

STEDYCON Confocal/Super Resolution Microscope

STEDYCON from Abberior is a new class of nanoscope with four colors confocal and STED (Stimulated emission depletion) capabilities. The lateral STED resolution could reach 30nm depending on dyes and objectives used. The acquired STEDYCON system is fitted on a Nikon Ti-S-E inverted microscope from a camera port and equipped with four excitation lasers: 405 nm CW and 488, 561, 640 nm pulse laser.

Main features of System:

- The STED process is applied by a 775 nm pulse laser. Four highly sensitive single-photon-counting Avalanche photodiode detectors (APD) are mounted.
- Two STED and four confocal imaging channels can be detected. A 100X/NA=1.45 oil immersion lens and other low magnification lens are provided to satisfy versatile measurements.
- An XY stage from Marzhauser and an ultra-fast and precise Piezo Z stage from PIFOC are mounted. Browser-based acquisition software is installed on a powerful PC with a Windows 10 system.

Imaging lasers:

- 405nm CW laser
- 488nm pulse laser
- 561nm pulse laser
- 640nm pulse laser
- 775nm STED pulse laser

Objectives:

Objective type	Magnification Aperture	Numerical Aperture	Immersion	Correction ring	Phase contrast	Coverglass	Free working distance (mm)
Plan Apo λ	4x	0.2	DRY	-		-	20
Plan-Neofluar	5x	0.15	DRY	-	Ph 1	0.17	13.6
Plan Apo	10x	0.45	DRY	-		0.17	4
Plan Apo λ	20x	0.75	DRY	-		0.17	1
Plan Apo λ	60x	1.4	OIL	-	EXT PH3	0.17	0.13
Plan Apo λ	100x	1.45	OIL	-	EXT PH3	0.17	0.13

Applications:

- Other advanced applications including Z stack, multipositioning, time series, and tiling and stitching can be performed.