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## **Rolls-Royce Unites with Manchester Graphene Experts to Enhance Next-gen Aerospace Engines**

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Rolls-Royce has selected Manchester's GEIC and Versarien to help develop the use of graphene and other 2D materials within next-generation aerospace engine systems.

Aircraft engine maker [Rolls-Royce](#) is to work with the [University of Manchester](#)'s Graphene Engineering Innovation Centre ([GEIC](#)) and its partner [Versarien](#) on the use of graphene and other 2D materials used in wiring for next-generation aerospace engine systems.

The announcement was made this morning by Versarien, the materials company behind 2-DTech, one of the first businesses in Manchester to work on the commercialisation of graphene.

The initial programme of work will use the state-of-the-art chemical vapour deposition (CVD) equipment located within the GEIC.

Work conducted will seek to use the unique properties of these 2D materials to reduce the weight of electrical components, improve electrical performance and also increase resistance to corrosion of components in future engine systems.

The programme aims to present potential economic benefits, through the possibility of significant cost reductions, and global environmental benefits, through the reduction of energy use and lower emissions from electrification.

Versarien chief executive Neill Ricketts said: "The pursuit of sustainability has become an important goal for many companies in recent years.

"Rolls-Royce is one of the world's leading industrial technology companies and today, the size and impact of the markets it serves makes this task more urgent than ever. "Taking

advantage of advanced materials such as graphene, has the potential to revolutionise these markets and add real benefit.

“The partnership with Rolls-Royce is a significant endorsement to 2-DTech’s work over the years and we are delighted it has been chosen by such a renowned business and look forward to working together.”

Dr Al Lambourne, materials specialist at Rolls-Royce, said: “Partnering with the GEIC and its members makes perfect sense to Rolls-Royce as we explore the opportunities and properties of a new class of 2D materials.

“Using the unique capabilities of 2-DTech and the GEIC we hope to address some of the challenges facing materials in the global aerospace industry, as we pioneer the electrification of future aircraft.”

James Baker, Graphene@Manchester chief executive, added: “The GEIC is intended to act as an accelerator for graphene commercialisation, market penetration and in the creation of the material supply chain of graphene and 2D materials.

“It’s great to see a company like Rolls-Royce partner with us and our other Tier 1 member, 2-DTech, to capitalise on our world-leading expertise and experience, along with specialist equipment, which will accelerate the product and process development and market entry.”

Read the [original article](#) on The Business Desk.