



Press Release

October 21, 2020

Simplifying light microscopy: Single-wavelength fiber laser for 2-photon fluorescence excitation

The FemtoFiber ultra 920 at an output wavelength of 920 nm is ideally suited for the two-photon excitation of common fluorophores like GFP, eGFP, Eosin, GCaMP, CFP, Calcein or Venus.

In 2-photon microscopy, peak-power is brightness! If you care for the best image brightness, you need short pulses, high power, and most importantly a clean temporal pulse shape.

With more than sufficient output power, shortest pulses, and our unique Clean-Pulse Technology, the FemtoFiber ultra 920 features the highest relative peak power and enables unmatched brightness in 2-photon microscopy without unwanted heating of the sample.

With its robust and compact design, the FemtoFiber ultra 920 is an easy to operate and maintenance-free laser system. The laser system is a great solution for applications in non-linear microscopy like two-photon excitation of fluorescent proteins and SHG based contrast mechanisms. With the emission wavelength of 920 nm it provides highest peak power for especially green and yellow fluorescent protein markers (GFP, YFP) commonly used e.g. in neurosciences and other laser related biophotonics disciplines.

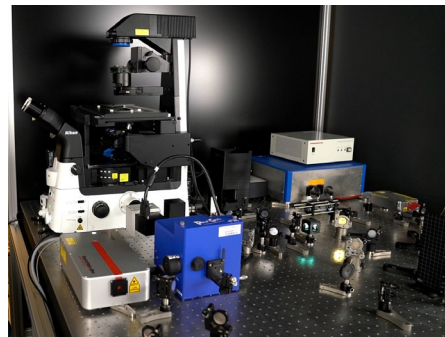
Turn-key and intuitive operation, fully-integrated dispersion compensation to ensure shortest pulses at the sample and built-in power control make the system extremely user-friendly and allow you to focus on your research!

The unique offering of the FemtoFiber ultra 920 has the potential to revolutionize two-photon fluorescence microscopy by making simple and cost-efficient light sources available to everyone.

For more information visit www.toptica.com/920, read the paper on analyticalscience.wiley.com and watch the [webinar](#)



FemtoFiber ultra 920 – powerful and compact 920 nm femtosecond laser system with turnkey operation and cost-effective design for multiphoton and second harmonic generation (SHG) microscopy.



Typical compact and simple two-photon microscopy setup with a modern single-wavelength fiber laser operating at 920nm. Laboratory of Prof. Thomas Hellerer at the University of Applied Sciences in Munich.

TOPTICA Photonics AG

Lochhamer Schlag 19
82166 Graefelfing, Germany
www.toptica.com

Press Contact

Mr. Jan Brubacher
Phone + 49 89 85837-123
jan.brubacher@toptica.com

TOPTICA has been developing and manufacturing high-end laser systems for scientific and industrial applications for 20 years. Our portfolio includes diode lasers, ultrafast fiber lasers, terahertz systems and frequency combs. The systems are used for demanding applications in biophotonics, industrial metrology and quantum technology. TOPTICA is renowned for providing the widest wavelength coverage of diode lasers on the market, providing high-power lasers even at exotic wavelengths.

Today, TOPTICA employs 340 people worldwide in six business units (TOPTICA Photonics AG, TOPTICA eagleyard, TOPTICA Projects GmbH, TOPTICA Photonics Inc. USA, TOPTICA Photonics K.K. Japan, and TOPTICA Photonics China) with a consolidated group turnover of € 76 million.