

Tradeshaw Talks with Tornado Spectral Systems - ACHEMA 2018

From [Tornado Spectral Systems](#)

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Hall 4.2 B7

The logo for ACHEMA 2018, featuring the word 'ACHEMA' in white and '2018' in blue, set against a dark blue background.

Tell us about your company and why you are attending ACHEMA 2018

Tornado Spectral Systems is a leading manufacturer of spectrometers and systems primarily for Raman spectroscopy and spectral-domain optical coherence tomography (SD-OCT). Our spectrometers deliver significantly enhanced sensitivity by using a patented high-throughput virtual slit (HTVS) to eliminate the physical slit of a conventional spectrometer and avoid signal losses while maintaining high spectral resolution. At ACHEMA, we want to introduce chemists and process technicians from every industry to our powerful Raman system that does not compromise spectral resolution and throughput efficiency.

What Products are you highlighting this year?

We are showcasing the HyperFlux™ PRO Plus which is a complete process Raman system, with the laser, power, and control/safety hardware built into the system. This powerful, reliable, and easy-to-use instrument is contained in a small, lightweight package which is readily deployed in both in-line process and laboratory settings.



What is it about your technology that gives you a competitive advantage?

Raman spectroscopy is a powerful analytical technique but Raman systems have traditionally been limited by a lack of sensitivity due to the input slit trade-off between resolution and throughput. What's unique about our technology is that the HyperFlux PRO Plus uses a proprietary HTVS-enabled spectrometer to deliver better Raman sensitivity than ever before possible, designed to provide users with faster measurements (10x to 30x) for better process responsiveness, better sensitivity for lower detection limits, and permitting reduction of the laser power without sacrificing performance. When compared to other systems, our spectrometers are designed to provide 10X photon throughput.



Which industries will benefit from your products?

The scope of application extends into many industries such as: pharma, plastic and polymers, bioprocessing, specialty chemical, biotech, academia, etc.

Tornado Spectral Systems



Address

Suite 402, P.O. Box 218, 555 Richmond Street West
Toronto
Ontario, M5V 3B1
Canada



Tornado Spectral Systems designs, manufactures, and sells dispersive optical spectrometers primarily for Raman spectroscopy and spectral-domain optical coherence tomography.

Founded in 2010, Tornado Spectral Systems is a developer of real-time optical process analyzers and imaging solutions using a portfolio of patents that includes Tornado's foundational and revolutionary High Throughput Virtual Slit (HTVS).

The HTVS technology allows the best Raman analysis currently achievable anywhere. The superior performance of Tornado's HyperFlux™ PRO Plus Raman spectroscopy system allows for more accurate chemical identification and quantitation even with challenging mixtures and low concentrations, faster measurements of dynamic reactions, and low laser power operation in hazardous environments.

HyperFlux PRO Plus uses a proprietary HTVS-enabled spectrometer to deliver better

Raman sensitivity than ever before possible, making it an ideal solution for production line and laboratory settings.

Combined with their small size and low cost, Tornado's non-destructive, real-time measurement solutions offer numerous benefits for established analytical practice and facilitate broader adoption of Raman methods for pharmaceutical, petrochemical, food, biotech, and other applications.