

MEDIA RELEASE

Research collaboration to deliver longer-life antiviral face masks and other PPE

Melbourne, 25 August 2022: Research into advanced textiles will soon deliver longer-life antiviral face masks and other personal protective equipment (PPE) that safeguard against infectious pathogens like COVID-19.

Advanced textile technology company Xefco and researchers at Deakin University have joined forces on a 10-month, \$500,000 project with the support of the Innovative Manufacturing Cooperative Research Centre (IMCRC).

The project, now in its final stages, has improved the durability of already-developed antiviral and heat-reflective metallic coatings for textiles.

Tom Hussey, CEO at Xefco and lead of the research collaboration, said the outcomes of the research and development (R&D) were poised to increase the quality and longevity of antiviral masks and other critical PPE manufactured in Australia.

“By advancing the metallisation technologies, we have created a more durable textile for PPE that can be used over extended periods while providing improved protection against COVID-19 and other viruses,” he said.

“In addition to increasing the life of the product, our research has generated new possibilities for re-purposing the materials at the end of their life to create a circular supply chain and reduce the consumption of raw materials.”

Dr Alessandra Sutti, Associate Professor at Deakin University’s Institute for Frontier Materials (IFM), said the project demonstrated the importance of knowledge translation that focused on extending product life and re-purposing existing materials.

“IFM’s researchers have made significant improvements to the durability of the materials” she said.

“These improvements include improved durability to laundering, disinfecting, aging and exposure to certain liquids, and are set to support the important move away from single-use PPE products.”

Dr Matthew Young, IMCRC’s Manufacturing Innovation Manager, stressed the importance of funding of relevant research and innovation, and in turn, foster the growth of Australia’s advanced materials manufacturing capability.

“The outcomes of this project will support the establishment and expansion of local textile materials and PPE manufacturing capability and increase the supply-chain availability of these critical products,” he said.

“This industry-focused R&D also positions Australia as a leader in advanced textile technologies, creating pathways for further collaborations and generating significant global export opportunities.”

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About IMCRC

IMCRC is an independent and for-impact cooperative research centre with a successful, proven and scalable model for catalysing research and business partnerships that drives transformative commercial outcomes for participating Australian manufacturers. To date, IMCRC has successfully co-invested in more than 70 R&D projects, catalysing more than \$230 million in transformative manufacturing research. More information is available at www.imcrc.org.

IMCRC's activate program was introduced in 2020 to support shorter-term, industry-led research projects that help Australian manufacturers take action and gain a competitive edge in the post-COVID-19 world. www.imcrc.org

About Xefco

Xefco is an Australian-owned company that creates innovative textile and coating technologies. Leveraging a global network of research partners, Xefco develops advanced manufacturing solutions and applies cutting edge materials science with a focus on functional improvements, sustainable manufacturing and reduced resource consumption. Incorporated in 2018, Xefco's technologies are now used by some of the world's leading technical apparel and fashion brands, providing proven functional benefits, enhanced performance, comfort and protection with reduced environmental impact. Xefco continues to expand its technology portfolio with a vision to create a more sustainable future for the textile and garment industries. www.xefco.com

About Deakin University

Deakin is one of Australia's leading tertiary education providers, offering a personalised experience enhanced by world-class programs and innovative digital engagement. Deakin takes a connected approach to solving global challenges, translating high-quality research into powerful solutions, policies and capabilities. www.deakin.edu.au

About the Institute for Frontier Materials

The Institute for Frontier Materials at Deakin University is a vibrant, multicultural research institute, graduating more than 30 PhD students a year and training 80 research fellows at any given time. IFM addresses material challenges in the energy, mining, environment, health, transport and manufacturing sectors. <https://ifm.deakin.edu.au>

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