

# THE ALBA SYNCHROTRON: EUROPE AND THE CHALLENGE OF KNOWLEDGE

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In early 2010, Catalonia made headlines around the world with the inauguration of the ALBA Synchrotron, located a short distance from Barcelona. ALBA is the first research infrastructure of its kind in Southern Europe and it is one of the world's top three synchrotrons, representing an investment of some 200 million euros.

ALBA has a circumference of 260 metres, around which electrons circulate, having previously been accelerated. They form beams of X-rays that are technically known as synchrotron light. This source of electromagnetic radiation circulates round ALBA at close to the speed of light until it is ultimately directed at one of the beamlines or laboratories where the light is used to examine the composition and structure of materials, organisms or extremely small composites.



At a time when Europe is searching for new strategies with which to overcome a crisis in the model and the accompanying values of a dehumanising economic system, Catalonia is investing in research and knowledge as tools for progress, development and welfare.

The synchrotron project was not cobbled together at the last minute, however, but rather is the culmination and realisation of a proposal made some twenty years ago by a group of Catalan investigators led by Professor Ramon Pascual, of the *Universitat Autònoma de Barcelona*.

The initiative shown by the scientific community and the support of former Minister Andreu Mas-Colell made it possible in January 2002, for Jordi Pujol, Catalan president at the time, to announce the decision to construct the first Catalan synchrotron

whilst he was on an official visit to research centres in California. President Pujol's dogged determination meant the project was given the go ahead in March 2002 and today, eight years later, the ALBA synchrotron has become a reality.

Europe's desire to participate in world leadership is inseparable from its responsibility to participate and lead the great challenges in world knowledge, investigation and research.

Experiences such as the ALBA synchrotron demonstrate that a Europe of knowledge cannot be improvised, but instead is the result of creating spaces for cooperation between political representatives and the scientific community. It is a combination that Catalonia wishes to repeat and offer as a model for progress to the whole of Europe and the world.