

## Cheaper Single Layer Graphene Oxide Production Method

### TECHNOLOGY DESCRIPTION

The technology is related to production of single layer graphene oxide powder.

### TECHNOLOGY FEATURES

This technology is developed using simple steps which has no additional extraneous chemical agents are required. The technology is easy and produces cheaper graphene powder. It has high surface area to be best used as electrodes, catalysts, polymer additives, and on large screen displays.

### ADVANTAGES

- This method offers simple protocol
- Single layer / high surface area / powder form
- Cheaper compared to current product in market

### INDUSTRY OVERVIEW

**Prospect: Electrical, Electronics including Telecommunication Industry, Pharmaceutical Industry, Aerospace And Defense Industry**

Graphene is a material made of carbon atoms that are bonded together in a repeating pattern of hexagons. Graphene has endless potential applications, in almost every industry like electronics, pharmaceutical, aviation and much more. As graphene is expensive and relatively hard to produce, great efforts are made to find effective yet inexpensive ways to make and use graphene derivatives or related materials. Graphene oxide (GO) is one of those materials. Graphene oxide is an oxidized form of graphene, laced with oxygen-containing groups. It is considered easy to process since it is dispersible in water (and other solvents), and it can even be used to make graphene. In Malaysia, the main competitor is a brand called Graphenea. GO played a prominent role in the development of graphene and its derivatives. It is considered easy to process since it is dispersible in water (and other solvents), and it can even be used to make graphene. This method offers a simple protocol as no additional extraneous chemical agents are required that resulted in a single layer, high surface area in a powder form at a relatively cheaper price. Locally, in the aerospace and defense Industry, there are 87 possible companies that will find this invention to be relevant. Other possible organizations might be the 2232 SMEs listed in the Electrical, Electronics including Telecommunication Industry, and 342 SMEs in the Pharmaceutical industry.



**Assoc. Prof. Dr. Nor Azowa Ibrahim**  
Faculty of Science