

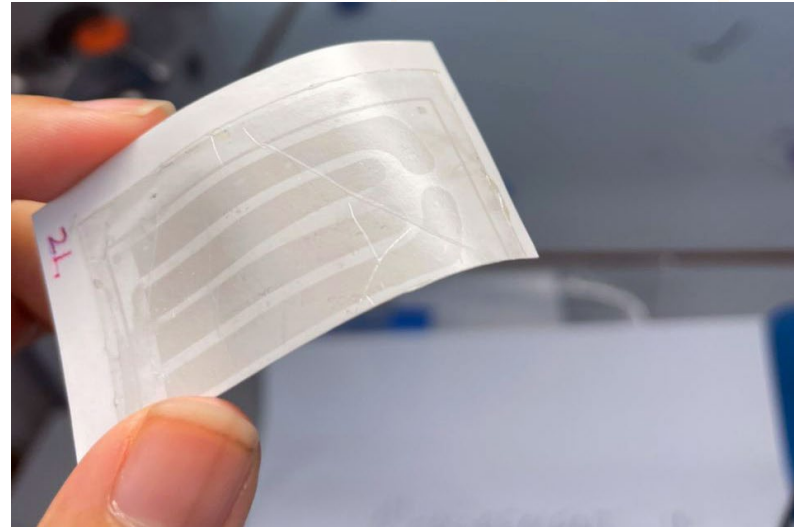


# Graphene pacemaker is thinnest yet

Slide by Neil Goalby. Available from [rsc.li/3MNa2Cd](https://rsc.li/3MNa2Cd)

Researchers have developed the first cardiac implant made from graphene. The thinnest cardiac implant to date works like a conventional pacemaker – sensing heartbeat irregularities and then delivering electrical impulses to restore the heart's more regular rhythm.

Graphene has many useful properties for this use. Graphene is electrically conductive. As carbon is the basis for life, it is biocompatible, and non-toxic. It is so thin that it is transparent, and is also capable of being moulded to the soft, wet, moving muscle tissue of the heart.



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*The graphene tattoo is the thinnest pacemaker ever created*

## Questions

1. Give two reasons why graphene is suitable for making a cardiac implant.
2. Describe the structure of graphene.
3. Explain how graphene conducts electricity.