

IN²UB INTERNATIONAL RESEARCH SEMINARS

Nanoscale effects induced by mechanochemistry. Applications in catalysis.

The development of better catalysts is a passionate topic at the forefront of modern science. Mechanochemistry is a physical-chemical transformation caused by mechanical force. The synthesis of materials by mechanochemistry is known because of its simplicity, low cost and reproducibility, but it has not yet been used for the synthesis of supported metal catalysts. In mechanochemistry, no solvents are used and no waste is generated. The collision between two particles only lasts ca. 10^{-7} s, but the pressure rises to several GPa and temperature rises up to 10^3 - 10^4 °C, thus creating extreme conditions where the transformations take place in a unique environment difficult to create by other means. Mechanochemistry may allow the preparation of a new generation of catalysts with properties that are absolutely inaccessible with the conventional preparation methods used today. Examples of catalysts prepared by mechanochemistry in our lab will be discussed, as well as their characterization under operando conditions to identify the nature of their particular active sites.

The IN²UB invites you to the seminar by

Prof. Jordi Llorca

*Institute of Energy Technologies
Universitat Politècnica de Catalunya*

SAVE THE DATE

January 29th, 2020 at 12.00h.

**Sala de Graus Eduard Fontseré,
Faculties of Physics and Chemistry. UB**



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