

Nanofilters for Indoor Air Quality

Maintaining good indoor air quality is important to building developers. Particulate matter and airborne chemicals, such as volatile organic compounds (VOCs) - *which furniture, carpet, and other items emit* - can pose health risks to the occupants in a building.

To help resolve this issue, EWTCOI researchers worked with nanofibres to develop air filters called **Nanofilters** that contain catalysts and/or adsorbents that can disinfect the air, detoxify chemical agents and retain particles larger than 0.3 microns in one single passing of air through the filter. The production process can be tweaked to make different filters with particulate removal efficiencies varying from 30% (surgical masks, car filters, air-conditioner filters) to 99.98% (High-Efficiency Particulate Air Filters).

EWTCOI can help you set new standards in safety and innovation.

Key Features & Benefits

- 20-30% lower pressure drop compared with commercial filters for the same aerosol filtration efficiency
- Strong anti-bacterial properties coupled with high bacterial filtration efficiency
- Quick and high detoxification of paraoxon, a simulant for nerve agents
- Smaller footprint and lighter weight compared with activated carbon adsorption media/canisters

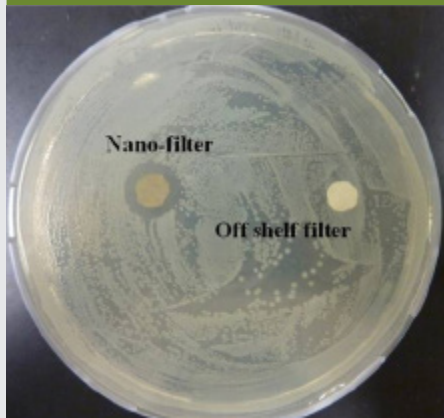
Applications

- Building filtration systems
- Cabin and vehicular filtration systems
- Machine and individual protection filters

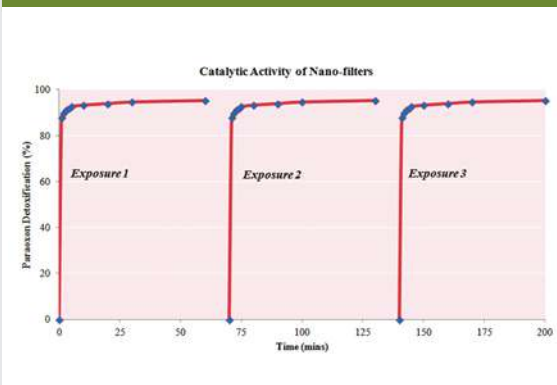
Applications of Nanofilters



Anti-bacterial property of Nanofilter Zone of inhibition of the Nanofilter



Repeated catalytic detoxification of paraoxon



Comparison of pressure drop of commercial filters Vs Nanofilters

