



IMPROVING AIR QUALITY

SafeAir PLATFORM

A laboratory platform for the treatment of air toxics



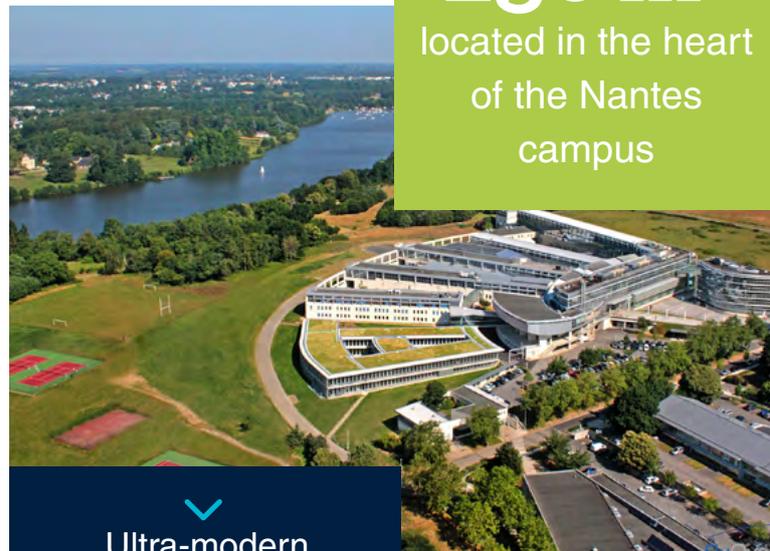
IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

230 m²

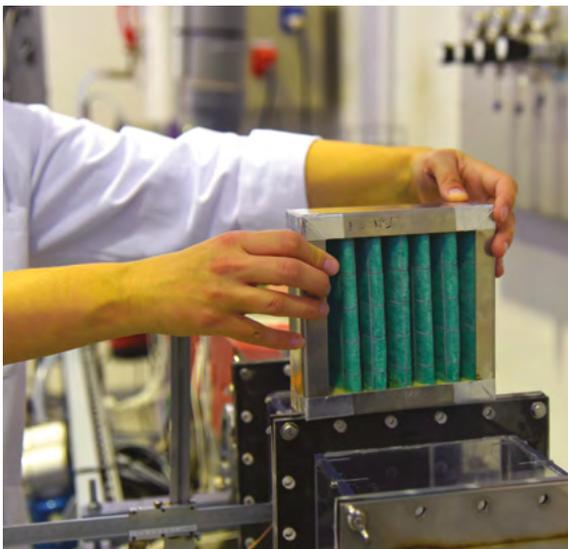
located in the heart
of the Nantes
campus

Our c. 230 m² facility is divided into **6 experimental chambers** equipped with **experimental benches**. At a laboratory scale, representative of real-life conditions, the platform addresses various research topics dealing with the fate and treatment of particles and nanoparticles, microbial aerosols, volatile organic compounds, air toxins and trace pollutants.

These premises enable the **development and testing of air treatment prototypes** for low concentrations of chemical pollution and toxic chemical compounds (VOCs, PAHs, dioxins, toxic chemicals, etc.), particulate pollution, especially nanoparticles and microbial aerosols (bacteria, fungi and viruses), etc.



Ultra-modern
research facilities



The associated scientific issues of:

- > Work generating low concentrations (ppm, ppb) and mixtures,
- > Monitoring of pollutants and by-products (metrology),
- > Modelling of dispersion in confined or ventilated environments,
- > Understanding interactions with the environment,
- > The study of treatment technologies, containment, process intensification, combined treatments, adsorption, photocatalysis, catalytic oxidation, filtration, etc.

The targeted applications are:

- > Indoor air and confined environments such as public spaces (ERP), professional environments (service, industry), specific confined spaces (professional vehicle interiors, clean rooms, hospitals, nuclear facilities, etc.) or specific PPE,
- > Industrial emissions in the case of dispersion, dissemination of pollutants, diffuse or channelled emissions.

Which technology for which pollutant?



We offer

- › Specific rooms (management of treated incoming or outgoing air, pressure or vacuum, safety equipment) to develop and test prototypes,
- › Rooms dedicated to the preparation and physico-chemical analysis of pollutants,
- › Specific locations in the research hall for large prototypes.

High-performance equipment at your service

Dynamic one-pass and multi-pass experimental benches

Specific equipment

- › Generation of gaseous pollutants (VOCs, NOx...), aerosols, bioaerosols, controlled quality air (zero air),
- › Measurements of VOCs (ppb), Gas Chromatography, Chromatography-Coupled Mass Spectroscopy, Particle counters,
- › Microbiology laboratory,
- › Measuring equipment adapted to T°, P, flow rates, NH₃, H₂S, iodine species, etc.



The SafeAir platform is an indispensable tool for the development of new innovative technological solutions for air toxics treatment systems.

It also enables validation of technical solutions, on a real scale or under realistic conditions, for air quality in confined spaces.



[Discover the platforms](#)

Let's study your needs together!



Campus de Nantes
La Chantrerie
4, rue Alfred Kastler
CS 20722
44307 Nantes cedex 3
France
www.imt-atlantique.fr

Contact :
Yves ANDRES, Professor
Yves.andres@imt-atlantique.fr
02 51 85 82 62