



Vocabulary: biotechnology 词汇: 生物技术

I am a massive science fiction **geek**. Ever since I was young, I've been captivated by tales of **interstellar** adventure, aliens, robots, and **cutting-edge** technology. I always loved the concept of **cyborgs**. That's a human-robot **hybrid**. They are ordinary humans who have been **enhanced** in some way by technology; more intelligence, faster speed or better resilience to disease and damage. Great ideas, but I never thought I'd see them in my lifetime.

Well, I stand corrected. **Integrated** biology and technology is already here and people have wasted no time utilising it to **re-engineer** their bodies. Take, for example, Neil Harbisson, who has an **antenna protruding** from his head that allows him to hear colour, or Moon Ribas, who has an **implant** that allows her to sense **seismic** activity. Now, neither are abilities that I particularly **covet**, but it's a start.

And it doesn't end there. As technology increases so too will our ability to enhance ourselves through it. One of the latest developments is the **graphene** tattoo. Not an actual tattoo at all, but more like a **patch**, the graphene tattoo could revolutionise biomedical monitoring.

It looks much like a **transparent** plaster, but with a gold coloured **circuit board** contained within it. This circuit is the graphene. Graphene is a form of **carbon**, but it's 200 times stronger than steel and **conducts** electricity better than gold, which is the **component** typically used in electronics.

The human body is basically an electrical machine. When in contact with the skin, the graphene in the plaster is able to read and conduct the electricity – allowing it to easily be used as a medical monitor for heart-rate and pulse, among other things. And even more, graphene tattoos can be used as **bioelectronic** controllers, as demonstrated by one engineer who attached them to his eyelids in order to direct which way a drone flew, just by looking with his eyes!

I know that biotechnology is a long way from allowing humans to be able to lift a car or run half-way around the world in a single day, like I wanted to be able to do when I was a child. But, it's improving all the time and once the price of graphene falls, who knows what else we'll be able to do? I'll see you in the future!

词汇表

geek	呆子，极客
interstellar	星际的
cutting-edge	前沿的
cyborg	半机械人
hybrid	混合体
enhanced	强化的，增强的
integrated	合成一体的
re-engineer	重建，重新组合
antenna	触角
protrude	伸出
implant	植入
seismic	地震的，造成严重破坏的
covet	渴望，贪求
graphene	石墨烯
patch	贴布，贴片
transparent	透明的
circuit board	电路板
carbon	碳
conduct	传导（电）
component	零部件，组成部分
bioelectronic	生物电子的

测验与练习

1. 阅读课文并回答问题。

1. According to the article, what is a cyborg?
2. Which enhancements do the two cyborgs mentioned in the article have?
3. Why is graphene such a useful material?
4. Apart from biomedical applications, what other use can graphene have?
5. True or false: *The human body is exactly the same as a battery.*

2. 请在不参考课文的情况下完成下列练习。选择一个意思合适的单词填入句子的空格处。

1. Ask John anything you want about music in the 1960s. When it comes to that stuff, he's such a _____.

cyborg	geek	hybrid	integrated
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2. Don't have any electronics in the bathroom. Water _____ electricity and you could get hurt.

re-engineers	implants	transparent
conducts		

3. I love their latest album. They're always at the _____ of what anyone is doing in the music industry.

cutting-edge	implant	patch	biotechnology
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4. One day technology will advance so far that _____ travel will be a daily occurrence. We'll be able to go to other solar systems!

cutting-edge	cyborg	integrated	interstellar
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5. This species of tomato is actually a _____ of the American and European varieties.

cyborg	hybrid	seismic	patch
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答案

1. 阅读课文并回答问题。

1. According to the article, what is a cyborg?

A cyborg is a human-robot hybrid. They are ordinary humans who have been enhanced in some way by technology.

2. Which enhancements do the two cyborgs mentioned in the article have?

One has an antenna protruding from his head which allows him to hear colours. The other has an implant that allows her to sense seismic activity.

3. Why is graphene such a useful material?

It's 200 times stronger than steel and conducts electricity better than gold.

4. Apart from biomedical applications, what other use can graphene have?

Apart from biomedical applications, graphene tattoos can also be used as controllers for electronics.

5. True or false: *The human body is exactly the same as a battery.*

False. The human body is basically an electrical machine.

2. 请在不参考课文的情况下完成下列练习。选择一个意思合适的单词填入句子的空格处。

1. Ask John anything you want about music in the 1960's. When it comes to that stuff, he's such a **geek**.

2. Don't have any electronics in the bathroom. Water **conducts** electricity and you could get hurt.

3. I love their latest album. They're always at the **cutting-edge** of what anyone is doing in the music industry

4. One day technology will advance so far that **interstellar** travel will be a daily occurrence. We'll be able to go to other solar systems!

5. This species of tomato is actually a **hybrid** of the American and European varieties.