Mimos Transforming The Semiconductor Industry With Graphene Technology

Graphene Technology | As a centre of research excellence and the nation's applied research centre, one of MIMOS' R&D activities currently focuses on Semiconductors for Future Electronics (CSFE) aims to enhance Malaysia's position in the global semiconductor value chain through homegrown technology infusion and strengthen existing semiconductor technology, increasing competitiveness and sustainability.

One of the advanced technologies that MIMOS has been focusing on is Graphene, also known as the wonder material, a form of carbon, a completely new material, that opens up numerous potentials for the E&E Industry.

Graphene applications:

provide Malaysia's E&E Industry and one of MIMOS' focus areas of research is Graphene-conductive ink. It can be used to create printed materials that conduct heat and electricity.

It has many advantages over other metal-based conductive inks, especially those that rely on silver and copper, making it a highly sought-after product with many interesting potential applications.

In addition to being exceptionally strong, transparent, cheaper, better environmental stability and non-toxic, it is also a more environmentally-friendly alternative to silver-based inks. Silver cannot be recycled, which means that every single-use electronic product must be disposed of. Graphene, on the other hand, can be recycled and used to produce more eco-friendly printed electronics.

The designing and manufacturing process of Graphene-conductive ink is simple thus reducing the time and labour required.

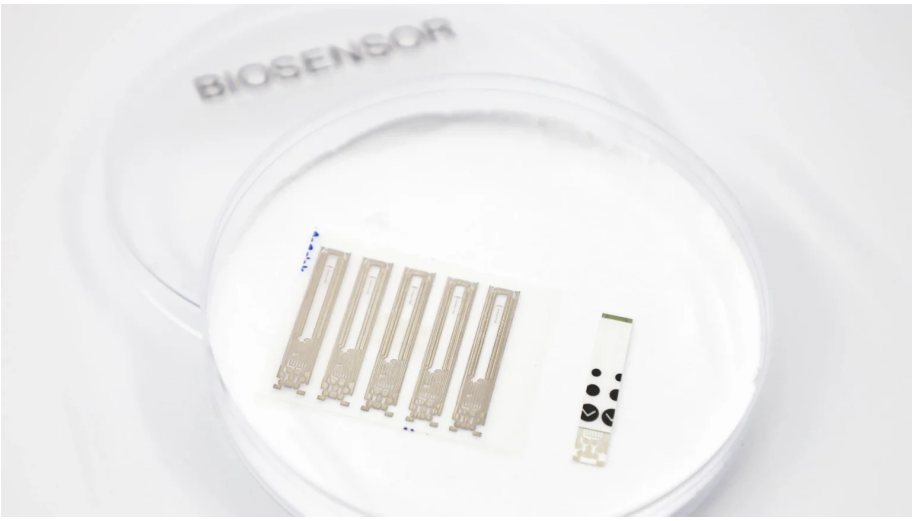
It is also a process that utilises fewer materials consumption resulting in reduced wastage. Its technology could also be utilised for the packaging of electronics, conductive clothing, disposable sensors and 3D printing. Graphene's impressive strength and flexibility also mean that it could be used in the production of OLED touch screens and panels as its ink conductivity makes it an ideal component in producing new touchscreen technology.

graphene technology for the medical field

MIMOS scientists have also succeeded in printing disposable biosensors with the inkjet-printing method which could significantly reduce production costs and make their use more widespread in the pharmaceutical industry, such as in the production of disposable blood glucose biosensors used all over the world by people with diabetes.

Its conductivity indicates that it could transform drug distribution systems, neuro tis engineering and stem cell differentiation, thus research focusing on the benefits of u graphene-based inks for 3D-printed graphene products has become a massive research

Technology Industry; reducing materials waste, saving time and reducing labour and materials costs for industry players, as well as changing and saving lives in the healthcare, fitness and lifestyle, and military industries



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