

AIXTRON partners with Institut Lafayette on further advancement of organic deposition technology OVPD

AIXTRON cluster tool successfully installed and ready for customer tests at French innovation platform

Herzogenrath/Germany, April 11, 2016 – AIXTRON SE (FSE: AIXA; NASDAQ: AIXG), one of the world's leading manufacturers of deposition systems for the semiconductor industry, announces that a new organic vapor phase deposition (OVPD) system of the company which is capable of handling 200x200 mm substrates has been installed and successfully tested at Institut Lafayette. The installation of this custom built system marks a key milestone and moves Institut Lafayette, which is part of the Georgia Institute of Technology international campus in Metz (France), one step closer to its fully operational phase.

The newly tested OVPD cluster tool and the previously installed metal oxide chemical vapor phase deposition (MOCVD) tool constitute the two flagship semiconductor growth capabilities at Institut Lafayette. They complete the existing full set of tools covering all key enabling technologies necessary to the fabrication, testing, and pre-production prototyping of optoelectronic devices that are housed in a 500 sqm clean room.

AIXTRON's OEC-200 OVPD system is currently comprised of eight STExS (Short Thermal Exposure Source) that transform solid organic electronic materials into the gas phase through a rapid and efficient process, minimizing overall heat exposure that can be damaging for certain materials. Materials in the gas phase are transferred by a controlled hot-carrier gas onto cooled substrates using AIXTRON's showerhead technology in a chamber at low-vacuum levels (mbar range). The rate of the materials deposited by this technique (up to 5 nm/s) can be adjusted by controlling the flux and material concentration of hot gases mixing in the showerhead, allowing for great control of film thickness and precise composition. The deposition chamber is connected to a vacuum deposition chamber allowing for the deposition of metal electrodes for the demonstration and testing of operating devices.

With its unique features, OVPD has the potential to alleviate the current limitations and concerns existing with conventional vacuum thermal evaporation (VTE). It could become the next-generation deposition technology for the large-scale, low-cost production of emerging organic electronic devices including organic light-emitting diodes (OLEDs) for displays and solid state lighting, and organic photovoltaic devices for renewable power generation.

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AIXTRON's showerhead technology used within the OVPD process has the advantage of being easily scalable as illustrated by the recent deposition results using the new Gen8 OVPD demonstrator that has been put into operation at AIXTRON's headquarters in Herzogenrath, Germany.

With its own team of engineers in organic-electronic technology and unique R&D fabrication and testing facilities, Institut Lafayette is ready for tests with potential customers and committed to further validate OVPD as the next generation deposition technology of choice.

Recognizing their complementary strength and long history in the development of semiconductor materials and devices, and in providing deposition equipment for the semiconductor industry, Institut Lafayette and AIXTRON, respectively, have agreed to enter into a partnership. Therefore, both parties signed a Memorandum of Understanding during a high-level visit to Metz on April 8, 2016 in the presence of Thierry Mandon, French Minister of Higher Education and Research, and Marianne Therre-Mano, German Consul in Strasbourg as well as Stefan Kern, premier advisor for scientific and technological affairs to the German Embassy.

Abdallah Ougazzaden, Professor at the Georgia Institute of Technology and Co-President of Institut Lafayette, said: "We have been very pleased with AIXTRON's extensive support while commissioning, testing, and installing both our MOCVD and OVPD tools. Based on this trustful relationship, we are confident that we will achieve our common objectives."

"We are delighted to co-operate with an international research institution like Georgia Tech and its Institut Lafayette to support innovations in optoelectronics and advanced semiconductor materials research by providing our leading OVPD and MOCVD manufacturing equipment. We are looking forward to a vibrant partnership for further developing future-oriented and groundbreaking semiconductor technologies", said Martin Goetzeler, CEO of AIXTRON SE.

Bernard Kippelen, Professor at the Georgia Institute of Technology and Co-President of Institut Lafayette, commented: "Reaching the operational phase with our OPVD tool is an important milestone for our newly-created innovation platform. Our teams and partners on both sides of the Atlantic have been working relentlessly to reach this point. It is another illustration of the strength of the long partnership between Georgia Tech, Metz, and Lorraine."

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PRESS RELEASE



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, Europe and in the United States. AIXTRON's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and opto-electronic applications based on compound, silicon, or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include LED applications, display technologies, data storage, data transmission, energy management and conversion, communication, signaling and lighting as well as a range of other leading-edge technologies.

OVPD® technology has been exclusively licensed to AIXTRON from Universal Display Corporation (UDC), Ewing, N.J. USA for equipment manufacture. OVPD® technology is based on an invention by Professor Stephen R. Forrest et al. at Princeton University, USA, which was exclusively licensed to UDC. AIXTRON and UDC have jointly developed and qualified OVPD® pre-production equipment.

Our registered trademarks: AIXACT®, AIXTRON®, Atomic Level SolutionS®, Close Coupled Showerhead®, CRIUS®, Gas Foil Rotation®, OVPD®, Planetary Reactor®, PVPD®, TriJet®, Optacap™

For further information on AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6; NASDAQ: AIXG, ISIN US0096061041) please visit our website at: www.aixtron.com.

About Institut Lafayette

Institut Lafayette is an innovation platform recently established on the Technopole of Metz, France, in partnership with the Georgia Institute of Technology. Its mission is to support public research institutions and private companies by providing technology transfer and commercialization services, access to state-of-the-art technical infrastructure, and technical expertise in the field of new semiconductor materials, components and devices for optoelectronic applications. It is a French private not-for-profit entity funded in part by the French government, local government entities, and the EU through FEDER funds.

Forward-Looking Statements

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON within the meaning of the safe harbor provisions of the US Private Securities Litigation Reform Act of 1995. These statements may be identified by words such as "may", "will", "expect", "anticipate", "contemplate", "intend", "plan", "believe", "continue" and "estimate" and variations of such words or similar expressions. These forward-looking statements are based on our current views and assumptions and are subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Actual results and trends may differ materially from those reflected in our forward-looking statements. This could result from a variety of factors, such as actual customer orders received by AIXTRON, the level of demand for deposition technology in the market, the timing of final acceptance of products by customers, the condition of financial markets and access to financing for AIXTRON, general conditions in the market for deposition plants and macroeconomic conditions, cancellations, rescheduling or delays in product shipments, production capacity constraints, extended sales and qualification cycles, difficulties in the production process, the general development in the semi-conductor industry, increased competition, fluctuations in exchange rates, availability of public funding, fluctuations and/or changes in interest rates, delays in developing and marketing new products, a deterioration of the general economic situation and any other factors discussed in any reports or other announcements filed by AIXTRON with the U.S. Securities and Exchange Commission. Any forward-looking statements contained in this document are based on current expectations and projections of the executive board and on information currently available to it and are made as at the date hereof. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law.

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