

HARPIA | TA

Ultrafast Transient Absorption Spectrometer

FEATURES

- Market-leading sensitivity
- 330 nm – 24 μm spectral range
- Probe delay ranges from 2 ns to 8 ns
- Pump pulse energies down to nJ
- Cryostat and peristaltic pump support

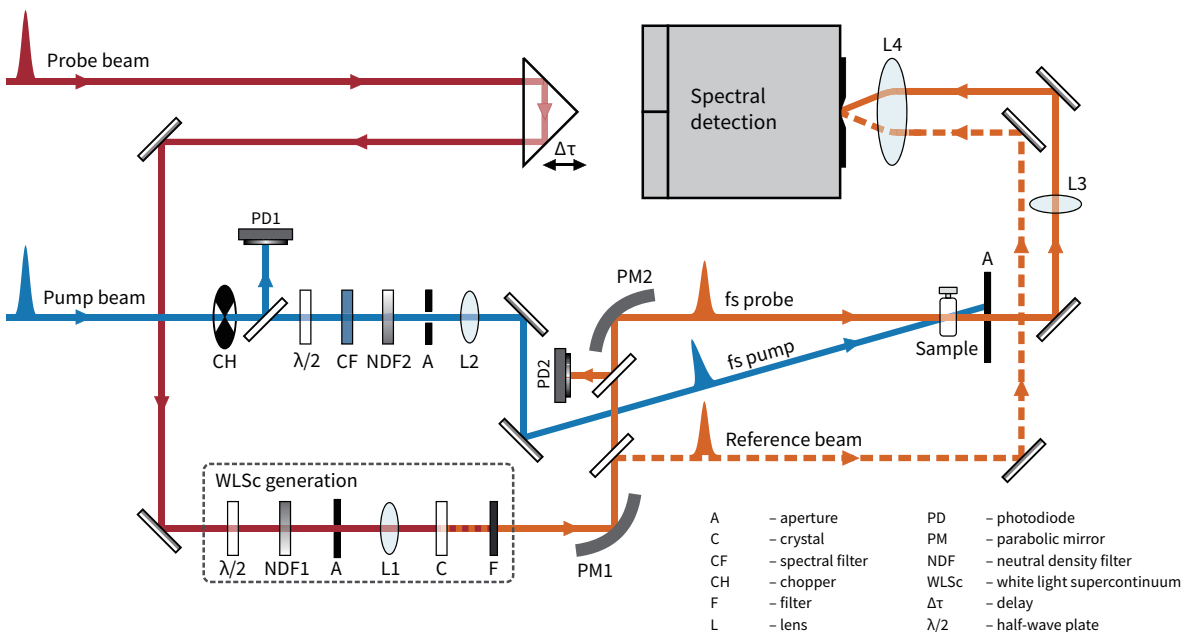


The HARPIA-TA ultrafast transient absorption spectrometer features market-leading characteristics such as 0.05 mOD ($10^{-4} \Delta T/T$) sensitivity and the ability to work at high repetition rates up to 1 MHz, when used with a PHAROS or CARBIDE laser and an ORPHEUS series OPA. A high repetition rate allows measuring transient absorption dynamics with excitation pulse energies down to several nanojoules.

Several probe light configurations and detection options are available: from a photodiode for single-wavelength detection to white-light supercontinuum probing, combined with spectrally-resolved broadband detection. HARPIA-TA features integrated data acquisition and measurement control electronics providing automated pump and probe beam

position tracking and alignment, motorized Berek polarization compensator, motorized supercontinuum generator, automated harmonic switching, an automated sample stage, as well as switching between transient absorption and transient reflection measurements. Delay range from 2 ns to 8 ns is available. The broadband probe covers the 330 – 1600 nm wavelength range and monochromatic probe enables the spectral range extension up to 24 μm.

HARPIA-TA is compatible with cryostats and peristaltic pumps, and the capabilities of the spectrometer can be further extended using expansion modules.



HARPIA-TA optical layout for pump-probe experiments