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EDITORIAL

Introduction by the guest editors

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This issue of *Photochemical & Photobiological Sciences* contains a collection of papers presented at the 6th European Conference on Solar Chemistry & Photocatalysis: Environmental Applications (SPEA 6). The conference, held in Prague (Czech Republic) from 13th to 16th June 2010, was organized by Josef Krýsa and Jaromír Jirkovský. The 254 delegates (representing more than 700 authors) came from 38 countries of 5 continents.

The biennial SPEA conference places strong emphasis on research in photochemical and photocatalytic processes able to use natural or simulated sunlight. The conference program was subdivided into four focused sessions, each of them addressing one of the main areas of the current applied photocatalytic research in the field of environmental chemistry: (1) development of new materials for photochemistry and photocatalysis, (2) air and water treatment, (3) models for photochemistry and photocatalysis and (4) environmental photochemistry and photoprocesses utilizing solar light.

Among the published papers we would like to mention those related to photodegradation of pollutants in water by UV-C by Olmez-Hanci *et al.*, on the photodegradation of dyes by a photo-Fenton process by Macías-Sánchez *et al.* and on the oxidation of surfactants by H_2O_2/UV by Arslan-Alaton *et al.* A complete and rigorous kinetic model on degradation of dichloroacetic acid in aqueous media employing O_3 and UVC was reported by Lovato *et al.* Also in aqueous solution, the photochemistry of Fe(III) complexes was studied by Glebov *et al.* Hybrid photocatalysts based on TiO_2 and impregnated with selected lanthanide diphthalocyanine and metalloporphyrin sensitizers were presented by Słota *et al.* Water disinfection (using H_2O_2) by solar energy was addressed by Polo-López *et al.* and using artificial light by Chatzisymeon *et al.*

Supported TiO_2 for degradation of water contaminants was addressed by Rathouský *et al.* (using thin films). Supported photocatalyts (titanium oxide coatings) for applications in the gas phase were also reported by Ctibor *et al.* Modified TiO_2 by doping (N and F) TiO_2 films for light absorption in the visible range has been addressed by Kontos *et al.* and by doping with S and F prepared by the sol–gel method by Dozzi *et al.*

Energy production from renewable sources was addressed by Antoniadou and Lianos combining a fuel cell with photocatalysis, and by Chiarello *et al.* through the photocatalytic production of hydrogen.

Other applications dealt with irradiating simultaneously with light and emitting phosphorescent particles, significantly improving the photocatalytic activity, as reported by Ciambelli *et al.*; and building materials with photocatalytic properties, of great interest nowadays for degrading odours and organic pollutants inside buildings, as stated in the work by Amrhein and Stephan.

The invited editors wish to express their appreciation to all the authors for their contributions and are confident that this collection of papers, although not exhaustive, reflects the most relevant aspects of the state of the art, and the excellent perspectives for application of the processes described. Sixto Malato wishes to thank the Spanish Ministry of Science and Innovation for financial support for the edition of this issue through the EDARSOL project (CTQ2009-13459-C05-01): http://www.psa.es/webesp/projects/edarsol/index.php.

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