



Media Advisory: Applied Materials Showcases Innovations to Boost Solar Efficiency and Lower Costs at PVSEC

September 20, 2012

SANTA CLARA, Calif., September 20, 2012 - Applied Materials, Inc., a leading supplier to the photovoltaic (PV) solar industry, will highlight its latest innovations in solar technology at the 27th European Solar Energy Conference and Exhibition ([EU PVSEC](#)) in Frankfurt, Germany, next week. These innovations are focused on customers looking for powerful, easy-to-implement solutions to boost cell efficiency and lower manufacturing costs - while delivering rapid return on investment.

Top Cell and Module Manufacturers Upgrading to Fine Line Double Print Technology

New data from some of the solar industry's top cell and module manufacturers shows that significant gains can be realized with Applied's unique Fine Line Double Print technology, powered by Applied's [Baccini Esatto Technology™](#). Used to optimize the conducting lines of a solar cell by making them taller and narrower, Fine Line Double Printing can reduce expensive front silver paste usage by 20% to less than 110mg per wafer, while simultaneously increasing cell efficiency by 0.2% absolute. These benefits can translate to significant additional revenue with a return on investment in as little as 6 months. Fine Line Double Print is offered as an upgrade to the installed base of [Baccini screen print lines](#) used in [c-Si](#) cell production worldwide.

Advanced Wire Saw Technology for Increased Productivity and Performance

Applying its extensive expertise in [wire saw](#) technology, Applied is providing customers with a quick, low risk path to increasing the productivity of its [precision wafering and squaring systems](#). Compatible with both diamond wire and [structured wire](#) slurry systems, Applied's new High Tension Upgrade Kit can double cutting speed with virtually no impact on yield and system footprint.

Applied is now offering for select applications its unique, high-strength, structured wire technology as an option for customers' [Applied HCT B5](#) wire saws - the industry's most widely used system. Providing greater than 20% productivity improvement, more than 15% energy reduction and a 20% or more reduction in wire consumption, structured wire enables a significant increase in HCT B5 performance.

Ion Implantation Boosts Cell Efficiency, Improves Yield

Applied's [Solion® ion implanter](#) is setting new benchmarks in c-Si cell efficiency and reduced production costs. Providing unique advantages over traditional doping methods, the system increases p-n junction quality to deliver efficiencies over 20% using advanced cell structures. These efficiency gains, combined with the elimination of PSG clean and isolation steps, lower the cost per watt for cell manufacturers. Multiple Solion systems are already in high volume production, providing the uniformity and exceptional process control to enable tighter binning for more high value cells.

Presenting Cutting-Edge Technology for the Next Inflection

Applied will present nine papers at PVSEC's prestigious technical conference, which runs September 24-28. The first presentation, "High Efficiency Back Contact Solar Cell Via Ion Implantation" will be a joint paper with Samsung. Follow [this link](#) for a complete list of Applied's oral and poster presentations. Also, please visit Applied's booth at PVSEC in Hall 3, #G-10.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today's innovations into the industries of tomorrow. Learn more at www.appliedmaterials.com.

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Contact:

[Michael Baxter](#) (Europe media) Office +49.6023.92.6276 Cell +49.174.33.87590

[Connie Duncan](#) (editorial/media) 408.563.6209

[Michael Sullivan](#) (financial community) 408.986.7977

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