

Germ-destroying air filter by IISC Bangalore

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In news— The Indian Institute of Science (IISC)-Bangalore has developed a 'green' tech to rid air filters of germs.

About the Air filtering technique-

- A research team IISc Bangalore has developed a **germ-destroying air filter that can inactivate germs using ingredients like polyphenols and polycationic polymers commonly found in green tea.**
- **The 'green' ingredients rupture the microbes through site-specific binding.**
- **With prolonged use, air filters become a breeding ground for captured germs.** The growth of these germs clog the pores of the filter, reducing their life.
- **Re-suspension of these germs can infect people in the vicinity.**
- The novel antimicrobial air filters were tested at an NABL accredited laboratory and were found to be **99.24% effective against SARS-CoV-2 (delta variant).**
- **The research was supported by special grants from SERB** during the challenging Covid-19 pandemic and SERB-Technology Translation Awards (SERB-TETRA) funds and a patent has been filed on this.
- **The technology was transferred to AIRTH,** a start-up that is replacing the existing germ-growing air filters with these germ-destroying air filters for commercial purposes. The air-filtering technique was granted a patent in 2022.
- The **deployment of these novel antimicrobial filters in ACs, central ducts, and air purifiers can play a crucial role in fight against air pollution** and mitigate the spread of air-borne pathogens such as several

coronaviruses.