



The Q2 Laser Scanning Nanoscope for quantitative cell biology

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At Neuroscience 2015 ISS introduces the Q2, the Laser Scanning Nanoscope for quantitative cell biology. The instrument, developed in the ISS facility of Champaign, Illinois, features three input ports for lasers, one fast scanning mirror unit and the computer-controlled confocal pinhole. The standard laser is a multiphoton fiber laser by Toptica emitting at 780 nm; standard multiphoton lasers can be coupled along with single-photon lasers and the supercontinuum laser. Detectors are GaAs photomultiplier tubes (PMT), hybrid PMTs or APDs.

The Q2 is capable of acquiring intensity and lifetime imaging (steady-state, FLIM, PLIM); measurements of the Fluorescence Fluctuation Spectroscopy family (FCS, FCCS, PCH, FLCS, scanning FCS, RICS, N&B); 3D particle tracking and Superresolution; and single molecule imaging (burst analysis, FRET efficiency determination; stoichiometry determination).