India’s First Graphene Innovation Centre in Kerala

Why in News

Recently, the Kerala government announced that the **country’s first Graphene Innovation Centre** would come up in Thrissur, Kerala.

- It is a joint venture of Digital University of Kerala, Centre for Materials for Electronics Technology (C-MET) and Tata Steel Limited.
- Earlier in 2020, the researchers from the City University of Hong Kong had produced a **laser-induced form of graphene masks** that inactivate the coronavirus species.

What is the Graphene Innovation Centre?

- An Innovation Center is a **cross-functional plan that creates a safe haven for new ideas.**
- With opportunities for individual and group collaboration across time zones and continents, **it's a place that fosters a culture of innovation through the creation, sharing, and testing of ideas.**
- The **India Innovation Centre for Graphene** would come up in **Thrissur at a cost of Rs 86.41 crore.**
    - Of the 86.41-crore, the **Union Government would provide Rs 49.18 crore** and private business houses Rs 11.48 crore.
- The **state government would provide the basic infrastructure for the project.** The Centre would help attract investors to develop graphene products.

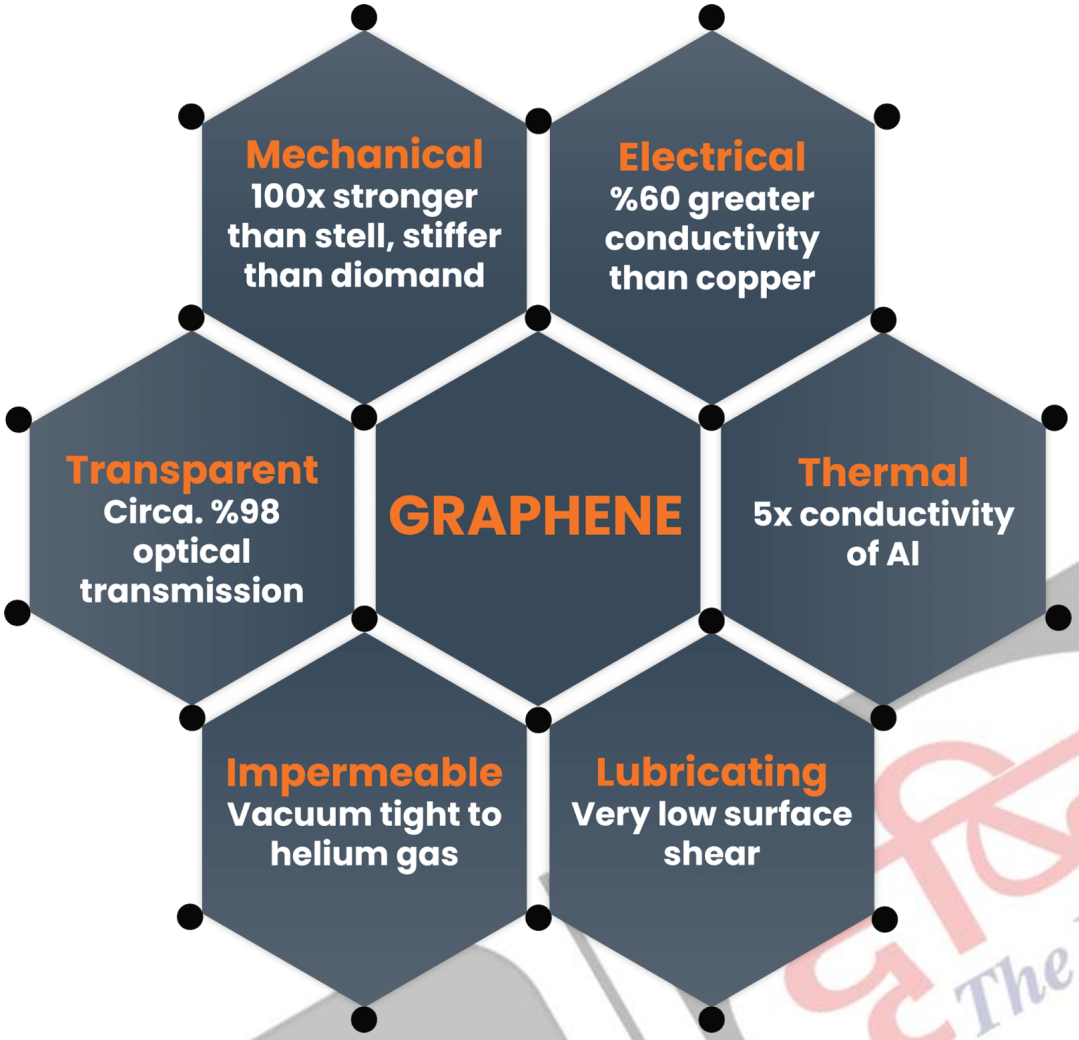
What is its Significance?

- The **project would give a major fillip for scientific research as well as the state’s industrial sector.**
- Kerala’s human resources capital could be effectively exploited by the proposed Centre, which would **help Kerala to emerge as a knowledge-based economy.**

What is Graphene?

- Graphene is a **one-atom-thick layer of carbon atoms arranged in a hexagonal lattice**. It is the building-block of Graphite, but graphene is a remarkable substance on its own with a multitude of astonishing properties.
- It is the **thinnest, most electrically and thermally conductive material in the world**, while also being **flexible, transparent and incredibly strong.**
- Often referred to as a **wonder material for its extraordinary electrical and electronics properties**, graphene could **replace Indium and thereby bring down the cost of OLED** (organic light-emitting diode) screens in smartphones, studies have shown.
- Graphene has a lot of promise for **additional applications**: anti-corrosion coatings and paints, efficient and precise sensors, faster and efficient electronics, flexible displays, efficient solar panels, faster **DNA sequencing**, drug delivery, and more.

//



Source: IE