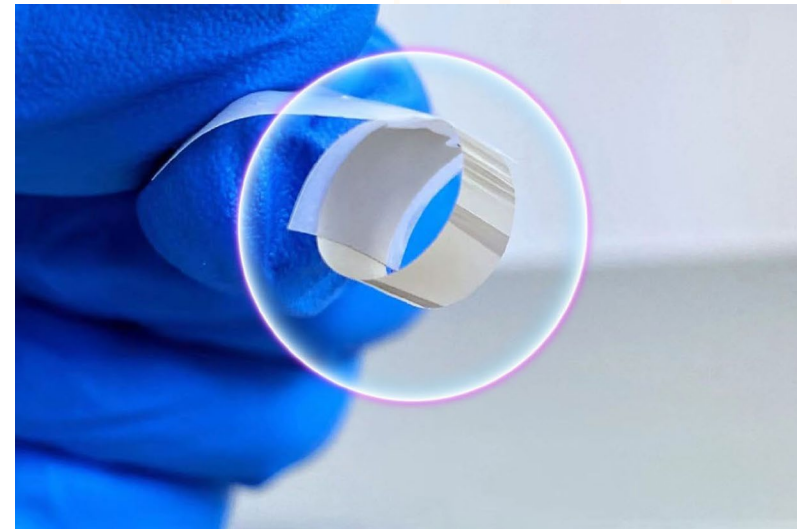




# Flexible diamond film made using sticky tape

Slide by Neil Goalby. Available from [rsc.li/4hsYKku](https://rsc.li/4hsYKku)

Diamond is one of the hardest, most brittle materials. When grown in thin films on a substrate, however, it can be surprisingly flexible. Scientists can grow diamonds on silicon substrates by chemical vapour deposition. Removing these films from the substrate, which can be up to 6000 atoms thick, has previously been difficult. But researchers have now made centimetre-sized flexible diamond films by removing them from the silicon substrate using sticky tape. The researchers think the electronic industry could use the films to cool semiconductor devices.



*Scientists can remove ultrathin diamonds from their growth surfaces using sticky tape*

## Questions

1. What element makes up diamond?
2. Explain why diamond is normally a hard substance.
3. Suggest why diamond films are more flexible than normal diamond.