Research on Combustion Generated Nanoparticles at ISS

The Institute for Sensors and Signals (ISS) was founded in spring 2000 at the University of Applied Sciences, Aargau. It is an interdisciplinary institute for applied research and development.

Current Fields of Activity in Nanoparticle Research

- Development of methods for particle characterization
- Investigation of particle emissions from combustion processes
- Systems for field measurement of vehicle emissions
- Emission Measurements
- Measurement of atmospheric aerosols and low particle concentrations

Selected Projects

**Portable particle sensor**
Number concentration and mean diameter monitoring in a compact, battery operated device. Working principle: A combination of diffusion charging with a single diffusion screen stage

**Photoacoustic Smoke Detector**
High sensitivity and low false alarms rate through the selective detection of carbon particles

**Sensor for undiluted raw gas**
A heated diffusion sensor that avoids pretreatment artifacts. No dilution or thermodesorption are required

**Light scattering for filter testing**
Direct measurement of the exhaust gas leaving the tail pipe

Recent Publications


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For more information see [http://www.fh-aargau.ch/iss](http://www.fh-aargau.ch/iss)