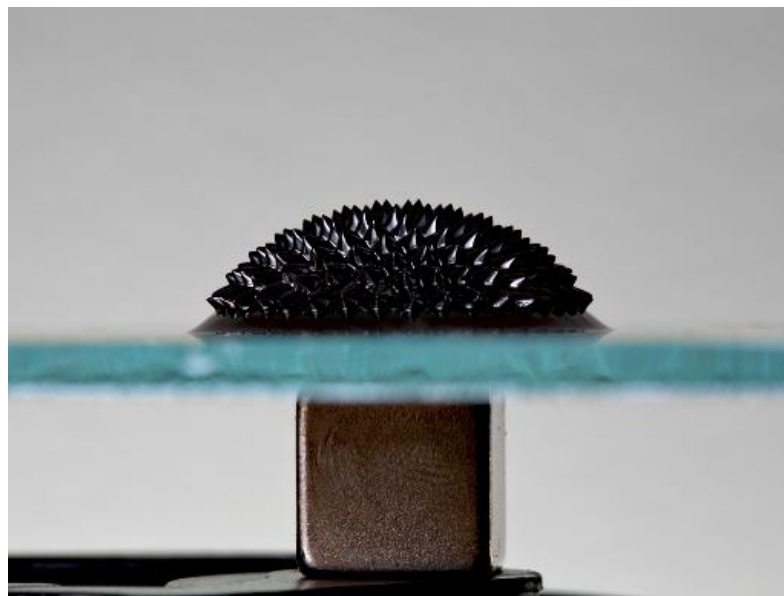


Dynamic surfaces can be switched by magnetic fields

Read the full article at rsc.li/2zwNuDb

An international team of researchers has created a surface that changes when a magnetic field is applied. The researchers used a porous solid – a solid with lots of small holes in it. They then infused the solid with a magnetic liquid.



A magnetic fluid on a glass plate: Gregory F. Maxwell / [GNU Free Documentation License, version 1.2](#)

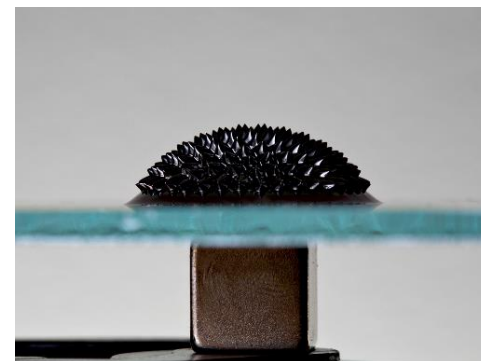
A magnetic field is used to control the movement of the magnetic liquid. In particular, a magnetic field can cause the layer of liquid on the surface to take on complex shapes and cause the liquid to flow in the pores. These changing shapes affect the friction and stickiness of the surface of the solid.

The research could be used to make switchable adhesion – the ability to turn stickiness on and off. Other researchers have warned that over time, dust might get into the pores and stop these interesting behaviours from happening.

Dynamic surfaces can be switched by magnetic fields

Read the full article at rsc.li/2zwNuDb

An international team of researchers has created a surface that changes when a magnetic field is applied. The researchers used a porous solid – a solid with lots of small holes in it. They then infused the solid with a magnetic liquid.



A magnetic fluid on a glass plate: Gregory F. Maxwell / [GNU Free Documentation License, version 1.2](https://www.gnu.org/licenses/old-licenses/gpl-2.0.html)

A magnetic field is used to control the movement of the magnetic liquid. In particular, a magnetic field can cause the layer of liquid on the surface to take on complex shapes and cause the liquid to flow in the pores. These changing shapes affect the friction and stickiness of the surface of the solid.

The research could be used to make switchable adhesion – the ability to turn stickiness on and off. Other researchers have warned dust might get into the pores over time and stop these interesting behaviours from happening.

1. Think of two uses for a switchable adhesive
2. Think of two ways to stop the pores becoming clogged with dust. Name one disadvantage of each