

AIXTRON supports early stage researchers in researching of future semiconductor quantum components

AIXTRON is a partner of the new EU doctoral program QUANTIMONY / Research focus is on semiconductor materials and devices containing antimony / Applications are optoelectronics, datacomms and energy as well as future quantum semiconductor technologies

Herzogenrath/Germany, December 6, 2021 – AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6) is partner of the new international doctoral program QUANTIMONY. The leading provider of deposition equipment for the semiconductor industry is thus supporting the training of early stage researchers and at the same time the research into the future field of quantum technologies utilizing the chemical element antimony (Sb).

The EU funding program QUANTIMONY (“Innovative Training Network in Quantum Semiconductor Technologies Exploiting Antimony”) is an innovative network for doctoral education in this field. It provides 14 junior researchers with PhD positions. They get into the field of semiconductor science and -technology a high-quality education that covers all scientific and engineering aspects from modeling to material growth and characterization to industrial use.

QUANTIMONY is configured as a multi-site network. It comprises eleven internationally renowned research teams as beneficiaries and is supported by twelve partner organizations. The combined consortium spans eight European countries, plus USA, Taiwan and Brazil.

Focus on antimony semiconductor components

The work focuses on research into semiconductor quantum components that contain the chemical element antimony. With QUANTIMONY a contribution should be made to raise the full potential of the III-Sb compound semiconductors GaSb, InSb, AISb. Antimonic semiconductor components are to be used primarily in optoelectronic applications such as LEDs, lasers and detectors in the infrared spectral range as well as DRAM-memories, single photon sources and solar cells.

Via QUANTIMONY, antimony (Sb) compounds shall find a path to volume production by utilizing MOCVD-technology, enabling the usage in computers and memories, telecommunications, automobiles, robotics and many other applications beyond those that are already served in aerospace and security.

“Quantum semiconductor technologies based on antimony are an important field of the future. The possible uses are extremely exciting. The research work of these doctoral students within the framework of QUANTIMONY will make a decisive contribution to accelerating the necessary research and development work for this future technology. The results will contribute to technological solutions for energy saving and solving the climate emergency”, says Prof. Dr. Michael Heuken, Vice President Advanced Technologies at AIXTRON SE and Head of the QUANTIMONY Exploitation and Industrial Engagement Committee.

The beneficiaries and partner organizations are: Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC), Universidad Politécnica de Madrid (UPM), Lancaster University, University of Warwick, Eindhoven University of Technology (TUE), Technical University Berlin (TUB), University of Würzburg, University of Rome “Tor Vergata”, AIXTRON SE, IQE plc, Nextnano GmbH, Bruker AXS, Nanoplus GmbH, Lancaster Materials Analysis Ltd (LMA), TiberLab Srl, QuantCAD LLC, Fluxim AG, Lund University, European Synchrotron Radiation Facility (ESRF), National Synchrotron Radiation Research Center, Cardiff University, Universidad de Cádiz (UCA), Universidade Federal de São Carlos (UFSCar).

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Further information: [QUANTIMONY](#) and [AIXTRON](#)

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About AIXTRON

AIXTRON SE is a leading provider of deposition equipment to the semiconductor industry. The Company was founded in 1983 and is headquartered in Herzogenrath (near Aachen), Germany, with subsidiaries and sales offices in Asia, United States and in Europe. AIXTRON's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and optoelectronic applications based on compound or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include Laser and LED applications, display technologies, data transmission, SiC and GaN power management and conversion, communication, signaling and lighting as well as a range of other leading-edge applications.

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