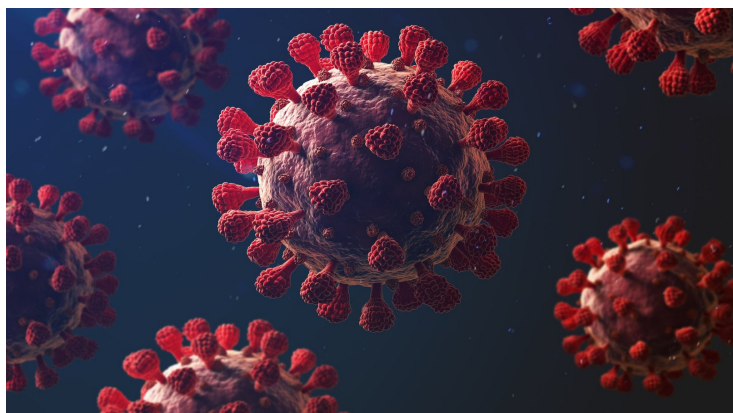


Korea suggests disinfecting COVID-19 with plasma filter

March 2, 2022 | News

Researchers have developed plasma air conditioning parts and completed technology transfer and commercialisation



A research team led by Nano-Bio Convergence at the Korea Institute of Materials Science (KIMS) succeeded in developing a plasma air conditioning technology that can inactivate the coronavirus aerosol in real-time.

The technology verified the real-time virus inactivation in an aerosol which is main infection vector of the COVID-19. KIMS is a government-funded research institute under the Ministry of Science and ICT.

The plasma filter developed by the research team uses dielectric filter discharge technology to inactivate the coronavirus aerosol with reactive oxygen species. The research team confirmed that the coronavirus was inactivated by about 99.8% or more immediately after passing through the plasma filter.

The plasma filter uses catalyst materials for ozone removal and are able to be applied to air purifiers and air conditioning equipment.

In addition, the research team installed a catalyst at the rear end of the plasma filter to maintain the concentration of emitted ozone below 0.05 ppm. The catalyst solved the ozone emission problem, a weakness of plasma technology, and satisfied various standards related to ozone emission.

If the technology is applied to air purifiers and air conditioning equipment of medical facilities and multi-use facilities, it is expected to suppress the spread of infectious diseases.