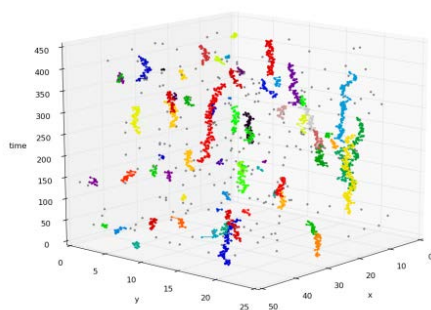
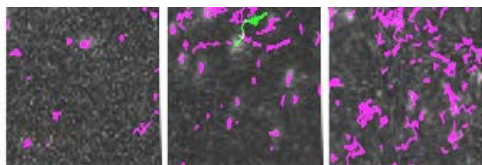


Octopus is a national user facility specialising in supporting UK science and industry with bio-imaging techniques

The Octopus facility supports and develops the latest microscopy techniques to enable successful applicants to perform complex studies in the areas of biological, chemical, environmental and materials science.



Super Resolution Microscopy

STORM/PALM 20 nm max xy resolution	Bruker Vutara SR-350. Max 0.5 Hz. Simultaneous two-colour 3D (biplane) imaging	405, 488, 561, 642, 750 nm
	Zeiss Elyra PS1. Low speed. Sequential three-colour 3D (phase ramp) imaging	405, 488, 561, 642 nm
Cryo-STORM 20 nm max xy resolution	FEI CorrSight & custom built microscope with cryo stage	
Structured illumination 100 nm max xy resolution	Zeiss Elyra PS1. Any dye, low phototoxicity. Sequential three-colour imaging. z-stacks	470-680 nm
STED 50 nm max xy resolution	Leica SP8, 592/775 nm depletion, FLIM, FCS	

Light Sheet Microscopy

Light sheet microscopy Up to 100 frames/s x,y diffraction limited; z up to 0.86 µm	Leica TCS SP8 DLS; fast 3D reconstruction of µm- mm translucent samples; in-situ fluorescence imaging; sequential multi-colour detection	470-670 nm
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TIRF/Single Molecule Techniques

TIRF	Single molecule tracking Stoichiometry	Single pair FRET Single molecule polarisation	Nanometre separation	405, 488, 532, 561, 642 nm
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Optical Trapping

Optical Tweezers	Force Measurement Raman Spectroscopy Mie Scattering Spectroscopy	Wavelengths for trapping and Raman 488 nm, 514 nm 532 nm 700 – 900 nm 1064 nm, 1090 nm
Aerosol Trapping	Confocal Microscopy FLIM/PLIM TIRF Multi-colour	

Lifetime Imaging

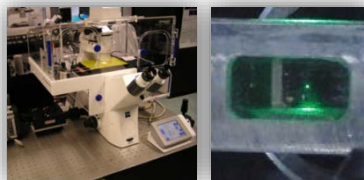
Confocal	Fluorescence FLIM 25 ps-50 ns Phosphorescence PLIM 100 ns-ms Multi-colour 2-16 channels Multi-wavelength excitation	Wavelengths 405nm, 488 nm, 543, 561 nm Fianium, NKT 550 – 980 nm 76MHz, 200fs
Multiphoton		
Widefield		

Successful applications are given full support from a team of experienced professional scientists whose sole aim is to deliver high quality and high impact results on every project

A comprehensive range of laser-based imaging techniques and sample handling are supported

Suite of cutting edge, complimentary bio-imaging techniques

Animal cell culture facilities
Advanced, bespoke image analysis



Chemistry and biological prep labs

Interdisciplinary operations team

Access to simulation /modelling expertise for interpretation