



Advisory: Applied Materials Reports Innovations in Solar Cell Manufacturing at SNEC

February 21, 2011

SHANGHAI, China, February 22, 2011 - Applied Materials, Inc., the world's leading equipment supplier to the solar photovoltaic (PV) industry, will introduce its latest advances in PV manufacturing technology at the [SNEC PV Power Expo 2011](#) show this week in Shanghai, China. Applied's innovations are designed to help customers in China and around the world meet their green energy goals by providing technology solutions to optimize wafer and cell performance - and lower manufacturing costs.

"Applied Materials is committed to helping China in its efforts to increase domestic solar use in accordance with its 5 year plan - and we have built the world's largest privately-funded solar R&D center in Xi'an to support this effort," said Dr. Charlie Gay, president of Applied Materials Solar. "We are the leading supplier of PV equipment and services to China and currently have over 120 solar customers in this region. The benefits of our collaborative approach with customers have earned us three awards from major Chinese solar producers in recent months. We will continue to use our advanced technology and global service infrastructure to enhance our customers' success."

Selective Emitter Technology for Increased Cell Efficiency

Applied Materials will report on a new [Selective Emitter](#) (SE) solution using its high-precision [Esatto Technology](#)^(TM) on [Applied Baccini integrated cell platforms](#) that offers customers a rapid, low-risk route to fabricate SE structures. While a Baccini line can support any SE approach, Applied's new SE solution incorporates a high-precision imaging system, custom screens, optimized dopant paste technology developed with [Honeywell Electronic Materials](#), and dedicated process support. Applied's SE solution has been proven to raise absolute cell efficiencies by more than 0.5% at multiple customer sites.

Rebecca Liebert, vice president and general manager at Honeywell Electronic Materials, commented, "We believe Applied's strong track record in developing production-ready manufacturing solutions makes them an ideal collaborator in enabling our customers to optimize the performance of advanced selective emitter dopant pastes."

New Wire Saw Technology to Significantly Increase Cutting Speed

Applied will also unveil its upgraded [wire saw](#) technology with the introduction of a new, high-strength [structured wire](#) capability for its market-leading [Applied HCT Squarer](#)^(TM), which prepares silicon ingots to be cut into PV wafers. The new structured wire increases cutting speed by 70% - resulting in a 30% reduction in total system cost-of-ownership. Applied's technologists are also optimizing structured wire technology for its popular [Applied HCT B5](#)^(TM) wire saw, which is used by more solar wafer manufacturers than any other wire saw system. The structured wire approach, production-proven for ingot squaring, is designed to deliver immediate and significant productivity and performance advantages when extended to wafering applications on both new and existing HCT B5 tools.

Applied will also highlight the advanced [Applied E3](#)^(TM) and [SmartFactory](#)^(TM) MES [automation software](#) and [service support solutions](#) for maximizing factory productivity and yield.

For more information, visit Applied's SNEC news page at <http://www.appliedmaterials.com/snec>.

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:

Ji Lin (China media) (+86) 158.0177.4508

Connie Duncan (U.S.media) (+1) 408.563.0647

Michael Sullivan (financial community) (+1) 408.986.7977

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