

AVVISO DI SEMINARIO

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TLS Detection in Liquid Chromatography, Flow Injection Analysis and Microfluidic Systems for Food Quality Control and Biomedical Diagnostics

The basics of thermal lens spectrometry (TLS) and TLS microscopy (TLM) will be explained considering in particular the dependence of the thermal lens signal on the excitation power, thermo-optical properties of the sample, as well as sample flow and photostability of the analyte, with particular focus on the TLS enhancement factor, sensitivity and sample throughput of TLS and TLM measurements.

Examples of applications will include most notable achievements of TLS and TLM measurements in liquid chromatography (detection of bilirubin and biliverdin in blood plasma, bilirubin in vascular endothelial cells), flow injection analysis (organophosphate insecticides and allergens in foodstuffs) and microfluidics (high throughput determination of Cr(VI), microcystin, HPV virus antibodies, and biomarkers of acute kidney injury).

Before the concluding remarks, recent progress in multi-pass mode-mismatched TLS instrumentation and applications of incoherent light sources will be presented as part of the future outlook for TLS and TLM techniques.

DIPARTIMENTO DI SCIENZE
DI BASE E APPLICATE
PER L'INGEGNERIA

Lunedì 30 OTTOBRE 2023 : ore 15.00

Aula Seminari – Pal. RM004

Dipartimento SBAI - Via Scarpa



SAPIENZA
UNIVERSITÀ DI ROMA