September 9, 2011

Amtech Announces Withdrawal of $60 Million Shelf Registration

Adequate Cash to Fund Operations & Strategic Objectives

TEMPE, Ariz.--(BUSINESS WIRE)-- Amtech Systems, Inc. (NASDAQ: ASYS), a global supplier of production and automation systems and related supplies for the manufacture of solar cells, semiconductors, and sapphire and silicon wafers, today announced that its Board of Directors has approved the company's application to the Securities and Exchange Commission (the "Commission") for an order granting the immediate withdrawal of its $60 million shelf registration statement on Form S-3 (Registration No. 333-172115), which was originally filed with the Commission on February 8, 2011.

J.S. Whang, Chief Executive Officer of Amtech, commented, "With our current healthy cash balance, we believe we have adequate cash resources to manage our current operations and continue executing on our strategic objectives, which include further improvements to our core solar diffusion technology, exploiting our N-type cell technology, developing our solar ion implant solution, and continuing our historically successful acquisition efforts. This is a time of opportunity and we remain committed to achieving these objectives."

About Amtech Systems, Inc.

Amtech Systems, Inc. manufactures capital equipment, including silicon wafer handling automation, thermal processing equipment and related consumables used in fabricating solar cells, LED and semiconductor devices. Semiconductors, or semiconductor chips, are fabricated on silicon wafer substrates, sliced from ingots, and are part of the circuitry, or electronic components, of many products including solar cells, computers, telecommunications devices, automotive products, consumer goods, and industrial automation and control systems. The Company's wafer handling, thermal processing and consumable products currently address the diffusion, oxidation, and deposition steps used in the fabrication of solar cells, semiconductors, MEMS and the polishing of LEDs and newly sliced silicon wafers.

Statements contained in this press release that are not historical facts may be forward-looking statements within the meaning of the Private Litigation Securities Reform Act. Such statements may use words such as "proposed," "anticipate," "believe," "estimate," "expect," "goal," "guidance," "intend," "outlook," "predict," "project" and similar expressions as they relate to Amtech Systems, Inc. or our management. When we make forward-looking statements, we are basing them on our management's beliefs and assumptions, using information currently available to us. Although we believe that the expectations reflected in the forward-looking statements are reasonable, these forward-looking statements are subject to risks, uncertainties and assumptions including the risks discussed in our 10-K and 10-Q reports and our other filings with the Securities and Exchange Commission. If one or more of these risks materialize, or if our underlying assumptions prove to be incorrect, actual

results may vary materially from what we projected. Any forward-looking statements contained in this press release reflect our current views with respect to future events and are subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, growth strategy and liquidity. We have no intention, and disclaim any obligation, to update or revise any forward-looking statements, whether as a result of new information, future results or otherwise.

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