



INDTECH2018

Innovative industries for smart growth

29-31 October, 2018
Vienna, Austria

www.indtech2018.eu
[@IndTech2018](https://twitter.com/IndTech2018)
[#IndTech2018](https://twitter.com/IndTech2018)

PILLAR1

Session 1.3

Materials for Clean Air : Corning Air Purification Technology

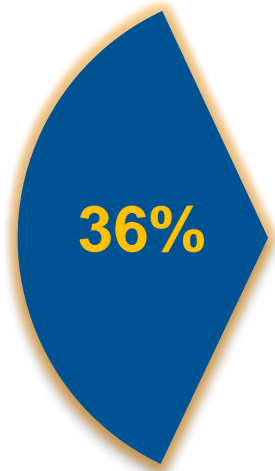
Jean-Jacques THERON

Corning European Technology Center

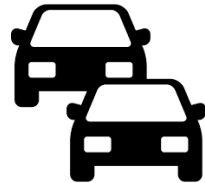
31 October 2018



Control distributed sources is key to reach WHO guideline



Industry



Traffic



**Concentrated
Pollution Sources**



Fuel burning



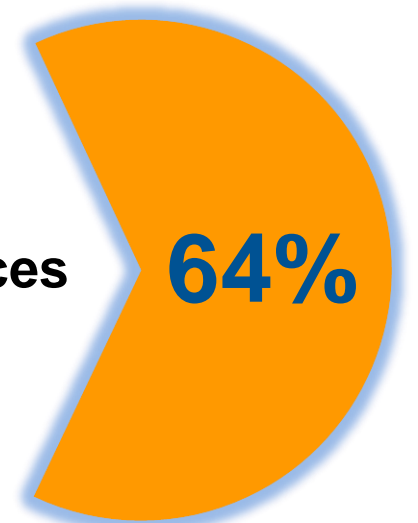
Natural sources



Others
unspecified human origin



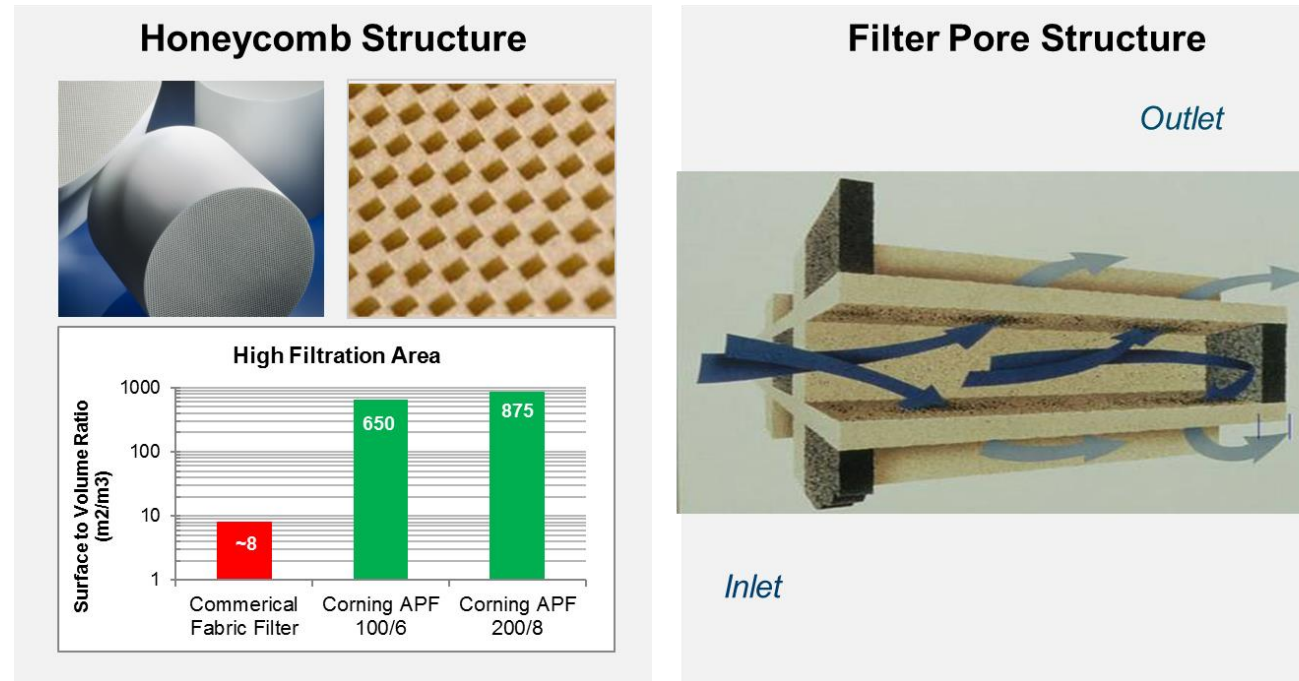
**Dispersed
Pollution Sources**



Corning Air Purification Technology is targeting at solving all airborne PM pollution, including from dispersed sources

Corning honeycomb filter structure

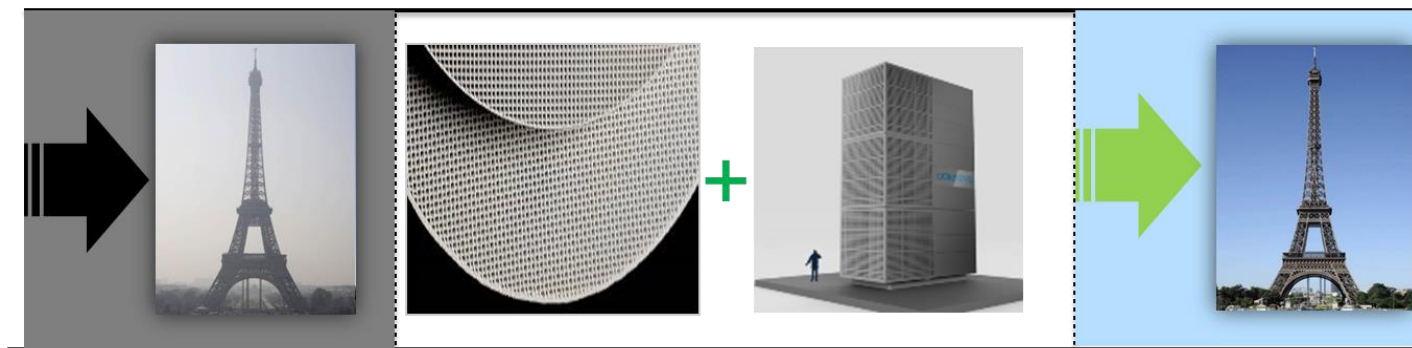
A new material based on Corning's experience in exhaust after treatment



- Honeycomb has very high filtration area and well-designed micro structure
- Able to capture fine/ultrafine particular matter efficiently

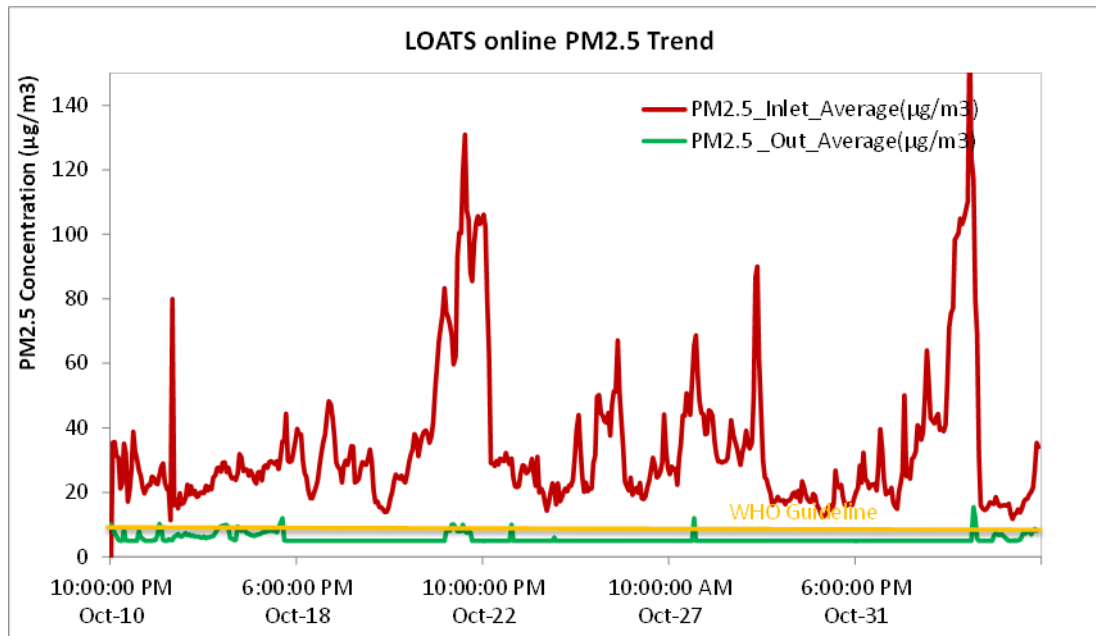
Corning Air Purification Technology concept *An urban "intelligent respiratory system" for real-time air quality control*

- Purifies the air up to 100 meters height and significantly reduces the concentration of PM2.5 in densely populated area.
- Can solve the PM pollution if implemented in accordance with urban planning and population distribution.
- Is designed to adapt to various pollution levels





Prototype system performance



PM_{2.5} remains < 5 - 10 $\mu\text{g}/\text{m}^3$

Has run for >300 days



Corning Air Purification Technology prototype



Demonstrated Performance

PM2.5 Capture

Lifetime

Energy Efficiency

Cost

Noise Level