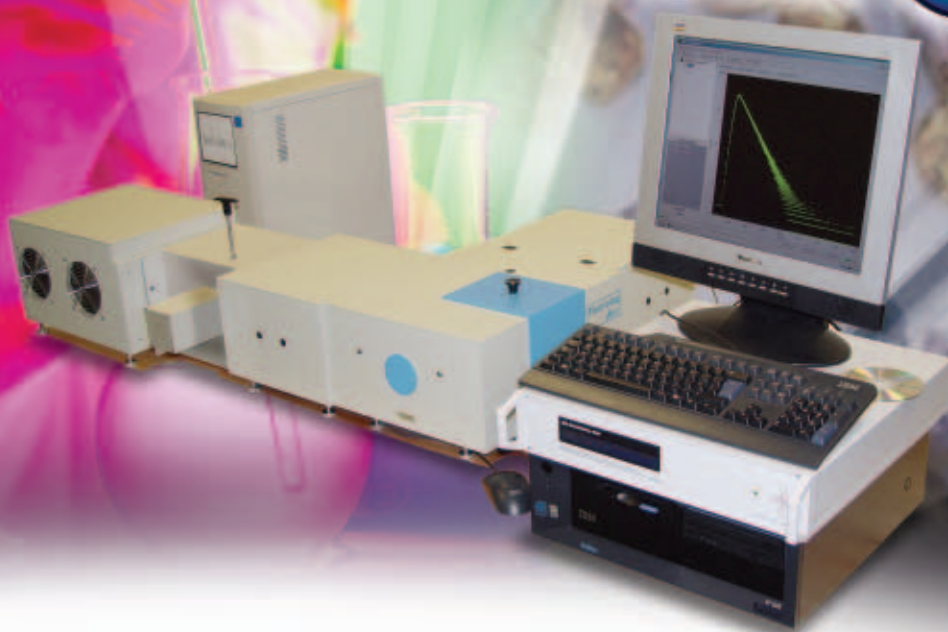




TCSPC on your Fluorolog[®] spectrofluorometer!

**Let there be
LIGHT!**



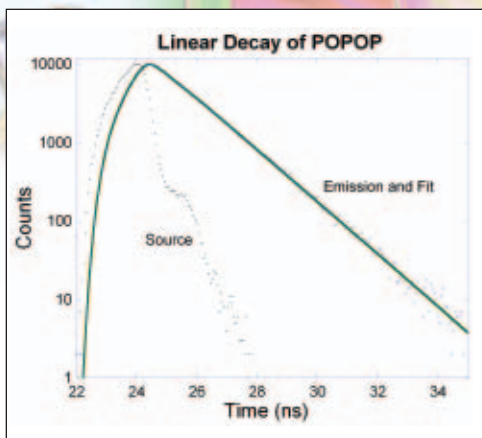
Time-Correlated Single-Photon Counting on The World's Most Sensitive Spectrofluorometer

We start with the best steady-state optical bench from Jobin Yvon Spex[®], add in a pulsed laser-diode or a pulsed spark source, and finish with a superior detector-module.

The result?

The World's Most Sensitive Spectrofluorometer, with TCSPC ready to perform time-domain lifetime spectroscopy! You get the reliability and

know-how of the Spex[®] Fluorolog[®] series, together with the solid-state economy and sensitivity of IBH lifetime analysis, all in one instrument. All functions are software controlled from a host computer, giving you access to data with just a few keystrokes. A repetition rate of up to one megahertz rapidly builds up a histogram of the sample's fluorescence decay.



So why use TCSPC for time-resolved experiments?

- Variations of the excitation beam's intensity are irrelevant
- Detects individual photons
- No pulse-smearing from boxcar gates
- High speed data-acquisition
- Digital precision, and no analog offset required for fitting results
- The entire decay curve is examined at once

Of all modern time-domain methods, including boxcar integration and the streak camera, TCSPC is, by far, the most sensitive. If your sample lifetimes are really important, then Spex®-IBH TSCPC is the method for you.

Jobin Yvon, uniting Spex® and IBH. When you're twice as serious about spectroscopy.

Technical specifications

Excitation sources

Steady-state

Broadband 450-W xenon arc lamp from UV to near-IR.

TCSPC

- Fixed-wavelength "Plug-and-play" interchangeable NanoLED pulsed laser-diodes and LEDs. Wavelengths of 375, 405, 440, 473, 635, 650, 785, and 830 nm are available for laser-diodes; 370, 455, 465, 485, 560, 590, 605, 625 for LEDs. Standard optical pulse durations are <200 ps (<100 ps typical) for laser-diodes, <1.5 ns for LEDs. Repetition rate up to 1 MHz.
- 5000F coaxial nanosecond flashlamp with broadband output from 180–780 nm. Thyatron-gated spark and pulse generator (10 Hz–100 kHz). Minimum optical pulse-width is 0.6 ns.

Spectrometers

Resolution

Czerny-Turner, with classically-ruled gratings and all reflective optics. Optional double-grating spectrometers available. For standard 1200-grooves/mm,

Accuracy

0.2 nm

Speed

± 0.5 nm

Range

150 nm/s

0–1300 nm

Detectors

TCSPC and Steady State

TBX-04 photomultiplier tube module, response 185–650 nm. Dark counts < 80 cps (< 20 cps typical). Timing jitter typically 180 ps FWHM, 250 ps maximum. Optional cooled extended-red detectors are available to 850 nm.

Lifetimes measurable

TCSPC

<100 ps to 100 microsecond lifetimes

MCS

<10 μs to seconds (MCS mode)

Software

Runs under Windows™



HORIBAJOBIN YVON

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Explore the future

HORIBA