40th International Conference on Environmental and Food Monitoring (ISEAC 40)

The International Symposium on Environmental and Food Monitoring (ISEAC) comprises the innovative use of analytical methods for the investigation of environmental and food relevant questions. The conference covers a wide range of topics from sampling, target and non-target analysis, rapid testing systems and on-site applications, to risk assessment or food authenticity. This year, the 40th International Conference on Environmental and Food Monitoring (ISEAC-40) took place on 19th-22nd of June in Santiago de Compostela (Spain). The conference was extraordinarily co-organized by the Institute for Food Analysis and Research (IIAA) of the University of Santiago de Compostela (USC), the University of Zaragoza (UNIZAR) and the International Association of Environmental Analytical Chemistry (IAEAC). Several international renowned scientists composed the scientific committee and Dr. José Benito Quintana (USC), and Dr. Cristina Nerín (UNIZAR) chaired the meeting.

This was the 40th edition of a conference, which started back in 1971 in Halifax (Canada). Along this time, the conference has been held in many locations across USA, Europe and Canada. This edition encompassed 16 keynote speakers from different disciplines who highlighted their main research advances for the approximately 300 worldwide-coming attendees. The meeting was scheduled during four days and involved a total of 372 contributions: 16 keynotes, 100 oral presentations and 256 posters. Concerning the poster communications, they were presented in 6 sessions during Tuesday, Wednesday and Thursday. Furthermore, out of these 372 contributions, young researchers presented 46 oral communications and 96 posters. The whole conference was organized in two parallel sessions: one for food and the other for environmental monitoring.

On Tuesday, the conference started with three keynotes remarking the state-of-the-art of environmental and food monitoring by Xenia Trier, Luke K. Ackerman and Mónica Rosell. Later on, a specific session on wastewater based epidemiology was held including a keynote by Sara Castiglioni showing the past, present and future applications of this strategy. The afternoon was devoted to recent developments in photocatalytic degradation of environmental pollutants and to screening strategies for the identification of emerging contaminants in aquatic environment. Regarding the food session, Maria Rosaria Milana talked about the current analytical challenges in the evaluation of food contact contaminants which may pose toxicological risks. An outstanding welcoming cocktail took place in an antique faculty of University of Santiago (Pazo de Fonseca) dating from the 16th century.

Wednesday started with a keynote on highly polar organic compounds by Thorsten Reemtsma and it was followed by some extraordinary presentations on developments in analysis of these type of compounds in environmental samples. Also, special interest was paid to the development of sensors for a wide range of compounds such as antibiotics, antioxidants, etc. Food session started with interesting presentations about diverse analytical methodologies to evaluate different processed foods and drinks, coffee roasting and beer brewing, for the identification of varied substances as pathogens and biogenic amines, etc. The afternoon was dedicated to various approaches for the analysis of contaminants of emerging concern in agricultural systems derived from reuse of reclaimed wastewater irrigation practices, as well as new contaminants found in air, dust and marine environments.

On Thursday, Imma Ferrer held a keynote on characterization of hydraulic fracturing by HRMS, highlighting the benefits of this technique for this kind of approaches. A complete session on screening strategies followed this keynote. Then, implications and risk assessment of micro plastics in marine environment was discussed in a keynote by Ricardo Beiras. Finally, Adrian Covaci showed how to find biomarkers of organophosphate flame retardants in urine and wastewater. The parallel session began with methodologies applied to the evaluation of metal pollution of sediments and fish. Then, oral

presentations were focused on the development of analytical strategies for the evaluation of different contaminants in environmental waters, animal tissues and products of animal origin. Later, Margarita Aznar presented the new challenges on the determination of non-intentionally added polymers and additives during food processing, being the rest of the afternoon devoted to this issue. At the end of the day, an extraordinary gala dinner was offered to the attendees to make easier the networking among different research groups.

On Friday, Félix Hernández highlighted the main advances of chromatography tandem mass spectrometry in environmental research. Finally, José Manuel Barat showed how to use nanotechnology in food industry. The ISEAC 2018 concluded with the closing ceremony where all the participants were invited to attend the next ISEAC conference. One of the participants in ISEAC 2018, who attended this conference thanks to a SECyTA grant, was awarded with the Young Lecture Award for her oral presentation.

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