RNS Number : 3620C
Oxford Advanced Surfaces Group PLC
17 March 2014

OXFORD ADVANCED SURFACES GROUP PLC

(AIM: OXA)

OAS announces graphene functionalisation capabilities

Oxford Advanced Surfaces Group (OAS), the AIM listed technology developer targeting engineered materials and surface modification applications in multiple markets including automotive, aerospace, communications and renewable energy, announces that it is developing capabilities to functionalise graphene using its proprietary Onto™ technology platform.

OAS is now investigating the use of Onto™ to modify graphene chemically for multiple applications. The ability to modify both the dispersibility/affinity of the graphene for a solvent or coating, and to improve the chemical interaction and adhesion of the graphene within a coating, is a powerful tool in the production of commercially relevant graphene-based applications and products.

OAS is researching the applications and requirements for chemically modified graphene in areas such as composites and electronics. In addition OAS is actively seeking partners for co-development of commercial applications with both graphene suppliers/manufactures as well as end users, converters and specifiers.

Graphene holds massive promise. Possessing a unique portfolio of desirable properties, including excellent conductivity, mechanical strength, gas barrier, thermal and biocompatibility, graphene is an intriguing material. One of the obstacles to realising graphene's potential is the need to functionalise with the minimum disruption to the intrinsic properties. This can be achieved by the chemical modification of graphene to impart the desired chemical properties to the platelets. The use of functional graphene is a fundamental part of new product design and should be factored into the plan for the product in the earliest stages of development.

Philip Spinks, CEO, commented:

"This is a significant development in the OAS Onto™ toolkit and could open significant emerging markets for OAS and graphene manufacturers and potential end users."

Jon-Paul Griffiths, Technical Manager, commented:

"The use of graphene in applications such as electronics and composites is an exciting prospect as seen by the materials community. Success relies heavily on the ability to combine graphene with other materials using commercially accepted manufacturing processes. The chemical modification of graphene using the Onto™ technology platform provides a significant potential to open up commercial applications for this exciting material."

17 March 2014

Enquiries:

Oxford Advances Surfaces Group Plc
www.oxfordsurfaces.com

Philip Spinks, Chief Executive Officer T: 01865 854 807

W H Ireland Limited
www.wh-ireland.co.uk

John Wakefield T: 0117 945 3471

Editors' Note

Oxford Advanced Surfaces Group (OAS) is the AIM listed technology developer targeting engineered materials and surface modification applications in multiple markets including automotive, aerospace, communications and renewable energy. Our proprietary Onto™ highly reactive chemistry provides manufacturers with solutions for the surface functionalisation and adhesion promotion of coatings, inks and adhesives to difficult-to-bond substrates. Onto™ is processed from solution using typical wet process techniques and can be integrated into customer manufacturing lines for use in a wide range of surface modification applications for high-performance plastics, low surface energy polymers and composites.

Onto™ technology creates permanent bonding to surfaces through the use of highly reactive carbene chemistry. Carbenes can react with almost anything, even difficult-to-bond materials with limited or no functionality such as polyethylene, making Onto™ a diverse surface modification technology for a wide range of materials. The chemistry is flexible and can be manipulated to provide a variety of properties to a surface, giving it scope for use in a broad range of applications and markets.

At OAS, we have the expertise, know-how and facilities to design and synthesise Onto™ materials and formulations that provide functional surface treatments to meet specific performance and processing requirements. We currently have one development product available to the market, EP1000, and we are working on a range of product to address further identified manufacturing needs.

END

NRAGGUQAWUPCGWC