enVISion™

UV/Vis/Near-IR TA Spectrometer

RAISE EYEBROWS

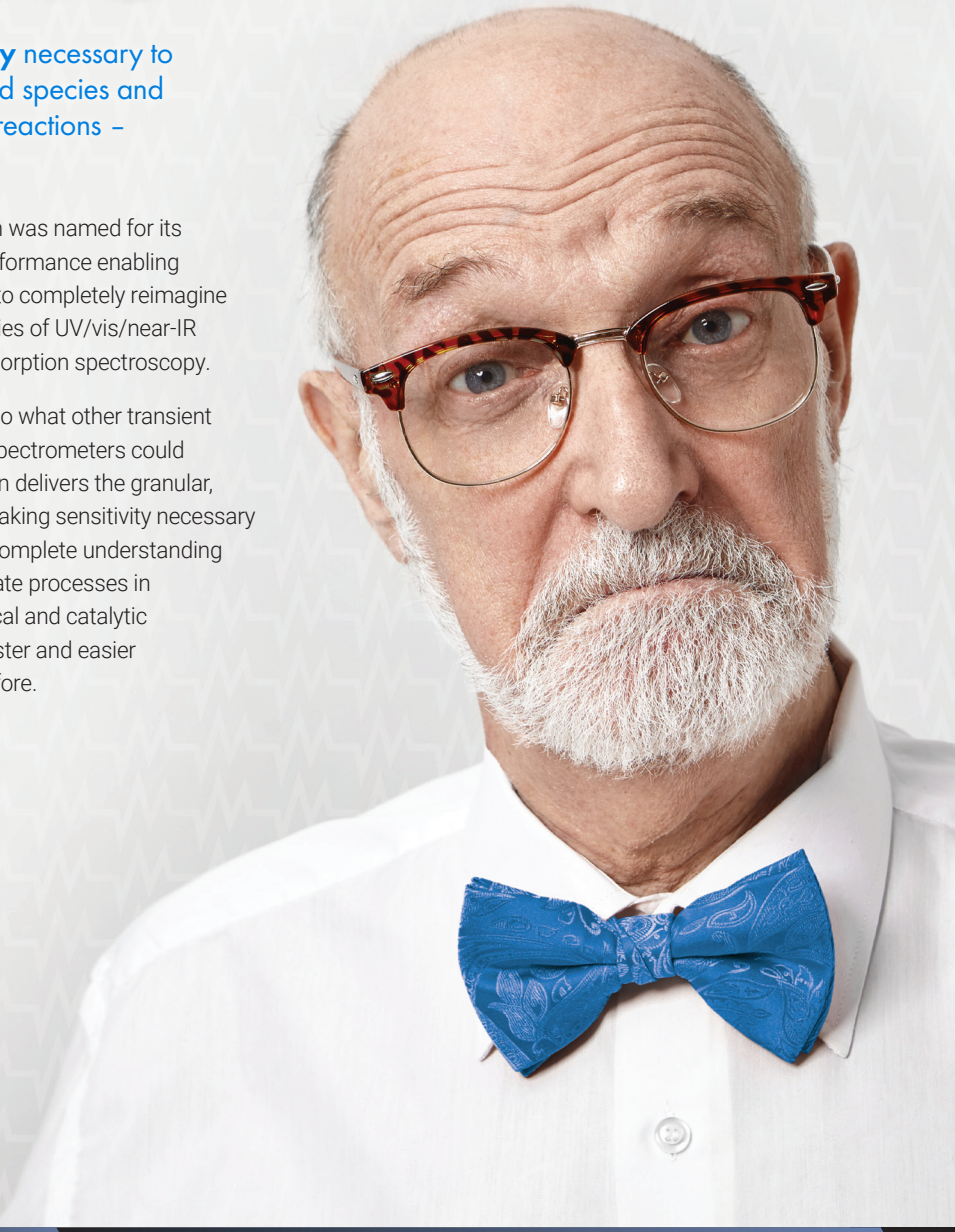
Difference-making spectroscopic sensitivity necessary to advance complete understanding of short-lived species and excited states in photochemical and catalytic reactions – faster and easier than ever before.

It's the game-changing transient absorption (TA) spectrometer electrochemists, biochemists, material scientists, solar/photovoltaic researchers, shared user facilities and more have been waiting for.

The enVISion™ delivers broadband nanosecond TA spectroscopy that **seamlessly probes the entire spectral region over UV, visible and near-infrared wavelengths with 5 ns time resolution** and up to milliseconds of delay time. **Record the entire time axis in a single laser shot for fast data collection with unprecedented sensitivity**. All from an all-in-one instrument that's as easy to use as a UV-Vis spectrometer; that fits comfortably on any table or lab bench.

The enVISion was named for its standout performance enabling researchers to completely reimagine the possibilities of UV/vis/near-IR transient absorption spectroscopy.

Invented to do what other transient absorption spectrometers could not—enVISion delivers the granular, difference-making sensitivity necessary to advance complete understanding of excited state processes in photochemical and catalytic reactions; faster and easier than ever before.



Rapid Data Collection.
Compact. Self-contained.
Easy-to-Use. Remarkable.

MAGNITUDE INSTRUMENTS™

Measurably Different.
TRANSIENT ABSORPTION SPECTROSCOPY

Transient Absorption spectroscopy with higher throughput and exponentially greater sensitivity.

enVISion™
UV/Visible IR TA Spectrometer

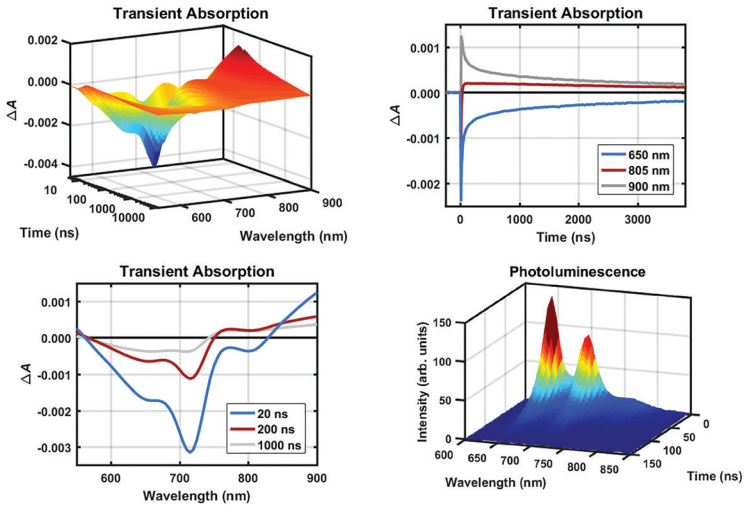
State-of-the-art TA spectroscopy measurements can now be performed with little training, making the system ideal for user facilities, multi-disciplinary research groups, undergraduate labs as well as advanced users seeking adaptable performance.

A true one-box platform, the enVISion redefines UV/vis/near-IR TA spectroscopy with the simplicity of UV-Vis steady state absorption measurements. Our patented noise cancellation technology enables the lowest recorded detection limit in TA spectroscopy (100 ΔnanoO.D.) with full 2D wavelength and time resolution.

Aside from TA spectroscopy, the enVISion can additionally be used for performing time-resolved photoluminescence spectroscopy with as fast as 5 ns time response along with steady state absorption measurements in the UV/visible/near-IR spectral regions.

Our fully integrated, one-box system includes everything for dynamic results:

- ✓ Probe light source
- ✓ Excitation laser
- ✓ All optical components
- ✓ Large, modular sample compartment
- ✓ All electronics
- ✓ Detection system
- ✓ On-board computer
- ✓ Analysis & automation software



SPECIFICATIONS

Cool!

Detection Limits (single frequency)	**10^{-7} ΔO.D. (1 hr); 10^{-6} ΔO.D. (<1 min)**
Time Resolution	≥5 ns (250 – 1700 nm)/ ≥14 ns (1700 – 2550 nm)
Time Range	Up to 130 ms *Depending on laser rep-rate.*
Spectral Resolution	1– 20 nm, Automated Control
Spectral Range	**250– 2500 nm**
Repetition Rate	Variable 8 Hz – 19 kHz (Automated Control, Internal Lasers)
Excitation Wavelength	266 nm, 355 nm, 532 nm, 1064 nm, or dual 355/532 nm (Internal Laser)
Sampling Rate	Up to 2 ns per sample
Size (inches)	**28 x 46 x 12**

APPLICATIONS

- Charge trapping and recombination in electronic materials
- Dynamics of biological materials
- Chemical reactions...and so much more

HIGHLIGHTS

- Unprecedented 100 ΔnanoO.D. detection limit
- One-box, user-friendly, turn-key system, with capability to accept additional external excitation sources
- No special laboratory requirements–operate on any lab bench or table
- Supports transmission and reflection probe light geometries
- Full time axis recorded with a single laser shot enables rapid signal acquisition; automated or user-defined frequency sampling for full 2D frequency-time data
- Time-resolved absorption spectroscopy with ≥5 ns time response and up to milliseconds of delay time. Probe wavelengths can range from UV/visible to near-infrared.
- Time-resolved photoluminescence spectroscopy with ≥5 ns time response and up to milliseconds of delay time
- Steady-state absorption spectrometry (e.g. UV/vis/near-IR absorption spectroscopy)

Learn more about our exciting new TA technology! Call (717) 301-4300 to schedule an in-person or virtual demo today and discover how we can help *you* raise eyebrows.

MAGNITUDE INSTRUMENTS™

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Phone: (717) 301-4300 **Lets Talk!**
www.magnitudeinstruments.com

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