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11:30 h,
SALA DE CONFERENCIAS
EDIFICIO DE I+D
CAMPUS RÍO EBRO



How Structure Makes a Function: New Ways to Understand the Functionality of Materials

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ABSTRACT:

Ultimately, the properties of matter and its ability to perform a specific function is determined by the structure, e.g. the variety of atoms and their exact position. Consequently, the structure characterization is standing in the center of understanding materials behavior. To observe the structural changes and the correlated electronic alteration during the performance of a function, also called operando, or in-situ experiment, allows finally to identify the active sites during reactions, bringing the dream of rational design of materials closer and making the optimization of known systems more efficient and promising.

The talk will discuss various options how multimodal characterization tools, high performance computation, data analytics, and high throughput experiments can help to deliver these goals not only to a small number of experts but also to empower a large science community.