

# Raman Spectroscopy on Inorganic Materials

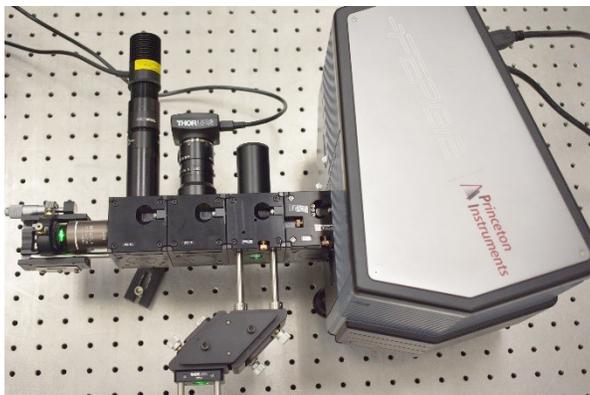
## Princeton Instruments Introduces 532 nm Accessories for FERGIE® Spectrographs

September 11, 2018 – New Jersey, USA – Princeton Instruments, a world-renowned manufacturer of scientific cameras and spectroscopy equipment, is pleased to announce the immediate availability of 532 nm Raman accessories for its popular and easy-to-use FERGIE spectrometer product line.

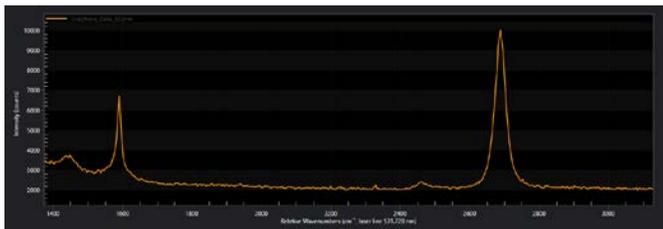
As the only aberration-free spectroscopy system on the market today, FERGIE has received numerous accolades from academic and industrial users alike for its outstanding results. The system's unique optical design and innovative, modular CUBE accessories enable users to perform high-precision Raman, fluorescence, absorption, and transmittance/reflectance measurements with ease.

“FERGIE provides a carefully conceived ecosystem that not only allows researchers to design an experiment quickly but also to switch between different experiments in minimal time,” comments Peng Zou, FERGIE product manager at Princeton Instruments. “We’re now expanding the system’s ecosystem by adding a set of 532 nm accessories, including f-matched Focusing CUBES as well as Raman CUBES with fully aligned Raman notches and clean-up filters. FERGIE makes it easier than ever to conduct *even challenging* Raman measurements on inorganic and semiconductor materials.”

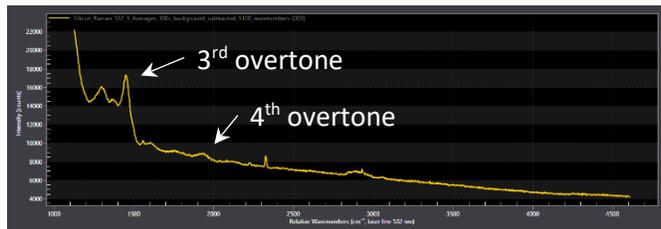
Raman measurements at 532 nm offer better sensitivity with a higher Raman cross-section ( $\sigma \propto \frac{1}{\lambda^4}$ ) compared to Raman measurements at 785 nm or longer wavelengths. The 532 nm excitation wavelength also delivers higher spatial resolution for Raman microscopy measurements, making it ideal for carbon materials (e.g., graphene and carbon nanotubes) and other thin film material characterization. In contrast, the 785 nm excitation wavelength is preferred for organic and biological samples that have fluorescence background. FERGIE is the perfect choice for both 532 nm and 785 nm Raman applications.



FERGIE Raman microscopy setup with 532 nm Raman CUBE.



532 nm Raman spectra of single-layer graphene.



532 nm Raman spectrum of silicon 3<sup>rd</sup> and 4<sup>th</sup> overtone bands.

To learn more about the new 532 nm Raman accessories as well as other FERGIE system accessories, please contact Princeton Instruments or one of its local sales offices — or visit [www.fergiespec.com](http://www.fergiespec.com).



## ABOUT FERGIE

FERGIE is a fully integrated, aberration-free spectrograph with a built-in, low-noise, cooled detector. Featuring a trim 11" x 7" x 8" profile, FERGIE provides the high sensitivity and low noise needed to address a wide range of spectroscopy applications. Its ecosystem of easy-to-use accessories, which includes everything from lasers, fiberoptics, and calibration sources to the ingeniously designed family of light-coupling FERGIE CUBES, allows scientists, educators, and engineers to put together complete experiments in a matter of minutes.

"I can honestly say FERGIE is changing the way we do spectroscopy in our lab." Dr. Mark Waterland, Messey University.

'We are switching the Fergie from the microscope to a microfluidic fluorescence platform, it takes only a few minutes. Fantastic tool.' Dr. Denis Boudreau, Université Laval.

Find out more about what users are saying and their researches using FERGIE at [www.FERGIESPEC.com](http://www.FERGIESPEC.com)

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## About Princeton Instruments

Princeton Instruments designs and manufactures high-performance CCD, ICCD, EMCCD, *em*ICCD, InGaAs, and back-illuminated sCMOS cameras; high-throughput spectrographs; complete spectroscopy systems; and optics-based solutions for the scientific research, industrial imaging, and OEM communities. We take pride in partnering with our customers to solve their most challenging problems in unique, innovative ways. Princeton Instruments is a registered ISO 9001:2015 company. For more information on all Princeton Instruments products, please visit [www.princetoninstruments.com](http://www.princetoninstruments.com).