

Press release

CCI – research transfer prize in gold awarded to Würth Elektronik The future of flexible and elastic printed circuits starts with TWINflex-Stretch

Together with the Fraunhofer Institute for Reliability and microintegration IZM, Würth Elektronik CBT won this year's research transfer prize in gold. This prize is being awarded to especially felicitous and successful cooperation projects of Economics and Science. Subject of the accolade was the innovation of making printed circuit boards flexible and elastic; unthinkable by then.

The prize, handed in a ceremonial act by the Chamber of Industry and Commerce Heilbronn, was received by PhD Alina Schreivogel of Würth Elektronik CBT's Research & Development (R&D) section, located in Rot am See - and by Dr. Thomas Löher of the IZM.

The laudatory speakers expressed their appreciation for both the idea of developing flexible printed circuits in place of rigid PCBs and its successful advancement up to serial production maturity, placed on the market under the brand name TWINflex- Stretch.

This technology now allows random adjustment of complex electronic systems and sensors, for example to the human body or wearables and textiles – An absolute novelty.

To showcase this, a cyclist jacket with flashing signals was introduced during the award ceremony:

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Other road users do not only see the cyclist, they may additionally estimate by the blinking speed the speed at which the cyclist is riding. Another application field this innovation is already in use, is the medical technology for neonates and preterm infants, incorporated in a measuring belt wrapped around the baby's body to measure cardiac and pulmonary functions smoothly and gently- without any implants or other surgery – therefor dispensing with the need for permanent supervision by X-ray. Further potential application spheres are given in smart and soft robotics, automation, sensors and automotive.

The necessary boost o innovation originated from the idea of using skin- friendly, soft polyurethane materials as new base material – a material known as leatherette or building foam. The material was coupled with an elastic, meandering-shaped Copper pattern.

The moment the very first intact TWINflex-Stretch- samples were taken out of the electroplated sink, will forever remain in the memory of Dr. Alina Schreivogel: "It was unbelievable. We hardly dared to breathe and were overjoyed looking at the result. "

Along with their R&D team and everyone involved directly and indirectly, Würth Elektronik is delighted about this re-affirmation of an important and successful work.

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About Würth Elektronik Circuit Board Technology (CBT)

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Founded in 1971, Würth Elektronik Circuit Board Technology has established itself as one of Europe's leading producers of printed circuit boards. There, electronics designers find both all the relevant and many innovative PCB technologies right up to system solutions. That way, Würth Elektronik covers the entire product life cycle: From the inception of an idea, within a development project - for example- through prototypes and samples in their online shop WEdirekt up to medium size batch production and larger volumes. Expert specialists as interlocutors are providing support from Germany and further afield: Internationalization is one key aspect of the company strategy: Sales units are present on site in many countries. More than 120 new PCB designs are processed through our production sites every day. The customer range covers more than 4.700 companies of all sizes - major conglomerates and one- man - offices, too. Customers have the freedom of choice between individual service provided by a network of more than 100 internal and field sales people and ordering PCBs online conveniently in our Web shop WEdirekt.

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