# **CHEM VS. COVID TIMELINE** 6 JUL

## Scientists call for greater recognition of airborne transmission

#### Modes of transmission

2020

When a person infected with COVID-19 coughs, sneezes, talks, or even breathes, they can propel droplets containing the virus into the air.



Larger droplets can contaminate surfaces. Contact with these surfaces was thought to be a key mode of COVID-19 transmission but recent research suggests it's less significant.



Droplets smaller than 5 µm dry and form aerosols (particles suspended in air). They can travel greater distances and lead to the virus being spread through the air.



**Limiting infections** Better understanding of how the virus spreads helps us take action to prevent its transmission, so we can reduce the number of infections.



On 6 July 2020, aerosol scientists published an open letter calling for recognition of the airborne transmission of SARS-CoV-2. We now know that surface transmission plays a lesser role than initially thought.



### How is it helping?

Making activities safe Knowing how the virus spreads helps us know what activities are safe, or how we can modify activities to make the risk of transmission lower.

#### **Preventing transmission**

Chemists have produced antiviral materials and coatings which can be used for surfaces and PPE to reduce transmission.



viruses by damaging their structure or genetic material.

viruses or modify surface properties to combat them.

Ventilation reduces airborne transmission. Additionally, filtration technologies help destroy the virus in the air in buildings.



High Efficiency Particulate Air (HEPA) filters use polypropene or fibreglass fibres to remove particles and viruses from the air.



## **UVC light**

UVC light damages virus RNA, deactivating virus particles in aerosols.

#### **Photocatalysis**

Some materials, such as titanium dioxide, generate virus-destroying compounds from the air when exposed to UV light.



#### Improved technology Funding for new antiviral technology against SARS-CoV-2 may also produce solutions that protect us against other viruses in the future.





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