

FDITE190 Photoacoustic spectroscopy II

Description:

The course covers the modeling and applications of photoacoustic spectroscopy (PAS) for trace gas analysis and aerosols characterization.

Major course topics:

Modeling of process of photoacoustic signal generation and detection,

Origin of noise in a PA measurement & noise suppression

Advancement of photoacoustic systems for trace gas measurements in field measurements

PAS for ambient particulate matter

State-of-the-art multiwavelength photoacoustic spectrometer for source apportioning of Ambient aerosols

Recommended Literature:

1. Botez, D. & Belkin, Mid-Infrared and Terahertz Quantum Cascade Lasers. Cambridge University Press, (2023).
2. A. Mandelis (ed.), Photoacoustic and Photothermal Phenomena, Springer, 1987.