

New report on nanomaterials and graphene for 3D printing and additive manufacturing

13 April 2015

The technology scouting services arm of Del Stark Technology Solutions has published a new technology briefing on nanomaterials and graphene for 3D printing and additive manufacturing. Research findings include the next generation of 'active electronics in unique functional and interwoven architectures', as well as, methods to incorporate optically detectable nano particles for security measures and advances in biomedical applications.

This 96 page report highlights recent academic research papers published in 2014 and early 2015 that could be of interest to companies interested in using nanomaterials and graphene for 3D printing and additive manufacturing.

The report provides access to news, patents, academic research findings and also supplies company details. The report also highlights universities and institutes working in the field, as well as, companies and research organisations that are patenting.

95 research projects are reviewed and 20 patents are profiled in this report.

Areas of interest from the patent section include: thermal transfer, nylon substitution, tissue engineering, drug delivery, manufacturing of porous materials, strengthening final products and the introduction of graphene.

Many diverse topics such as printed electronics, biomedical, aerospace, supercapacitors, nanoscale objects, security applications, characterisation, novel inks and related printing process are described in the report.

Materials such as graphene, porous nanocomposites, conductive nano inks and titanium nanocomposites are being used for reinforcement and making biomedical scaffolds and flexible electronics.

Recently, conductive graphene filaments for printing electrically conductive components have entered the market and some automotive manufactures plan to use graphene for future component reinforcement.

Experts were asked for their views on the commercial viability of introducing nanomaterials and graphene into the 3D [printing](#) and [additive manufacturing](#) supply chain. Experts come from organisations such as MIT, Haydale Ltd, Group NanoXplore Inc., Monash University and Université de Fribourg. Our findings from this research are presented in this report.

Graphene is a material that has been making headlines across the globe. Its many interesting properties makes [graphene](#) very interesting to academic scientists and industrial companies. Graphene is extremely thin, stiff and strong, a conductor of heat and electricity and it is also ductile.

Provided by CORDIS

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