

IIT-K develops novel technology for lung health monitoring

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Ministry of Electronics and Information Technology (MeitY) provided financial support for the innovation

The Indian Institute of Technology Kanpur (IIT-K) has developed a novel technology titled, "A Continuous Lung Health Monitoring System". The technology has been innovated by a group of inventors from IIT Kanpur, IIT Kharagpur, and the International Institute of Information Technology (IIIT) Naya Raipur.

The Ministry of Electronics and Information Technology (MeitY), Government of India has provided financial support for the innovation. The technology has been protected by Indian Patent application no. 202311027111. The technology is a low-cost, ubiquitous, unobstructive, and compact system that can help healthcare teams to track patients' lung health status.

It offers rapid access to lung disease data and facilitates the patient to monitor the disease at the convenience of sitting anywhere.

The system includes an acoustic mask with highly sensitive sound sensors and an intelligent corded device to sense the inaudible breathing sounds from the user's mouth and nose. The corded device of the mask consists of a Wi-Fi module for sharing the lung health status with the health-care provider. The device is equipped with a highly-durable battery that provides seamless continuous monitoring and a local storage unit that stores the processed audio data for long-term

inferences and a processing unit that has inbuilt memory and microprocessor. This real-time continuous monitoring system assists doctors in responding promptly to any possible change or deterioration in the health status.

The device will have far-reaching impact on patient health monitoring market as going by a global report from the US-based Markets and Markets, it has been estimated that the monitoring devices are expected to be \$65.4 billion by 2027 growing at a CAGR of 9.1% over the forecast period.