



MICROSYSTEMS

## Going beyond the diffraction limit with Leica Microsystems

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Super-resolution microscopy overcomes the diffraction limit and allows users to investigate subcellular architecture and dynamics at the nanoscale. Leica Microsystems has more than 10 years of super-resolution microscopy experience since the introduction of the very first super-resolution microscope in 2004, Leica TCS 4Pi.

With the latest generation of super-resolution systems, Leica SR GSD 3D and Leica TCS SP8 STED 3X, Leica Microsystems has led the way in offering unparalleled abilities to study biological processes in multidimensional beyond the diffraction barrier down to the molecular level.

We will discuss the new innovations on the Leica TCS SP8 STED 3X system that now allow 3D optical resolution improvement with all depletion laser lines to allow resolution improvement across the visible spectrum. This will offer more possibilities for live cell imaging with many more fluorescent proteins and dyes able to be used.

The Leica SR GSD 3D offers unprecedented stability to allow the most accurate localization precision. We will discuss some of the key features that provide the stability including the unique SuMo stage. We will also give details about the 160x objective lens especially designed for GSDIM which allows the best results across the visible spectrum.

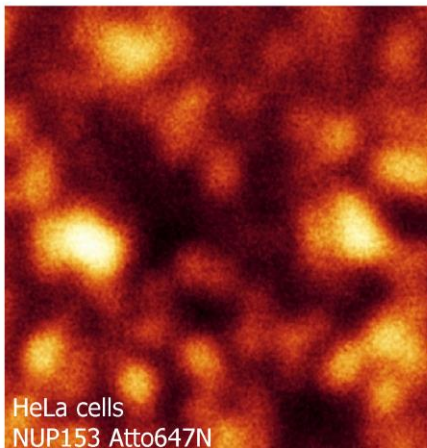
For SP8 confocal users, by combining our super-sensitive hybrid detectors and trusted mathematical Huygens deconvolution from the technology leader SVI, the Leica TCS SP8 high-resolution imaging system easily improves the resolution of your confocal microscope to around 140nm lateral resolution and delivers crisp multicolor images.



### Pulsed STED @ 775 nm

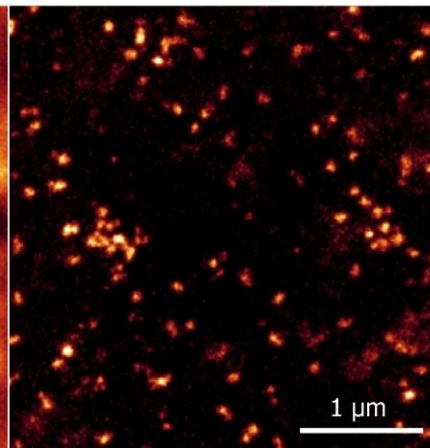


Confocal



HeLa cells  
NUP153 Atto647N

STED



1 μm