

timpani

Novel ionization methods for mass spectrometry

Thursday, 14th January 2020, 10:00 – 12:30 (CET, Madrid Spain)

Online


Hosted by University of Jaen, Spain



Meeting room: <https://meet.google.com/edg-dzid-ugf>

Agenda

10:00-10:10	Welcome and overview of the webinar and of the TIMPANI project <i>Dr Charalambos Anastasiou, UCY Timpani project manager</i> <i>and Professor Juan F. Garcia-Reyes, UJAEN</i>
10:10-10:35	Facets of Ambient Air Diode Laser Desorption/Plasma Ionization Mass Spectrometry <i>Alexander Knodel, ISAS, PhD candidate</i>
10:35-11:00	Potential Devices based on Metal Organic Frameworks for direct mass spectrometry analysis. <i>Dr. Priscilla Rocio Bautista (UJAEN)</i>
11:00-11:25	Charged controlled electrospray ionization via Triboelectric nanogenerators (TENG)" <i>Dr. Marcos Bouza Areces (UJAEN)</i>
11:25-11:50	Use of Controlled Atmosphere Flexible Microtube Plasma as ionization source in mass spectrometry for the determination of small molecules <i>Dr. David Moreno González (ISAS/UJAEN)</i>
11:50-12:15	Olive oil quality control using paperspray and related methods <i>Dr. Lucia Bartella (University of Calabria, Italy)</i>
12:15-12:30	Open discussion and question session <i>Moderated by Prof. Juan F. Garcia-Reyes, UJAEN</i>

Presenters

	<p>Dr Charalambos Anastassiou is the manager of the H2020 program TImPANI. Prior to that he was Marie Curie Post-Doctoral Fellow (H2020-MSCA-IF-2015) “CAP-CANCER”. There he conducted research with atmospheric pressure plasma jet sources and their effect on cancer cells. He has extensive industrial and academic experience and holds a PhD in Electrical Engineering from Princeton University.</p>
	<p>Juan F. García-Reyes is currently Professor of Analytical Chemistry at the University of Jaén. He is also Associate editor of Royal Society of Chemistry (RSC) journal Analytical Methods since 2015. His current research interests are the application of different LC-MS methodologies for small molecule applications and the use of new ambient and atmospheric pressure ionization methods based on dielectric barrier discharges for mass spectrometric applications such as pesticide testing and explosive detection. After earning his PhD in 2006 at the University of Jaén, he joined the Group of Prof. R. Graham Cooks at Purdue University (Indiana, USA) as a visiting Fulbright Research Scientist in 2008-2009. He is co-author of over 120 peer reviewed journal articles and over 150 presentations in analytical chemistry conferences.</p>
	<p>Mr. Alexander Knodel is a PhD student in the miniaturisation group at the Leibniz-Institute for Analytical Sciences – ISAS – eV. In Dortmund. He conducts research on laser desorption mass spectrometry methods coupled with plasma ionization. Combining surface, laser and plasma physics with analytical chemistry, this interdisciplinary field provides both great challenges and opportunities for low quantification limits of compounds. Beginning his early-stage career at the University of Dortmund, he advanced to plasma and laser physics at the Ruhr-University Bochum, where he did his master’s degree and thesis in laser-induced fluorescence in a plasma jet.</p>
	<p>Dr. Priscilla Rocío-Bautista completed her BSc in Chemistry in 2012, MSc in Chemistry Research in 2013 and, PhD in Chemistry in 2018. Her entire education was at the University of La Laguna (Tenerife, Spain). There, she was trained in Analytical Chemistry and Material Sciences. As a PhD student, she had the opportunity to participate as visiting researcher at the University of Urbino (Urbino, Italy) and KULeuven University (Leuven, Belgium). Her post-doctoral experience was in Italy (2018-2019 at the University of Urbino and 2019-2020 at the University of Parma). Her research there was focused on the development of novel interfaces nanoLC-MS. She is currently a member of the Analytical Chemistry Group from the University of Jaén. Her research, is focusing on the implementation of new ionization devices based on dielectric barrier discharge on food safety. She is author of 17 research articles, 7 book chapters and a working team member in a national patent (h index = 10, Scopus).</p>
	<p>Dr. Marcos Bouza graduated (International mention PhD) in 2016 at the Department of Physical and Analytical Chemistry at the University of Oviedo. He complemented his graduate school education with a short stay at the University of Indiana, Bloomington. There in Prof. Clemmer’s research group Dr Bouza worked in Ion Mobility Mass Spectrometry. After that, he was a postdoctoral researcher at the Georgia Institute of Technology (Atlanta, USA), in Prof. Facundo M. Fernández research group for three years. His research was focused in the development of analytical tools based on high-resolution mass spectrometry (FT-ICR, Orbitrap and TOF) to identify and sequence biopolymers in an origins of life context. In addition, he was responsible of the development and characterization of triboelectric nanogenerators to operate nanoESI for metabolomics. Currently, he is a postdoctoral researcher at the University of Jaen working on the development of ambient ionization mass spectrometry strategies based on DBDI. During his research career, he has gained profound experience in mass spectrometry, and ambient ion sources development and characterization. His research focus is in the implementation of new analytical tools and methodologies based on ambient mass spectrometry applied to food analysis, lipidomics or metabolomics and related research fields.</p>

	<p>Dr. David Moreno-Gonzalez obtained his PhD (international label) at the Department of Analytical Chemistry from University of Granada, Spain in 2013. He completed his training by means of different research appointments in Netherlands, Germany and Spain through the competitive Juan de la Cierva program. He was a research associate at the Department of Analytical Chemistry, Faculty of Pharmacy, Charles University (Czech Republic). He was Marie Skłodowska-Curie Post-doc at the Miniaturisation Group of the Leibniz Institute for Analytical Sciences – ISAS (Germany). Currently, he is working at the University of Jaén on olive classification using HPLC-MS and CE-MS. Most of his work focuses on the food safety realm, developing analytical methodologies for the determination of organic contaminants in foods. More specifically, his main research topic was the exploitation of the potential of coupling CE, HPLC and nano LC to MS analyzers as advanced tools for multiresidue quantitative methods of organic contaminants at ultra-trace levels</p>
	<p>Dr Lucia Bartella is a researcher in Organic Chemistry at the University of Calabria, Italy. She obtained her PhD in 2018 and carried out post-doctoral research fellowship at the same University. Her research activity is focused on the natural compound chemistry. It concerns the development of innovative mass spectrometric methodologies to valorise agro-food products, through the identification, characterization and quantification of molecular quality markers</p>

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For more information about the project please visit: www.timpani.eu.

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