

FDITE139 Photoacoustic spectroscopy

Description:

Photoacoustic Spectroscopy covers the fundamental principles, physics, and applications of this versatile technique for analyzing solids, liquids, and gases. Dive into gas and particulate matter detection, instrumentation, and real-world uses in environmental monitoring, material science, and biomedical diagnostics. Perfect for students and professionals in physics, chemistry, or engineering seeking to master this cutting-edge technology.

Major course topics:

Basics of Photoacoustic spectroscopy (PAS)

Theoretical foundation

Technical side of PAS

PAS for solid and liquid characterization

Gas phase PAS

Instrumentation

Recommended Literature:

1. Rosencwaig, *Photoacoustics and Photoacoustic Spectroscopy*, Wiley, 1980.
2. S.N. Thakur and V.N. Rai (eds.), *Photoacoustic and Photothermal Spectroscopy: Principles and Applications*, Elsevier, 2022.