

## Thematic Session 18

### **Layered double hydroxides: advanced 2-D clay-materials for applications in energy, environmental remediation and health**

#### **Vanessa Prevot**

Institut de Chimie de Clermont-Ferrand (ICCF) - UMR 6296, Campus, Universitaire des Cézeaux, 24 avenue Blaise Pascal, TSA 60026 CS 60026 63178 AUBIERE Cedex, France  
vanessa.prevot@uca.fr

#### **Yasuaki Tokudome**

Osaka Prefecture University, Department of Materials, Science, 1-1 Gakuencyo, Nakaku, Sakai, Osaka, 599-8531, Japan  
tokudome@mtr.osakafu-u.ac.jp

#### **Gonzalo Abellan**

University of Valencia, Instituto de Ciencia Molecular, Catedrático José Beltrán 2, 46980, Paterna, Spain  
gonzalo.abellan@uv.es

Over the last decade, the research on layered double hydroxides (LDH) has been developing in different directions, including both fundamental and applied aspects. LDH materials show great potential in healthcare, environmental remediation or energy conversion and storage to name a few. These two-dimensional (2-D) materials are able to trigger innovative solutions in many fields thanks to their functionalities, which can be optimized for applications in sustainable and smart technologies. To address these issues, this session will cover general topics of LDH nanostructures and their nanohybrids and will be focused on i) the elaboration and properties of LDH and their hybrid nanostructures, ii) new contributions of advanced characterization and modelling techniques and multifunctionality through nanostructuring, and iii) the development of more efficient materials in the aforesaid fields of application.

Keywords: Layered double hydroxides, Soft chemistry, Energy, Environment, Magnetism, Health.

Potential Journal: Applied Clay Science.

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