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Hong Kong develops first anti-COVID-19 stainless steel

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The anti-COVID-19 stainless steel can also inactivate the H1N1 virus and E. coli on its surface



A team of researchers at the Department of Mechanical Engineering of the Faculty of Engineering of the University of Hong Kong (HKU), in collaboration with the Centre for Immunity and Infection of the LKS Faculty of Medicine of HKU, has made significant breakthroughs in producing the first anti-COVID-19 stainless steel that kills the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) on its surface. The anti-COVID-19 stainless steel can also inactivate the H1N1 virus and E. coli on its surface.

Stainless steel (SS) is one of the most extensively used materials in many public areas and hygiene facilities but has no inherent antimicrobial properties. Additionally, the SARS-CoV-2 exhibits strong stability on regular SS surfaces, with viable viruses detected even after three days. Undoubtedly, this has created a high possibility of virus transmission among people using these areas and facilities.

“The breakthrough found interesting points about silver (Ag) and copper (Cu) as the allying elements to prepare anti-pathogen SS”, said the researchers.

A patent (Patent Cooperation Treaty type) has been filed for the research findings. The team has been liaising with industrial partners to generate prototypes of public SS products such as lift buttons, doorknobs, and handrails for further tests and trials.