Copper Metallized TOPCon Solar Cell Achieves Efficiency Milestone

Bert Thin Films has achieved a 24% power conversion efficiency with patented CuBert™ copper pastes on a tunnel oxide passivated contact (TOPCon) M10 solar cell.

LOUISVILLE, KY, UNITED STATES, April 10, 2025 /EINPresswire.com/ -- Bert Thin Films, Inc. announced today that it has achieved a 24% power conversion efficiency with their patented CuBert™ copper pastes on a tunnel oxide passivated contact (TOPCon) M10 solar cell. This is a major milestone in its mission to deliver a scalable metallization paste to replace silver.

The breakthrough result was achieved using Bert Thin Films' patented CuBert™ pastes which are screen printed, fired in air and processed using the laser enhanced contact optimization (LECO) process.

"This result is more than just a number – it is validation of the core technology that we have been developing," said Thad Druffel, CEO of Bert Thin Films. "By enabling high-efficiency cells sustainably and at lower costs, we're opening the door to more flexible, cost-effective manufacturing pathways for the entire solar industry."

The Bert Thin Films team emphasized that this milestone marks only the beginning of its TOPCon roadmap, with ongoing efforts focused on pushing efficiencies even higher while reducing costs through materials innovation and process integration. The company is currently working with pilot-line partners to scale production and bring its unique metallization approach to commercial volumes.

TOPCon is one of the most promising architectures and the LECO tool is an innovative process in the race for higher-efficiency solar cells. Bert Thin Films' approach addresses the key limitations that have hindered adoption of copper pastes into these technologies.

About Bert Thin Films
Bert Thin Films, Inc. located in Louisville, Kentucky, is a materials-driven startup pioneering high-temperature, high-performance copper pastes for next-generation photovoltaics. With a focus on enabling copper, Bert Thin Film's technology platform supports scalable, cost-effective solar cell production across a range of advanced device architectures. For more information, visit www.bertthinfilms.com.

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