FACULTY OF SCIENCE
Charles University

Department of Physical and Macromolecular chemistry
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Group of Heterogeneous Catalysis and Advanced Materials
together with the
Department of Physical and Macromolecular Chemistry
invite you for the lectures

National NMR facility at Aveiro

and

Deciphering adsorption mechanisms of confined guests using NMR methods

Lecture hall **CH 1**, Faculty of Science, Hlavova 8, Praha 2

on April 18th, 2024 at **10:40**

speakers: Dr. Mariana Coutinho Sardo and Dr. Luís Mafra

CICECO - Aveiro Institute of Materials, University of Aveiro, Portugal

Recent breakthroughs in instrumentation and methodology have positioned solid-state NMR spectroscopy to the forefront of atomic-level characterization of increasingly complex solids across diverse research domains. However, such state-of-the-art methods rely on the use of sophisticated and costly equipment that is only available in a handful of national facilities, such as CICECO. Dr. Sardo, an expert in high-resolution solid-state NMR spectroscopy, is the coordinator of the EU-funded "PANACEA" project, which aims to make cutting-edge NMR facilities more accessible to the European chemical community. In her lecture, she will spotlight the opportunities offered by the powerful National NMR facility at Aveiro within the framework of "PANACEA.

Dr. Mafra is the Principal Researcher and the Manager of the solid-state NMR facility at CICECO. He is recognized for his pioneering work in developing novel NMR spectroscopy methods, particularly for observing quadrupolar nuclei, which have earned him several prestigious awards, including the Celestino da Costa/Jean Perrin prize (2006), António Xavier-Bruker prize (2009), and a European Research Council (ERC) Consolidator Grant (2020). In his lecture, Dr. Mafra will illuminate the recent advancements in solid-state NMR spectroscopy for a molecular-scale understanding of the adsorption mechanisms of confined guest molecules in the context of heterogeneous catalysis and gas capture applications.

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