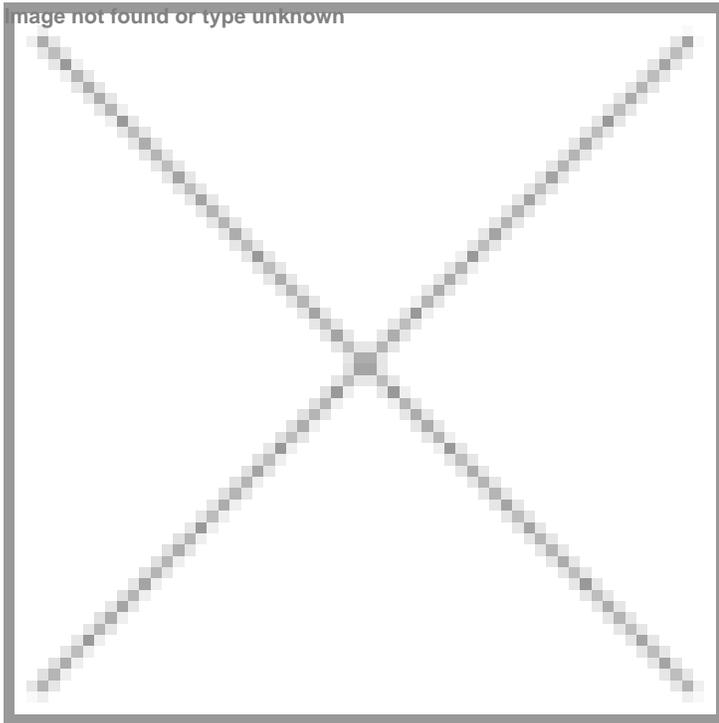


IIT Jodhpur develops novel device to ensure good indoor air quality

04 September 2023 | News

Indoor air sterilisers are being developed by Divya Plasma Solutions, a startup incubated at IIT Jodhpur Technology Innovation and Start-up Centre



Researchers at the Indian Institute of Technology (IIT) Jodhpur have developed a novel Cold-plasma Detergent in Environment 'CODE' device for good indoor air quality. The device has been tested extensively which deactivates more than 99.99% of harmful pathogens and provides quality indoor air.

Air pollution is basically one of the top 5 risks causing chronic diseases according to the World Health Organisation. We consume nearly 8 times as much air by volume as food and 4 times as much air as water. Indoor air often contains around 2-5 times more pollution as compared to outdoor air. Sick building syndrome is also a challenging issue nowadays. Besides these, airborne transmitted pathogen infection is a huge challenge in the current era.

Indoor air sterilisers are being developed by Divya Plasma Solutions, a startup incubated at IIT Jodhpur Technology Innovation and Start-up Centre (TISC) which aims to deal with both aerosol transport and aerosol infectivity simultaneously in the indoor environment and proactively treat the air in the occupied space at the source of contamination.

The concept is based on non-equilibrium cold plasma in combination with nano-technology. This novel CODE device is producing optimum concentrations of negative ions having cold-plasma detergent ions as well as positive ions in the environment similar to mother nature. Nobel Prize winner Paul Crutzen coined the phrase "Detergent of the Atmosphere", that is exactly what the novel code device is capable of.

The device introduces requisite quasi-neutral electric atmosphere so as to balance negative and positive charges similar to mother nature and also to produce local fields in the air to rupture harmful pathogens in the aerosols.

According to the researchers, the developed CODE device is unique with multiple advantages and will be highly useful for hospitals to reduce cross contamination besides its usages in indoor public places.