



CAPABILITY

# Printed Electronics

Let's innovate together

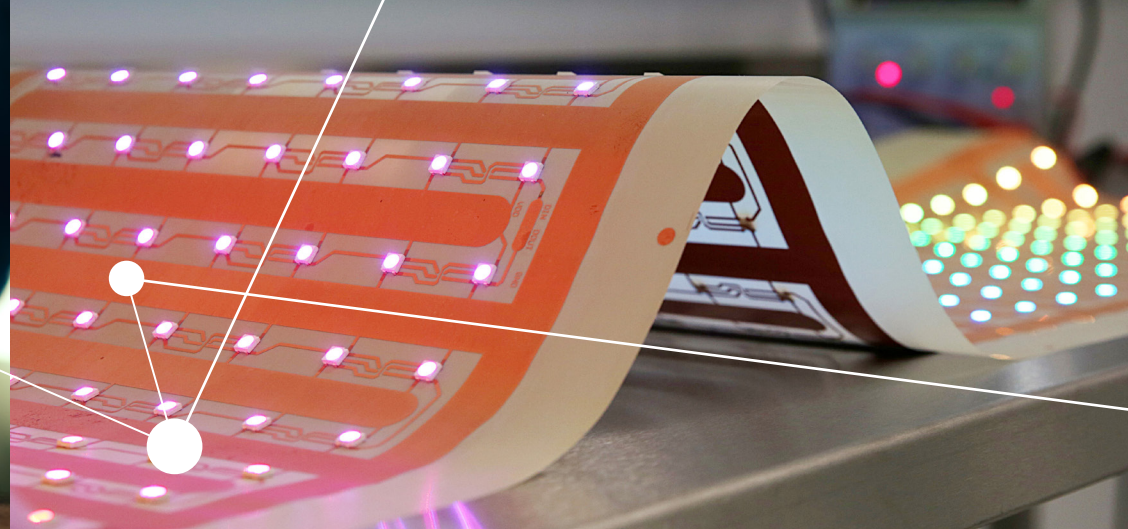
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**We have over fifteen years of experience developing functional printed electronic devices, from thin film transistors for display backplanes, to flexible sensor systems and large area electromagnetic detection arrays. By utilising our world-class facilities and expertise for scale up and commercialisation, we can help you to manufacture printed electronics components and devices for feasibility, prototyping and market seeding volumes.**

### **Sensors, energy harvesting and storage**

We have acquired years of experience in the fabrication of printable sensors that can measure parameters such as temperature, stress and strain, gases and even biological molecules. With the freedom of design and functional flexibility imparted by printing onto flexible substrates; sensors can be thin, lightweight, large area or embedded within devices where traditional electronics cannot fit. We also have the expertise to design energy harvesting and storage devices within thin, lightweight and flexible form factors.



### **Barrier and encapsulation technologies**

Our teams are able to offer their expertise in barrier and encapsulation technologies, allowing you to protect sensitive materials from the environment to produce stable, long life devices. Our scientists have extensive experience in the deposition and characterisation of barrier layers, including Atomic Layer Deposition, enabling your innovations in flexible, wearable and large-area devices.

### **Materials and formulation for coating and patterning**

We offer key skills such as encapsulation and environmental protection, thin film patterning, controlled thin film deposition, and testing of materials, components and devices. Our multi-partner network spans key knowledge partners and SME innovation enablers, providing you with industry-trained experts and flexible access to facilities for the development and scale up of advanced formulated products. Our teams can provide formulation of inks for printed electronics applications followed by coating, printing and patterning. We can also help you to select or formulate and optimise solvent systems, surfactants, resins and adhesives.





## Analytical measurements for investigation and quality control

We ensure processes are well controlled so that the materials, components and devices are as defect-free as possible. We are also able to support your project with suites of analytical equipment for investigative analysis and quality control. Our teams can perform surface analytics for morphology and defects in thick and thin films, in addition to process checks for critical dimensions of patterned parts. We also offer physical testing and accelerated aging of devices to enable optimisation of performance and lifetimes.

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