

Thematic Session 02

Property, functionalization and applications of one-dimension nanoporous clay minerals: from nanofiber to nanotube

Peng Yuan

Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou 510640, China
yuanpeng@gig.ac.cn

Pilar Aranda

Materials Science Institute of Madrid (ICMM) of the Spanish National Research Council (CSIC)
C/Sor Juana Inés de la Cruz 3 28049 Madrid, Spain
pilar.aranda@csic.es

Giuseppe Lazzara

Department of Physics and Chemistry, University of Palermo, Italy
giuseppe.lazzara@unipa.it

Antoine Thill

CEA Saclay UMR 3685 CEA/CNRS; DRF/IRAMIS/NIMBE/LIONS, Bat 12591191 Gif Sur Yvette, France
antoine.thill@cea.fr

Mingxian Liu

College of Chemistry and Materials Science, Jinan University Guangzhou 511443, China
liumx@jnu.edu.cn

Pooria Pasbakhsh

School of Engineering, Monash University Malaysia, 47500, Bandar Sunway, Selangor, Malaysia
pooria.pasbakhsh@monash.edu

The topics of the proposed session will cover the fundamental aspects and actual applications of tubular and fibre-like clay minerals, such as halloysite, palygorskite, sepiolite, and imogolite, among others. Particularly, clay scientists, material scientists, biomedical researchers and engineers are focusing a growing interest toward the abovementioned clay minerals as they allow the incorporation of multifunctionalities and their use as nano-containers, besides other attractive properties for materials applications spanning from medical and environmental uses to energy and cultural heritage conservation. The fundamental knowledge on the mineralogy, structure and properties of these clay minerals is of key importance to target specific applications. This session aims at gathering the most active research groups worldwide and to share the most advanced results regarding synthesis, functionalization, properties and uses. The session also intends to bridge the different competences from scientists with a wide range of specialization within the following specific topics regarding nanotubular and fibrous clay minerals:

- Mineralogy, geology, synthesis, modification and characterization.
- Applications and future prospects in medicine and biology, materials science and (bio)nanocomposites, environmental protection and remediation, energy and other advanced applications.

Keywords: Halloysite, Palygorskite, Sepiolite, Imogolite, Composite, Functionalization, Characterization, Nanohybrid, Medical and biological uses, Advanced materials.

Potential Journal: Applied Clay Science.

17th INTERNATIONAL CLAY CONFERENCE

THEMATIC SESSION 02

Property, Functionalization and Applications of One-Dimension Nanoporous Clay Minerals : from Nanofiber to Nanotube

Co-Chairs

Dr. YUAN Peng
Chinese Academy of Sciences, China
yuanpeng@qig.ac.cn

Dr. Pilar Aranda
Spanish National Research Council, Spain
pilar.aranda@csic.es

Dr. Giuseppe Lazzara
University of Palermo, Italy
giuseppe.lazzara@unipa.it

Dr. Antoine Thill
CEA Saclay, France
antoine.thill@cea.fr

Dr. LIU Mingxian
Jinan University, China
liumx@jnu.edu.cn

Dr. Pooria Pasbakhsh
Monash University Malaysia, Malaysia
pooria.pasbakhsh@monash.edu

1D Nanoporous Clay Minerals