

CORPORATE NEWS

Press release on continuing research collaboration between SERIS and FHR in the field of advanced TCO and contact coatings

On May 28th, 2018 the Solar Energy Research Institute of Singapore (SERIS) and FHR Anlagenbau GmbH, Germany jointly announced to continue the close collaboration on the development of new Transparent Conductive Oxide (TCO) and metal contact coatings that have broad applications in the solar industry. To meet industrial requirements new contact concepts has to be implemented in the production technologies of thin film and silicon based solar panels. At SERIS, several years of experience have been built up in thin-film technologies, and a group of researchers is working on the development of next-generation high-performance solar cells. In TCO development the use of toxic, scarce and expensive materials needs to be reduced or completely eliminated, without compromising the functional properties. TCOs and metal contacts are widely used in thin-film solar cell technologies such as CdTe, CIGS and amorphous silicon, they are also used in advanced high-performance silicon wafer solar cell technologies such as heterojunction solar cells. Both SERIS and FHR have agreed to share their experience and expertise, and to join hands in a collaborative project aiming at lowering the cost of solar energy.

"At SERIS we are continuously working to drive down the cost of solar energy." said Professor Armin ABERLE, CEO of the Solar Energy Research Institute of Singapore. "We explore advanced solar cell concepts and strive to implement them in a high-volume, low-cost process. We are happy to continue the long-term relationship with FHR in this field."

Torsten Winkler, CEO of FHR Anlagenbau GmbH added that "It´s perfect to bring both our long term experience together to master the cost reduction requirements for advanced solar cell and panel. SERIS is for us the ideal Asian-based partner working with their industry partners for the most advanced technologies. By cooperating with SERIS we continue a strategic partnership with the aim of enhancing our leading know-how in vacuum process technologies on a high level and to offer state-of-the-art vacuum coating solutions to our customers."

SERIS has acquired a state-of-the-art and highly versatile in-line magnetron sputtering platform from FHR, which provides excellent process control and which is capable of depositing a variety of advanced TCO materials onto substrates with a size of up to 300 mm × 400 mm. This platform will allow SERIS to become a leading R&D centre in thin-film and heterojunction solar cell research, pushing these technologies to a competitive position in the renewable energy landscape.

About SERIS

The Solar Energy Research Institute of Singapore (SERIS) at the National University of Singapore (NUS) is Singapore's national institute for applied solar energy research. 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

About FHR

FHR Anlagenbau GmbH is specialised in the development of innovative thin-film coating technologies and vacuum coating equipment and renders various services in the field of thin-film technology. The major field of business is the construction of coating plants which feature a range of vapour deposition, magnetron sputtering, CVD and ALD technologies for industrial production and research applications. These systems are used in many branches of industry, including photovoltaics, in particular for CIGS solar cells and organic PV cells, solar thermal plants, optics, electronics, sensor technology, and in the automotive sector. The product portfolio includes modular cluster systems for stationary coating of substrates, inline systems with vertical or horizontal substrate transport for coating glass plates or tube surfaces, as well as roll-to-roll plants for coating flexible substrates such as metal strips or polymer films. FHR closely collaborates with renowned research institutions and industry partners world-wide. The company takes a leading market position, in particular in the field of roll-to-roll vacuum coating equipment. In addition to plant engineering, FHR manufactures planar and tubular sputtering targets and has a powerful service department.

For media enquiries, kindly contact:

SERIS

Tan Mui Koon

Scientific Manager, Corporate Relations

Phone: +65 66011356

Email: muikoon.tan@nus.edu.sg

FHR Anlagenbau GmbH

Michael Schneider

Head of Marketing

Phone: +49 35205 520-302

Email: michael.schneider@fhr.de