

TIME-RESOLVED SPECTROSCOPY

Time-resolved spectroscopy allows to monitor the evolution of light spectrum in time. This way, we can observe temporal behaviour of various optical phenomena such as fluorescence or non-linear effects. We are equipped with a streak camera allowing to perform time-resolved spectroscopy of short (nanosecond scale) or even ultra-short (picosecond scale) processes.

ACQUIRED INFORMATION

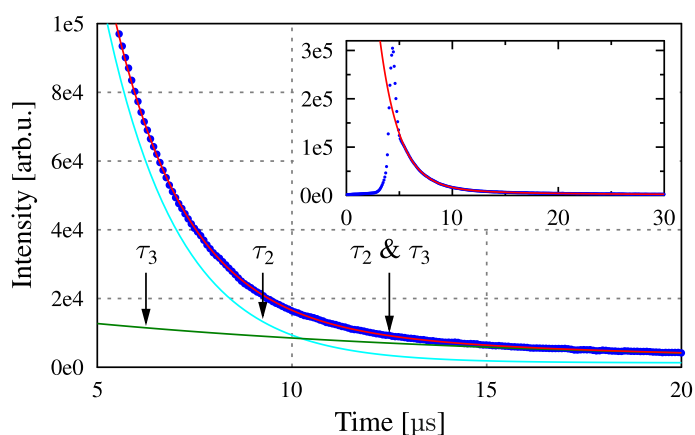
- > Time-dependent transmissivity or absorbance spectra
- > Fluorescence and phosphorescence spectra and decay times measurements
- > Non-linear optical processes characterization

SAMPLE TYPES

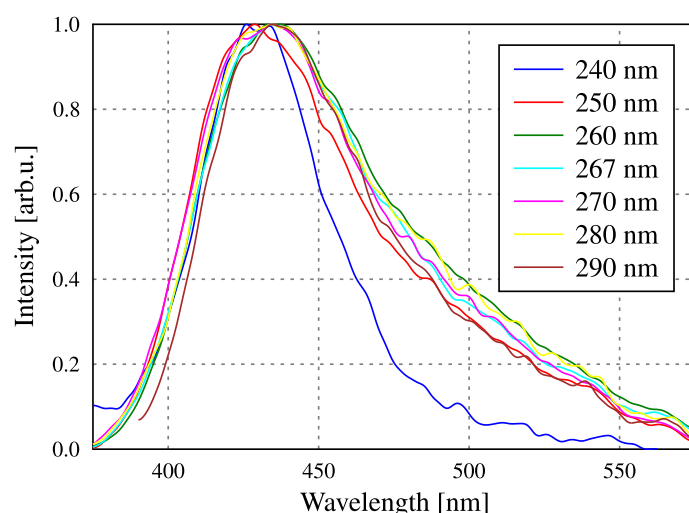
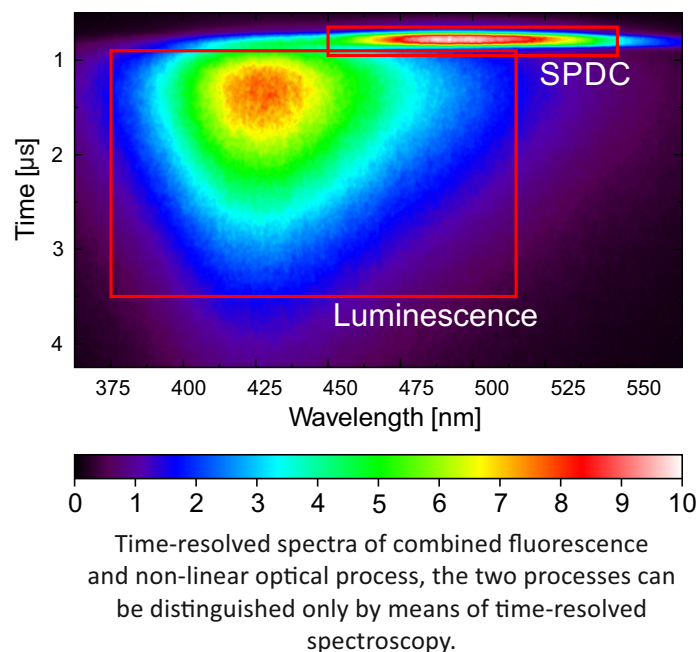
- > Room temperature solid or liquid samples
- > For solid samples, cryogenic temperatures are available (up to 10 K)
- > Size limitation depends on type of measurement

MODES, CONDITIONS AND PRECISION

- > Pumping by ultra-short (femtosecond) laser pulses at tunable wavelength (250 - 2000 nm), typical optical power about 100 mW
- > Measurement in spectral range 350 to 700 nm with precision up to 1 nm
- > Time-resolved measurements with resolution up to 1 ps
- > Single-photon level measurement available
- > Single-shot measurement available with time resolution up to 20 ps per pixel



Decay time measurement of fluorescence signal at given spectral range.



Spectrum measurement for various pumping wavelengths.

DETAILED INFORMATION ON REQUEST



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WWW.RCPTM.COM RCPTM.SERVICES@UPOL.CZ



Palacký University
Olomouc