Atmospheric Aerosols Laboratory

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- **Staff:**

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- **Research Activities**

  - Basic research in the study of aerosols dynamicsin the atmosphere.
  - Measurements of aerosols and gaseous pollutants in the atmosphere.
  - Measurements of aerosols and gaseous pollutants in indoor environments.
  - Modelling of aerosols dynamics in indoor environments.
  - Basic research in human population exposure to particulate matter in indoor and outdoor environments.
  - Modelling particle deposition in the human respiratory system.
  - Development and implementation of three dimensional models of air pollution.
  - Modelling emissions of gaseous and particulate pollutants from landfills
  - Heterogeneous chemical reactions on the surface of suspended particles.
  - Establishing emission registries using GIS.
  - Thermal comfort and air quality in indoor environments.

- **Lab infrastructure**

  A) Two prefabricated small buildings (ISOBOX) within the University Campus that are used for environmental measurements.
  B) An airtight emission measurements chamber.
  C) A fully equipped laboratory room for the conduction of chemical analysis and filter weighing using a precision balance with 0.01 mg readability.
  D) Two fully equipped meteorological observation stations (vantage Pro2 Plus-Davis).

  In addition, the laboratory equipment includes the following instruments for measurements of gaseous and particulate pollutants:

  - Dust Track (TSI instruments) (2)
  - Dust Track II (TSI instruments) (3)
  - Dust Track DRX (TSI instruments)
  - P-Track (TSI instruments) (2)
  - IAC Calc (TSI instruments)
  - Nanoscan SMPS 3910 (TSI instruments)
  - Optical particle sizer 3330 (TSI instruments) (2)

- Condensation Particle counter 3775 with electrostatic classifier 3082 (TSI instruments)
- Velocicalc 9555 (with VOC probe) (TSI instruments)
- Side Pack AM510 (TSI instruments) (2)
- PpbRAE 3000 handheld VOC monitor (RAE systems by Honeywell)
- PhoCheck Tiger handheld VOC detector Tiger (Ion science)
- PG-250 gas analyzer (Horiba)
- APOA-360 Ozone Analyzer (Horiba)
- Serinus 44 $NO/NO_2/NO_x/NH_3$ analyzer (Ecotech)
- Sioutas cascade impactor (SKC)
- Personal Environmental monitor for $PM_{10}/PM_{2.5}$ with Leland Legacy sampl pumb (2) (SKC)
- Aeroqual series 500 portable air quality monitor (Aeroqual)
- Tracer 5^i portable X-ray Fluorescence analyzer (Bruker)
- Qubit 3 Fluorometer (Thermo Fischer scientific)
- Microaeth AE51 (Aethlabs)
- Sequential Particle Sampler FH 95 SEQ, (Thermo Scientific)
- Sequential Particle Sampler SEQ47/50 (Leckel GmbH)
- SMPS +C with Universal DMA (Grimm Technologies)
- Scanning Mobility Particle Sizer with Faraday Cup Electrometer (FCE) (Grimm Technologies
- Non-Viable Impactor, Eight Stages (Thermo Scientific)
- Viable Impactor, Six Stages, (Thermo Scientific)
- FH 62 I-R, Beta Attenuation Monitor (Thermo Scientific)
- Gillibrator Air flow calibration system, (Scientific Instrument Services)
- DOSEman portable radon dosimeter(SARAD)
- FH-40 GL portable radiation detector (Thermo Scientific)
- Brigon Engineer Test Kit for Oil and Gas (Brigon)
- Kane 455 flue gas analyzer (Kane International Ltd)

❍ **Research Projects**

1. LIFE Programme 2014-2020: «Index-Air, Development of an Integrated Exposure – Dose Management Tool for Reduction of Particulate Matter in Air», Project is funded by the European Union, 2016-2020. Link: http://www.lifeindexair.net/
2. Interreg V-A, Greece-Cyprus 2014-2020: «MOYSEIA_II, Protection and promotion of the cultural heritage of Greece & Cyprus in museum collections», Project is cofunded by the European Union (ETPA) and national resources of Greece and Cyprus, 2017-2020.