

Press release

Heraeus press conference on annual results 2014

Hanau, Germany, May 8, 2014

Cluster strategy enhances the benefits to end customers

- Forming Group-wide cluster teams in future-oriented fields is a key component of the Heraeus innovation strategy

Renewable energies, display & consumer electronics, additive manufacturing and sensor technology are future-oriented fields in which Heraeus intends to capture new markets with attractive products and innovative materials.

As market demands intensify, Heraeus is giving research and development an even stronger international base, as well as forming international clusters. "Innovations are always crucial to a technology company's success. From the beginning, therefore, Heraeus has made research and development a very high priority. By forming Group-wide clusters, we aim to promote technological innovation and actively shape market trends," explained Rolf Najork, Member of the Board of Management of Heraeus Holding GmbH, presenting the innovation strategy at this year's press conference on annual results. The company views this integration of expertise as a way to broaden the traditional orientation of the business groups while maximizing proximity to the relevant global markets. Jan Rinnert, Chairman of the Heraeus Holding Board of Management, considers this a crucial approach. "The days of the ivory tower are over. Meaningful development requires proximity to the market and a direct connection with customer needs. Our developers need to focus more strongly on customers and markets."

Heraeus Holding manages the clusters and provides the necessary resources. The mandate for the cluster teams is straightforward: "They are to identify global developments, trends, and new potential for Heraeus – and fill our innovation pipeline with products that deliver significant added value to the end customer," said Rolf Najork. The great advantage of the clusters is that the various business groups contribute different perspectives, skills and market insights, opening new horizons for the Heraeus Group.

Example 1: Display & Consumer Electronics Cluster

The entertainment industry is a large and diverse market. Its product palette ranges from smartphones, tablets and televisions to game consoles and cameras – even "smart homes" with entertainment media networked throughout the house. As innovation cycles shrink, the demand for new and ever better materials continues to grow.

Heraeus has a hand in shaping this change – with ideas and materials that are used in many different technologies and markets, making devices even smaller, more user-friendly and more powerful. The company considers itself a partner to the display and components industry. Working closely with clients, Heraeus develops materials that give them a decisive edge, setting them apart from the competition for end customers.

In developments for the display industry, Heraeus relies on research collaborations in Asia, especially Taiwan, where Heraeus is working with the Industrial Technology Research Institute (ITRI), an organization comparable to the Fraunhofer Institute in Germany. The focus is on

developing and combining Heraeus materials that enable the production of consumer electronics with innovative functions that better serve the end customer, such as flexible, unbreakable touchscreens and ultrathin, bendable OLED displays.

Example 2: Renewable Energies Cluster

Using energy efficiently, conserving resources, protecting the environment – green technology and renewable energies spur Heraeus and its partners to pursue innovations along the value creation chain. One current example: The high-technology field of fuel cells specifically for the automotive industry is a future market. Although developers worldwide have been hard at work on this since the 1960s, the breakthrough allowing mass production has remained out of reach. With the development of alternative low-emission and CO₂-neutral drive systems, however, research is gaining new momentum. In particular, the focus is on improving the durability and performance of fuel cells. The renewable energies cluster aims to foster this approach, because new materials for fuel cell electrodes could hold the crucial key to optimizing the efficiency of fuel cells. The development of polymer electrolyte membrane (PEM) fuel cells offers the best entry point for Heraeus. In these cells, catalysts transform the chemical energy liberated during the reaction of hydrogen and oxygen into electrical energy. Heraeus is developing new catalyst inks containing precious metals, which can be used as effective electrode coatings. The cluster aims to draw on system expertise from all business groups to develop materials that will allow significant product improvements for generating, inverting, storing, and distributing renewable energies.

Link for picture download: [140508_Cluster](#)

Legend: (Source: Heraeus)

Consumer Electronics: Dispersions of **conductive polymers** from Heraeus are blue liquids and are used as electrical functional coatings in capacitors or for touchscreens. The polymer PEDOT (polyethylene dioxythiophene) is polymerized in the presence of polystyrene sulfonic acid (PSS), which makes it dispersible in water. Clevios™ PEDOT:PSS, in dispersed form, is a genuine all-rounder and the basis for more than 100 application-specific and customer-specific polymers and formulations. (Source: Heraeus)

Consumer Electronics: Porocarb® is an industrially manufactured conductive carbon powder that is particularly porous. The characteristics of the material can be modified to meet the specific requirements of customers and their fields of application. A very small quantity of Porocarb® is all it takes to significantly improve the performance of lithium-ion batteries used in smartphones and substantially cut production costs. (Source: Heraeus)

Heraeus, the precious metals and technology Group headquartered in Hanau, Germany, is a global, private company with more than 160 years of tradition. We create high value solutions for our customers, strengthening their competitiveness for the long term. Our fields of competence include precious metals, materials and technologies, sensors, biomaterials and medical products, quartz glass, and specialty light sources. In fiscal year 2013, Heraeus had product revenue of €3.6 billion and precious metals trading revenue of €13.5 billion. With more than 12,500 employees in over 110 subsidiaries worldwide, Heraeus holds a leading position in its global markets.

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