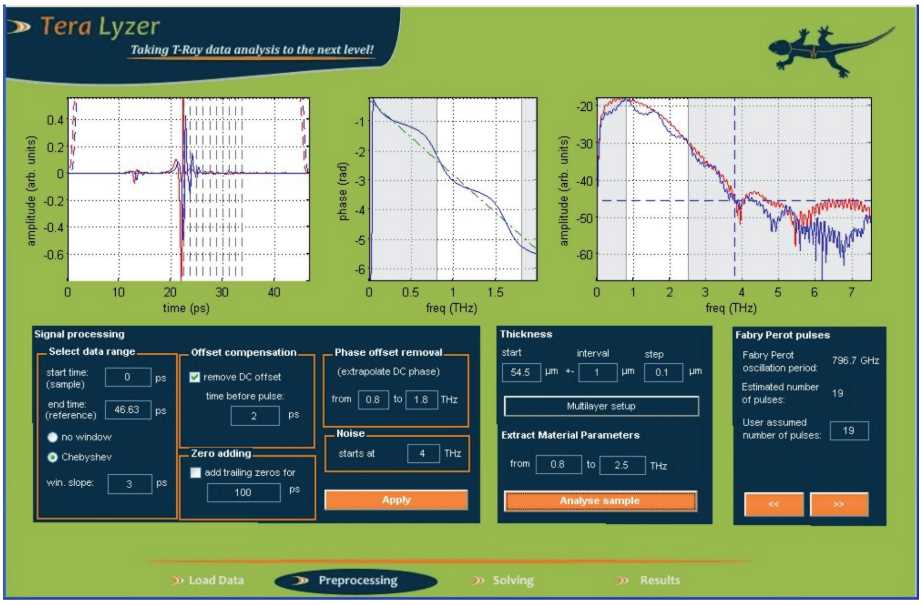
TeraLyzer

THz-TDS Data Evaluation Software for Sub-100 µm and Multilayer Samples

MenloSystems



TeraLyzer is a first-of-its-kind software solution for material parameter extraction from terahertz time domain spectroscopy data in transmission geometry. It delivers highly precise information of the complex material parameters of a sample (n, α, κ, ε', ε''), including error bars and the estimated sample thickness.
One of the strong features of the TeraLyzer software is that thin samples in the sub-100 µm regime become accessible to your research without the need for differential measuring setups. Moreover, analysis of multilayer systems promotes a whole new range of experiments.
For a free TeraLyzer trial version contact our expert.

APPLICATIONS

- Time-resolved THz Spectroscopy in Transmission Geometry
- Investigation of Sub-100 µm Samples, up to Several mm Thickness
- Characterization of unknown Layers in a Multilayer System
- Inaccessible Samples, eg. in a Cryostate

FEATURES

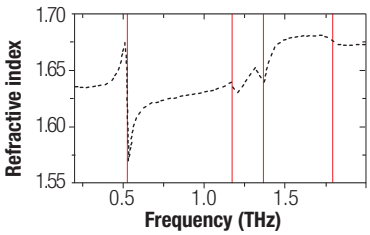
- Broadband Application
- Sample Thickness Extraction
- Optical Parameter Extraction (n,α,κ,ε′ and ε″)
- Statistical Error Propagation
- Data Import and Preprocessing
- Dynamic Range Correction for Highly Absorbing Samples

OPTIONS

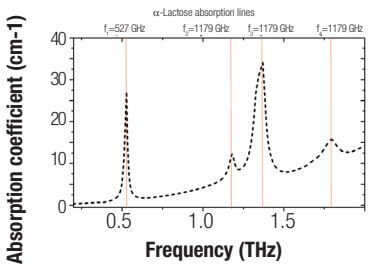
- **SINGLE LICENCE**
  Single Version
- **GROUP LICENCE**
  Up to 10 Workstations
- **TRIAL VERSION**
  Valid for 28 Days

CASE STUDY α-lactose / polypropelene compound

Refractive index:



Absorption spectrum:



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SPECIFICATIONS

Measurable Sample Thickness	<100 µm, up to several mm, multilayer empowerment
Multi-step Procedure	data import (transmission measurement) data preprocessing (windowing, offset and phase correction) thickness extraction extraction of $n, \alpha, \kappa, \varepsilon'$ and ε'' statistical error propagation
Thickness Extraction Algorithms	considering Fabry-Perot reflections (Quasi Space or Total Variation method)

SETUP REQUIREMENTS

Setup Configuration	flexible import of Menlo Systems TDS data or custom data import

SYSTEM REQUIREMENTS

Processor	Intel Pentium 4 or AMD Athlon 64 processor
Systems Software	Microsoft Windows XP
RAM	1 GB
Display	1024x768 display with grafic card
Data import	THz time-domain measurement data (ASCII)
Data export	.csv and .mat
Internet Connection	required for license validation

ORDERING INFORMATION

Product Code		
TeraLyzer	Trial Version	Please request

MenloSystems

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