参考译文

This is Scientific American 60-second Science, I'm Christine Herman.

Got a minute?

这里是科学美国人——60秒科学系列，我是克里斯汀·赫尔曼。

有一分钟时间吗?

Polyurethane: It's used to make seat cushions, memory foam, paint and myriad other products. Unfortunately, due to its widespread use, more than a million tons of polyurethane waste end up in U.S. landfills each year.

聚氨酯。这种物质被用来制作座垫、记忆泡沫、油漆和其他无数产品。不幸的是，由于聚氨酯的广泛使用，每年有超过100万吨的聚氨酯废料最终被丢弃在美国垃圾填埋场。

It's not that easy to recycle polyurethane. So the main alternative to just tossing the stuff is incineration. However:

回收利用聚氨酯没那么容易。因此，替代直接扔掉废料的主要措施是焚烧。然而：

"Incineration produces toxic by-products; requires a lot of heat—so a lot of energy input to bring it down to something that you can get rid of."

“焚烧会产生有毒的副产品，需要大量热能，所以，大量能量输入，使其分解成你能处理掉的东西。”

University of Illinois chemistry professor Steve Zimmerman.

伊利诺伊大学的化学教授史蒂夫·齐默曼说到。

He and his team therefore set out to tweak the molecules that make up polyurethane to make it easier for it to be converted into other useful materials.

因此，他和团队着手调整组成聚氨酯的分子，使其更易转化为其他有用材料。

The molecular tweaking involves inserting a chemical linker, known as an acetal, into one of the components that make up polyurethanes found in rubber bands, packaging and car parts. The acetal linker readily cleaves in the presence of acid.

分子调查包括将名为“缩醛”的化学连接剂插入组成聚氨酯的一种成分中，该成分可在橡皮筋、包装和汽车零部件中发现。缩醛连接剂遇酸很容易裂解。

"So we're breaking it down to materials that are actually different than we started with. And so what we're doing is using those to make other polyurethanes."

“因此，我们将其分解成与开始时完全不同的物质。我们所做的就是用这些物质来制造其他聚氨酯。”

In the particular process recently presented by Zimmerman's grad student Ephraim Morado at the national meeting of the American Chemical Society in San Diego, the new polyurethanes behave like superglue.

最近，齐默曼的研究生以法莲·莫拉多在圣地亚哥举行的美国化学学会全国会议上展示了一种特殊工艺，这种新型聚氨酯的效果就像超级胶水一样。

"And it actually works better than superglue."

“事实上，它的效果比强力胶水还要好。”

The biggest hurdle to widespread use is the cost. But Zimmerman hopes further research will cut costs down so that the glue-making method will really stick.

Thanks for the minute for Scientific American — 60-Second Science. I'm Christine Herman.

广泛应用的最大障碍是成本。但齐默曼希望进一步研究能降低成本，这样胶水制作方法就能很牢固。谢谢大家收听科学美国人——60秒科学。我是克里斯汀·赫尔曼。

听力原文

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