



ASM Qualifies New Higher-k Gate Process for 14nm Manufacturing

Milestone Achieved at Key Customer Development Fab

ALMERE, The Netherlands, December 5, 2011 –ASM International N.V. (www.asm.com) (NASDAQ: ASMI and Euronext Amsterdam: ASM), the leader in atomic layer deposition (ALD) of high-k gate materials, today announced the successful demonstration of a new 14nm high-k gate dielectric process that achieved less than 6 angstroms equivalent oxide thickness (EOT) at a customer's 14nm R&D line, an improvement of about 40% from the current advanced nodes. The new high-k process improves device performance by enabling faster switching and lower leakage current, while reconfirming the extendibility of hafnium based high-k dielectrics. Using ASM's most advanced Pulsar ALD tool, a hafnium based material with a higher-k value than the current baseline was qualified at the customer's R&D facility.

"ASM was the first to introduce hafnium-based high-k dielectrics for transistor gates, and we are now working with key device manufacturing leaders on scaling next-generation high-k metal gate technology," said Glen Wilk, Sr. Director of ALD Products at ASM. "The new process leverages ASM's extensive understanding of high-k metal gates, our technology leadership in ALD, and the extendibility of our Pulsar ALD process module. Together, these three factors give ASM a clear advantage in providing our customers with the smoothest transition to manufacturing nodes below 20nm, for both planar and 3D devices."

Developed on the Pulsar ALD tool without the need for additional clustered process steps, the new process achieves less than 6Å EOT while maintaining gate leakage below 1A/cm² to meet 14 nm high-k metal gate (HKMG) logic technology requirements.

About ASM International

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

Safe Harbor Statement under the U.S. Private Securities Litigation Reform Act of 1995: All matters discussed in this statement, 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, shareholder and 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 filings from time to time with the U.S. Securities and Exchange Commission, including, but not limited to, the Company's reports on Form 20-F and Form 6-K. The Company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.

ASM International:

Erik Kamerbeek
Investor Relations
+31 881008500
Erik.Kamerbeek@asm.com

Mary Jo Dieckhaus
Investor Relations
+1 212-986-2900
MaryJo.Dieckhaus@asm.com