

# ITALIAN PLASTICS & RUBBER PROCESSING MACHINERY INDUSTRY ~ NEWS

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PIATTAFORMA INDIA PROJECT

NEWSLETTER NO. 80



UCIMU-SISTEMI PER PRODURRE



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## **EXTRUSION OF POLYMERS WITH GRAPHENE ADDITIVES**

A formal collaboration was recently established between BANDERA, the Italian manufacturer of extrusion machinery, the Department of Physics and Astronomy of the University of Catania, and the Imperial College London for the development of agricultural and food packaging applications.

The agreement has been announced under the PON - Ricerca e Innovazione (Research and Innovation) 2014-2020 programme funded by the Italian Ministry of University and Research and involves the adoption of graphene and other two-dimensional materials to develop polymers with innovative features that can be processed on industrial extrusion lines.



The newly established Nanomaterials and two-dimensional materials and devices laboratory (NANO2D2) of the Department of Physics and Astronomy of the University of Catania is involved in cutting-edge research in the field of graphene and two-dimensional materials for applications spanning from electronics and photonics to polymer composites. Graphene is a one atom-thick layer of graphite with remarkable potential to enable significant technological advances in various applications. The electrical, optical and mechanical properties of graphene make it a key material for greener smart packaging and more environmentally-friendly agricultural applications.

One of the research streams of the lab aims at finding ways of manufacturing and optimising graphene and related materials for real industrial applications. The research programme itself will investigate the development of graphene as a functional additive within polymer matrix, which promises to significantly improve the performances of extrudable thermoplastic polymers for applications such as anti-fog or gas barriers.

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The project Piattaforma India has been promoted by UCIMU – Association of Italian Machine Tools Manufacturers and AMAPLAST – Italian Plastics and Rubber Processing Machinery and Moulds Manufacturers Association. The two associations agreed on the idea that promoting a network of associations and entrepreneurs who have developed knowledge and experience on the Indian market, can be useful in favoring of new paths of development for business. The Indian companies who are interested to form JV, cooperation, technical tie up, purchase machinery etc from/with Italian companies can contact below mentioned address for any assistance:

Contact information of Piattaforma India desk:

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