

## Press release

Hanau/Shenzhen, November 20, 2018

### **Clevios™ HY E - the secret behind foldable touchscreens**

**Foldable smartphones, tablets and screens are finally becoming a reality. Now there is a need for robust conductive materials in touch displays so that the new technology will function reliably – materials like the new Clevios™ HY E from Heraeus Electronic Chemicals.**

For a display to be foldable at all, each of its components must be extremely robust and flexible. With the fundamental shift from glass to plastic in displays, the main challenge is to employ mission-critical materials that are necessary for foldable displays. “Our conductive material already possesses all the requisite electronic and mechanical properties,” says Dr. Armin Sautter, Head of Technical Service Display at Heraeus Electronic Chemicals.

The new Clevios™ HY E from Heraeus Electronic Chemicals is a hybrid material consisting of silver nanowires for higher conductivity and conductive PEDOT polymers as a flexible binding agent that allows for a smaller bending radius. In tests, films coated with Clevios™ HY E have been folded more than 300,000 times with a bending radius of 1 mm – with no impairment of their conductivity. High and stable conductivity is essential especially for large displays. With such small bending radii, it will be possible to produce thin smartphones and tablets that have multiple folds.

“Even during implementation, we can provide support to display manufacturers as they implement individual adaptations of the material and develop processes for series production,” Dr. Armin Sautter points out. In its test laboratory in Taiwan, Heraeus Electronic Chemicals has a wide variety of options for testing conductive polymers on substrates. In addition, the developers can structure touchscreens themselves – inserting the touch-sensitive sensors into the display film in such a way that they are undetectable.

Working with a Taiwanese touch panel manufacturer, Heraeus Electronic Chemicals has demonstrated what the future of displays actually looks like, as the team of developers produced an 8-inch folded touchscreen prototype in their test laboratory in Taiwan. “This prototype clearly demonstrates how sophisticated and robust our materials are,” says Dr. Armin Sautter. “Now we are looking for technological partnerships to implement additional applications.”

**Heraeus Electronic Chemicals is presenting Clevios™ HY E and the touchscreen prototype from November 22 to 24, 2018, at the C-Touch & Display in Shenzhen at booth #1N01 in Hall 1. For additional technical information, go to: [www.herae.us/c-touch2018](http://www.herae.us/c-touch2018)**

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A globally leading technology group, Heraeus is headquartered in Hanau, Germany. Founded in 1851, it is a family-owned portfolio company which traces its roots back to a pharmacy opened by the family in 1660. Today, Heraeus combines businesses in the environmental, energy, electronics, health, mobility and industrial applications sectors.

In the 2017 financial year, Heraeus generated revenues of €21.8 billion. With approximately 13.000 employees in 40 countries, the FORTUNE Global 500-listed company holds a leading position in its global markets. Heraeus is one of the top 10 family-owned companies in Germany. With technical expertise, a commitment to excellence, a focus on innovation and entrepreneurial leadership, we are constantly striving to improve our performance. We create high-quality solutions for our clients and strengthen their long-term competitiveness by combining unique material expertise with leadership in technology.

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