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## Directa Plus Receives EU Grant to Develop Graphene-based Printing Technology for Fabrics

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Directa Plus has received an EU grant of €100,000 for a project to develop an environmentally sustainable technology to digitally print its G+ graphene products on fabrics.

[Directa Plus](#), producer and supplier of graphene nanoplatelets based products for consumer and industrial markets, has been awarded EU grant for a project to develop an environmentally sustainable technology to digitally print its [G+](#) graphene product on fabrics. The project will last for an initial period of 24 months and has a total value of some €1 million.

The Green.Tex project partners are Directa Plus, EFI Reggiani, the Italian subsidiary of global digital printing group Electronics For Imaging (EFI), and IBS Consulting Group. Of the total value of some €1 million, Directa Plus will invest €240,000 and receive a grant of €100,000.

Green.Tex is aimed at reducing the environmental impact of printing graphene on fabric through the use of an advanced material. The goal is to develop an innovative digital printing process using water-based graphene ink. Using digital equipment will significantly reduce the environmental impact, particularly with regards to water and energy consumption and chemical waste production. The research will be mainly focused on ecologically friendly fabrics, such as natural fabrics and synthetic fabrics obtained from recycling processes.

The partners will work to develop the components and processes needed to print (using inkjet systems) G+ graphene onto fabrics for the textile market (apparel, upholstery, technical markets), with each partner contributing in their own specialist fields. Directa Plus will develop a suitable grade of G+ for this application. EFI Reggiani will develop a specific ink and printing equipment to print G+ ink. IBS will support the team in identifying and supplying various substrate and fabrics onto which G+ ink will be printed.

Successful development of the printing technology will allow fabrics to be enhanced in a number of ways - improved thermal and electrical conductivity, and the introduction of a bacteriostatic effect.

Digital printing will represent an important step forward from traditional rotary screen printing. It offers superior flexibility of production, such as the possibility to print small batches of fabrics without significant set-up costs, and the ability to change the printed pattern very quickly.

In addition, the technology offers the potential to improve the sustainability of the technology as digital printing is likely to require a lower amount of water during the process as well as a much lower waste of materials.

Commenting, Giulio Cesareo, founder and CEO of Directa Plus, said: "We are delighted to be working with industrial partners at the forefront of their fields, to jointly develop applications and technology for graphene enhanced fabrics. Directa Plus' strategy in each of our industrial verticals is to capture as much value as possible from the supply chain, by working with established partners to develop processes that we can bring to market worldwide. This partnership will advance this strategy in our key textiles vertical."

"G+ enhanced garments offer clear, measurable advantages to end users in a wide variety of fields, from high performance sports, to armed forces and emergency services personnel, to manual workers in both hot and cold climates," Cesareo said.

Read the [original article](#) on Fibre2Fashion.