Vortex Filter to Remove PM2.5 with High Flowrate



Applications

- Household Air Filtration Device
- Face Mask
- Medical device, e.g. CPAP, respirator, ventilators

The global air filters market size stood at USD12.10b in 2019, is projected to reach USD20.63b by 2027, exhibiting a CAGR of 6.9%.¹



This invention provides a microfluidic PM removal device with a staggered herringbone micromixer that can remove PM particles efficiently while maintaining a low pressure drop to improve user experience.

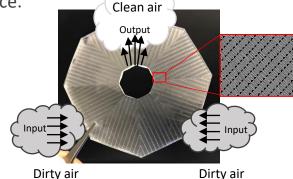


Fig 1. Prototype of the staggered herringbone micromixer



Talk to Us

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Advantages

- High PM removal efficiency with micromixer.
- Low pressure drop due to wide microfluidic channel.
- Large surface area, with herringbone-shaped grooves for PM capture.
- Can be for multiple uses.

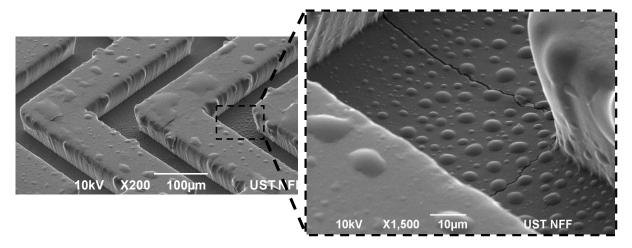


Fig 2. SEM image showing PM removal by the staggered herringbone micromixer



Intellectual Properties

USPTO US Patent Application 16/401402 CNIPA Chinese Patent Application 201910364376.3 HK Patent Application 42020003798.4





