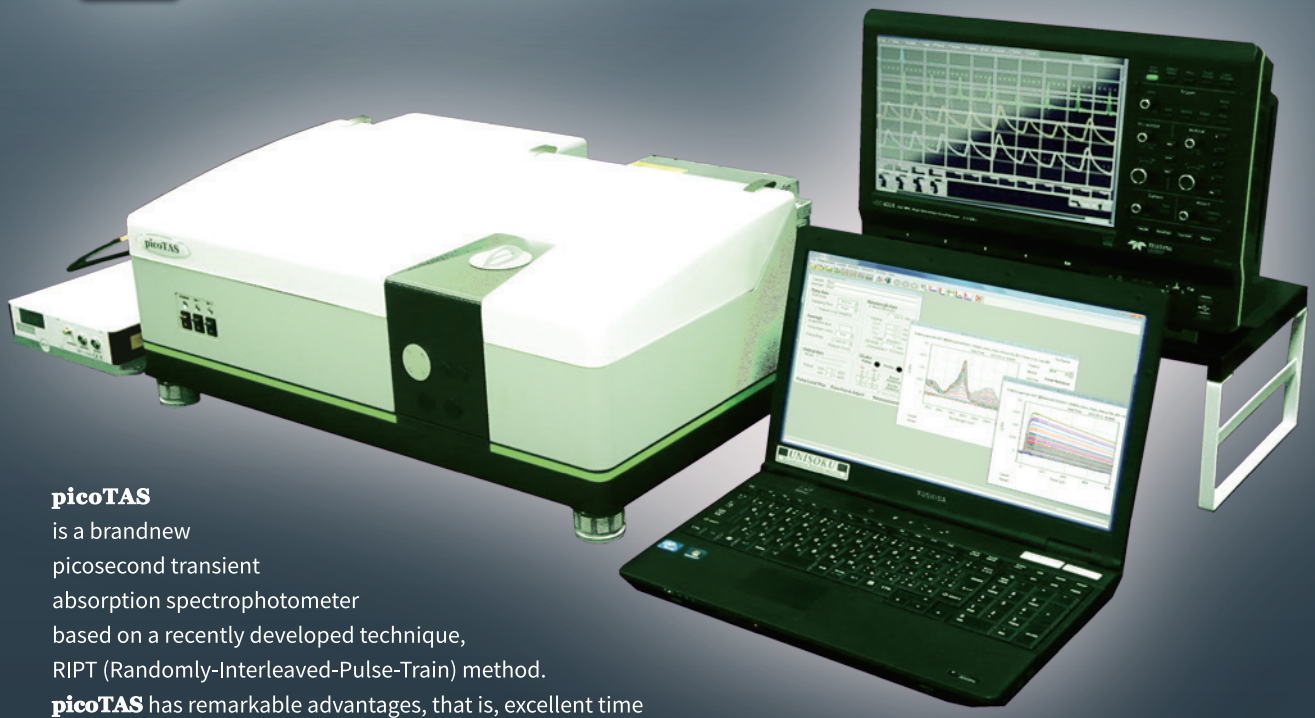
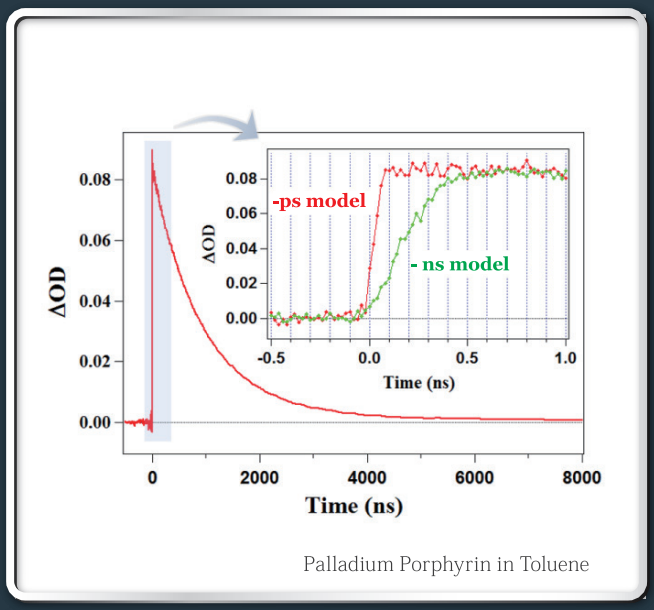
UNISOKU
TTI Group
MUTUAL SATISFACTION

Picosecond Transient Absorption Spectroscopy System

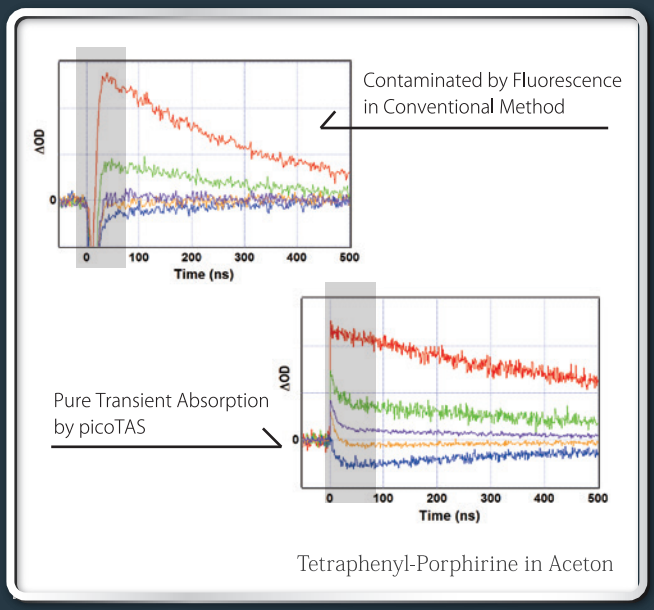
picoTAS



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.



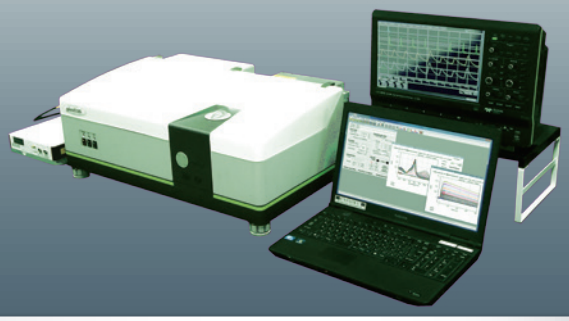
Rise time - less than 100 ps!! (-ps model)
or less than 400 ps! (-ns model)



Pure Transient Absorption Curve
Free From Fluorescence!!

Picosecond Transient Absorption Spectroscopy System

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 Availabe 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 µJ (-ps model) Picosecond mode-locked Nd:YAG laser, pulse width < 25 ps, pulse energy >100µJ
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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MUTUAL SATISFACTION

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