



ASMI EXPANDS ALD PORTFOLIO WITH SYNERGIS® 300MM TOOL FOR ADVANCED-NODE LOGIC AND MEMORY HIGH-VOLUME PRODUCTION

New System Integrates Core Pulsar® and EmerALD® Capabilities with Higher Productivity, Enabled by Multi-Chamber 300mm XP8 Platform

SAN FRANCISCO, California, July 9, 2018 - ASM International N.V. (Euronext Amsterdam: ASM) today announced the Synergis® atomic layer deposition (ALD) tool for advanced-node logic and memory high-volume production applications. The latest addition to ASM's industry-leading line of ALD tools, Synergis leverages ASM's core ALD hardware and process technology, optimized over more than a decade in volume manufacturing, to address a wide range of thermal ALD applications.

Demand for ALD solutions is growing, as it enables the use of new materials and designs for advanced chip manufacturing. The new Synergis system is designed to address a number of key ALD equipment challenges, by providing superior thermal control of the reactor environment, delivery of low-vapor-pressure precursors, purge efficiency and reduced preventive-maintenance cycles. As a result, Synergis delivers excellent conformality and film uniformity with high throughput and low per-wafer cost.

"Many of our customers desire the ability to extend existing films, running on our current ALD tools, for other applications, many of which require the high throughputs and cost-of-ownership benefits that Synergis can provide," said Dr. Hichem M'Saad, ASM General Manager and Senior Vice President, Thermal Products Business Unit. "Additionally, the Synergis system allows us to address many new films for a broad array of logic and memory applications and with its flexible source layout, Synergis can easily address ternary films and multi-film laminates to finely tune film properties. We are excited about the opportunities this new solution affords for strengthening our customer relationships."

Synergis builds on the core capabilities of ASM's existing EmerALD® XP and Pulsar® XP systems. Pulsar is the industry's benchmark ALD tool for high-k dielectrics, while EmerALD enables deposition of thin conformal metal and metal nitride / carbide layers. With its efficient, high-throughput configuration, Synergis supports ALD for both extremely thin films and relatively thicker layers.

The new Synergis product is available in four base configurations, each optimized for targeted film categories: metal oxides, metal nitrides, dielectrics and pure metals.

Utilizing ASM's production-proven XP8 platform for 300mm applications, Synergis can be configured with up to four dual-chamber modules, enabling eight single-wafer ALD chambers in a compact footprint.

About ASM International

ASM International NV, headquartered in Almere, the Netherlands, its subsidiaries and participations design and manufacture equipment and materials used to produce semiconductor devices. ASM International, its subsidiaries and participations provide production solutions for wafer processing (Front-end segment) as well as for assembly & packaging and surface mount technology (Back-end segment) through facilities in the United States, Europe, Japan and Asia. ASM International's common stock trades on the Euronext Amsterdam Stock Exchange (symbol ASM). For more information, visit ASMI's website at www.asm.com.



Cautionary Note Regarding Forward-Looking Statements: All matters discussed in this press release, except for any historical data, are forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. These include, but are not limited to, economic conditions and trends in the semiconductor industry generally and the timing of the industry cycles specifically, currency fluctuations, corporate transactions, financing and liquidity matters, the success of restructurings, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholders or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict or political instability, epidemics and other risks indicated in the Company's reports and financial statements. The Company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.

This press release contains inside information within the meaning of Article 7(1) of the EU Market Abuse Regulation.

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