

ALBA Synchrotron radiation techniques for oxide, 2D-vdW and other spintronic materials

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The talk will cover capabilities at ALBA synchrotron for investigating current aspects on oxide, bidimensional van der Waals materials and other spintronic relevant materials. First, a quick overview of ALBA and the Electronic and Magnetic structure of matter section will be given, including details of its core beamlines and instruments: the X-ray Photoemission Electron Microscope (X-PEEM) at CIRCE beamline[1], the X-ray Absorption Spectroscopy and Magnetic Circular Dichroism (XMCD) cryomagnet and the multipurpose reflectometer for soft x-ray resonant and coherent scattering (RSXS, XRMS, GISAXS, Holography/CDI) at BOREAS beamline[2], and the more recent soft X-Ray angle-resolved photoemission electron spectroscopy (ARPES) instrument at LOREA beamline [3]. On a second part, recent highlights on the investigation of spintronic and quantum materials will be shown, and recent and on-going instrumental developments will be quickly presented.

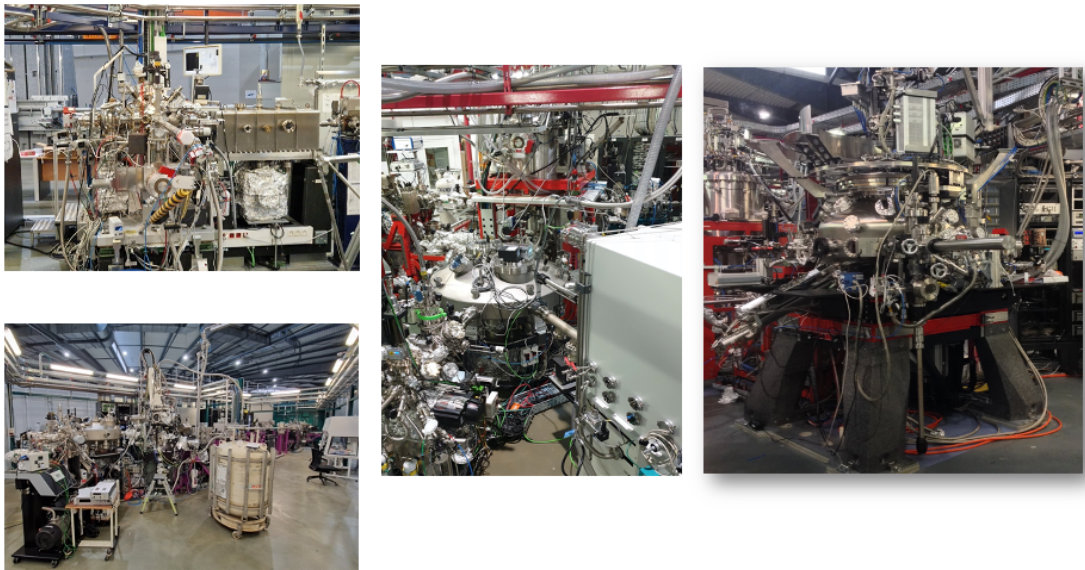


FIGURE 1. Core instruments of the electronic and magnetic structure section of the ALBA synchrotron: (left top) PEEM microscope endstation; (left bottom) view of ARPES instrument and LOREA beamline; (mid) XMCD endstation and off-line surface science instrumentation and glove box; (right) SXRS endstation

REFERENCES

1. A. Barla, et al, *Design and performance of BOREAS, the beamline for resonant X-ray absorption and scattering experiments at the ALBA synchrotron light source*, Journal of Synchrotron Radiation 23,1507-1517 (2016)
2. L. Aballe, et al. *The ALBA spectroscopic LEEM-PEEM experimental station: Layout and performance*. J. Synchrotron Rad. 22, 745-752 (2015)
3. M. Tallarida et al. *LOREA, the ARPES beamline at ALBA synchrotron (under preparation)*