

Protection from coronavirus and zero-day pathogens: New disinfection chamber

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Researchers in India are developing a disinfection chamber that integrates a system that can deactivate coronavirus particles. The team reports details in the *International Journal of Design Engineering*.

As we enter the second year of the COVID-19 pandemic, there are signs that the causative [virus](#) SARS-CoV-2 and its variants may be with us for many years to come despite the unprecedented speed with vaccines against the disease have been developed, tested, and for some parts of the world rolled out. Sangam Sahu, Shivam Krishna Pandey, and Atul Mishra of the BML Munjal University suggest that we could adapt screening technology commonly used in security for checking whether a

person is entering an area, such as airports, hospitals, or [government buildings](#), for instance, carrying a weapon, explosives, or contraband goods.

Such a system might be augmented with a body temperature check for spotting a person with a fever that might be a symptom of COVID-19 or another contagious viral infection. They add that the [screening system](#) might also incorporate technology that can kill viruses on surfaces with a quick flash of ultraviolet light or a spray of chemical disinfectant.

Airborne microbial diseases represent a significant ongoing challenge to public health around the world. While COVID-19 is top of the agenda at the moment, seasonal and [pandemic influenza](#) are of perennial concern as is the emergence of drug-resistant strains of tuberculosis. Moreover, we are likely to see other emergent pathogens as we have many times in the past any one of which could lead to an even greater pandemic catastrophe than COVID-19.

Screening and disinfecting systems as described by Sahu could become commonplace and perhaps act as an obligatory frontline defense against the spread of such emergent pathogens even before they are identified. Such an approach to unknown viruses is well known in the [computer industry](#) where novel malware emerges, so-called 0-day viruses, before the [antivirus software](#) is updated to recognize it and so blanket screening and disinfection software is often used.

More information: Sangam Sahu et al. Disinfectant chamber for killing body germs with integrated FAR-UVC chamber (for COVID-19), *International Journal of Design Engineering* (2021). [DOI: 10.1504/IJDE.2021.113247](#)

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