

Press release

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New conductive polymers from Heraeus reduce distracting light reflexions on displays by 50%

Heraeus presents innovative technologies for flexible and foldable displays and printed capacitive touch sensors at C-Touch 2017 in Shenzhen (November 24-26)

New conductive polymers from the Heraeus Clevios line reduce the sheet resistance on flexible and foldable touchscreens by more than 50%. This considerably improves conductivity and transmission for ultra-thin conductive display layers. Clevios HY E has thus become a key material for stably and reliably producing the next generation of foldable displays and smartphones. Heraeus will present this innovation at C-Touch in Shenzhen from November 24 to 26. "Clevios HY E is an improved hybrid product made of silver nanowires and the conductive polymer PEDOT:PSS. More than 300,000 bends with a bending radius of one millimeter can thereby withstand a 40 Ohm/sq conductive layer without damage," says Dr. Armin Sautter, Head of Technical Services at Heraeus Emerging Business. At the trade show, the technology group will present a new foldable touch sensor based on Clevios HY E that can be used in AMOLED displays.

Clevios enables an electromagnetic shield for displays and printed touch sensors

An additional Clevios innovation improves the optical properties and function of LCDs (liquid crystal displays): The polymer enables transparent conductive and scratch resistant shielding layers on display glass and reduces distracting light reflexions by over 50% in comparison with previously used ITO layers (indium tin oxide). This increases the optical display contrast. Clevios has minimal inherent color and higher transmission than ITO. It can furthermore be applied via an inexpensive wet coating process. "Layers produced with Clevios achieve higher optical transmission, greater clarity, and they are colorless. They are perfectly suited to be display layers since they are very stable not only mechanically but also in climate tests," says Armin Sautter. The products cure quickly (within five minutes) and achieve up to 8H pencil hardness.

Another Heraeus highlight on display are printed capacitive touch sensors. In the future, it will be possible to mold switches and control elements into whatever shape is needed, not just the customary flat and two dimensional. This requires extremely flexible, transparent conductors. Clevios is suited for this purpose and can be used in thermo- and high pressure forming processes.

Visit the Heraeus booth 1E96 and experience the future of touch technology.

Caption: C-Touch 2017: New conductive polymers (Clevios) from Heraeus reduce distracting light reflexions on displays by 50%

Heraeus, the technology group headquartered in Hanau, Germany, was founded in 1851 and today is a globally leading, family-owned company. With technical expertise, a focus on innovation, operational excellence and entrepreneurial leadership, we constantly strive to 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 includes everything from components to coordinated material systems, and our products are used in a wide variety of industries, including the steel, electronics, chemical, automotive, and telecommunications industries. In fiscal year 2016, Heraeus earned revenues excluding precious metals of €2.0 billion and total revenues of €21.5 billion. With around 12,400 employees worldwide in more than 100 subsidiaries in 40 countries, Heraeus holds a leading position in its global markets. In 2016, Heraeus was named one of the Top 10 Family Businesses in Germany by the Foundation for Family Businesses.

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