



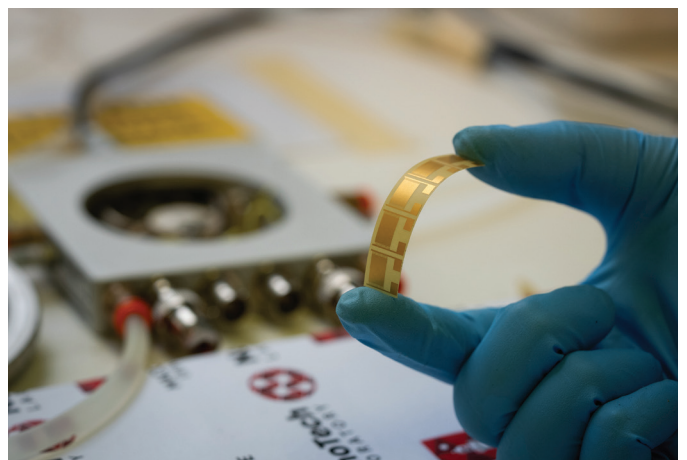
THEME 2: ADVANCED MATERIALS AND MANUFACTURING

Our research strength in this theme propels us to the forefront of innovation and cutting-edge technologies. Within the pillars of our research, we delve into the intricate domain of nanomaterials and nanotechnology, where novel materials are ingeniously engineered at the atomic scale, promising unique properties for unparalleled applications. Explore the domain of composite and manufacturing to witness the craftsmanship behind forging strength and adaptability, yielding materials customised for a wide range of sectors – from aerospace and automotive to health and medical applications. Elevate functionality through our specialisation in functional coatings and surface engineering, where surfaces transcend their inherent properties – embracing traits such as hydrophobicity, hydrophilicity, self-cleaning capabilities, and even self-healing attributes. Our focus on these advanced functionalities is to unleash innovative potential in industries by creating surfaces that interact intelligently with their environment.



CANCER DIAGNOSES DEVICES

Skin cancer accounts for more diagnoses than all other cancers combined and costs more than \$750 million annually to treat. This project will drive rapid and significant improvements in skin cancer prevention by designing, developing and implementing the Sunwatch, a personalised and wearable UV sensor to alert users of overexposure.



SENSING TECHNOLOGY

This project aims to develop cutting-edge, non-invasive sensing technology revolutionising cattle management in the meat, livestock and dairy industries to enable producers to conduct safe and accurate pregnancy testing when it suits, without relying on a veterinarian.