



## E-tattoos to help monitor health

Chinese scientists have developed skin-like electronic tattoos, that can be used to monitor health parameters such as blood pressure and body temperature in real time.

- E-skin refers to thin, flexible and stretchable electronic material that mimics human skin and can sense pressure, temperature and stretch.
- It is graphene-based and can be easily transferred onto various surfaces such as the human skin, leaves and silk.
- It could also be attached to masks and throats to measure body signals such as breathing, heartbeat and voice.
- It exhibits high sensitivity and long-term stability. It can withstand higher temperatures and is comfortable to wear as well.
- The pattern of the graphene-based electronic skin can be personalised by the help of laser scribing technology, a feature that will help future commercialisation.

### Graphene

- It is a carbon material that is one atom thick. Its thin composition and high conductivity means it can be used in applications ranging from miniaturised electronics to biomedical devices like computers, solar panels, batteries, sensors and other devices.
- Other properties of Graphene are:
  - Lowest resistivity substance known at room temperature.
  - High thermal stability.
  - High elasticity.
  - High electrical conductivity.
  - Electron mobility is high at room temperature.
  - Recently scientists developed Graphene from Soybean using “GraphAir” technology which is fast, simple, safe, and potentially scalable method. Until now, the high cost of graphene production has been the major roadblock in its commercialisation
  - Graphene oxide (GO) membranes can be used to filter common salt from seawater.