Introduction to the Graphene Engineering Innovation Centre (GEIC) Deposition Lab Capabilities and Case Studies

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The Graphene Engineering Innovation Centre (GEIC) collaborates with companies to commercialise and scale up, products processes and applications that exploit the remarkable properties of graphene and other 2D materials. We work with start-ups, SMEs, and multinationals, operating a collaborative membership model to accommodate the diverse needs and requirements of all industry partners. GEIC provides the ideal environment to accelerate and develop your graphene projects. Our industry-focused approach and state-of-the-art facilities mitigate risks, streamline scaling, and expedite time-to-market. Through our tiered membership program, you gain access to world-class research, engineering expertise, and cutting-edge equipment. Having worked with over 500 projects in direct collaboration with over 400 companies, our fully equipped laboratory and professional support enable your team to successfully integrate graphene and other 2D materials into your products and processes.

One focus of the GEIC is deposition of mono- and multilayer graphene and related 2D materials and their characterisation and analysis for use in a wide range of applications including transparent electronics, membranes, and barriers. Our labs possess a roll-to-roll chemical vapour deposition (CVD) reactor with the capacity to scale up to 100x the speed of batch-growth CVD, along with Metal Organic CVD capabilities to grow a range of other 2D materials including h-BN for insulating barriers and semiconducting TMD materials. The GEIC also houses a class 1000 cleanroom for wet and dry transfers of graphene onto a wide range of substrates. We have formed partnerships to provide high-quality dry transfer graphene, and worked with companies looking at ion and isotope separation, large-scale transparent electronics, and wafer scale spintronics.