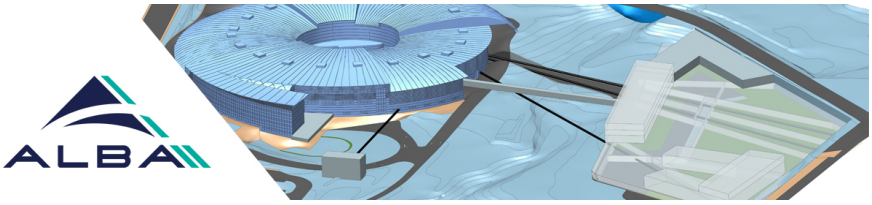

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# CoDI, Coherence Diffraction Imaging

*Tuesday, 15 November 2022 10:05 (10 minutes)*

CoDI will be the coherence diffraction end station at ALBA II. This station will be intended to investigate materials in strategic sectors for the European Union (biotechnology and agri-food; energy transition and decarbonization; active and healthy ageing; circular economy and sustainable raw materials), which complement ALBA strategic research lines. The main technique at CoDI will be ptychographic-tomography in forward direction, making possible the imaging of thick (< 500 μm) nanostructured materials (e.g. nanocatalysts, nanocrystals, nanoparticles) and biological samples. The setup will be compatible with tele-ptychography (a new variant of ptychography that use an analyzer to reconstruct complex wave fronts after the sample, this simplifies in-situ experiments), scanning approaches, near-field ptychograpy, Bragg-CDI and Bragg-ptychography. A tailored setup for tele-ptychography will make CoDI at ALBA II an unique instrument in the world.
CoDI beamline perfectly suits within the societal challenges defined at European level, as well as in the ALBA strategic research lines. This will help to the different national and international academic and industrial community to profit about this highly advanced beamline.
Scientific communities that will benefit from imaging thin and thick samples till 500 μm, such as biology, catalysis, electrocatalysis, energy related materials and general material science.

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