




ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AIR QUALITY

Air Pollution continues to be a global concern among the scientific community for its impacts on the human health, the environment and climate change.



The research of the University of Bologna is spread across several disciplines from science-based to technology applications and solutions and it covers:

- development, assessment and validation of atmospheric dispersion models from street to urban scale; long-range transport modelling
- interaction between air quality and climate change in urban environments: from science to urban and regional planning
- developments and testing of sensors (including low cost) for air quality applications
- detection of short-lived atmospheric radicals from spectroscopic and mass spectrometric techniques to novel, low-cost, small and easy-to-use nano-electronic devices
- chemical characterization of atmospheric aerosols at various temporal scales
- development of innovative technologies for fine powder filtration from gaseous flow for industrial and domestic application to biomass combustion

HIGHLIGHTS

The University of Bologna has been involved in several solutions-oriented national and European funded projects, among them: **H2020-ISCAPÉ** - *Improving the smart control of air pollution in European cities*; **H2020-RADICAL** - *Fundamental Breakthrough in Detection of Atmospheric Free Radicals*; **H2020-WeWair** - *Wearable and Stationary Sensors for Air Quality Management*; **LIFE-Simplest** - *Smart Innovative Management of PelLEt STove to optimize environmental performance*; **LIFE-SAFER-PER-LIFE** - *Secondary Aluminium Foundries Energy Recovery and Pollutant Emissions Reduction*; **LIFE-IPER+** - *Innovation in Particulate's Emission Reduction in biomass boilers*.