

chronosBH



ChronosBH—ISS technology combined with Becker & Hickl electronics for precise TCSPC measurements using laser diodes and LEDs.

ChronosBH is a time-domain fluorometer with pico-second resolution. Its optical design and automatic instrument control are state-of-the-art for time-resolved fluorometers.

Ready-to-Use & User-Friendly Software

ChronosBH includes Vinci – Multidimensional Fluorescence Spectroscopy, a powerful software package that provides several ready-to-use routines for reliable, user-friendly acquisition of complex fluorescence data:

- Spectra (excitation, emission, synchronous, time-resolved and polarization)
- Measurements at fixed wavelengths (intensity and polarization)
- Measurement of kinetics data
- Time-resolved measurements (lifetimes and rotational correlation times)

Designed for Steady-State & Time-Resolved Applications

Steady-State Measurements

- Intensity measurements at fixed wavelengths
- Polarization (anisotropy) measurements at fixed wavelengths

Time-Resolved Measurements

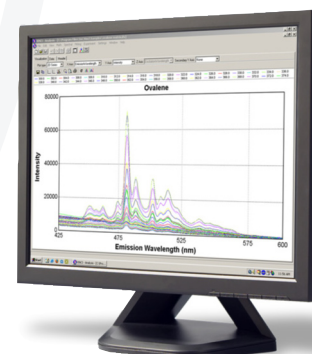
- Single- and multi-exponential decays
- Anisotropy decays
- Time-resolved kinetics
- Time-resolved spectra
- FRET

Key Features

- Time-domain lifetime measurements with picosecond resolution
- Lifetime measurement range from milliseconds to picoseconds
- Flexible instrument configuration with a variety of light sources
- T-format and parallel beam optical design for fast and precise polarization measurements
- Full automation of instrument components including: cuvette holder, polarizers, shutters, filterwheel, monochromators and stirrers
- PC-controlled integration of temperature path, titrator, stopped-flow apparatus and pressure-pump
- Powered by Vinci - Multidimensional Fluorescence Spectroscopy.

Vinci, the Complete Software Solution for Steady-State and Time-Resolved Applications

A powerful and flexible multidimensional fluorescence spectroscopy software with ready-to-use routines for data acquisition and analysis.



Software Specifications

Instrument Automation

ChronosBH is the instrument of choice for reliable time resolved data acquisition using laser diodes and LEDs. All hardware components, including external devices, are automated and PC-controlled.

User-friendly Acquisition

A sequence of measurements is acquired through a one-time setup of the experiment file, allowing for the automatic acquisition of multiple data sets.

Personalized Login

With its unique system memory design, Vinci allows user-specific access. In multi-user environments each user may perform measurements with a personalized instrument configuration.

Software Specifications

Decay Times

Decay time analysis is performed on multiple data sets using various models including multi-exponential, non-exponential and lifetime distributions.

Rotational Correlation Times

Anisotropy decay data analysis of up to three species using models for isotropic, anisotropic and hindered rotators.

Data Display & Export

- 2D and 3D display with user-defined colors and fonts
- 3D surface rotation and in/out zooming
- 3D display of user-defined functions
- Cursor identification of XY spectra coordinates
- Time-resolved spectra display as 3D and center of gravity plots
- Export to gif, png, jpeg, bitmap and metafile formats
- Data are generated and exported in ASCII format

Instrument Specifications

Light Sources: Laser diodes (405, 436, 473, 635, 690, 780 and 830 nm), Ti:Sapphire, white and other pulsed lasers

Focusing & Collection Geometry: Parallel beam design for precise polarization measurements

Polarizers: UV grade Glan-Thompson with L/A=2.0

Detectors: PMTs and MCPs

Wavelength Range: 160 – 850 nm (MCP), 185 – 850 (PMT)

TCSPC Modules:

- Electrical Time Resolution down to 8 ps FWHM/5 ps rms
- Minimum Time Channel Width 820 fs
- Total useful count rate up to 4 MHz
- Measurement times down to 1 ms

Lifetime Measurement Range: 10-11 to 10-2 sec

OS Requirements: Windows XP, 2000

Power Requirements: Universal power input of 110-240 V, 50/60 Hz, 400 VAC

Dimensions: 540 mm (L) x 400 mm (W) x 330 mm (H)

Weight: 26 Kg

For more information about ChronosBH, including a complete list of accessories, call (217) 359-8681 or visit www.iss.com.

Information & specifications are subject to change without notice.