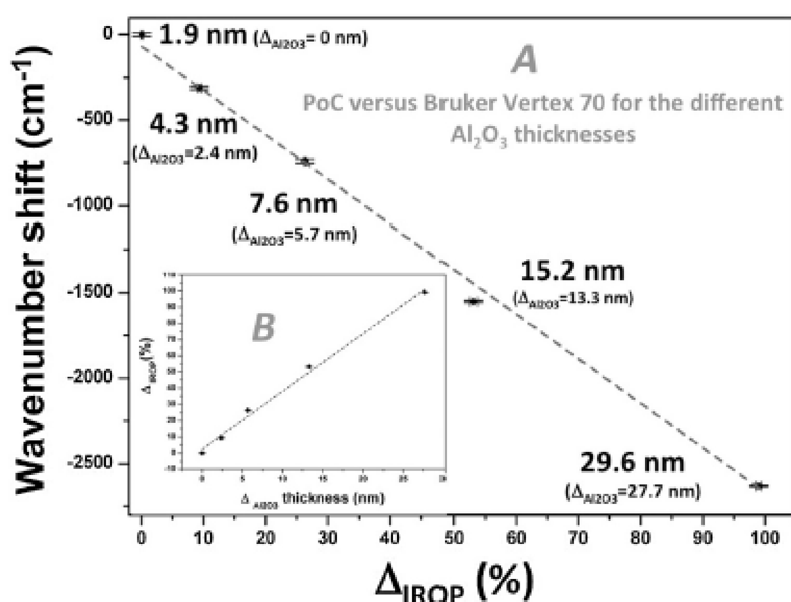
Your application

biod
Bio Optical Detection

Measurement of thin layers

The classical method for measuring thin layers consists in using ellipsometry, a high-resolution spectrometry or a high-resolution Fourier Transform (FT) visible spectroscopy. Instead, biod's technology can be used for achieving the same result with better performance.

In the example below, we measured different thin layers of Al_2O_3 fabricated by atomic layer deposition (ALD). In this case, we compared IOMD (Interferometric Optical Detection Method) with high-resolution FT visible spectroscopy.



(A) Experimental correlation between wave number shift (Δwn) and IROP for different ALD thicknesses of Al_2O_3.
(B) Optical response of IROP (Increase Relative Optical Power) for the different increasing thickness of Al_2O_3 (ΔAl_2O_3).

Advantages

- **Time saving**: Real time detection.
- **High performance**: Low uncertainty in thickness measurement.
- **Easy to operate**: Avoidance of complex tools such as ellipsometer. No need to perform periodic calibrations.

Other examples

Our technology could be used for many different applications such as:

- Surface chemistry
- Etching control
- Deposition control
- Plasma damage monitoring
- Silanization processing