

## Trade Press Release

Hanau, September 24, 2013

### **Heraeus Photovoltaics Business Unit to Attend EU PVSEC 2013 in Paris**

- **Heraeus to showcase new metallization pastes for higher efficiency solar cells at a lower cost per Wp**

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The Heraeus Photovoltaics Business Unit will be attending the exhibition of EU PVSEC 2013 in Paris, Parc des Expositions Paris Nord Villepinte, hall 2, booth 2/C3, from October 1-3, 2013. Heraeus will be highlighting several of their newest products in their current portfolio of metallization pastes that provide solar cells with higher efficiency at a reduced cost per Wp.

Lowering cost, especially silver cost in cell metallization will be a key topic at our booth. Heraeus pastes allow cell manufacturers to lower the silver cost for front-side metallization to below \$0.01 per Wp (as demonstrated by the Institute for Solar Energy Research Hamelin, Germany; solar cell: PERC, printing technique: Dual Print; efficiency: 20.2%). Sure, low cost per Wp is a key objective for cell manufactures, with increasing importance. However, high cell efficiency has always been and continues to be the key driver in cell production.

During the show, Heraeus will be highlighting their SOL9610 Series of front-side metallization pastes, which continues successful market adaptation. Improvements to the SOL9610 Series provide finer line resolution and improved contact to silicon wafers. The series of pastes has demonstrated cell efficiencies greater than 19.5% on standard p-type cells.

New to their portfolio is the SOL9350 Series, designed for n-type cells with p<sup>+</sup> wafer surfaces. This series of pastes provides improved printability and allows customers to achieve higher cells efficiencies. On bifacial n-type cells, the SOL9350 Series for p<sup>+</sup> wafer surfaces can be complemented with other Heraeus pastes, such as the SOL9610 Series or the lower silver SOL9300 Series. For back-side metallization, Heraeus offers low silver tabbing pastes with silver contents below 45%.

A key characteristic of Heraeus pastes is their excellent adhesion to both the front-side and back-side of solar cells. "In the R&D process, we focus on formulating pastes that advance both the electrical and mechanical performance of solar cells. Adhesion is considered a key factor in the mechanical performance of cells. During our paste development process, we will not sacrifice the mechanical performance and reliability of cells," said Dr. Weiming Zhang, Vice President of Technology for the Heraeus Photovoltaic Business Unit.

To talk to our experts to find out more about Heraeus' current product portfolio for conventional and advanced cell visit us at this year's EU PVSEC 2013 in Paris, Parc des Expositions Paris Nord Villepinte, in hall 2, booth 2/C3 of the exhibition.

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You can also go to [www.pvsilverpaste.com](http://www.pvsilverpaste.com) for more information.

### **About the Heraeus Photovoltaics Business Unit**

The Heraeus Photovoltaics Business Unit is an industry leading developer and manufacturer of silver metallization pastes 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. 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 precious metals and technology group headquartered in Hanau, Germany, is a global, private company with more than 160 years of tradition. Our fields of competence include precious metals, materials and technologies, sensors, biomaterials and medical products, quartz glass, and specialty light sources. In the financial year 2012 Heraeus generated product revenues of €4.2 billion and precious metal trading revenues of €16 billion. With more than 12,200 employees in over 100 subsidiaries worldwide, Heraeus holds a leading position in its global markets.

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