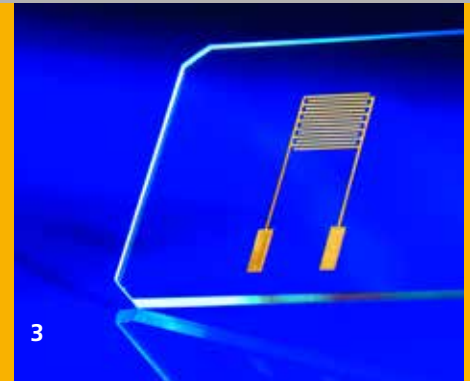
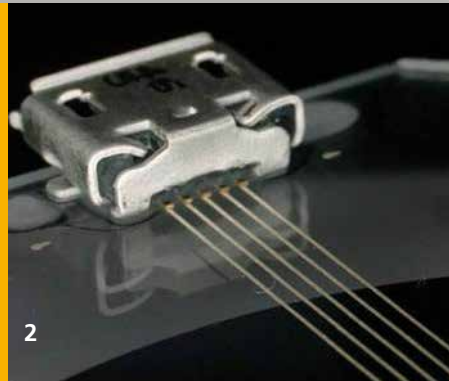
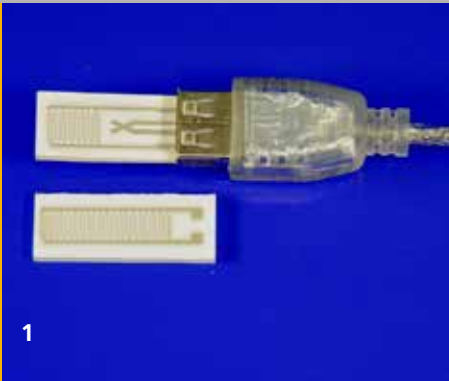




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- 1 Connecting printed sensors with USB-connection.
- 2 Micro-USB-connection connected with printed traces.
- 3 Printed gold structure for selective sensors assembly.

PRINTED SENSORS

Using printing technologies, various sensors can be applied to component surfaces or integrated into components based on need, thereby using fewer resources. Parts and components can be functionalized, the sensor is individually designed and flexibly integrated to fulfil the project requirements.

sensor structure characterization, reliability testing, process integration, economic efficiency analysis, and knowledge transfer round out the overall portfolio.

Applications

Printed sensors are used in many areas of application, e. g. energy, electronics, medical technology, the automotive industry, and aviation. Current fields of application for printed electronics and sensors include:

- Contacts and 3D circuit paths for structural design and connection technology
- Temperature or fill level sensors and strain gages
- Gas sensors based on printed metal oxide semiconductor materials
- Bio-sensors created by combining printed electronics with biologically active substances

Component functionalization

Functionalization of components can involve the integration of temperature, crack, strain, or fill level sensors. Biofunctionalized sensor structures are produced for optical or electrochemical detection. We focus on the application of electrically conductive structures, insulating layers and structures, and the production of sensor components and 3D surfaces. The processes range from conception of the sensor layout through substrate selection, modification, and preliminary structuring; formulation of printable inks and pastes; and the structured application of materials through process evaluation, using various printing methods. Market analyses and feasibility studies,

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