

# Graphene Production and the Importance of Dispersion in Graphene Applications

**Prof Karl Coleman**

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## *Abstract*

Graphene has generated much interest owing to its high surface area and exceptional electrical, thermal and mechanical properties. Here I will discuss the synthesis of graphene using a simple, convenient and scalable 'bottom-up' process. I will talk about how Applied Graphene Materials works in partnership with its customers to provide dispersion and product integration expertise, to deliver solutions for a wide range of applications. During the talk I will highlight the importance of graphene dispersions in delivering the true commercial value of graphene which lies in the ability to transfer its intrinsic properties into other materials.

Applied Graphene Materials works in partnership with its customers across many different sectors with the know-how to deliver advanced material solutions for many applications, including: advanced composites and polymers; coatings; functional fluids including oils and lubricants; supercapacitors and batteries; thermal management solutions; barriers and impermeable films; display materials and packaging; and inks and 3D printed materials. I will discuss some recent case studies where graphene has been shown to offer significant benefits in the application area targeted.

## *Biography*

Karl Coleman is a Professor of Chemistry at Durham University UK and the founder and Chief Scientific Officer of Applied Graphene Materials.

His work has been recognized with numerous awards, including the international Royal Society of Chemistry Entrepreneur of the Year Award 2011 for his development of intellectual property around the production of graphene, and the Times Higher Education Research and Innovation Award 2012. Karl established Applied Graphene Materials in 2010, which is now listed on the FTSE AIM index.

Links:

**Prof. Karl Coleman Home Page**

<http://www.dur.ac.uk/chemistry/staff/profile/?id=1329>

**Applied Graphene Materials**

<http://www.appliedgraphenematerials.com>