Electrically Conductive Nanocomposite Films

An industrially scalable method has been developed for synthesising polymer nanoparticles decorated with graphene oxide sheets via miniemulsion polymerisation. This enables preparation of electrically-conductive films using a simple method at ambient temperature. The resulting nanocomposite films exhibit high electrical conductivity and have a wide range of potential applications as conductive coatings.

Competitive advantage

- Technology represents first example of an approach for synthesis of electrically-conductive graphene/polymer films that form at ambient temperature
- Environmentally friendly process
- Amenable to industrial scale applications

Impact

- Potential for advanced coatings, sensors and nanomedicines

Capabilities and facilities

- Synthesis of polymer/graphene thin films with specified level of electrical conductivity
- Synthesis of hybrid polymer/graphene nanoparticles as hybrid materials
- Synthesis of polymer nanoparticles of various size, shape and internal morphology

Our partners

- Planet Innovation Ltd
- Atmo Biosciences Ltd
- Department of Agriculture, Australia
- Department of Industry, Innovation and Science, Australia

More Information

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