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.