

Geckos and their unique feet

G

E

Geckos can climb many surfaces, like walls. They can even climb glass surfaces that are very smooth. However, we don't know how their feet stick to smooth surfaces. Understanding how geckos' feet work can help us to make new kinds of reusable adhesives.

D

How do geckos stick to smooth surfaces?

B

We think that geckos' feet have lots of very small suction cups that help them climb smooth surfaces.

F

We used an electron microscope to look at the bottom of the feet of seven geckos.

A

We thought that geckos would have tiny suction cups on the bottoms of their feet. However, there were not suction cups on the bottom of their feet, but tiny hairs (Figure 1). These hairs are called *setae*. When *setae* are close to surfaces like glass, they create lots of small electromagnetic forces that make geckos' feet stick to them.

C

We found that geckos have lots of small hairs called *setae* on the bottoms of their feet that help them stick to surfaces like glass. Therefore, geckos use their unique feet and electromagnetic forces to climb smooth surfaces. In the future, we hope to use this knowledge to create new kinds of reusable adhesives.

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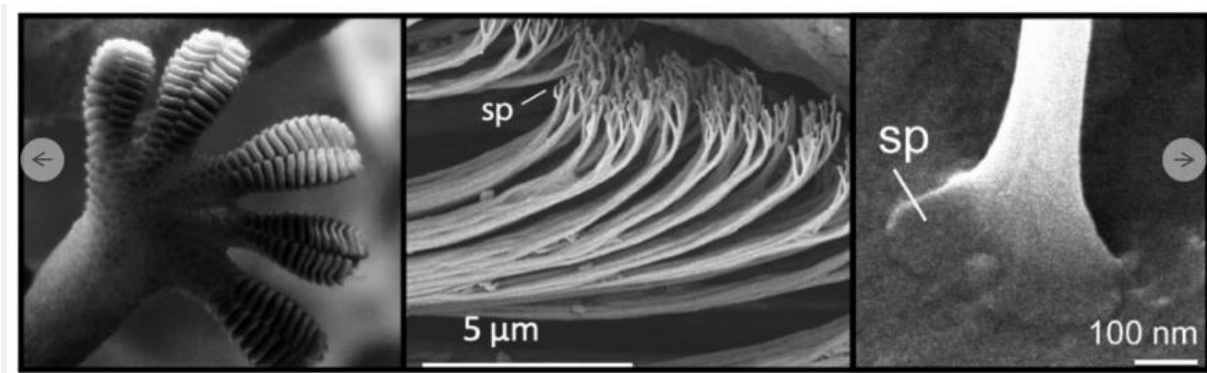
# I

Scientists gain fresh insight into the secret of how gecko feet stay sticky. 2022. <https://arstechnica.com/science/2022/07/scientists-gain-fresh-insight-into-the-secret-of-how-gecko-feet-stay-sticky/>

Geckos' Sticky Secret? They Hang by Toe Hairs. 2014. <https://www.livescience.com/47307-how-geckos-stick-and-unstick-feet.html>

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# H



Gecko - ヤモリ

Surface - 表面

Smooth - 滑らかな

Stick to - くっつく

Reusable - 再利用可能な

Adhesive - 接着剤

Suction cups - サクションカップ

Electron microscope - 電子顕微鏡

Electromagnetic forces - 電磁力

Name: \_\_\_\_\_

**Put the pieces of the science paper in the correct order!**

**Part of Science Paper**

**Letter (A, B, C, etc.)**

1.

\_\_\_\_\_

2.

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3.

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