HELIOS *Femtosecond Transient Absorption Spectrometer*

Probe Spectral Range

UV-VIS-NIR-SWIR

Automated

Extendable Time Window

Microscopy Extensions

HELIOS is an automated femtosecond Transient Absorption Spectrometer. It is designed to work with a variety of amplified femtosecond lasers, including high energy Ti:Sapphire amplifiers and high repetition rate Yb amplifiers. Together with our patented optical delay line, HELIOS delivers an unmatched level of performance and user-friendliness.

Broad probe spectral range

with Ti:Sapphire lasers:	with Yb lasers:
280 - 380 nm	350 - 750 nm
320 - 650 nm	480 - 950 nm
420 - 820 nm*	800 - 1600 nm*
820 - 1600 nm	1400 - 2000 nm
1600 - 2400 nm	

* Probe coverage around fundamental wavelenghts (~800 nm for Ti:Sa, and ~1030 nm for Yb) require manual filter adjustments

## 8 ns time window   The standard 8 ns time window is extendable to sub-ms with the EOS add-on.

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Sample holder options

The magnetic stirrer allows for working with closed cuvettes (≥2 mm long) and can work with a simple cuvette holder. The translating sample holder can raster thinner cuvettes (which cannot be stirred easily), films, wafers, etc. The translating sample holder can work with transmissive as well as reflective samples.
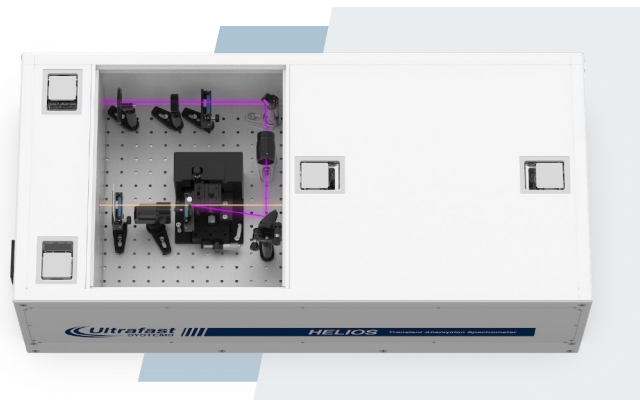
OPAs optimized for spectrometry


Optical Parametric Amplifiers

The Apollo OPA line is optimized to work with all our spectrometers on the Ti:Sapphire or the Yb platforms. These OPAs have been designed as a capable yet easy to use pump source with the spectroscopist in mind. They fit neatly alongside the spectrometer, minimizing the amount of table space required. Inclusion of multiple frequency conversion schemes allows fully computer-controlled tuning of the output, while collinear output from a single port reduces the need for external beam routing optics. The timing of the pulse output remains consistent across the whole wavelength tuning range.

Helios Microscopes

We offer two options for performing spatially resolved transient absorption measurements.

CONFOCAL Microscope

This is effectively Helios with very tight beam focusing on the sample. With it you can extract transient spectra and kinetics from a specific point on your sample.
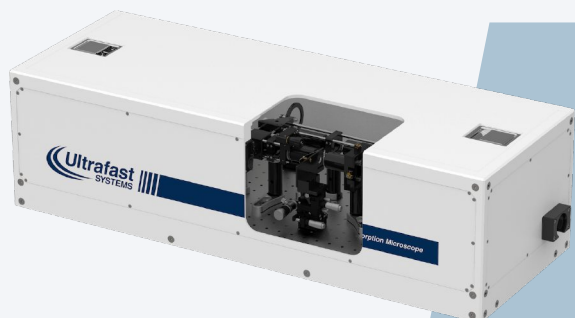
WIDEFIELD Microscope

It is designed to image kinetic data from many points on the sample simultaneously.

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