sup>1</sup>*  
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<sup>2</sup> Technical university Liberec, Studentska, 1402/02 Liberec, Czech Republic
- K.57 APPLICATION OF GCXGC-MS FOR OIL IDENTIFICATION IN COMPARISON WITH TRADITIONAL GC-MS ANALYSIS OF SARA FRACTIONS**  
*Evgenia Leushina, Elena Kozlova, Mikhail Spasennykh*  
Center for Hydrocarbon Recovery - Skolkovo Institute of Science and Technology (Skoltech), Skolkovo Innovation Center, 3 Nobel Street, 143026 Moscow, Russia
- K.58 DETERMINATION OF TECHNOLOGICAL CONTAMINATION IN CORE SAMPLES USING INDIVIDUAL COMPONENT RATIOS**  
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Center for Hydrocarbon Recovery - Skolkovo Institute of Science and Technology (Skoltech), Skolkovo Innovation Center, 3 Nobel Street, 143026 Moscow, Russia
- K.59 NEW PLATFORM-INDEPENDENT DATA ANALYSIS SOFTWARE WITH BUILT IN CHEMOMETRIC TOOLS FOR THE DATA ANALYSIS OF COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY (GCxGC) WITH HIGH RESOLUTION OR NOMINAL MASS SPECTROMETRIC DETECTION**  
*Thomas M. Groeger<sup>1,2</sup>, Ralf Zimmermann<sup>2</sup>*  
<sup>1</sup> Comprehensive Molecular Analytics - Helmholtz Zentrum München, Ingolstadter Landstrasse 1, 85764 Oberschleheim, Germany  
<sup>2</sup> Analytical Chemistry - University Rostock, Dr.-Lorenz-Weg 1, 18051 Rostock, Germany
- K.60 PRODUCTION OF BIO-OIL FROM RICE HUSK PYROLYSIS AND CHROMATOGRAPHIC CHARACTERIZATION BY HPLC/PDA AND GCxGC/QMS**  
*Elina B. Caramao, Eliane Lazzari, Allan S. Poldoro, Bruna Onorevoli, Tiago Schena, Aline Nunes, Enelise Scapin, Rosângela A. Jacques*  
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- K.61 STUDY OF BIO-OIL FROM THE PYROLYSIS OF INDUSTRIAL WASTE PYROLYSIS (SILVERSKIN AND GREEN COCONUT FIBER): CHEMICAL CHARACTERIZATION BY GCx GC/QMS**  
*Thiago R. Bjerk, Laiza C. Krause, Elina Bastos Caramao, Mozart D. Bispo, Jaderson K. Schneider*  
Instituto de Tecnologia e Pesquisa (ITP), Universidade Tiradentes (UNIT), Av. Murilo Dantas, 300 - Bairro Farolândia, 49032 - 490 Aracaju, SE, Brazil
- K.62 A COMPREHENSIVE ANALYSIS OF VOLATILE PROFILE OF CANNABIS SATIVA L. VARIETY FUTURA ESSENTIAL OIL BY UV TOTAL FLOW GCXGC-TOF AND GC-VUV.**  
*Eligio D. Sebastiani<sup>1</sup>, F. Villanelli<sup>2</sup>, Francesca Ieri<sup>3</sup>, Luca Calamai<sup>4,5</sup>, Annalisa Roman<sup>2,3</sup>*  
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<sup>5</sup> Laboratory for the Analysis and Research in Environmental Chemistry (ARCA)-IBBR - CNR, Via Madonna del Piano 10, 50019 Sesto Fiorentino (FI), Italy

- K.63 IMPORTANCE OF SORBENT MATERIAL SELECTION FOR VOCs SAMPLING: APPLICATION ON BACTERIAL CULTURES AND BREATH**  
*Flavio A. Franchina*, *Giorgia Purcaro*, *Alison Burklund*, *Marco Beccaria*, *Jane E. Hill*  
 Thayer School of Engineering - Dartmouth College, 14 Engineering Drive, 03755 Hanover, United States
- K.64 ANALYSIS OF PARTICULATE PHASE OF CIGARETTE SMOKE AND TOBACCO HEATING PRODUCT AEROSOL USING A TD-GC×GC-LRTOFMS/FID APPROACH**  
*Benjamin Savareear*<sup>1</sup>, *Juan Escobar-Arnanz*<sup>1</sup>, *Michal Brok*<sup>2</sup>, *Malcom J. Saxton*<sup>2</sup>, *Christopher Wright*<sup>2</sup>, *Chuan Liu*<sup>2</sup>, *Jean-Francois Focant*<sup>1</sup>  
<sup>1</sup> Organic & Biological Analytical Chemistry Group - University of Liege, Allée du Six Août, 11, 4000 Liege, Belgium  
<sup>2</sup> Group Research and Development - British American Tobacco, Regents Park Rd, SO158TL Southampton, United Kingdom
- K.65 MONITORING FRUIT QUALITY DURING POST-HARVEST STORAGE USING THERMAL DESORPTION AND TWO-DIMENSIONAL GAS CHROMATOGRAPHY**  
*Natasha D. Spadafora*<sup>1,2</sup>, *Antonella Muto*<sup>1</sup>, *Innocenzo Muzzalupo*<sup>3</sup>, *Leonardo Bruno*<sup>1</sup>, *Carsten Muller*<sup>4</sup>, *Hilary J. Rogers*<sup>4</sup>, *Massimo Santoro*<sup>2</sup>, *Laura McGregor*<sup>5</sup>, *Nick Bukowski*<sup>5</sup>, *Maria B. Bitonti*<sup>1</sup>  
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<sup>2</sup> Markes International, Gwaun Elai Medi-Science Campus, CF72 8XL Llantrisant, United Kingdom  
<sup>3</sup> Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, C.da Li Rocchi-Vermicelli, 87036 Rende (CS), Italy  
<sup>4</sup> Cardiff University, Sir Martin Evans Building, Museum Avenue., CF10 3AX Cardiff, United Kingdom  
<sup>5</sup> SepSolve Analytical, 22 Commerce Road, PE26LR Peterborough, United Kingdom
- K.66 HYBRID EI/PI GC×GC-HRTOFMS FOR HETEROATOM CHARACTERIZATION IN RENEWABLE PLASTIC PYROLYSIS OIL**  
*Anupam Giri*<sup>1</sup>, *Eric Brander*<sup>1</sup>, *Lara Galan-Sanchez*<sup>2</sup>  
<sup>1</sup> Analytical GTC - SABIC, Plasticslaan 1, 4612 PX Bergen op Zoom, Netherlands  
<sup>2</sup> Aromatics Tech EU & AMR - SABIC Technology Center, Urmonderbaan 22, 6167 RD Geleen, Netherlands
- K.67 AN AVIATION KEROSENE COMPOSITION STUDY BASED ON COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY WITH HIGH RESOLUTION MASS SPECTROMETRY**  
*Xing Peng*<sup>1,2</sup>, *Chenfei Ma*<sup>3</sup>  
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<sup>3</sup> Department of Analysis and Standardization - PetroChina Petrochemical Research Institute, Block A42, Science Base PetroChina, Xisha Village West, Shahe Town Changping District, Beijing, China, 102206 Beijing, China
- K.68 ANALYSIS OF VOLATILE DEFENSIVE SECRETION OF TRUE BUGS (LYGAEUS EQUESTRIS) BY 1D GC-MS AND BY COMPREHENSIVE GC×GC-MS**  
*Martina Havlíková*<sup>1</sup>, *Zuzana Bosáková*<sup>1</sup>, *Radomír Cabala*<sup>1,2</sup>, *Tereza Bosáková*<sup>1</sup>, *Sofiya Grybinik*<sup>1</sup>  
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<sup>2</sup> Toxicology Department - General University Hospital in Prague - Institute of Forensic Medicine and Toxicology, Studnickova 4, 12821 Prague 2, Czech Republic



- K.69 FINGERPRINTING BITUMEN FROM ARCHAEOLOGICAL SITES USING 2-DIMENSIONAL FLOW-MODULATED GAS CHROMATOGRAPHY**  
*Thomas Van de Velde<sup>1,2</sup>, Frederic Lynen<sup>1</sup>*  
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<sup>2</sup> Department of Archaeology - Ghent University, Sint-Pietersnieuwstraat 35, 9000 Gent, Belgium
- K.70 DISTINGUISHING COMMERCIAL DIESEL FUEL BRANDS USING COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY/MASS SPECTROMETRY**  
*Zhanpin Wu<sup>1</sup>, John Coleman<sup>1</sup>, Qingping Tao<sup>2</sup>*  
<sup>1</sup> Zoex Corporation, 12221 Fuqua Rd, Suite A, 77034 Houston, United States  
<sup>2</sup> GC Image LLC, PO Box 57403, 68505 Lincoln, United States
- K.71 ROBUST AND DETAILED PROFILING OF PLASMA PHOSPHOLIPID FATTY ACID USING FAME GCxGC: TOWARD BETTER NUTRITIONAL BIOMARKERS FOR FAT INTAKE**  
*Keith Summerhill<sup>1</sup>, Rebecca Preston<sup>2</sup>, Aaron Parker<sup>2</sup>, Bob Green<sup>2</sup>, Albert Koulman<sup>1,3</sup>, Laura McGregor<sup>2</sup>*  
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<sup>2</sup> SepSolve Analytical, 22 Commerce Road, PE2 6LR Peterborough, United Kingdom  
<sup>3</sup> NIHR BRC Nutritional Biomarker Laboratory, Hills Road, CB2 0QQ Cambridge, United Kingdom
- K.72 OPTIMIZING GCXGC PARAMETERS FOR PETROLEUM ANALYSIS USING A FREE WEB-BASED TOOL**  
*Christina N. Kelly, Joseph E. Binkley, Lorne M. Fell*  
 LECO Corporation, 3000 Lakeview Avenue, 49085 Saint Joseph, MI, United States
- K.73 DUAL HEADSPACE STIR BAR SORPTIVE EXTRACTION: INFLUENCE OF COATING PHASE AND CO-EXTRACTION STEP ON RECOVERY OF MEAT AROMA COMPOUNDS USING COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY GCxGC/TOF-MS**  
*Laurent Le Thuaut<sup>1</sup>, Bharath K.S. Gowda<sup>2</sup>, Cécile Marzin<sup>1</sup>, C. Anandharamakrishnan<sup>2</sup>, Carole Prost<sup>1</sup>*  
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<sup>2</sup> IICPT Indian Institute of Crop Processing Technology, Pudukkottai Road, 613 005 Thanjavur, India
- K.74 COMBINED TARGETED AND UNTARGETED PROFILING OF VOLATILE AROMA COMPOUNDS WITH COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY FOR DIFFERENTIATION OF CROATIAN EXTRA VIRGIN OLIVE OILS ACCORDING TO VARIETY AND GEOGRAPHICAL ORIGIN**  
*Igor Lukic<sup>1</sup>, Silvia Carlin<sup>2,3</sup>, Ivana Horvat<sup>1</sup>, Urska Vrhovsek<sup>2</sup>*  
<sup>1</sup> Department of Agriculture and Nutrition - Institute of Agriculture and Tourism, Karla Huguesa 8, 52440 Porec, Croatia  
<sup>2</sup> Department of Food Quality and Nutrition, Research and Innovation Centre - Fondazione Edmund Mach (FEM), Via E. Mach 1, 38010 San Michele all'Adige, Italy  
<sup>3</sup> Department of Agricultural, Food, Environmental and Animal Sciences - University of Udine, Via delle Scienze 208, 33100 Udine, Italy
- K.75 FLAVOUR PROFILING OF DIPEEL TREATED AVOCADOS BY SOLID PHASE MICRO EXTRACTION WITH COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY (SPME-GCXGC)**  
*Taylor Hayward, Allison Ferranti*  
 Apeel Sciences, 819 Reddick St, 93105 Santa Barbara, United States
- K.76 GCXGC-TOFMS AS A TOOL TO CONFIRM FOOD CONTAMINATION WITH MINERAL OILS**  
*Tomas Selecky*  
 MOSH/MOAH - SGS Institut Fresenius GmbH, Tegeler Weg 33, 10589 Berlin, Germany

- K.77 A COMPARISON OF PAH LEVELS IN USED ENGINE OILS BY GC-TOFMS AND GCXGC TOF-MS**  
*Christina Kelly, David Alonso, Lorne M. Fell, Joseph E. Binkley*  
LECO Corporation, 3000 Lakeview Avenue, 49085 Saint Joseph, MI, United States
- K.78 CHARACTERIZATION OF VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS PROFILE FROM WINE SAMPLES PROVIDED FROM A SMALL LOCAL PRODUCER BY SPME-GCXGC-TOFMS AND HS-SPME-GCXGC-TOFMS.**  
*Aurel M. Toderici<sup>1,2</sup>, Thomas Kovalczuk<sup>3</sup>, Diana Stegarus<sup>1</sup>*  
<sup>1</sup> Dept. of Research and Development - Natl. R&D Inst. for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, no. 4, Uzinei str., 240050 Ramnicu Valcea, Romania  
<sup>2</sup> Fac. of Appl. Chem. and Mat. Sci. / SIMONa Dept. - Politehnica University of Bucharest, no. 1-7, Polizu str., 011061 Bucharest, Romania  
<sup>3</sup> LECO Instruments Plzen, Plasma, 66, 323 00 Plzen, Czech Republic
- K.79 PROFILE OF VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS FROM ALCOHOLIC DISTILLATED BEVERAGE SAMPLES PROVIDED FROM A BRANDY LOCAL PRODUCER BY SPME-GCXGC-TOFMS AND HS-SPME-GCXGC-TOFMS.**  
*Diana Stegarus<sup>1</sup>, Tomas Kovalczuk<sup>2</sup>, Aurel M. Toderici<sup>1</sup>*  
<sup>1</sup> Dept. of Research and Development - Natl. R&D Inst. for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, no. 4, Uzinei str., 240050 Ramnicu Valcea, Romania  
<sup>2</sup> LECO Instruments Plzen, Plasma, 66, 323 00 Plzen, Czech Republic
- K.80 COMPREHENSIVE RESEARCH OF CRUDE OIL ON GCxGC MS-QTOF**  
*Konstantin Svirskiy<sup>1</sup>, Andrey Grinko<sup>2</sup>, Stanislav Novikov<sup>2</sup>, Ivan Goncharov<sup>2</sup>*  
<sup>1</sup> Chemical Analysis - Agilent Technologies, Kosmodamianskaya Nab., 52 Building 1, 115054 Moscow, Russia  
<sup>2</sup> Engineering Department of Natural Resources, Tomsk Polytechnic University, 30 Lenin street Tomsk, Russia
- K.81 COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY COUPLED TO HIGH RESOLUTION TIME-OF-FLIGHT MASS SPECTROMETRY (GCxGC-HR-TOFMS) FOR THE ANALYSIS OF SOUTH AFRICAN CHENIN BLANC WINES**  
*Andreas G. Tredoux, Sithandile Ngxangxa, Andre de Villiers*  
Department of Chemistry and Polymer Science - Stellenbosch University, Private Bag X1, 7602 Stellenbosch, South Africa
- K.82 ENHANCED WORKFLOWS IN GCxGC DATA PROCESSING**  
*Nick Bukowski<sup>1</sup>, Laura McGregor<sup>1</sup>, Matthew Edwards<sup>1</sup>, Joe Blanch<sup>2</sup>, Patrick Henry<sup>2</sup>*  
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## K\*. OTHER COMPREHENSIVE TECHNIQUES

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- K\*.01 UNRAVELING THE COMPOSITION OF BIOACTIVE COMPOUNDS IN HOP ( HUMULUS LUPULUS ) BY COMPREHENISVE LC x LC-IT-TOF ASSISTED BY DI-FT-ICR**  
*Eduardo M. Sommella<sup>1</sup>, Emanuela Salvati<sup>1</sup>, Giacomo Pepe<sup>1</sup>, Ettore Novellino<sup>2</sup>, Pietro Campiglia<sup>1,3</sup>*  
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<sup>2</sup> Università di Napoli, Via Domenico Montesano, 80131 Napoli, Italy  
<sup>3</sup> Ebris - European Biomedical Research Institute of Salerno, Via De Renzi 50, 84125 Salerno, Italy

- K\*.02 EXPLORING THE POSSIBILITIES OF TEMPERATURE-RESPONSIVE COLUMNS IN COMPREHENSIVE TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY**  
*Mathijs Baert*<sup>1</sup>, *Kristina Wicht*<sup>1,2</sup>, *André de Villiers*<sup>2</sup>, *Gert Desmet*<sup>3</sup>, *Frederic Lynen*<sup>1</sup>  
<sup>1</sup> Department of Organic and Macromolecular Chemistry - Ghent University, Krijgslaan 281 S4-Bis, 9000 Ghent, Belgium  
<sup>2</sup> Department of Chemistry and Polymer Science - Stellenbosch University, Private Bag X1, 7602 Stellenbosch, South Africa  
<sup>3</sup> Department of Chemical Engineering - Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussel, Belgium
- K\*.03 COMPREHENSIVE TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY COUPLED TO MASS SPECTROMETRY FOR ELUCIDATION OF THE POLYPHENOLIC FRACTION OF PISTACIA VERA FROM DIFFERENT GEOGRAPHICAL ORIGIN**  
*Katia Arena*<sup>1</sup>, *Francesco Cacciola*<sup>2</sup>, *Domenica Mangraviti*<sup>1</sup>, *Francesca Rigano*<sup>3</sup>, *Paola Dugo*<sup>1,3</sup>, *Luigi Mondello*<sup>1,3</sup>  
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- K\*.04 INVESTIGATION OF PARTIAL BREAKTHROUGH EFFECT IN TWO-DIMENSIONAL LC USING GRADIENT ELUTION IN THE SECOND DIMENSION**  
*Gino Groeneveld*<sup>1</sup>, *Melissa Dunkle*<sup>2</sup>, *Theodora Adamapoulou*<sup>1</sup>, *Bob Pirok*<sup>1</sup>, *Matthias Pursch*<sup>3</sup>, *Edwin Mes*<sup>2</sup>, *Peter Schoenmakers*<sup>1</sup>  
<sup>1</sup> Analytical Chemistry - University of Amsterdam, Science Park 904, 1098 XH Amsterdam, Netherlands  
<sup>2</sup> Analytical Sciences - Dow Benelux B.V., P.O. Box 48, 4530 AA Terneuzen, Netherlands  
<sup>3</sup> Analytical Sciences - Dow Deutschland Anlagengesellschaft mbH, P.O. Box 1120, 21677 Stade, Germany
- K\*.05 PROFILING OF MARINE ORGANISM LIPIDOME USING HYPHENATED AND MULTIDIMENSIONAL CHROMATOGRAPHY TECHNIQUES COUPLED TO MASS SPECTROMETRY DETECTION**  
*Paola Donato*<sup>1</sup>, *Giuseppe Micalizzi*<sup>2</sup>, *Marianna Oteri*<sup>2</sup>, *Francesca Rigano*<sup>3</sup>, *Danilo Sciarrone*<sup>2</sup>, *Paola Dugo*<sup>2,3</sup>, *Luigi Mondello*<sup>2,3</sup>  
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<sup>3</sup> Chromaleont S.r.L. - c/o University of Messina, Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Polo Annunziata, Viale Annunziata s.n., 98168 Messina, Italy
- K\*.06 TEMPERATURE RESPONSIVE COMPREHENSIVE TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY: A NEW TOOL ALLOWING IMPROVED RESOLUTION OF (BIO-) ORGANIC SOLUTES**  
*Kristina Wicht*, *Mathijs Baert*, *Frederic Lynen*  
 Separation Science Group, Department of Organic and Macromolecular Chemistry - Ghent University, Krijgslaan 281S4bis, B-9000 Ghent, Belgium

- K\*.07**     **COMPREHENSIVE TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY COUPLED TO TANDEM MASS SPECTROMETRY FOR QUALI-QUANTITATIVE ANALYSIS OF THE POLYPHENOLIC FRACTION OF EXTRA VIRGIN OLIVE OILS**  
*Katia Arena<sup>1</sup>, Francesco Cacciola<sup>2</sup>, Fabio Salafia<sup>1</sup>, Francesca Rigano<sup>3</sup>, Mario Simone Zoccali<sup>1</sup>, Paola Dugo<sup>1,3</sup>, Luigi Mondello<sup>1,3</sup>*  
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- K\*.08**     **SUPERCRITICAL FLUID CHROMATOGRAPHYxULTRAHIGH PRESSURE LIQUID CHROMATOGRAPHY FOR PAPRIKA FINGERPRINTING BY Q-TOF AND ION MOBILITY SPECTROMETRY**  
*Paola Donato<sup>1</sup>, Daniele Giuffrida<sup>1</sup>, Marianna Oter<sup>2</sup>, Paola Dugo<sup>2,3</sup>, Luigi Mondello<sup>2,3</sup>*  
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## L. TRACE ANALYSIS

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- L.01**     **ROBUST MULTIRESIDUE PESTICIDE ANALYSIS IN BABY FOOD WITH ENHANCED SENSITIVITY GC-MS/MS TECHNOLOGY**  
*James R. Law, Paul Silcock, Tim Anderson, Cristian I. Cojocariu*  
Applied Technologies - Thermo Fisher Scientific, Manor park, WA7 1TA Runcorn, United Kingdom
- L.02**     **DETERMINATION OF NITROAROMATIC COMPOUNDS USING SPME WITH GC-MS**  
*Ales Eisner, Tomas Bajer, Petra Bajerova, Karel Ventura, Martin Adam*  
Department of Analytical Chemistry, Faculty of Chemical Technology - University of Pardubice, Studentská 573, CZ-53210 Pardubice, Czech Republic
- L.03**     **DETERMINATION OF UNDERIVATIZED TRICLOSAN AND RELATED COMPOUNDS. OPTIMIZATION OF GC/MS/MS PARAMETERS**  
*Marco Gomes da Silva<sup>1</sup>, Mátia Magro<sup>2</sup>, Davide Mendes<sup>1</sup>, Eduardo Mateus<sup>2</sup>, Alexandra Ribeiro<sup>2</sup>*  
<sup>1</sup> Faculdade de Ciências e Tecnologia - LAQV, REQUIMTE-DQ, Universidade Nova de Lisboa, 2829-516 Caparica, Portugal  
<sup>2</sup> CENSE - Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Campus da Caparica, 2829-516 Caparica, Portugal
- L.04**     **APPROACHES FOR THE ANALYSIS OF PESTICIDE RESIDUES IN CANNABIS**  
*Katherine K. Stenerson, Gary Oden, Michael Halpenny, Leonards Sidisky, Craig Aurand, Lisa McCombie*  
MilliporeSigma, 595 N. Harrison Rd, PA 16823 Bellefonte, United States

- L.05 THE APPLICATION OF GAS AND LIQUID CHROMATOGRAPHY TO THE ANALYSIS OF CHEMICAL WARFARE AGENTS AND THEIR DEGRADATION PRODUCTS IN SEDIMENT SAMPLES FROM THE BALTIC SEA**  
*Stanislaw Popiel, J. Nawala, D. Gordon, B. Dawidziuk, D. Dziedzic*  
Faculty of Advanced Technologies and Chemistry - Military University of Technology, Urbanowicza street 2, 00-908 Warsaw, Poland
- L.06 NEW GC INLET LINER DEACTIVATION EXHIBITS EXCELLENT RESPONSE FOR ACTIVE COMPOUNDS**  
*Linx Waclaski, Mark Badger, Christopher Rattray*  
Innovations - Restek Corporation, 110 Benner Circle, 16823 Bellefonte, PA, United States
- L.07 MS/MS SPECTRAL LIBRARY WITH LINEAR RETENTION INDICES: A POWERFUL TOOL FOR IDENTIFICATION OF PESTICIDES IN COMPLEX MATRICES**  
*Filippo Alibrando<sup>1</sup>, Emanuela Trovato<sup>1</sup>, Margita Utzas<sup>1,2</sup>, Luigi Mondello<sup>2,3</sup>*  
<sup>1</sup> Chromaleont S.r.l. - c/o University of Messina, Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Viale Annunziata, Polo Annunziata, 98168 Messina, Italy  
<sup>2</sup> Center of Sports Nutrition Science - University of Physical Education, Alkotás utca 44, 1123 Budapest, Hungary  
<sup>3</sup> Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - University of Messina, Viale Annunziata, Polo Annunziata, 98168 Messina, Italy
- L.08 C/Q-TOF TECHNICAL INNOVATIONS ALLOW TRACE ANALYSIS AND SCREENING OF DRUG RELATED SUBSTANCES**  
*Peter Van Eenoo<sup>1</sup>, Michaël Polet<sup>1</sup>, Wim Van Gansbeke<sup>1</sup>, Remko Van Loon<sup>2</sup>, Ken Brady<sup>2</sup>*  
<sup>1</sup> DoCoLab - Ghent University, Rectorate Sint- Pietersnieuwstraat 25, B-9000 Ghent, Belgium  
<sup>2</sup> Marketing Programs - Agilent Technologies, 5500 Lakeside, SK8 3GR Cheadle, United Kingdom
- L.09 GC/APCI/MS/MS CAPABILITIES TO CHALLENGE THE ULTRA-TRACES ANALYSIS OF CHEMICAL HAZARDS IN COMPLEX BIOLOGICAL MATRICES**  
*Emmanuelle Bichon, Ingrid Guiffard, Marie-Line Morvan, Wafaa Halloum, Ronan Cariou, Jean-Philippe Antignac, Anaïs Vénisseau, Philippe Marchand, Fabrice Monteau, Bruno Le Bizec*  
LABERCA - ONIRIS, Route de Gachet - CS 50707, 44307 Nantes Cedex 3, France
- L.10 METHOD DEVELOPMENT FOR THE ANALYSIS OF ARTIFICIALLY LIGHT AGED ASIAN LACQUER FILMS USING PYROLYSIS AND THERMAL DESORPTION TECHNIQUES HYPHENATED WITH GAS CHROMATOGRAPHY/MASS SPECTROMETRY**  
*Jonas Veenhoven<sup>1,2</sup>, Steven Saverwynna<sup>2</sup>, Henk v. Keulen<sup>2</sup>, Maarten v. Bommel<sup>2</sup>, Michael Schilling<sup>5</sup>, Frederic Lynen<sup>1</sup>*  
<sup>1</sup> Separation Science Group - Department of Organic and Macromolecular Chemistry, Ghent University, Krijgslaan 281, 9000 Ghent, Belgium  
<sup>2</sup> Department Laboratories - Royal Institute for Cultural Heritage (KIK-IRPA), Jubelpark 1, 1000 Brussels, Belgium  
<sup>3</sup> Department of Conservation - Cultural Heritage Agency of the Netherlands (RCE), Hobbemastraat 22, 1071 ZC Amsterdam, Belgium  
<sup>4</sup> Conservation & Restoration of Cultural Heritage - University of Amsterdam, Johannes Vermeerplein 1, 1071 DV Amsterdam, Netherlands  
<sup>5</sup> Science Department - The Getty Conservation Institute(GCI), 1200 Getty Center Drive, Suite 700, CA 90049 Los Angeles, United States
- L.11 MULTIRESIDUE PESTICIDE ANALYSIS WITH THE AGILENT INTUVO 9000 GC AND AGILENT 7000D TRIPLE QUADRUPOLE GC/MS**  
*Jessica Westland, Phil Wylie*  
AGILENT TECHNOLOGIES, INC., 2850 CENTERVILLE ROAD, 19808 Wilmington, United States

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## M. ENVIRONMENTAL APPLICATIONS

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**M.01 SCREENING FOR PESTICIDE RESIDUES IN CANNABIS USING A HIGH RESOLUTION ACCURATE MASS GC/Q-TOF**

*Philip L. Wylie<sup>1,2</sup>, Mei Wang<sup>3</sup>, Mohamed A. ElSohly<sup>4,5</sup>, Ikhtlas Khan<sup>3</sup>, Chandrani Gon<sup>4</sup>, Mohamed Radwan<sup>4</sup>*

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<sup>4</sup> Research Institute of Pharmaceutical Sciences - University of Mississippi, Waller Lab 135, 38677 Oxford, United States

<sup>5</sup> ElSohly Laboratories, Inc., 5 Industrial Park Drive, 38655 Oxford, United States

**M.02 QUANTIFICATION OF SHORT AND MEDIUM CHAINED CHLORINATED PARAFFINS IN FISH USING GC ORBITRAP-MS**

*Cristian I. Cojocariu<sup>1</sup>, Kerstin Krätschmer<sup>2</sup>, Alexander Schächtele<sup>2</sup>, Paul Silcock<sup>1</sup>, Rainer Malisch<sup>2</sup>*

<sup>1</sup> Thermo Fisher Scientific, Tudor Road, Manor Park, WA7 1TA Runcorn, United Kingdom

<sup>2</sup> European Union Reference Laboratory (EURL) for Dioxins and PCBs in Feed and Food, Bissierstraße 5, 79114 Freiburg, Germany

**M.03 MAJOR AND TRACE ELEMENTS DISTRIBUTION IN BIVALVE MOLLUSK SHELLS USING LA-ICP-MS LINE SCAN TECHNIQUE**

*Tatiana Chenet<sup>1</sup>, Dettel Günther<sup>2</sup>, Bodo Hattendorf<sup>2</sup>, Gunnar Schwarz<sup>2</sup>, Claudia Stevanin<sup>1</sup>, Luisa Pasti<sup>1</sup>*

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<sup>2</sup> Laboratory of Inorganic Chemistry - ETH, Vladimir-Prelog-Weg 1, 8093 Zurich, Switzerland

**M.04 DEVELOPMENT OF AN EXTRACTION METHOD FOR POLYCYCLIC AROMATIC HYDROCARBONS IN POLYHYDROXYALKANOATE BIOPOLYMERS BEFORE GAS CHROMATOGRAPHY-MASS SPECTROMETRY ANALYSIS**

*Anna Laura Capriotti, Michela Antonelli, Patrizia Foglia, Carmela Maria Montone, Roberto Samperi, Aldo Laganà*

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**M.05 METABOLIZATION OF LIPID-LOWERING DRUGS (STATINS) IN CRESS AS A RESULT OF BIOACCUMULATION**

*Lisa Emhofer, Wolfgang Buchberger, Christian W. Klampfl*

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**M.06 MULTIRESIDUE PESTICIDE ANALYSIS IN FRUIT AND VEGETABLE COMMODITIES USING BOTH UPLC AND APGC ON A SINGLE MASS SPECTROMETER PLATFORM**

*Steve Preece, Kari Organtini, Gareth Cleland McCall, Eimear McCall, Simon Hird*

Waters - Waters Corporation, Stamford Ave, SK9 4AX Wilmslow, United Kingdom

**M.07 THE ANALYSIS OF NATURAL AND SYNTHETIC ESTROGENS AT SUB PPT LEVELS IN SURFACE WATER AND CRUDE INFLUENT WATER WITH THE 2D-LC-MS/MS**

*Steve Preece<sup>1</sup>, Euan Ross<sup>1</sup>, Angela Boad<sup>2</sup>, Hamish Todd<sup>2</sup>, Neil Gatward<sup>2</sup>*

<sup>1</sup> Waters - Waters Corporation, Stamford Ave, SK9 4AX Wilmslow, United Kingdom

<sup>2</sup> Scottish Water, Herriot Watt Research Park, EH14 4AP Edinburgh, United Kingdom

- M.08 OCCURRENCE OF HAZARDOUS CHEMICALS IN SYNTHETIC TURF SPORTS FIELDS: POTENTIAL RISK TO HUMAN HEALTH AND THE ENVIRONMENT**  
*Maria Llompart<sup>1</sup>, Maria Celeiro<sup>1</sup>, Nuno Ratola<sup>2</sup>, Thierry Dagnac<sup>3</sup>*  
<sup>1</sup> Department of Analytical Chemistry, Nutrition and Food Science - University of Santiago de Compostela, Avda das Ciencias S/N, Campus Vida, E-15782 Santiago de Compostela, Spain  
<sup>2</sup> Laboratory for Process Engineering, Environment, Biotechnology and Energy (LEPABE), - University of Porto, Rua Dr Roberto Frias 4200-465, XX Porto, Portugal  
<sup>3</sup> INGACAL. CIAM - Xunta de Galicia, Apdo 10, 15080 A Coruña, Spain
- M.09 ASSESSMENT OF THERMAL PROCESSING CONTAMINANT LEVELS IN DRIED AND SMOKED FRUITS USING QuEChERS APPROACH FOLLOWED BY GC-SIM-MS**  
*Magdalena Surma, Anna Sadowska-Rociek, Ewa Cieslik*  
 Malopolska Centre of Food Monitoring - University of Agriculture in Krakow, Balicka str. 122, 30-149 Krakow, Poland
- M.10 SEWAGE SLUDGE EFFECT ON THE CONCENTRATIONS OF TEBUCONAZOLE IN SOIL**  
*Giani B. Bohm<sup>1</sup>, Sara L. Lanius<sup>1</sup>, Daniel R. Arsand<sup>1</sup>, Emerson d. Bohm<sup>1</sup>, Pedro J. Sanches Filho<sup>1</sup>, Ednei G. Prime<sup>2</sup>*  
<sup>1</sup> engenharia e ciencias ambientais - GPCA - IFSul- Campus Pelotas, praça 20 de setembro, 455, 96010000 pelotas, Brazil  
<sup>2</sup> Análises de Compostos Orgânicos e Metais- LACOM - Furg, Av. Itália, km 8, 474 Rio Grande, Brazil
- M.11 OPTIMIZATION OF THE GCMS CHROMATOGRAPHIC METHOD FOR DETERMINATION OF DIFENOCONAZOLE**  
*Giani b. Bohm, Alex M. Larrosa, Emerson d. Bohm, Iago R. Dutra, Pedro J. Sanches Filho*  
 Engenharia e Ciências Ambientais - GPCA - IFSul- Campus Pelotas, praça 20 de setembro, 455, 96010000 pelotas, Brazil
- M.12 DICLOFENAC VS. PLANTS – IS DICLOFENAC TAKEN UP AND METABOLIZED DIFFERENTLY BY VARIOUS PLANT TYPES?**  
*Franz Mlynek<sup>1</sup>, Christian Klampff<sup>1</sup>, Wolfgang Buchberger<sup>1</sup>, Stepan Zezulka<sup>2</sup>, Jan Triska<sup>3</sup>*  
<sup>1</sup> Institute for Analytical Chemistry - Johannes Kepler University, Altenbergerstr 69, 4040 Linz, Austria  
<sup>2</sup> Institute of Experimental Biology, Faculty of Science - Masaryk University, Kotlarska 2, 61137 Brno, Czech Republic  
<sup>3</sup> Academy of Sciences of the Czech Republic - Global Change Research Institute, Belidla 986/4a, 60300 Brno, Czech Republic
- M.13 CONTAMINATION OF ENVIRONMENT BY MACROCYCLIC MUSK COMPOUNDS**  
*Milada Vávrová, Tereza Svestková, Pavlína Landová, Lenka Tobková*  
 Department of Chemistry and Technology of Environmental Protection - Brno University of Technology, Faculty of Chemistry, Purkynova 118, 61200 Brno, Czech Republic
- M.14 CHARACTERIZING VOLATILE ORGANIC DEGRADATION PRODUCTS FROM THE ELECTROLYTE OF LITHIUM ION BATTERIES BY GC/MS AND GC/MS-FTIR**  
*Maria Antoniadou<sup>1</sup>, Chrysoula Kanakaki<sup>1</sup>, Jürgen Kahr<sup>2</sup>, Erwin Rosenberg<sup>1</sup>*  
<sup>1</sup> Institute of Chemical Technologies and Analytics - Vienna University of Technology, Getreidemarkt 9/164 AC, A-1060 Vienna, Austria  
<sup>2</sup> Center for Low-Emission Transport, Electric Drive Technologies - AIT Austrian Institute of Technology GmbH, Giefinggasse 2, 1210 Vienna, Austria
- M.15 SYNTHETIC MUSK FRAGRANCES IN THE AQUATIC ENVIRONMENT**  
*Tereza Svestkova, Ludmila Mravcova, Milada Vavrova*  
 Institute of Chemistry and Technology of Environmental Protection - Brno University of Technology, Faculty of Chemistry, Purkynova 118, 61200 Brno, Czech Republic

- M.16 BIOLOGICAL SLUDGE IN TOMATO CULTIVATION AND ITS INFLUENCE ON RESIDUAL CONCENTRATION OF TEBUCONAZOLE**  
*Giani Mariza B. Bohm*<sup>1</sup>, *Sabrina M. Schwanz*<sup>1</sup>, *Emerson d. Bohm*<sup>1</sup>, *Iago R. Dutra*<sup>1</sup>, *Pedro J. Sanches Filho*<sup>1</sup>, *Daniel R. Arsand*<sup>1</sup>, *Ednei G. Prime*<sup>2</sup>  
<sup>1</sup> Engenharias e Ciências Ambientais - MECA - IFSul - Campus Pelotas, Praça 20 de setembro, 455, 96015360 Pelotas, Brazil  
<sup>2</sup> Análises de Compostos Orgânicos e Metais - LACOM - Furg, Av. Itália, km 8, 474 Pelotas, Brazil
- M.17 AN EFFICIENT METHOD TO ANALYZE OXY-PAHS, NITRO-PAHS AND PAHS IN PM<sub>2.5</sub> USING COLD FIBER SPME AND GC/MS**  
*Rosimeire R. Santos, Helvécio C. Menezes, Zenilda L. Cardeal*  
 Department of Chemistry - Universidade Federal de Minas Gerais, Av. Antonio Carlos, 6627, 31270901 Belo Horizonte, Brazil
- M.18 DETERMINATION OF OXY-PAHS, NITRO-PAHS AND PAHS IN COFFEE BREW USING AN EFFICIENT COLD FIBER-SPME GC/MS METHOD**  
*Rosimeire R. Santos, Helvécio C. Menezes, Zenilda L. Cardeal*  
 Department of Chemistry - Universidade Federal de Minas Gerais, Av. Antonio Carlos, 6627, 31270901 Belo Horizonte, Brazil
- M.19 CONTROL OF PRIORITY PERSISTENT ORGANIC POLLUTANTS IN SURFACE WATER AT BACKGROUND LEVEL OF POLLUTION**  
*Oksana N. Izosimova, Tatyana A. Babenko, Olga V. Kustova, Alexander G. Gorshkov*  
 Laboratory of Chromatography - Limnological Institute Siberian Branch of the Russian Academy of Sciences, 3, Ulan-Batorskaya Str., 664033 Irkutsk, Russia
- M.20 NEW DETERMINATION METHOD OF PERSISTENT ORGANIC POLLUTANTS IN WATER BY DI-SPME-GC/MS FOR REMEDIATION STUDIES USING EFFICIENT NANOMATERIALS**  
*Alejandro G. Haro*<sup>1</sup>, *Helvecio C. Menezes*<sup>1</sup>, *Leiliane Andre*<sup>2</sup>, *Zenilda L. Cardeal*<sup>1</sup>  
<sup>1</sup> Department of Chemistry - UFMG, Av. Antonio Carlos, 6627, 31270010 Belo Horizonte, Brazil  
<sup>2</sup> Department of Clinical and Toxicological Analysis - UFMG, Av. Antonio Carlos, 6627, 31270010 Belo Horizonte, Brazil
- M.21 DEVELOPMENT OF AN ANALYTICAL METHOD FOR THE METAPROTEOMIC INVESTIGATION OF AIR PARTICULATE MATTER DEPOSITED ON TEFLON FILTERS FOR ENVIRONMENTAL ANALYSIS**  
*Patrizia Foglia, Riccardo Zenezini Chiozzi, Anna Laura Capriotti, Michela Antonelli, Carmela Maria Montone, Aldo Lagana*  
 Department of Chemistry - Sapienza University of Rome, p.le Aldo Moro, 5, 185 Rome, Italy
- M.22 ERRORS IN ALKYLATED POLYCYCLIC AROMATIC HYDROCARBON CONCENTRATIONS CAUSED BY CURRENTLY EMPLOYED STANDARDIZED METHODS**  
*Albert Robbat, Nicholas Wilton, Benjamin Nicolaysen*  
 Department of Chemistry - Tufts University, 62 Talbot Ave, 02155 Medford, United States
- M.23 THE PREGNANCY EXPOSOME: EXPOSURE TO PER- AND POLYFLUOROALKYL SUBSTANCES IN A MOTHER-CHILD COHORT**  
*Dawei Geng*<sup>1</sup>, *Tim Siniöja*<sup>1</sup>, *Cecilia Carlsson*<sup>1</sup>, *Matej Oresic*<sup>2</sup>, *Tuulia Hyötylainen*<sup>1</sup>  
<sup>1</sup> MTM Research Centre, School of Science and Technology - Orebro University, Fakultetsgatan 1, 701 82 Orebro, Sweden  
<sup>2</sup> School of Medicine - Orebro University, Fakultetsgatan 1, 701 82 Orebro, Sweden



- M.24** DETERMINATION OF FIPRONIL AND ITS METABOLITES IN EGGS BY GAS CHROMATOGRAPHY TANDEM MASS SPECTROMETRY (GC-MS/MS) AFTER GEL PERMEATION CHROMATOGRAPHY (GPC) CLEAN-UP AND APPLICATION OF THE IMPROVED METHOD TO THE PROFICIENCY TESTING (PT) MATERIAL CHARACTERISATION  
*Lubomir Karasek, Stefanka Bratinova*  
Food and Feed Compliance - EC-DG JRC, Retieseweg, 2400 Geel, Belgium
- M.25** POLYCYCLIC AROMATIC HYDROCARBONS FINGERPRINTS IN THE WATER AND SEDIMENT SAMPLES OF ALGOA BAY, SOUTH AFRICA  
*Abiodun O. Adeniji*  
Department of Chemistry - University of Fort Hare, NO. 2, King William's Road, 5700 Alice, South Africa
- M.26** KOVAT'S AND LEE RETENTION INDICIES FOR CHARACTERIZATION OF PCBs AND DIOXINS  
*Conner Stultz<sup>1</sup>, Frank L. Dorman<sup>2</sup>*  
<sup>1</sup> Department of Chemistry - Pennsylvania State University, 104 Chemistry Building, 16801 State College, United States  
<sup>2</sup> Department of Biochemistry - Pennsylvania State University, 107 Althouse, 16801 State College, United States

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## N. ENERGY, PETROCHEMISTRY AND INDUSTRIAL APPLICATIONS

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- N.01** DETERMINATION OF BENZO[A]PYRENE AND BENZ[A]ANTHRACENE IN COAL TAR AND PITCH PRODUCTS BY AUTOMATED SPE-GC/MS  
*Oliver Lerch<sup>1</sup>, Andreas Hoffmann<sup>1,1</sup>, Carlos Gil<sup>1</sup>*  
<sup>1</sup> Gerstel GmbH & Co.KG, Eberhard-Gerstel-Platz 1, 45473 Mülheim an der Ruhr, Germany
- N.02** FAST SEPARATION OF SYNTHESIS GASES USING STANDARD GAS CHROMATOGRAPHS AND PACKED COLUMNS  
*Lars Kürstejn*  
Organic Analytical Department - Haldor Topsoe A/S, Haldor Topsoe Allé 1, 2800 Lyngby, Denmark
- N.03** STRATEGIES FOR QUANTITATION OF HINDERED AMINE LIGHT STABILIZERS IN POLYMERIC MATERIALS  
*Markus Wierer, Christian Klampfl, Wolfgang Buchberger*  
Institute for Analytical Chemistry - Johannes Kepler University, Altenbergerstraße 69, 4040 Linz, Austria
- N.04** THE ANALYSIS OF TAR FORMED DURING GASIFICATION OF BIOMASS  
*Ludmila Mravcová<sup>1</sup>, Martin Lisy<sup>2</sup>, Milada Vávrová<sup>1</sup>, Hana Lisá<sup>2</sup>, Tereza Svestková<sup>1</sup>, Josef Caslavsky<sup>1</sup>*  
<sup>1</sup> Institute of Chemistry and Technology of Environmental Protection - Brno University of Technology, Faculty of Chemistry, Purkytova 118, 61200 Brno, Czech Republic  
<sup>2</sup> Energy Institut - Brno University of Technology, Faculty of Mechanical Engineering, Technická 2, 61669 Brno, Czech Republic
- N.05** GAS CHROMATOGRAPHIC ANALYSIS OF FUEL AND COOLANT CONTAMINATION IN USED MOTOR OILS  
*James McCurry, Kelly Beard, Matthew Giardina, Rebecca Veeneman, Abbey Fausett*  
Gas Phase Division - Agilent Technologies, 2850 Centerville Road, 19808 Wilmington, United States

- N.06 A NEW APPROACH FOR NATURAL GAS APPLICATIONS BY MEANS OF A MEMS-BASED GC: THE PICOGC PROJECT**  
*Brais Vazquez Iglesias<sup>1</sup>, Stefano Rizzi<sup>1</sup>, Matteo Monticelli<sup>1</sup>, Ivan Elm<sup>2</sup>, Stefano Zampoll<sup>2</sup>, Gian Carlo Cardinal<sup>2</sup>, Fulvio Mancarella<sup>2</sup>, Filippo Bonafè<sup>2</sup>, Fabrizio Tamarr<sup>2</sup>, Stefano Galli<sup>2</sup>, Mario Galli<sup>2</sup>*  
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<sup>2</sup> CNR-IMM, Via Gobetti 101, 40129 Bologna, Italy  
<sup>3</sup> MEGA Srl, Via Plinio 29, 20025 Legnano, Italy
- N.07 MULTIPLEXING GAS CHROMATOGRAPHY FOR PROCESS CONTROL**  
*Marco Wunsch<sup>1</sup>, Alexander Reiter<sup>1</sup>, Rudolf Lehnig<sup>1</sup>, Oliver Trapp<sup>2</sup>*  
<sup>1</sup> Process Analytical Technology - BASF SE, Carl-Bosch-Str. 38, 67056 Ludwigshafen, Germany  
<sup>2</sup> Department Chemie - Ludwig-Maximilians-Universität München, Butenandtstr. 5-13, 81377 Munich, Germany
- N.08 AN INNOVATIVE, FAST AND FLEXIBLE CONFIGURATION FOR REFINERY GAS ANALYSIS.**  
*Maira Zanaboni, Matteo De Amicis, Ornella Crispu, Albino Sironi*  
 Dani Instruments, Viale Brianza, 87, 20093 Cologno Monzese, Italy

## O. BIOMEDICAL AND PHARMACEUTICAL APPLICATIONS

- O.01 BASELINE BREATHPRINTING OF A HEALTHY ADULT POPULATION IN OAHU, HAWAII**  
*Jireh S. Mendoza, Kealina Elzey-Aberilla, Katelynn A. Perrault*  
 Forensic Sciences Unit, Division of Natural Sciences and Mathematics - Chaminade University of Honolulu, 3140 Waiialae Avenue, 96816 Honolulu, United States
- O.02 DEVELOPMENT AND VALIDATION OF A NEW HPLC-ESI-MS/MS ANALYTICAL METHOD TO PROFILE BILE ACID METABOLISM OXIDATION PRODUCTS IN HUMAN FECES**  
*Placido Franco<sup>1</sup>, Emanuele Porru<sup>2</sup>, Jessica Fiori<sup>2</sup>, Bruno Cerra<sup>3</sup>, Antimo Gioiello<sup>3</sup>, Aldo Roda<sup>1,2</sup>*  
<sup>1</sup> Consorzio Interuniversitario per la Ricerca Industriale - University of Bologna, Via Selmi 2, 40126 Bologna, Italy  
<sup>2</sup> Department of Chemistry - University of Bologna, Via Selmi 2, 40126 Bologna, Italy  
<sup>3</sup> Department of Pharmaceutical Sciences - University of Perugia, Via del liceo 1, 06123 Perugia, Italy
- O.03 QUALITATIVE AND QUANTITATIVE SERUM BILE ACID ANALYSIS BY HPLC-ESI-MS/MS IN PATIENTS WITH ULCERATIVE COLITIS AND CROHN DISEASE COMBINED TO MULTIVARIATE CHEMOMETRIC DATA ANALYSIS.**  
*Emanuele Porru<sup>1</sup>, Placido Franco<sup>2</sup>, Konstantinos Katsanos<sup>3</sup>, Dimitrios K. Christodoulou<sup>3</sup>, Aldo Roda<sup>1,2</sup>, Giulia Roda<sup>4</sup>*  
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<sup>4</sup> IBD Centre - Humanitas Clinical and Research Centre, Via Manzoni 56, 20089 Rozzano, Milano, Italy
- O.04 PURIFICATION OF TWO PEPTIDES CRUDE MIXTURES WITH GRADIENT ELUTION RP-LC AND STUDY OF THEIR ADSORPTION ISOTHERMS BY MEANS OF INVERSE METHOD**  
*Chiara De Luca<sup>1</sup>, Martina Catani<sup>1</sup>, Simona Felletti<sup>1</sup>, Marco Visentin<sup>2</sup>, Walter Cabri<sup>2</sup>, Antonio Ricci<sup>2</sup>, Alberto Cavazzini<sup>1</sup>*  
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<sup>2</sup> Fresenius Kabi iPSUM s.r.l., Via San Leonardo, 23, 45010 Villadose (RO), Italy

- O.05 PROFILING VOLATILE ORGANIC COMPOUNDS IN EXHALED BREATH BY TD-GC-TOF MS**  
*Rebecca Preston, Anthony Buchanan, Laura McGregor, Bob Green, Nick Bukowski*  
 SepSolve Analytical, 22 Commerce Road, PE26LR Peterborough, United Kingdom
- O.06 FREE FRACTION ANALYSIS FOR THERAPEUTIC DRUG MONITORING OF ANTIEPILEPTIC DRUGS**  
*Craig Aurand, Klaus Buckendahl, Lisa McCombie, Leonard Sidisky*  
 Merck, 595 North Harrison Road, 16823 Bellefonte, United States
- O.07 DETERMINATION OF HEMATIC LEVEL OF BUTYRIC ACID IN PLASMA BY GC-TOFMS. A PILOT STUDY FOR MULTIPLE SCLEROSIS ASSESSMENT.**  
*Maira Zanaboni<sup>1</sup>, Albino Sironi<sup>1</sup>, Veniero Gambaro<sup>2</sup>, Gabriella Roda<sup>2</sup>, Sebastiano Arnoldi<sup>2</sup>*  
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<sup>2</sup> Dipartimento di Scienze Farmaceutiche, Laboratorio di Analisi Chimico-Tossicologica - University of Milan, via Mangiagalli 25, 20133 Milano, Italy
- O.08 QUANTIFICATION OF PHARMACEUTICALS FOR CEREBRAL PHARMACOKINETIC STUDIES**  
*Armin S. Guntner*  
 Institute for Analytical Chemistry - Johannes-Kepler-University, Altenbergerstr. 69, 4040 Linz, Austria
- O.09 RAPID AUTOMATED PROTEIN DIGESTION USING CONTROLLED FLOW KINETICS AND CUSTOMISABLE MICRO REACTION CARTRIDGES**  
*Peter Dawes<sup>1</sup>, Karen Doung<sup>2</sup>, Simin D. Maleknia<sup>3</sup>, Andrew Minett<sup>1</sup>, Philip Doble<sup>2</sup>*  
<sup>1</sup> EPREP Pty.Ltd., 14/35 Dunlop Road, 3170 Mulgrave, Australia  
<sup>2</sup> School of Mathematical and Physical Sciences - University of Technology Sydney, PO Box 123, Broadway, NSW 2007 Sydney, Australia  
<sup>3</sup> University of Technology Sydney, 15 Broadway, Ultimo, NSW 2007 Sydney, Australia
- O.10 ANALYSIS OF PLASTICIZERS AND METABOLITES IN SALIVA AND URINE OF PATIENTS WITH MOUTH CANCER USING AN IMPROVED HF-LPME-GC/MS METHOD**  
*Gabriela D. Cerqueira, Helvécio C. Menezes, Zenilda L. Cardeal*  
 Department of Chemistry - Universidade Federal de Minas Gerais, Av. Antonio Carlos, 6627, 31270901 Belo Horizonte, Brazil
- O.11 APPLICABILITY OF HF-LPME GC/MS TO STUDY THE ASSOCIATION BETWEEN BISPHENOL A, PHTHALATE METABOLITES AND ENDOMETRIOSIS**  
*Miriany M. Fernandez<sup>1</sup>, Zenilda L. Cardeal<sup>1</sup>, Marcia M. Carneiro<sup>2</sup>, Leiliane Andre<sup>3</sup>*  
<sup>1</sup> Department of Chemistry - UFMG, Av. Antonio Carlos 6627, 31270901 Belo Horizonte, Brazil  
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<sup>3</sup> Department of Clinical and Toxicological Analysis - UFMG, Av. Antonio Carlos, 6627, 31270010 Belo Horizonte, Brazil
- O.12 UREASE IMMOBILIZED ON MAGNETIC MICROPARTICLES FOR GC/MS-BASED URINARY METABOLOMICS**  
*Jaroslava Jacova<sup>1,2</sup>, Miroslav Jorenek<sup>3</sup>, David Friedecky<sup>1,2</sup>, Ludmila Zajoncova<sup>3</sup>, Tomas Adam<sup>1,2</sup>*  
<sup>1</sup> Laboratory of Metabolomics - Palacky University Olomouc, Hnevotinska 5, 779 00 Olomouc, Czech Republic  
<sup>2</sup> Laboratory of Inherited Metabolic Disorders - University Hospital Olomouc, I.P. Pavlova 6, 77900 Olomouc, Czech Republic  
<sup>3</sup> Department of Biochemistry - Palacky University Olomouc, Slechtitelu 27, 783 71 Olomouc, Czech Republic

- O.13 INVESTIGATING BACTERIAL VOLATILOME FOR THE CLASSIFICATION AND IDENTIFICATION OF MYCOBACTERIAL SPECIES**  
*Flavio A. Franchina<sup>1</sup>, Mavra Nasir<sup>2</sup>, Marco Beccaria<sup>1</sup>, Theodore Mellors<sup>1</sup>, Jane Hill<sup>1</sup>, Giorgia Purcaro<sup>1</sup>*  
<sup>1</sup> Thayer School of Engineering - Dartmouth College, 14 Engineering Drive, 03755 Hanover, United States  
<sup>2</sup> Geisel School of Medicine - Dartmouth College, 1 rope ferry road, 03755 Hanover, United States
- O.14 SERUM METABOLITE PROFILING OF POTENTIAL BIOMARKERS DURING FETAL AND EARLY LIFE EXPOSURES TO ENVIRONMENTAL CONTAMINANTS IN ASSOCIATIONS WITH AUTOIMMUNE DISEASES**  
*Tim Sinioja<sup>1</sup>, Dawei Geng<sup>1</sup>, Cecilia Carlsson<sup>1</sup>, Matej Oresic<sup>2</sup>, Tuulia Hyötyläinen<sup>1</sup>*  
<sup>1</sup> School of Science and Technology - Orebro Universitet, Fakultetsgatan 1, SE-701 82 Orebro, Sweden  
<sup>2</sup> School of Medicine - Orebro Universitet, Fakultetsgatan 1, SE-701 82 Orebro, Sweden
- O.15 METAPEPTIDOMICS DATA PROCESSING PIPE-LINE: APPLICATION TO THE STUDY OF FUNCTION OF GUT MICROBIOME IN CHRONIC KIDNEY DISEASE.**  
*Oleg Karaduta, Boris Zybajlov*  
Department of Biochemistry and Molecular Biology - UAMS, 4301 W MARKHAM ST, 72205 LITTLE ROCK, United States

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## **P. ANALYSIS OF NATURAL PRODUCTS, FOOD, FLAVOURS AND FRAGRANCES**

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- P.01 SENSITIVE AND ROBUST DETERMINATION OF PHTHALATES IN COOKING OIL USING ADVANCED ELECTRON IONIZATION SINGLE QUADRUPOLE GC-MS TECHNOLOGY**  
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- P.02 FLAVOR ANALYSIS OF HOT STEEPED MALT FOR BEER BREWING BY GC-MS**  
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- P.03 DETERMINATION OF VOLATILE COMPOUNDS (VCS) IN SESAME PASTES ANALYZED WITH- AND WITHOUT-SALT USING SOLID PHASE MICRO EXTRACTION TECHNIQUE (SPME)**  
*Ahmet Dursun, Dilek Özkan, Zehra Güler*  
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- P.04 EFFECT OF HARVESTING TIME ON VOLATILE COMPOSITION OF BERGAMOT ( CITRUS BERGAMIA ) ESSENTIAL OIL**  
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**P.05 CHARACTERIZATION OF BIOACTIVE SECOIRIDOID AGLYCONES IN OLIVE OIL BY LIQUID CHROMATOGRAPHY-ELECTROSPRAY IONIZATION AND FOURIER-TRANSFORM MASS SPECTROMETRY**

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**P.06 FULLY AUTOMATED DETERMINATION OF 3-MCPD, 2-MCPD, AND GLYCIDOL IN EDIBLE OILS BY GC/MS BASED ON METHOD AOCS CD 29C-13**

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**P.07 COMPARISON OF DETECTION TECHNIQUES FOR DETERMINATION OF PHENOLIC COMPOUNDS USING HPLC METHOD**

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**P.08 ANALYSIS OF BISPHENOL A IN FOODS USING SOLID PHASE MICROEXTRACTION WITH AN OVERCOATED FIBER**

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**P.09 ANALYSIS OF ETHANOL CONTENT IN KOMBUCHA TEA USING HEADSPACE SOLID PHASE MICROEXTRACTION AND GC-MS ANALYSIS**

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**P.10 GC/MS/MS ANALYSIS OF FIPRONIL AND FIPRONIL SULFONE IN EGGS, CHICKEN MEAT AND MAYONNAISE AFTER QuEChERS EXTRACTION AND CLEANUP USING ZIRCONIA BASED SORBENT**

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**P.11 ANALYSIS OF POLYNUCLEAR AROMATIC HYDROCARBONS IN PAPRIKA POWDER USING EZ-POP NP SPE AND THE A NEW CAPILLARY GC COLUMN**

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**P.12 COMBINATION OF STABLE ISOTOPE RATIOS OF H, C, N, O AND S WITH <sup>15</sup>N AND <sup>13</sup>C OF AMINOACIDS FOR THE DIFFERENTIATION OF ORGANICALLY AND CONVENTIONALLY GROWN TOMATOES**

*Luana Bontempo<sup>1</sup>, Katryna A. van Leeuwen<sup>1,2</sup>, Mauro Paolini<sup>1</sup>, Kristian Holst Laursen<sup>3</sup>, Cristina Micheloni<sup>4</sup>, Paul D. Prenzler<sup>2</sup>, Danielle Ryan<sup>2</sup>, Federica Camin<sup>1</sup>*

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- P.13 C AND H STABLE ISOTOPE RATIO ANALYSIS USING GC-IRMS FOR VANILLIN AUTHENTICATION**  
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- P.14 QUANTIFICATION OF METHYL XANTHINE, CAFFEIC ACID AND CHLOROGENIC ACIDS IN THE ULTRASONIC EXTRACTS OF SILVERSKIN BY HPLC-DAD-MS**  
*Elina B. Caramao<sup>1</sup>, Anal L. dos Santos<sup>1</sup>, Allan S. Polidoro<sup>1</sup>, Claudia A. L. Cardoso<sup>2</sup>, Rosângela A. Jacques<sup>1</sup>*  
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- P.15 SCREENING AND CONFIRMATORY METHODS TO ASSESS PALM OIL ADDITION IN FOOD**  
*Emanuele Sangiorgi<sup>1</sup>, Pierangela Rovellini<sup>2</sup>, Roberto Piro<sup>3</sup>, Renato Berneri<sup>1</sup>, Brunella Miano<sup>2</sup>*  
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- P.16 STUDY OF VOLATILE PROFILE OF PINOT BLANC WINE USING SOLID-PHASE MICROEXTRACTION GAS CHROMATOGRAPHY-TIME OF FLIGHT-MASS SPECTROMETRY (SPME/GC-TOF-MS) ANALYSIS**  
*Valentina Lazazzara, Florian Haas, Selena Tomada, Magdalena M. Kössler, Fenja Hinz, Ulrich Pedri, Peter Robatscher*  
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- P.17 DETERMINATION OF LOW MOLECULAR WEIGHT ALCOHOLS IN PURE ETHANOL AND LIQUEURS TO ASSESS THE QUALITY OF THE PRODUCTS**  
*Daniele Naviglio<sup>1</sup>, Martina Ciaravolo<sup>1</sup>, Silvia Sposito<sup>1</sup>, Michelina Catauro<sup>2</sup>, Monica Gallo<sup>3</sup>*  
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<sup>3</sup> Dipartimento di Medicina Molecolare e Biotecnologie Mediche - Università degli Studi di Napoli Federico II, via Pansini, 5, 80131 Napoli, Italy
- P.18 PROFILING THE AROMA OF PORTUGUESE MONOVARIETAL OLIVE OILS BY HS-SPME-GC/MS**  
*Maria Joao Cabrita<sup>1</sup>, Raquel Garcia<sup>1</sup>, Ana Maria Costa Freitas<sup>1</sup>, Marco Silva<sup>2</sup>*  
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- P.19 INVESTIGATION OF EXTRACTED AND LEACHED ANALYTES FROM PACKAGING MATERIALS WITH GC-TOFMS**  
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- P.20 EFFECTS OF SOIL AND VINEYARD CHARACTERISTICS ON SENSORY/VOLATILE PROFILES AND ON PHENOLICS OF CABERNET SAUVIGNON WINES**  
*Claudia A. Zini<sup>1</sup>, Karine P. Nicoll<sup>1</sup>, Aline T. Marques<sup>2</sup>, Celito C. Guerra<sup>3</sup>, Henrique P. dos Santos<sup>3</sup>, Juliane E. Welke<sup>4</sup>*  
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- P.21 DETERMINATION OF BIOACTIVE MOLECULES IN BAOBAB ( *Adansonia digitata* ) FRUIT FROM TANZANIA USING LIQUID CHROMATOGRAPHY.**  
*Marina Russo<sup>1</sup>, Maria Beatrice Ronci<sup>1</sup>, Alessandra Vilmercati<sup>1</sup>, Luigi Mondello<sup>2,3</sup>, Paola Dugo<sup>2,3</sup>, Laura De Gara<sup>1</sup>*  
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- P.22 IDENTIFICATION AND QUANTIFICATION OF BIOACTIVE COMPOUNDS IN YERBA MATE BY HPLC-DAD-MS**  
*Elina Bastos Caramao, Rosângela A. Jacques, Milena Mallmann, Allan S. Polidoro, Enelise Scapin, Tais Klein, Eliseu Rodrigues*  
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- P.23 EVALUATION OF THE INFLUENCE OF VINEYARD AGE, RIPENING STAGE AND CONSERVATION TEMPERATURE ON THE ESTER PROFILE OF PALOMINO FINO WHITE WINES**  
*José M. Muñoz-Redondo<sup>1</sup>, María V. Jiménez-Povedano<sup>2</sup>, Belén Puertas<sup>2</sup>, Emma Cantos-Villar<sup>2</sup>, Manuel J. Valcárcel-Muñoz<sup>3</sup>, Beltrán Peña-Parra<sup>3</sup>, José M. Moreno-Rojas<sup>1</sup>*  
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- P.24 A DETAILED STUDY OF ADDED-VALUE PHENOLIC COMPOUNDS IN SALIX SPECIES BARK, BY MASS SPECTROMETRY HYPHENATED CHROMATOGRAPHIC ANALYSIS**  
*Patrícia A. Ramos<sup>1</sup>, Sónia A. Santos<sup>1</sup>, Carmen S. Freire<sup>1</sup>, Artur M. Silva<sup>2</sup>, Armando J. Silvestre<sup>1</sup>*  
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- P.25 DETERMINATION OF PESTICIDES RESIDUES IN TROPICAL FRUITS OF COLOMBIA**  
*Diana Angélica Varela Martínez<sup>1</sup>, Javier González-Sálamo<sup>2</sup>, Miguel Angel González-Curbelo<sup>1</sup>, Javier Hernández-Borges<sup>2</sup>*  
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- P.26 CHARACTERIZATION OF THE VOLATOMIC PROFILE OF LEMON FROM DIFFERENT GEOGRAPHIC ORIGIN BASED ON CHROMATOGRAPHIC AND CHEMOMETRIC ANALYSIS**  
*José Figueira<sup>1</sup>, Priscilla Porto-Figueira<sup>1</sup>, Jorge A. Pereira<sup>1</sup>, José S. Câmara<sup>1,2</sup>*  
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- P.27 A CHROMATOGRAPHIC-BASED VOLATOMIC PROFILE AS A POWERFUL TOOL TO DISCRIMINATE CITRUS FRUITS**  
*José Figueira<sup>1</sup>, Priscilla Porto-Figueira<sup>1</sup>, Jorge A. Pereira<sup>1</sup>, José S. Câmara<sup>1,2</sup>*  
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- P.28 PHENOLIC COMPOUNDS ANALYSIS AND ANTIOXIDANT ACTIVITY EVALUATION OF DIFFERENT PDO ITALIAN EXTRA-VIRGIN OLIVE OILS**  
*Chiara Fanali<sup>1</sup>, Susanna Della Posta<sup>1</sup>, Alessandra Vilmercati<sup>1</sup>, Laura Dugo<sup>1</sup>, Marina Russo<sup>1</sup>, Luigi Mondello<sup>2,3</sup>, Laura De Gara<sup>1</sup>*  
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- P.29 QUANTITATIVE GC-VUV ANALYSIS OF ESSENTIAL OIL TERPENES USING TIME INTERVAL DECONVOLUTION**  
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- P.30 IKNIFE: A NEW SAMPLING DEVICE COUPLED TO RAPID EVAPORATIVE IONISATION MASS SPECTROMETRY FOR THE DETECTION OF FOOD FRAUD.**  
*Domenica Mangraviti<sup>1</sup>, Francesca Rigano<sup>1</sup>, Roberta La Tella<sup>2</sup>, Luigi Mondello<sup>1,2</sup>*  
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- P.31 CLIMATE DRIVES PLANT QUALITY: TEA AS A MODEL SYSTEM**  
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- P.32 HPLC-PDA/ESI-MS ANALYSIS OF AVAILABLE POLYPHENOLS OF HIBISCUS SABDARIFFA AND ZINGIBER OFFICINALE WITHIN THE RAT COLON LUMEN**  
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- P.33 OPTIMIZATION AND VALIDATION OF AN HPLC-PDA/ESI-MS METHOD FOR THE DETERMINATION OF POLYPHENOLS IN EXTRA VIRGIN OLIVE OIL**  
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- P.34 STUDY OF THE INFLUENCE OF THE APPLICATION OF AMINOETHOXYVINYLGLYCINE (AVG) COMBINED WITH POST-HARVEST STORAGE CONDITIONS ON THE PRODUCTION OF VOLATILES IN "GALA" APPLES USING HS-SPME-GC/MS**  
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- P.35 MULTIVARIATE HS-SPME-GC/MS METHOD OPTIMIZATION FOR VOLATILE AROMA PROFILING IN BEER**  
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- P.36 INFLUENCE OF GRAPE MATURATION, MACERATION TIME ON THE VOLATILE COMPOSITION OF SYRAH WINES PRODUCED IN NORTHEASTERN OF BRAZIL ACCESSED BY ANOVA-PCA**  
*Janaina A. Barbará<sup>1</sup>, Erica A. Souza-Silva<sup>1,2</sup>, Aline T. Marques<sup>3</sup>, Adriano A. Gomes<sup>1</sup>, Claudia A. Zini<sup>1</sup>*  
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- P.37 PYROLYSIS-COMPOUND-SPECIFIC HYDROGEN ISOTOPE ANALYSIS ( <sup>2</sup>H PY-CSIA). FIRST APPROACH OF A NEW CHROMATOGRAPHIC TECHNIQUE FOR GEOGRAPHICAL ORIGIN OF EXTRA VIRGIN OLIVE OILS.**  
*Maria Cabrita<sup>1</sup>, Nicasio Jiménez Morillo<sup>1</sup>, Cristina Maria Barrocas Dias<sup>2</sup>, Vera Palma<sup>1</sup>, F.J. González-Vila<sup>3</sup>, J.A González-Pérez<sup>3</sup>*  
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- P.38 HS-SPME-GC-MS QUANTITATIVE ANALYSIS OF LIPOXYGENASE PATHWAY VOLATILE COMPOUNDS IN MONOCULTIVAR EXTRA VIRGIN OLIVE OILS FROM TUSCAN GERMPLASM**  
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- P.39 LINEAR RETENTION INDEX APPROACH APPLIED TO LC TECHNIQUES FOR RELIABLE CHARACTERIZATION OF OXYGEN HETEROCYCLIC COMPOUNDS IN COSMETICS**  
*Adriana Arigo<sup>1</sup>, Francesca Rigano<sup>1</sup>, Paola Dugo<sup>2,1</sup>, Luigi Mondello<sup>2,1</sup>*  
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- P.40 PROFILING OF TRIACYLGLYCEROLS IN VEGETABLE OILS BY USING MALDI-ToFMS AND HPLC-MS: A SIDE-BY-SIDE COMPARISON**  
*Marianna Oteri<sup>1</sup>, Francesca Rigano<sup>2</sup>, Paola Donato<sup>3</sup>, Peter Tranchida<sup>1</sup>, Paola Dugo<sup>1,2</sup>, Luigi Mondello<sup>1,2</sup>*  
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- P.41 QUANTIFICATION OF FREE FATTY ACIDS (FFAs) IN RAW MILK AND KEFIR USING BOTH INTERNAL AND EXTERNAL STANDARD TECHNIQUES: REPRODUCIBILITY AND RECOVERY**  
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- P.42 ANALYSIS OF TRIACYLGLYCEROLS DERIVED FROM STRAIGHT CHAIN AND CYCLIC FATTY ACIDS USING GC-(EI) MS IN SAPUCAINHA OIL (*CARPOTROCHE BRASILIENSIS*)**  
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- P.43 GERMINATION INHIBITION AND CHEMICAL COMPOSITION OF EUCALYPTUS ESSENTIAL OILS BY GC-MS METHOD COUPLED WITH PRINCIPAL COMPONENT ANALYSIS**  
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- P.44 ISOLATION AND CHARACTERISATION OF EXOPOLYSACCHARIDES**  
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- P.45 PHYTOCHEMICAL PROFILING OF PRESSURIZED LIQUID EXTRACTS FROM PHYSALIS PERUVIANA CALYCES BY LC AND GC COUPLED TO Q-TOF MASS SPECTROMETRY**  
*Diego Ballesteros-Vivas<sup>1</sup>, Andrea del Pilar Sánchez-Camargo<sup>1</sup>, Elena Ibañez<sup>2</sup>, Fabián Parada-Alfonso<sup>1</sup>, Alejandro Cifuentes<sup>2</sup>, Gerardo Alvarez-Rivera<sup>2</sup>*  
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- P.46 IDENTIFYING VOLATILE COMPOUNDS IN SILAGE USING HEADSPACE GC-MS**  
*Asger Geppel, Nina Milora, Giuseppe Copani, Morten Nielsen, Basti Bergdahl*  
 Chr.Hansen A/S, Bøge Allé 10-12, DK-2970 Hørsholm, Denmark
- P.47 AUTHENTICITY OF PISTACHIO SAMPLES THROUGH THE INNOVATIVE RAPID EVAPORATIVE IONIZATION MASS SPECTROMETRY TECHNOLOGY**  
*Francesca Rigano<sup>1</sup>, Sara Stead<sup>2</sup>, Domenica Mangraviti<sup>1</sup>, Renata Jandova<sup>2</sup>, Davy Petit<sup>3</sup>, Luigi Mondello<sup>1,4</sup>*  
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- P.48 USING CHROMATOGRAPHIC TECHNIQUES TO UNVEIL THE CONTENTS OF ANCIENT CERAMICS: THE CASE STUDY OF THE ROMAN AMPHORAE USED TO TRANSPORT OLIVE OIL**  
*Cristina M. Barrocas Dias<sup>1</sup>, Sergio Martins<sup>1</sup>, Ana Manhita<sup>1</sup>, Marco G. da Silva<sup>2</sup>*  
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- P.49 STANDARDIZATION OF GAS CHROMATOGRAPHY TO MEASURE POULTRY SAMPLES**  
*Hanan S. Alkhalaifah, Afaf Al-Nasser*  
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- P.50 DEVELOPMENT AND VALIDATION OF AN ANALYTICAL METHOD FOR NITRITE AND NITRATE DETERMINATION IN MEAT PRODUCTS BY CAPILLARY ION CHROMATOGRAPHY (CIC)**  
*Teresa D'Amore, Aurelia Di Taranto, Giovanna Berardi, Valeria Vita, Marco Iammarino*  
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- P.51 DEVELOPMENT AND VALIDATION OF AN ANALYTICAL METHOD FOR THE SIMULTANEOUS DETERMINATION OF PHTHALATES AND BISPHENOL-A RELEASED FROM FOOD BEVERAGE CONTAINERS**  
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## Q. MICROFABRICATED CHIPS

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### Q.01     **PROTOTYPING OF MICROFLUIDIC CHIPS FOR LIQUID-PHASE SEPARATIONS**

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### Q.02     **HIGH EFFICIENCY MICROFABRICATED PLANAR COLUMNS FOR ANALYSIS OF REAL-WORLD SAMPLES OF PLANT AND FOOD VOLATILE FRACTION**

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### Q.03     **CHARACTERIZATION OF A TEMPERATURE AND FLOW PROGRAMMABLE MICROFLUIDIC PRE-COLUMN FOR GAS CHROMATOGRAPHY**

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