SERIS PRESS RELEASE

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SERIS partners with Ruxing Technology to develop commercial metallisation pastes to enable above 24% low-cost monoPoly™ solar cell production

Singapore, February 11, 2019 - SERIS, a world-leading solar cell research institute, and Guangzhou Ruxing Technology Development Company Ltd., a market-leading manufacturer of metallisation pastes for PV products, have signed a collaboration agreement to accelerate the development of commercial metallisation pastes to enable low-cost, mass production of above 24% monoPoly™ solar cells.

Over the past 15 months, SERIS and its industry partners have been fine-tuning SERIS' proprietary monoPoly™ passivated-contact solar cell technology platform for mass production, with average solar cell efficiency range of 23.0% to 23.5% and 60-cells module power above 330 Watt. With Ruxing Technology's expertise in developing specialised, production-ready metallisation pastes, SERIS expects to increase the average efficiencies of monoPoly™ solar cells to the 23.5% to 24.0% range and module power beyond 345 W.

Dr. Shubham Duttagupta, Deputy Director of SERIS' Silicon Materials and Cells Cluster said, "Having the right industry partners has been critical in enabling the rapid commercialisation of our monoPoly™ technology, so we are very pleased to add Ruxing Technology, a market and technology leader, as a strategic metallisation paste partner to accelerate both technical improvements and industrial implementation of this game-changing technology."

Shan Xu, President of Ruxing Technology, said, "We stay committed to providing our customers with the best metallisation paste products to stay ahead of the technology and cost-reduction curve. After the success of our market-leading aluminium paste and back silver paste in enabling PERC technology in mass production, we are confident that we will once again deliver the right products to enable monoPoly™ solar cells to enter mass production."

SERIS CEO, Prof. Armin Aberle added, "We are thankful for the unwavering trust and strong support from our industry partners, and this collaboration with Ruxing Technology is another testament to SERIS' long-standing commitment to develop industry-relevant technology solutions that help our partner manufacturers to stay competitive in the cut-throat solar industry."

The monoPoly™ technology platform is a low-cost option to enhance PERC production line performance, requiring only one tool upgrade for most PERC production lines and having one production process step less than a standard PERC production process. With only seven process steps, monoPoly™ solar cells produce superior cell and module power as well as better tolerance to PID and LID compared to PERC solar cells. SERIS expects at least 3 GW of monoPoly™ production capacity to be installed in 2019.

SERIS is a research institute at the National University of Singapore (NUS). SERIS is supported by the National University of Singapore (NUS), National Research Foundation Singapore (NRF) and the Singapore Economic Development Board (EDB).

About Ruxing Technology

Guangzhou Ruxing Technology Development Co., Ltd. is a global market leader in conductive pastes for the photovoltaics industry. Founded in 2000 and headquartered in Guangzhou, China, Ruxing Technology has a dominant PV market share for both aluminium paste and back silver paste with top 10 C-Si cell makers being its prestigious clients, and is a leader in technology innovation in the specialty PV materials field.

About the Solar Energy Research Institute of Singapore (SERIS)

Founded in 2008 and located at the National University of Singapore (NUS), the Solar Energy Research Institute of Singapore (SERIS) is Singapore's national institute for applied solar energy research and a global leader in solar cell research and development. SERIS is supported by the National University of Singapore (NUS), National Research Foundation (NRF) and the Singapore Economic Development Board (EDB). SERIS conducts research, development, testing and consulting on solar energy technologies and their integration into power systems and buildings. The institute's R&D spectrum covers materials, components, processes, systems and services, with an emphasis on solar photovoltaic cells, modules and systems. SERIS is globally active but focuses on technologies and services for tropical regions, in particular for Singapore and South-East Asia. SERIS collaborates closely with universities, research organisations, government agencies and industry, both locally and globally.

For more information on SERIS, please visit www.seris.sg

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