

# Advanced characterization methods of functional solid materials


MAY, 27-31 2019



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ECTS



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## The characterization of solids is not an easy task, and it is a field that advances in knowledge and new techniques and devices day by day.

When working with functional materials, such as catalysts and adsorbents, there are many aspects necessary to know in order to understand the mechanisms by which these materials perform their function, and therefore how to improve them. For example, it is necessary to know the composition of the surface, something complex in solids especially if they are very porous and heterogeneous. In addition, it is also necessary to analyze such materials under working conditions (reaction, adsorption etc.), and with time-resolved techniques.

All these aspects will be discussed, presented and analyzed by a group of renowned experts with experience in the use of various advanced characterization techniques.

### Academic Directors



**M. OLGA GUERRERO-PÉREZ**  
(Dep. Ingeniería Química,  
Universidad de Málaga)



**ANTONIA INFANTES-MOLINA**  
(Dep. Química Inorgánica,  
Universidad de Málaga)

15:30

TO

17:30

17:30

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18:00

18:00

TO

20:00

## MONDAY

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**INTRODUCTION: CHALLENGES OF THE CHARACTERIZATION OF SOLIDS IN THE XXI CENTURY**

M.OLGA GUERRERO-PÉREZ  
Universidad de Málaga, Spain

**EXPERIMENTAL METHODS IN CHEMICAL ENGINEERING**

GREGORY PATIENCE  
Polytechnique Montreal, Canada

## TUESDAY

28

**KINETIC METHODS FOR CHARACTERIZATION OF CATALYTIC MATERIALS**

TED OYAMA  
The University of Tokyo, Japan

**ELECTRICAL CHARACTERIZATION OF MATERIALS AND INTERFACES**

JOSÉ RAMÓN RAMOS BARRADO  
Universidad de Málaga, Spain

## WEDNESDAY

29

**SOLID STATE RMN: APPLICATIONS, EQUIPMENTS AND FUTURE PERSPECTIVES**

ANTONIA INFANTES - MOLINA  
Universidad de Málaga, Spain

**X-RAY DIFFRACTION TOOLS FOR CHARACTERIZATION OF MATERIALS**

AURELIO CABEZA DÍAZ  
Universidad de Málaga, Spain

## THURSDAY

30

**COOPERATIVE CATALYSIS ON HETEROGENEOUS SURFACES**

OZ GAZIT  
Technion, Israel Institute of Technology

**MODERN METHODS OF XPS CHARACTERIZATION**

ENRIQUE RODRÍGUEZ CASTELLÓN  
Universidad de Málaga, Spain

## FRIDAY

31

**CHARACTERIZATION OF SOLIDS BY RAMAN SPECTROSCOPY: STATE OF THE ART AND FUTURE PERSPECTIVES I**

JUAN CASADO CORDÓN  
Universidad de Málaga, Spain

**CHARACTERIZATION OF SOLIDS BY RAMAN SPECTROSCOPY: STATE OF THE ART AND FUTURE PERSPECTIVES II**

JAVIER RAMIREZ AGUILAR  
Universidad de Málaga, Spain

## ■ Accommodation

A special fare of 25€/night is offered to all the attendants to this course.

Contact with **Karolina Santisteban** for further details:

**karolina@studentrentalmalaga.com**

**+34 625 195 298**

## ■ Sign up here:

<https://bit.ly/2FJQHza>

## ■ Location

Aulario Severo Ochoa, Universidad de Málaga



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