

Foreword to the Special Issue from the Interfaces Against Pollution 2016 Conference: Environmental Challenges and Opportunities

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The publisher wishes to correct an error in the authors list.

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This special issue of *Environmental Chemistry* brings together selected contributions presented at the 9th international conference ‘Interfaces Against Pollution’, which took place in Lleida (Catalonia, Spain) on 4 to 7 September 2016, organised by members of the Chemistry Department of Lleida University. The guiding theme of the IAP 2016 conference was ‘Environmental Challenges and Opportunities’. The IAP conference in Lleida added to the list of biannual IAP conferences that began 20 years ago: the first IAP conference was organised in Wageningen (the Netherlands) by Prof. Luuk Koopal in 1997, and was followed by IAP conferences held in Miskolc (Hungary 2002), Jülich (Germany 2004), Granada (Spain, 2006), Kyoto (Japan, 2008), Beijing (China, 2010), Nancy (France, 2012) and Leeuwarden (the Netherlands, 2014).

The IAP conference series has a highly interdisciplinary character and brings together researchers active in the broad field of surface and colloid science, with a focus on the fate and impacts of pollutants in natural and engineered systems. Over the past two decades, the IAP conference series has contributed to advancing a more fundamental understanding of the (bio)physicochemical factors that underlie important processes (including partitioning, transformation and speciation) and that determine the activity of pollutants in diverse environmental compartments and engineered systems. The conference series also has a tradition of highlighting exciting opportunities in fundamental and applied environmental research, which includes the development of theoretical and experimental approaches within the framework of contaminant (bio)remediation, risk assessment of current and emerging technologies (e.g. (nano)materials), and the sustainable development of chemical industries in the near future.

A total of 213 participants from all over the world attended the IAP conference in Lleida. The conference had six plenary lectures, 29 keynote lectures, 54 regular oral presentations and 139 poster presentations. The sessions of the conference revolved around the following topics:

1. *Water treatment and soil remediation technologies*: (bio) catalysis and interfaces; bioelectrodes; capacitive deionisation (CDI); electrochemistry at interfaces; membranes; flocculation and coagulation; flocculation
2. *Instrumental techniques for probing interfacial processes*: neutrons and X-rays in environmental sciences; imaging techniques; confocal and other microscopy techniques; AFM
3. *Sensors and biosensors*: elemental speciation; biouptake, bioavailability and toxicity; analytical environmental methods; ecotoxicology; dynamic and equilibrium modelling
4. *Natural and engineered colloids and nanoparticles*: environmental fate and behaviour; characterisation techniques; transformations; humic substances
5. *Fundamentals of colloid and interface science*: modelling and molecular simulation; adsorption and bioadhesion; electrokinetics; reaction kinetics; catalysis; transport in porous media
6. *Global environmental processes*: energy capture, storage and recovery; biogeochemistry of carbon cycle; ocean acidification; multi-scale modelling.

In this light, the papers of this special issue also highlighted the importance of interfacial reactions and novel research directions in this field. For example, papers by Gonzalez et al.,^[1] Cancelo-Gonzalez et al.^[2] and Pham et al.^[3] evaluated substrate removal by particles, while Arroyave et al.^[4] and Preocanin et al.^[5] examined adsorption/desorption mechanisms. Delgado et al.^[6] related materials’ properties to their function. Finally, Mannelli et al.^[7] studied surface mediated reactions for disinfecting virus containing solutions, while Bertin et al.^[8] looked at foam placement in the soil remediation process.

The local IAP 2016 organising committee, the IAP 2016 scientific committee and the IAB board warmly thank all scientists who attended the conference and contributed to making the IAP Lleida conference a successful and inspiring event: a gathering of minds and knowledge transfer between researchers with diverse backgrounds, with high-quality scientific contributions and exciting discussions. Furthermore, we would like to acknowledge the important contributions and vision of two outstanding scientists who were instrumental to this conference series: David Waite and Luc Koopal, who led the conference series from its inception. With this experience in mind, we are eagerly awaiting the next IAP conference, which will be held in Montpellier (France) in 2018, and will

surely extend the tradition of excellence of this conference series.

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