

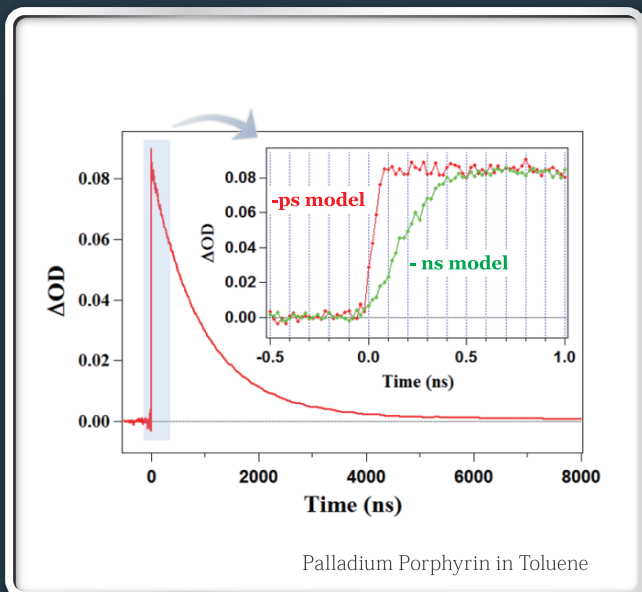
Picosecond Transient Absorption Spectroscopy System

picotAS

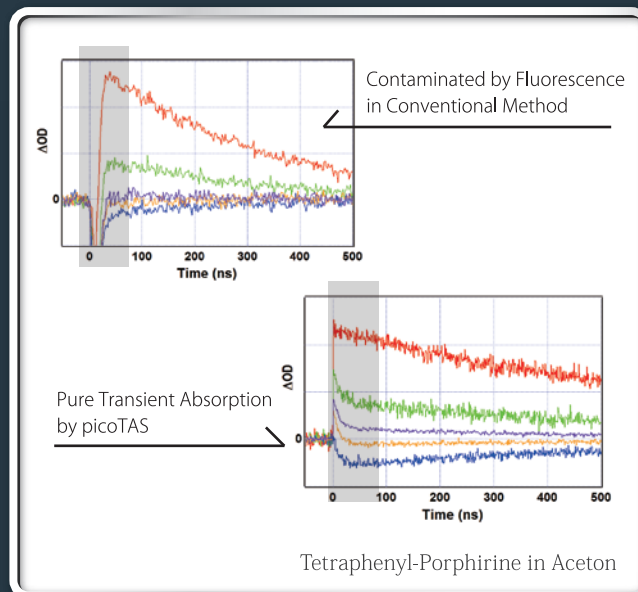


picotAS is a brandnew picosecond transient absorption spectrophotometer based on a recently developed technique, RIPT (Randomly-Interleaved-Pulse-Train) method.

picotAS has remarkable advantages, that is, excellent time resolution of < 100 ps (-ps model) or < 400 ps (-ns model), wide time range including "gap time": 1 ns ~ 20 ns where conventional methods have difficulties to measure, broadband wavelength coverage from VIS to NIR, and fluorescence elimination capability. **picotAS** will be your powerful tool to explore the frontier of photochemistry.

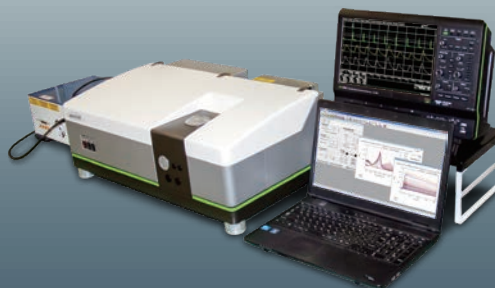


Rise time - less than 100 ps!! (-ps model)
or less than 400 ps! (-ns model)



Pure Transient Absorption Curve
Free From Fluorescence!!

picOTAS



Features

- Measures Wide Time Range from 100 ps ~ ms
- Completely Bridges Gap Time Region of 1 ns ~ 20 ns
- Covers Broadband Wavelength Range from 410 nm ~ 1600 nm
- Removes Fluorescence Signal
- Asynchronous Operation of Light Sources
- Compact Footprint and Easy Operation
- for Solution, Thin Film. Options Available for Avoiding Sample Damage

Applications

- Observation of Transient Absorption Spectra of Excited Singlet/Triplet
- Measurement of ISC Rate
- Research of Electron Transfer, Charge Separation/Recombination Dynamics
- Observation of Intermolecular Reaction, Excimer Generation etc.
- Analysis of Dynamics of Photochromism, Organic EL, Photocatalyst etc.

Specifications

Method	Randomly-Interleaved-Pulse-Train (RIPT) method
Probe Light Source	20 MHz picosecond supercontinuum laser
Pump Light Source	(-ns model) Subnanosecond microchip laser, pulse width < 350 ps, pulse energy > 20 μ J (-ps model) Picosecond mode-locked Nd:YAG laser, pulse width < 25 ps, pulse energy > 100 μ J
Oscilloscope	200MHz, 12bit
Optical System	Pre- and post- monochromators, two shutters, polarizers
Detectors	Amplified photodiodes, bandwidth > 30 MHz
Functions	Automatic balancing of light Intensity with variable ND filters, Automatic wavelength scanning, Pseudo-logarithm sampling

Unisoku has been developing this product in cooperation with Nihon University, Osaka University and Meijo University in the framework of the Japan Science and Technology Agency's "Development of Systems and Technologies for Advanced Measurement and Analysis (JST-SENTAN)" program.

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