

Press Release

New Heraeus diffusion consultancy ushers next step of efficiency gain for Photovoltaic industry

New service allows cell manufacturers to further optimize production processes and significantly increase cell efficiency by up to 0.2% through optimized connection between wafer and silver paste

SHANGHAI, CHINA – April 19, 2017 – Heraeus Photovoltaics, a leading provider of Heraeus Photovoltaics, a leading provider of technology solutions for the renewable energy industry, has launched a new diffusion consultancy service to optimize the diffusion of phosphor in crystalline Silicon photovoltaic wafers at the 11th SNEC International Photovoltaic Power Generation Conference & Exhibition in Shanghai. Phosphor is used during the cell production to optimize the transport of electrons between the silicon wafer and the silver paste. The full potential of high quality materials can only be demonstrated, when the production processes are perfectly matched.

Heraeus' new consultancy service allows manufacturers of solar cells to optimize the connection between wafer and silver paste as well as an improved blue response and thus significantly increase efficiency of the cells by up to 0.2%, optimize production processes and save resources and production time.

“All Heraeus products and services have the common goal: significantly enhance the overall efficiencies of our customers at cell level as well at production process level. We are convinced that by increasing efficiencies throughout the whole value chain the costs of renewable energies can be reduced by a further 50 percent within the next five years. Heraeus expects to be able to contribute about one-third to this cost reduction,” said Andreas Liebheit, President Heraeus Photovoltaics.

Heraeus offers a complete analysis, simulation and optimization framework to identify and implement the optimal diffusion profile under its customer's process conditions.

Collaborating with world class research institutions, cell manufacturers will be asked to provide samples in various stages of their production process to perform loss mechanism analysis. Heraeus will then use the resulting data to adjust the production parameters and optimize the processes to gain the full potential of the material.

The new diffusion consultancy service will be applicable to PERC, BSF and n-type bifacial cells and can be adapted to different production processes.

Heraeus exhibits its full range of products and services at the 11th SNEC International Photovoltaic Power Generation Conference & Exhibition 2017 in Shanghai.

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About the Heraeus Photovoltaics Global Business Unit

The Heraeus Photovoltaics Business Unit is an industry leading developer and manufacturer of silver metallization pastes as well as a provider of solutions and services for the photovoltaic industry. For over 40 years, Heraeus has built a reputation of innovation, extensive research and new product development in thick film technologies for some of the most prominent companies within a variety of industries. In the field of photovoltaics, the Heraeus Photovoltaics Business Unit applies this history and its innovative technology to offer metallization pastes for solar cell applications as well as solutions and services to increase efficiency in wafer production processes. The Heraeus SOL Series of silver pastes is specially formulated to provide higher efficiencies and wider processing windows, resulting in better yields and higher output for cell manufacturers.

Heraeus, the technology group headquartered in Hanau, Germany, is a leading international family-owned company formed in 1851. In 2016, it has been awarded one of the ten most important family owned businesses. With expertise, a focus on innovations, operational excellence and an entrepreneurial leadership, we strive to continuously improve our business performance. We create high-quality solutions for our clients and strengthen their competitiveness in the long term by combining material expertise with technological know-how. Our ideas are focused on themes such as the environment, energy, health, mobility and industrial applications. Our portfolio ranges from components to coordinated material systems which are used in a wide variety of industries, including the steel, electronics, chemical, automotive and telecommunications industries. In the 2015 financial year, Heraeus generated revenues without precious metals of €1.9 bn and a total revenue including precious metal of €12.9 bn. With approximately 12,500 employees worldwide in more than 100 subsidiaries in 38 countries, Heraeus holds a leading position in its global markets.

Trade Press Contact:

Kevin Chen
Corporate Communications Manager
Phone: + 86 21 3357 5261
E-Mail: kevin.chen@heraeus.com

For additional information, please contact:

Michael Treutel
Senior Vice President Marketing
Heraeus Photovoltaics
Phone: +49 (6181) 35-2295
E-Mail: michael.treutel@heraeus.com