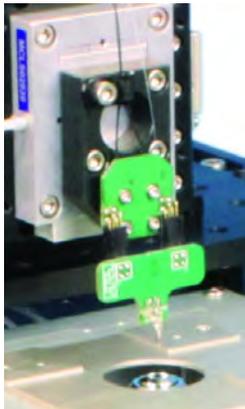


Near Field Scanning Optical Microscope is latest system from Mad City Labs



Mad City Labs' **Near Field Scanning Optical Microscope System (NSOM)** is based on their versatile **RM21™ microscope platform**. It offers NSOM, SPM, and fluorescence optical microscopy techniques in a single package.

The NSOM combines Mad City Labs' successful SPM resonant probe, the MadPLL® phase lock loop controller, and several of the company's precision positioning elements. For example, the NSOM includes six axes of motorised positioning for the sample and NSOM probe, and three axes of closed loop nanopositioning for exceptional position resolution and accuracy.



Other key items supplied are: a 635 nm laser excitation source with fibre launch, a 100x 1.25 N.A. oil immersion objective lens, an avalanche photodiode detector, a CMOS alignment camera, and various tuning fork probes (*image above*).

The microscope's versatile design allows researchers to configure the instrument for many different optical microscopy techniques such as:

- Aperture-less NSOM
- Resonant probe AFM
- Near field spectroscopy
- Fluorescence & epifluorescence microscopy



The NSOM operates in aperture mode, supporting illumination; collection; illumination and collection; reflection and reflection collection, with shear force feedback. Mad City Labs supply a LabVIEW™ based software package which automates the motion control features.

For details about this and other products from **Mad City Labs**, please **contact us**.

Energetiq's EQ-400 offers the highest radiance available in a broadband white light source



Continuing the development of the highly successful **Laser-Driven Light Source (LDLS)** technology, Energetiq's 5th generation EQ-400 offers the highest radiance and irradiance available in a truly broadband white light source.

- Radiance >100 mW/mm².sr.nm
- Extreme high brightness from DUV to NIR: 170-2100 nm
- Very low noise and excellent spatial stability
- Dual beam output, or higher-output single-beam



The **EQ-400** features a compact lamp house, with clean construction that ensures long life and the ultimate in stability. With a 170 to 2100 nm wavelength range, and a choice of source dual-beam output or a single-beam output with retro-reflector, the EQ-400 is flexible for a broad variety of applications.

For details about the EQ-400 and other LDLS light sources **Energetiq** manufacture, please **contact us**.

Non-contact Visible Fault Location in fibre added to OZ Optics range



OZ Optics has expanded its range of **Visible Fibre Optic Fault Locators** with the addition of a benchtop non-contact tester, the ideal solution for inspecting devices with no connectors on the fibre ends.

Visible Fibre Optic Fault Locators launch either 520 or 635 nm laser diode light into a fibre to enable discovery of breaks or sharp bends, which are revealed by the resulting scattered light emerging from the sides of the cable.

Fault locators are now available in four models: two benchtop and two portable...

- Benchtop Non-Contact, for CW and pulsed operation
- Benchtop CW High Power only
- Portable pen - CW only
- 'Pocket size' offering CW or pulsed output



Pulse modulation aids in locating faults under high ambient light conditions and improves battery life. 2 Hz modulation is easy to detect with the naked eye, while 270 Hz and 2 kHz pulse modulation modes are used for fibre identification by detectors. For more information, please **contact us**.

Laser Servo Lock technology demonstrated by Vescent



Lock robustness



Lock Guard™

Vescent Photonics have two videos demonstrating the robustness of their D2-125 servo-loop controller in maintaining lock.

The D2-125 Laser Servo is designed for low-noise servo control of lasers and other experimental systems. The PI²D loop filter, with two-stage integral feedback, provides tight locking to cavities and atomic/molecular transitions. The D2-125 provides full user-control over the loop-filter parameters, enabling servo-loop optimisation for a wide variety of systems such as: acousto and electro-optic actuators, voice coils, piezo actuators, temperature controllers, and so on.

Lock Guard™ Option

Auto relocking is available for the D2-125 Laser Servo as an option. Lock Guard™ detects when the servo loop filter has gone out of lock and automatically recaptures it. When it detects an Unlock Point (a fast change in the servo output), it disengages the servo and holds the output at the last known valid value. Lock Guard™ then waits for a Hold Time before re-engaging the lock. If, during the Settle Time, it detects that the system is still out of lock it will try again. Lock Guard™ control parameters are all user adjustable for maximum flexibility.

If your delicate laser experiment keeps losing its lock, **contact us** for more information.



This month, Elliot Scientific will be exhibiting at...



Photonex Scotland Roadshow

8th June 2016
Heriot-Watt University
Edinburgh



SPIE Astronomical Telescopes & Instrumentation Expo

28th-29th June 2016
Edinburgh International Conference Centre

Website Product Overview 2016 Optical Tweezers 2015 Components Catalogue 2013 2015 Newsletters 2014 Newsletters

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