

FOR IMMEDIATE RELEASE

## ASM Completes Shipment of First ALCVD Batch Furnace to Customer

**BILTHOVEN, The Netherlands – March 31, 2003** – ASM International N.V. (NASDAQ: ASMI and Euronext Stock Exchange in Amsterdam: ASM) today announced that its subsidiary, ASM Europe B.V. has shipped its first A4ALD<sup>TM</sup> vertical furnace for Atomic Layer CVD<sup>TM</sup> (ALCVD<sup>TM</sup>) to a customer. The batch ALCVD system was installed and qualification of the first ALCVD process was successfully completed.

The A4ALD is an Advance<sup>®</sup> 400 Series reactor module specifically designed for ALCVD, ASM's atomic layer deposition technology. While ASM has an already established position in batch furnaces for atmospheric and LPCVD processes, future devices will require the excellent thin film properties of ALCVD films and new chemical substances that are only possible with ALCVD. The A4ALD merges the technological expertise of ASM's Pulsar®, its single-wafer platform for ALCVD, and the Advance 400 Series vertical furnaces to create a cost-effective batch solution targeted mainly for dielectric capacitor market. Situating ALCVD in a vertical batch furnace allows for a higher throughput, as up to 100 wafers can be processed simultaneously. This is particularly beneficial for thicker layer films, such as the ones used for MIM capacitors. ASM can now offer two different cost effective tools for capacitors to its customers: batch solution with A4ALD and single-wafer plasma ALCVD solution with Polygon<sup>TM</sup> single wafer cluster tool.

The shipped A4ALD is also equipped with an in-situ radical generator for post-process anneal, which results in improved electrical performance. The  $Al_2O_3$  process has been fully characterized, with electrical performance equal to performance of single-wafer ALCVD tools. The next step is finalizing the electrical qualification of  $Ta_2O_5$  and HfO<sub>2</sub>.

Dr. Albert Hasper, worldwide product manager of Vertical Furnaces at ASM said, "This is an important milestone for ASM's vertical furnaces. By transferring ALCVD technology to our Advance 400 batch furnaces, our customers can benefit from a low cost of ownership, inherent to batch systems. Our plans to further develop ALCVD batch furnaces for 200 mm and 300 mm confirm ASM's position as a leader in innovative wafer processing solutions."

Prior to the customer shipment ASM installed its first A4ALD system in June 2002 in its R&D line at IMEC, the Interuniversity MicroElectronic Center at Leuven, Belgium, Europe's largest independent research center for microelectronics and nanotechnology, and recorded successful deposition of the first films.

## About ASM

ASM International N.V. is headquartered in Bilthoven, the Netherlands. ASM International is a global company, serving one of the most important and demanding industries in the world. The Company possesses a strong technological base, state-of-the-art manufacturing facilities, a competent and qualified workforce and a highly trained strategically distributed support network. ASM International's subsidiaries design and manufacture equipment and materials used to produce semiconductor devices. ASM International and its subsidiaries provide production solutions for wafer processing, assembly and packaging through their facilities in the United States, Europe, Japan and Asia. ASM International's common stock shares trade on NASDAQ (symbol ASMI) and the Euronext Stock Exchange in Amsterdam (symbol ASM). For more information, visit ASM's web site at <a href="http://www.asm.com">http://www.asm.com</a>

## ###

Safe Harbor Statement under the US Private Securities Litigation Reform Act of 1995: The statements regarding orders, earnings development and the effects of research and new products on ASM's future, and other 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 in the semiconductor industry, currency fluctuations, the timing of significant orders, market acceptance of new products, competitive factors, risk factors related to litigation and other risks indicated in filings from time to time with the SEC and Stock Exchange Authorities.

ASM and Advance are registered trademarks and A412 is a trademark of ASM International.

**Contacts:** Yinka Massally Public Relations +1 602-470-5829 yinka.massally@asm.com

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