

### 本集内容

The whitest white paint 迄今为止最白的白色涂料

### 学习要点

有关“discoveries（发现）”的词汇

### 边看边答

What percentage of sunlight does the new white paint reflect?

### 文字稿

Cool, heat-reflecting white rooms are already an urban climate solution that's been **embraced** in cities around the world.

凉爽且能反射热量的白色房间已是一种城市气候解决方案，在世界各地的城市中得到了应用。

In New York, more than ten million square feet [929,000 square metres] of rooves have been coated with white heat-reflecting paint.

在纽约，超过 1000 万平方英尺（92 万 9 千平方米）的屋顶被涂上了白色的热反射涂料。

But these scientists say their ULTRA-white paint could make those rooves even cooler.

但这些科学家表示，他们的“超白”涂料可以使屋顶变得更凉爽。

While the whitest currently available paints reflect between 80 and 90 per cent of sunlight, these researchers say theirs reflects more than 98 per cent.

目前可用的最白涂料可以反射 80% 到 90% 的阳光，而这些研究人员说他们的涂料能反射 98% 以上的阳光。

Covering a 1,000 square foot [92.9 square metre] roof with this paint, they **estimate**, would provide more cooling power than a typical central air conditioner.

用这种涂料漆上 1000 平方英尺（92.9 平方米）的屋顶，据科学家们估计，能比普通的中央空调提供更强的降温效果。

Prof Xiulin Ruan, Purdue University

Every one per cent of reflectance you get will translate to ten watts per metre squared less heating from the Sun. So, basically, it provides cooling of 18 kilowatts. That's really a big deal. That's more than a typical air conditioner does for a house with the same kind of space.

阮修林教授 美国普渡大学

“反射比每增加 1%，就相当于每平方米内少吸收太阳 10 瓦的热能。所以基本上，这种涂料可以提供 18 千瓦的降温效果。这很厉害。比普通空调在同等大小的房屋中功效还要强。”

The secret to its **formulation** also makes it **relatively** cheap to produce: the scientists used high concentrations of a compound called barium sulphate, that's already used to make paper.

该涂料**配方**的秘密也使其生产成本**相对**低廉：科学家们使用了高浓度的硫酸钡化合物，这种化合物已被用于造纸。

Back in 2014, another group of scientists developed the blackest possible black coating, a material called 'Vantablack', that absorbs so much light it makes every surface look almost invisibly flat.

早在 2014 年，另一组科学家就研制出了最黑的黑色涂层，是一种名为“纳米碳管黑体（Vantablack）”的材料，可吸收的光线之多使每个涂层表面看起来都几乎平坦无形。

And one museum in the US now wants to put these two **breakthroughs** side-by-side, displaying the whitest possible white alongside the blackest black.

美国的一家博物馆现在想把这两个**重大突破**放在一起，并排展出最白的白色和最黑的黑色。

词汇

embraced 被应用，被采纳

estimate 估计

formulation 形成方式，配方

relatively 相对地

breakthroughs 重大突破

视频链接

<https://bbc.in/33hdwpY>

问题答案

Researchers say their paint reflects more than 98 per cent of sunlight.