

2011 Newsletters



Company Profile

Elliot Scientific is a major supplier of Opto-Mechanic components and systems under the Elliot|Martock and Elliot Scientific brands to the Scientific, Research and Industrial communities. In addition, we supply world-class Laser, Cryogenic, Magnetic, Telecom and Datacom systems sourced from many British, North American, European and Far Eastern companies.

Elliot Scientific is uniquely positioned to assist customers by being able to:

- Supply competitive components and systems
- Source, integrate and manufacture complex systems
- Design and manufacture for Custom or OEM requirements

Elliot|Martock

Martock Design became a wholly owned subsidiary of Elliot Scientific in 2003 following thirty years at the forefront of design, development and manufacture of high quality precision instruments and equipment. That tradition continues today as we continually strive to improve and expand the ranges of Elliot|Martock and Elliot Scientific own brand products.

These include our award winning optical tweezer systems, the lab essentials mirror mount range, fibre positioning components, waveguide manipulators, automated alignment systems, micropositioners and other class-leading products.

All of our customers - from academic institutions and government agencies through to commercial researchers and industry - are provided with the highest levels of service backed up by solid technical support from our team of experienced engineers.

Solution Science for Research and Industry

We pride ourselves in offering Solution Science for Research and Industry. We employ the best-qualified staff and scientists to help you sift through the multitude of options available to get the equipment and systems that match your needs. That's **Solution Science**.

Staff

We employ PhD level physicists, scientists and mechanical design engineers to assist you with your product search or application, and to ensure that our advice is correct and balanced. Many of the team have been with us for over ten years, bringing with them a huge amount of experience for you to tap into.

Quality

We have been BS EN ISO 9002 registered since 1993 and BS EN ISO 9001 registered since 2003. We understand the need for continual improvement in services and traceability, both in distribution and manufacture. Our commitment to this ensures our standards are the highest in our industry.

Catalogue & Custom Manufacturing

This catalogue only gives an overview of our extensive range. If you cannot find what you are looking for here, why not phone, fax or e-mail us. Many products have been supplied that started as ideas and concepts requested by customers requiring tailored manipulation systems. With our innovative design experience, we can offer unique solutions in opto-mechanical positioning and control systems. We are here to help you find the right products to meet your requirements.

Elliot Scientific Limited

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Energetiq® LDLS™ Laser-Driven Light Sources now available from Elliot Scientific

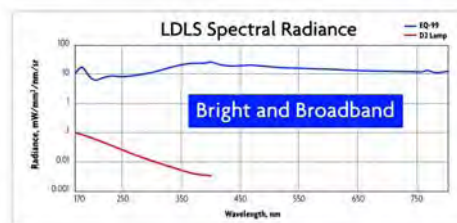


- CW laser plasma discharge
- Very high broadband brightness
- Electrodeless for longer life
- Excellent spatial stability
- SMA fibre-coupled option

Plasma-based light sources for nanoscale applications are a new way forward in illumination technology and Energetiq's revolutionary single lamp LDLS - the focusable high brightness **Laser Driven Light Source** - offers a broad spectral range from 170 nm to visible and beyond with high stability, long life and low cost of ownership.

The **Energetiq® LDLS™** can replace traditional, inefficient, and costly multiple-lamp systems in applications such as:

- HPLC
- High Performance Spectroscopy
- Advanced Imaging
- Microscope Illuminators
- Environmental Analysis
- Environmental Monitoring
- Materials Characterisation
- Sample Testing
- Gas Phase Measurements



Spectral Radiance: LDLS v. Deuterium

Elliot Scientific now offers 5 models from the compact **EQ range** to researchers and industry in the UK and Ireland. If you have an application that needs this solution, then please discuss your requirements with our **Sales Team**

Photonics West 2011



Next week, **Photonics West** opens its doors at **The Moscone Center, San Francisco**. As the flagship event for companies in the industry, Photonics West showcases the tools, applications and innovations that will be available in 2011. If you're going to be at SPIE Photonics West, then this is your opportunity to see Elliot Scientific technologies, discuss the services we offer, and try out some of our products. Something you cannot do over the telephone, through advertising or on-line.

You can talk face-to-face with some of the Elliot Scientific team in **Booth 4912** - download the floorplan [here](#) - and meet other visitors from the Photonics and Laser community. We look forward to seeing you.

Show Preview

Elliot Scientific Tweezer Systems: Now with Camera Particle Tracking Technology



Elliot Scientific brought optical tweezing out of the lab and onto the bench with our **award-winning E3100**. This model has now been superseded by the more capable **E3101** but it is only one of a number of affordable systems that we offer.

- **Single or multi-spot trapping**
- **CPT - Camera Particle Tracking (NEW)**
Measures multiple particle Trap Stiffnesses
- **QPD - Quadrant Photodetector force measurement**
Measures single particle Trap Stiffness
- **Breadboard set-ups & Retrofits**



These options make us the leaders in this field. [Click here to go to the tweezer group pages and see the demo videos.](#)

Better than half-micron sensitivity with Elliot|Martock Miniature Stages



Elliot|Martock high-resolution ($< 0.5 \mu\text{m}$) precision miniature slides have dominated the market for many years and our broad range of stages with travels of 3, 5 and 10 mm will be to the fore at Photonics West.

Available in Small, Very Small and Ultra Small categories, the positioners offer single, dual and three axis configurations with a variety of adjustment options. A number of accessories complement each range to further enhance the useability and flexibility of the stages.

Photonics West gives you the opportunity to see for yourself how Elliot|Martock miniature slides can improve your applications. More information on these positioners can be found [here](#).

Elliot|Martock Flexure Stages

Elliot|Martock's Flexure Stage is still the **best performing** and **best value** high resolution XYZ positioner on the market featuring:

- 20 nm resolution
- 2 mm travel per axis
- Excellent long term stability

"We are frequently complemented on the high quality of our Flexure Stage range and it is important to note that its high resolution allows one to maximise throughput in fibre launch applications. However, long term stability ensures that once you are aligned, the experiment remains aligned at peak power rather than constantly having to tweak the alignment. This is why people favour our Gold Series flexure stages."

Mike Elliot

Elliot Scientific's **Gold Series** XYZ Flexure Stage is manufactured by us in the UK. It is part of our extensive **Elliot|Martock** range of positioning systems.



Flexure Stages



Fibre Launch



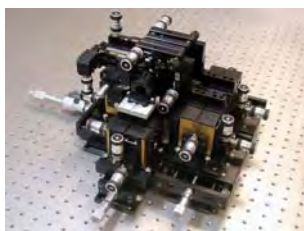
Multi-Axis Positioners



Alignment Accessories

For more information about these products click on an image above, download the **Elliot|Martock Catalogue** or contact **Elliot|Martock Sales Team**.

Manual and semi-automatic alignment systems from Elliot Scientific



Specially developed for a variety of customers, Elliot Scientific regularly builds alignment systems based around manual or **DALi 2** controlled **piezo-driven Elliot Gold Series Flexure Stages**. The rigs offer unprecedented stability and flexibility in multiple axes with positioning accuracies down to 10 nm on some models.




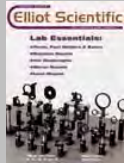



If you have an application that needs a custom solution, then please discuss your requirements with our Sales Team at Photonics West or **contact us**.

Events



Elliot Scientific will be at Biophysical 55 in March - Booth 740, demonstrating our Optical Tweezer System with Camera Particle Tracking Technology

PDF Downloads & Links

						
Home Page	Products & Capabilities Brochure	Tweezer Summary Brochure	Lab Essentials Brochure	Elliot Martock Brochure	2010 Emailed Newsletters	For more News visit ElliotScientific on Facebook



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FEMTOLASERS Deliver Pulse Picking And More For 2011



Pulse Picking offers the selection of up to μJ pulse energies at MHz repetition rates. Developed especially for the FEMTOSOURCE™ scientific™ XL family of high energy oscillators, the pulse picker provides a unique combination of high contrast and high throughput for sub-50 fs oscillator pulses.

- Stand-alone or PC control
- Repetition rate control through:
 - Divider
 - Pulse counting
 - Pulse bursts or combinations thereof
- Rejected laser pulses are available at the secondary output

The robustness of the **INTEGRAL** ultrafast Ti:S oscillator system has been demonstrated in a video recently released by FEMTOLASERS. You can [watch it undergo a shaking test here](#).

Femtosecond researchers may also want to [download the new FEMTOOPTICS catalogue](#). This latest edition features all FEMTOLASERS' precision optical components suited for ultra-short pulse applications in the wavelength ranges 600-1000 nm and 360-440 nm.

If you have an application that needs these solutions, then please contact our **Laser Sales Team** to discuss your requirements.



Elliot Scientific will be at Biophysical 55 in March - Booth 740, demonstrating our Optical Tweezer System with Camera Particle Tracking Technology

SAGA Offers More Energy - Thales Laser Upgraded



- Up to 1.6 J at 532 nm
- 4 - 8 ns pulse duration
- Up to 10 Hz repetition rate

The **SAGA series** from Thales has been improved for 2011 and now offers up to 1.6 J of energy at 532 nm. As the most efficient and compact flashlamp-pumped solidstate laser on the market, it features high-coupling diffusing pumping chambers that ensure a high quality and high efficiency Top Hat profile beam.

SAGA's optical cavity design is based on an unstable resonator with a variable reflectivity mirror to enhance energy extraction. This is housed in a compact structure to ensure excellent short and long term alignment stability. Different harmonic generators on pre-aligned mounts extend the wavelength range to the second, third and fourth harmonics. These are integrated in a temperature regulated housing for optimum long term performance.

If you require more information on this product, or any other lasers in the **Thales range**, then contact our **Sales Team**

Elliot Scientific is supporting The International Year of Chemistry



The **International Year of Chemistry 2011** is a worldwide celebration of the achievements and contributions of chemistry. Under the unifying theme *Chemistry — our life, our future*, IYC 2011 offers a range of interactive, entertaining, and educational activities for all ages.

Throughout the year, Elliot Scientific will highlight activities that are of interest and will also be actively participating through our [Ask the Experts](#) page.

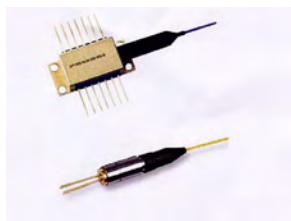
Cryogenic Probe Stations Explained



Lake Shore Cryogenic Probe Stations are used for testing the electronic and magneto-transport properties of chips, wafers, and packaged devices. The systems feature variable temperature operation from 1.5 K to 475 K, and can accommodate up to 4" wafers with up to 6 micro-manipulated probes depending on model chosen. In this **video**, Brad Dodrill explains the capabilities and multiple uses of Lake Shore's cryogenic probe stations.

If you would like more information on the systems available, then please discuss your requirements with our **Lake Shore Sales Team**.

New Discrete Mode Speciality Laser Diodes from Eblana



Eblana Photonics has launched several new laser diodes that feature Discrete Mode technology for improved wavelength performance. In addition, the original 1550 nm butterfly laser diode range Elliot Scientific offers has also been supplemented with a 100 kHz linewidth model. The new line up is:

- Narrow Linewidth Laser - Under 100 kHz at 1550 nm
- Dual Mode Laser - Simultaneous emission at two different wavelengths
- Single Wavelength Lasers - 690, 780 and 3350 nm
- High Power Single Transverse Mode Laser - Up to 100 mW at 1550 nm

To discover what Eblana can offer you, please contact our **Sales Team**

1-6 May 2011
BALTIMORE CONVENTION CENTER
Baltimore, Maryland, USA

- Short Courses: 1-3 May
- Technical Conference: 1-6 May
- Exposition: 3-5 May

Elliot Scientific will be at CLEO in May - Booth 1824

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International Year of CHEMISTRY 2011
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Energetiq win Prism Award at 2011 Photonics West



SPIE and Laurin Publishing awarded a 2011 Prism Award for Photonics Innovation in the product category of Other Light Sources to Energetiq® for the EQ-99. The Prism Awards are an annual competition that recognise the best in innovative technology within the multi-billion dollar business of optics and photonics. A panel of independent judges, acknowledged as experts in their respective fields, selected the winners from more than 80 entries.

Energetiq® Laser Driven Light Sources (LDLS) use a focused laser beam to generate an incredibly bright plasma without electrodes. Already established in the Semiconductor industry, applications in Life Sciences have yet to benefit from these intense point light sources that can offer up to 10x the brightness of traditional lamps, higher UV output, much longer working lives and lower cost of ownership.

For more information about this new and exciting light source, [contact us now](#).

New Hybrid Low Temperature Cryostat



Janis Research Company has developed a new hybrid low temperature system; the versatile model 2K-VTI variable temperature cryogen-free (dry) system has been combined with a wet (LHe cooled) 9T/4T vector magnet to provide low temperature and high magnetic field measurements.

The **2K-VTI** can be integrated with either wet or dry magnets, and can be configured for sample in vacuum, sample in ultra high vacuum (UHV), sample in exchange gas or even sample in liquid.

The 2K-VTI cryostat can be operated in several different modes, allowing the user to optimise the cooling method for the particular sample and experimental requirement.

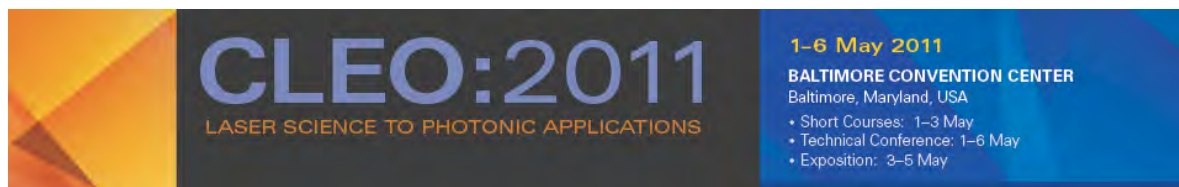
You can find out more information about this cryostat and other Janis Research products [here](#).

CSA Webinar: Introduction to Cryostat Design



To complement the Janis Research Hybrid Cryostat news, we just want to highlight a webinar series on **Cryostat Design** organised by the **Cryogenic Society of America**.

Presented live by Dr. John Weisend II, Professor of Engineering at Michigan State University, the four-session webinar will be held at 12 noon (EST) on consecutive Fridays in April. If you would like more information, visit the [CSA Webinar Page](#)



Elliot Scientific will be at CLEO in May - Booth 1824

The International Year of Chemistry: Dr Hal Sosabowski



Dr Hal Sosabowski, from Brighton University, is the **face of the IYC** for the **Royal Society of Chemistry**. Each year, thousands of people are enthralled as he makes learning fun through his **Big Bang Show** - an offering of explosive and colourful science featuring the power of chemistry. Although currently touring Belgium, Dr Hal will make a welcome return to the UK at **Science World 2011**.

Throughout this **International Year of Chemistry**, Elliot Scientific will highlight people and activities of interest and will also be actively participating through our **Ask the Experts** page.

CPT Tweezer Publicly Demonstrated



Richard Bowman, from the University of Glasgow, and Elliot Scientific's Colin Freeland put the E4500 CPT Tweezer System through its paces.

Elliot Scientific is the first company to benefit from the University of Glasgow's Easy Access IP initiative, a scheme designed to freely transfer some of the University's technical, scientific and medical intellectual property to research and industry for the benefit of all.

CPT technology enables the collection of data from multiple particles at a higher rate. This allows for:

- Improved trap stiffness measurements
- Multiple particle tracking within microfluidic channels
- Viscosity measurements at several points simultaneously



For more information about this new advance in the field of optical trapping, contact our **Tweezer Sales Team**



The E4500 Laser Tweezer with Camera Particle Tracking (CPT) in Booth 740 at Biophysical 55

Elliot|Martock Miniature Stages feature in New Catalogue



The **Elliot|Martock Range** of high-resolution precision miniature slides have dominated the market for many years and our broad range of stages with travels of 3, 5 and 10 mm now feature in an easy to use PDF catalogue.

Divided into **Small, Very Small and Ultra Small positioners**, the slides are available in single, dual and three-axis configurations with a variety of adjustment options. Centring and rotation stages are also included, along with a complementary range of accessories to further enhance their useability and flexibility.

You can **download the new catalogue as a PDF here**, or view it online magazine-style via our **Issuu channel**.

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Lake Shore Announces New Model 335 Temperature Controller and ...



Lake Shore's new **Model 335 Temperature Controller** offers many user-configurable features and advanced functions that until now have been reserved for more expensive, high-end temperature controllers. It is the first two-channel temperature controller available with user configurable heater outputs delivering a total of 75 W of low noise heater power — 50 W and 25 W, or 75 W and 1 W.

Control outputs are equipped with both hardware and software features allowing you, and not your temperature controller, to easily control your experiments. Alarms and relays are included to help automate secondary control functions and the controller's zone tuning feature also allows you to measure and control temperatures seamlessly from 300 mK to over 1,500 K. This feature automatically switches temperature sensor inputs when your temperature range goes beyond the useable range of a given sensor. USB and IEEE-488 interfaces, intuitive menu structure and logic promote efficiency and ease of use along with drop-in compatibility for the popular Model 331 and 332 temperature controllers through software emulation.

... Model 8404 AC/DC Field Hall Effect Measurement System sensitive to 0.001 cm²/Vs

LAKE SHORE

AC/DC FIELD
HALL EFFECT
MEASUREMENT
SYSTEM

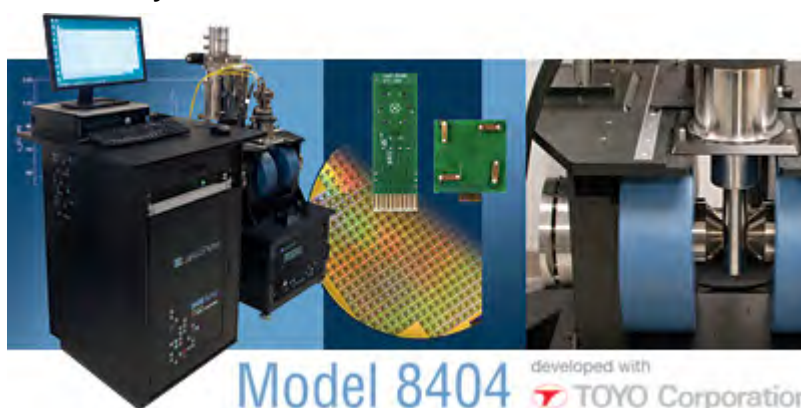
NEW!

AVAILABLE
SEPTEMBER 2011

Measure mobilities
down to 0.001 cm²/Vs

Mobilities from 10⁻³ to 10⁶ cm²/Vs
Resistances from 10 μΩ to 100 GΩ
Temperatures from 15 K to 1273 K

Fields of study:
Solar cells — a-Si, CdTe, GaAs, CdTe
Organic electronics — DTEFs, OLEDs
Transparent conducting oxides — ITO, ZnO, IZO
Semiconductors — GaAs, GaN, SiGe, HgCdTe, SiC



Traditionally, the DC field measurement technique has been sufficient to measure materials with mobilities down to approximately 1 cm²/Vs. However, the emerging class of **photovoltaic** (solar cell), **organic electronic** and **thermoelectric** materials are characterised by low mobilities that are difficult, if not impossible to measure. It is challenging to extract the diminishingly small Hall voltage from the background noise that is produced by such materials using DC field techniques. Consequently, Lake Shore and Toyo have joined in an international partnership to develop the **8400 Series** Hall effect measurement system, with an AC field Hall measurement option capable of measuring mobilities down to 0.001 cm²/Vs, allowing you to measure low mobility materials with ease.

For more information about either of these two new products, please contact our **Cryogenics & Magnetics Sales Team**

OEM Developer Kits from HOLOEYE



Elliot Scientific is now offering a range of **OEM developer kits** from **HOLOEYE** which utilise a translucent or reflective liquid crystal microdisplay. The kits are highly programmable and allow a tailored configuration according to your specific requirements. Via the RS-232 interface and with the provided software one is able to perform gamma control to configure the modulator for different applications and wavelengths. In addition to geometry and gamma corrections, different sequences can also be addressed to the driver.

The four HEO models available from can be used in a variety of situations requiring, for example: Technical or Diffractive Optics, Image Projection, Optical Sensing, Machine Vision, Pattern Recognition or Optical Information Processing.

Each kit is supplied with imager, driver board(s), software and PSU(s), and all have a 6 month warranty. For more information and prices, please **contact us now**.

The International Year of Chemistry: Events in May



Prof. Peter Sarre from the University of Nottingham will be giving a free public lecture on May 12th entitled **Astrochemistry: Spaced-out Molecules!** Taking place in the School of Chemistry's X1 Lecture Theatre, the professor will talk about the amazing chemistry of space - chemistry that happens in clouds of gas and dust that lie between the stars and how it is linked to planets.

Other events next month include **Chemistry Open Days at the University of Sarajevo** from May 10th, and **National Chemistry Week in Singapore** begins on May 28th.

Datasheet Updates from AKELA and IRphotonics...



The latest PDF datasheets for the high-power laser diodes from **AKELA Laser Corporation** and the range of high-performance infrared fibre optics from **IRphotonics** are now available.

AKELA are noted for:

- High-power Laser Diodes & Diode Bars
- Single Emitters & Arrays
- Standard & Custom Packages

AKELA designs and manufactures high-power laser diodes for the medical, industrial and military sectors and has been the market leader in the wavelength region from 1208 to 2000 nm, achieving powers roughly 2-3 times that of its competition. In other wavelengths, AKELA is on par with the market leaders.



IRphotonics offers the iGuide™ range of:

- Single- & Multi-mode Infrared Fibres
- Doped & Indium Fluoride Mid-IR Fibres
- High Power Mid-IR Fibres & UV-IR Glasses

iGuide™ is a product family of advanced infrared fibre optics and materials from IRphotonics designed for use in industrial, medical, telecom, defence and aerospace applications. Based on a ground-breaking process allowing the production of infrared glass and optical fibre with exceptional properties in the 300 to 5500 nm optical window, iGuide™ can also transmit light from UV to the mid-infrared allowing for a wide range of multi-spectral applications.

For more information on any of these products, [please contact us](#).

Countdown to CLEO and ...



May is a busy month for us here at Elliot Scientific as we are attending two major exhibitions and conferences taking place nearly 7000 km apart within 3 weeks of each other.

The logistics for the movement of staff and hardware from the UK to the US for **CLEO**- taking in to account religious festivals, public holidays and royal weddings, then back and on to Munich for **Laser World of Photonics** has been taxing to say the least. However, all the arrangements are in place and in a few days our exhibition team will follow the demonstration equipment that's already on its way to Baltimore.

If anyone is visiting either show, then we look forward to meeting you and giving you the opportunity to experience the **Elliot|Martock** flexure stage range, plus slides and positioners from our extensive portfolio of precision opto-mechanics.

If you cannot make it to a show, then [download our new 2011 catalogue](#). It now combines the Elliot|Martock and *Lab Essentials* ranges into one convenient 14Mb PDF publication packed with extra details and drawings.



Elliot Scientific will be at CLEO from May 3rd - Booth 1824

... Munich



LASER World of PHOTONICS

Elliot Scientific will be at LWP from May 23rd - Hall C1, Stand 360

Links & Downloads



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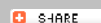
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Firefly-IR Scanner goes live at Laser World of Photonics



A new man-portable, tripod-mounted Firefly-IR with integrated imaging scanner — the Firefly-IR-SC — will be launched by **M Squared Lasers** at Laser World of Photonics next week.

The system is designed to bring a new and unique blend of performance capabilities to a variety of remote sensing and remote imaging applications such as:

- Improvised Explosive Device (IED) detection
- Atmospheric pollutant monitoring
- Hazardous/fugitive gas emission tracking [\[Video\]](#)

The system is based on M Squared Lasers' **Firefly-IR** widely tunable, high repetition rate pulsed MWIR/NIR laser source. With class-leading peak and average power and wavelength coverage, it enables users to probe a wider range of molecules with a single instrument, and to image in real time and at improved standoff detection distances and/or to achieve higher signal to noise.

The unit is supplied ready to use *straight out of the box*. M Squared is also keen to work with customers to help tailor and optimise the Firefly-IR-SC's highly flexible system modules (laser, scanner and software) for their particular remote sensing application. Extending the system to LWIR and narrower linewidths, for example, is already under development.

SolsTiS® - the World's Only Alignment-free CW SLM Ti:S Laser Hits High Power

Already the industry leader by virtue of its sealed, alignment- and maintenance-free design, the unique, ultracompact **SolsTiS** CW narrow linewidth Ti:Sapphire laser now adds output powers >5 W to its wide range of available options and model configurations. The new high power SolsTiS® CW SLM Ti:S laser is compatible with all commercial high-power CW Ti:S pump lasers and can produce industry-leading output powers in excess of 5 W at around 800 nm.

For more information about these new M Squared products and others in their range, [contact us now](#).

LCOS SLM Microdisplay Developer Kits from HOLOEYE



Features

- Microdisplays in sizes from 0.7" to 1.8"
- Amplitude modulation/Projection kits
- High resolution
- Programmable via RS-232
- Monochrome LCOS, Colour Field Sequential LCOS & Transmissive LC displays

We are now offering a range of board-level developer kits from **HOLOEYE** which include either one translucent LC kit or a monochrome/colour sequential reflective LCOS (liquid crystal on silicon) spatial light modulator (SLM) microdisplay kit.

Elliot Scientific offers 3 kits for the developer:

Model	Dimensions (mm)	Diagonal	Resolution	Display Type
HEO 0017	36.9 x 27.6	1.8"	1024 x 768	Transmissive
HEO 0720	25.6 x 15.4	1.2"	1280 x 768	Reflective
HEO 6001	15.36 x 8.64	0.7"	1920 x 1080	Reflective



The board level projection kits come without housing for easy integration. Basically, the LCOS display works like an extended monitor with the signal coming from a standard DVI port on a PC's graphics card or media player.

These plug and play kits allow a quick start-up and easy usage.

For more information, [click here](#) or [contact us](#).

Elliot | Martock Mini-Stages star in new catalogue



Elliot|Martock small, very-small and ultra-small high-resolution precision miniature slides are now featuring in their own downloadable [dedicated catalogue](#).

With travels of 3, 5 and 10 mm, the positioners are available in single, dual and three axis configurations with a variety of adjustment options. A number of accessories complement each range to further enhance the usability and flexibility of the stages.

The full range will be on show at Laser World of Photonics so visitors can see how these Elliot|Martock miniature slides can improve their applications. More information [here](#).

LASER World of PHOTONICS

Elliot Scientific will be in Hall C1 on Stand 360 next week in Munich

Automatic Alignment Systems from Elliot Scientific



Specially developed for a broad range of customers, Elliot Scientific regularly constructs alignment systems based upon our world-leading **Elliot|Martock Gold Series Flexure Stages**.

Controlled by the **DALi 2**, these **piezo-driven** rigs offer unprecedented stability and flexibility in multiple axes, with some models offering positioning accuracies down to 10 nm.

If you have an application that needs a custom solution, then please discuss your requirements with our **Sales Team** at Laser World of Photonics

New Symphony and Scherzo from KLASTECH are music to our ears

♦ Spectroscopy and Bio-fluorescence ♦ Holography ♦ Particle Scattering and Vibration Measurements



KLASTECH are releasing their second generation DPSS single-frequency continuous wave lasers over the coming months and first out are the new high-performance Symphony and Scherzo models.

With both operating at the significant 532 nm wavelength, these lasers come in a variety of powers - Symphony up to 1.5 W and Scherzo offering 50 to 300 mW, are OEM ready, and can be supplied with a choice of connectors - USB, RS-232, Ethernet etc. - for interfacing with a PC-based controller.

Symphony and Scherzo offer beam quality, power and control at realistic prices: outperforming many rival and more expensive offerings - and single frequency operation is included as standard!

Contact us now for details.

The International Year of Chemistry: Top Scientist



© The Muppets Studio, LLC

The world's scientists have been voting in various polls to choose their No.1 chemist for the **International Year of Chemistry**.

Famous names put forward included: Avogadro, Haber, Boltzmann, Kekulé, Boyle, Nernst, Arrhenius, Joule, Perkin, Bohr, Paracelsus, Pasteur and Davy.

However, the public's favourite was voted as Dr. Bunsen Honeydew of Muppet Labs - *where the future is being made today!*

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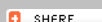
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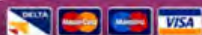
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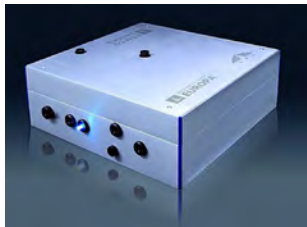
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EUROPA™ MHz OPA now available through Elliot Scientific

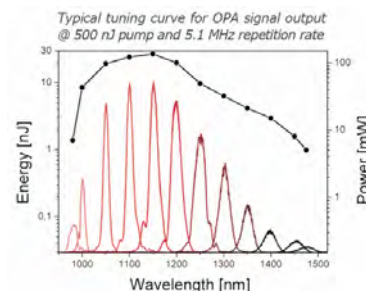


"Uncomplicated, inexpensive, stable and compact, the system is the ideal choice for spectroscopy and microscopy applications which require a high signal-to-noise ratio."

FEMTOLASERS EUROPA™ is the first Optical Parametric Amplifier (OPA) directly pumped by sub-50 fs sub-μJ pulses provided by the unique FEMTOSOURCE™ XL high energy oscillator.

The complete package of FEMTOSOURCE™ XL 500 or 650, PULSEFINDER™ programmable pulse picker and EUROPA™, constitutes a formidable tuneable laser source for delivering high pulse energy at repetition rates up to 5.1 MHz across the visible to mid-IR spectral range. *Click on the graph to enlarge.*

For more information about this laser system and others from the **FEMTOLASERS** range, **contact us now**.



Imperial College
London

SASQC11

International Symposium
on Attoscience and
Ultrafast Quantum Control

**Elliot Scientific and FEMTOLASERS Produktions GmbH will be at SASQC11
on the 7th, 8th & 9th of September 2011 at Imperial College, London**

Bioscience boosted by blue laser light



- ◆ Raman spectroscopy
- ◆ Bio-fluorescence
- ◆ Holography
- ◆ He-Cd replacement
- ◆ Flow cytometry
- ◆ Confocal microscopy

KLASTECH have released two upgraded CW DPSS blue laser systems that can more than fulfil the requirements of a wide variety of applications in science and industry.

Until recently 442 nm laser generation was exclusive to large, costly and cumbersome He-Cd gas-based systems. Although good quality single frequency laser light was produced, the disadvantages were in maintenance, cooling, laser life and beam pointing stability.

These issues have been made obsolete with the introduction of the improved **Concerto®**, a compact, highly stable DPSS blue laser delivering up to 100 mW of low noise power. Concerto® offers all the performance advantages of He-Cd and more, but without the drawbacks.

Blue light at the 488 nm wavelength is key for bio-fluorescence applications. Flow cytometry, confocal microscopy and high throughput screening will also benefit from KLASTECH's new **Blue Note®** laser that offers up to 100 mW of diffraction limited TEM₀₀ optical performance combined with extremely low optical noise and rock solid laser beam pointing stability over long time periods.

More information on these and other lasers in the KLASTECH range can be found [here](#).

Sperian's new Rio frame extends their stylish laser protection range



Sperian is a leading brand in laser eye protection. Their polymer and glass-based styles are designed to maximise visibility while providing unsurpassed attenuation by narrowing the absorption band to the specific wavelengths of your laser installation.

Manufactured to stringent European and ANSI standards in an ISO certified state-of-the-art facility, Sperian's eyewear range offers performance, comfort and style like no other as evidenced by the **New York**, **Milan** and **forthcoming Rio** frames.

If you require spectacles, goggles or eyeshields, discuss your requirements with our specialist **Sales Team**.

PHOTONICS IRELAND 2011

September 7th - 9th 2011

Grand Hotel Malahide, Dublin

Elliot Scientific and M Squared Lasers will be attending Photonics Ireland from the 7th to the 9th of September 2011 at the Grand Hotel Malahide, Dublin

Minus K® Negative-Stiffness Optical Table



Elliot Scientific is introducing a new, versatile, ultra-low-natural-frequency optical table isolation support system to researchers in the UK and Ireland. The **MK52**, from anti-vibration leaders **Kinetic Systems** of Boston, achieves low net vertical natural frequency without limiting its ability to support static loads due to its unique Minus K® negative-stiffness technology.

Horizontal isolation is provided by beam columns connected in series with the vertical-motion isolator. When adjusted to a ½ Hz natural frequency, the MK52 achieves 93% isolation efficiency at 2 Hz, 99% at 5 Hz, and 99.7% at 10 Hz.

For more information about anti-vibration systems, [contact us now](#).

The International Year of Chemistry: Events in July



Chemical Magic

Large Lecture Theatre, School of Chemistry, University of Nottingham
Jul 05, 2011

Science is for Everybody

Australian National Chemistry Quiz
Jul 28, 2011

Children's Chemical Experiment Show

National Museum of Emerging Science & Innovation, Odaiba, Tokyo
Jul 29 - Jul 31, 2011

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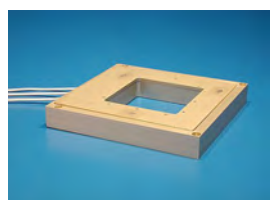
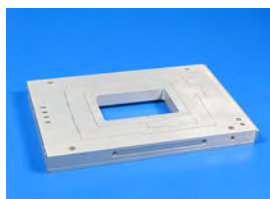
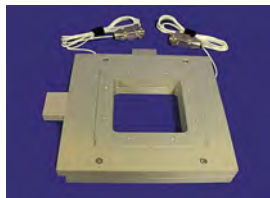
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Mad City Labs full range available exclusively through Elliot Scientific



Mad City Labs of **Madison City** in Wisconsin, the leading US manufacturer of flexure based nanopositioning systems capable of sub-nanometre positioning resolution has appointed Elliot Scientific Ltd. as **exclusive distributor** of its products within the UK and Ireland.

The newly expanded product line now offered by Elliot Scientific covers the entire spectrum of nanopositioning in single and multi-axis stages, some including rotation/tilt and focus mechanisms, for numerous biophysics and lifescience applications. UHV versions are also available for nanotech researchers.

Systems from Mad City Labs combine long range motion with exceptional linearity, orthogonality, and stability to provide innovative and practical control solutions for:

- Super resolution microscopy
- High speed confocal imaging
- AFM, NSOM and scanning probe microscopy
- Fibre positioning & high resolution optical alignment
- Single molecule spectroscopy & particle tracking
- SR optical microscopy
- Sub-diffraction limit microscopy, nanoscopy & lithography

The addition of the Mad City Labs range to Elliot Scientific's portfolio of micro and nanopositioning systems complements our existing product line-up, and positions us as the logical choice of micropositioner supplier to the nanotech, biophysics and lifescience communities in academia and industry.

For more information about the micropositioning systems from Mad City Labs, [download the catalogue here](#) or, [contact us now](#).



Elliot Scientific and M Squared Lasers will be attending Photonics Ireland from the 7th to the 9th of September 2011 at the Grand Hotel Malahide, Dublin

IPG Photonics' offer their Low Power Fibre Lasers through Elliot Scientific



Following our recent appointment as the IPG Photonics' distributor for the UK and Ireland, we are now offering their low power continuous wave (CW) and single frequency diode-pumped fibre lasers up to 20 Watts. IPG Photonics' advanced commercial/non-telecommunications fibre laser devices are a quantum leap forward and provide the best in diode-pumped solid-state reliability and performance for a broad range of applications.

Elliot Scientific offers three series of **rare earth doped fibre lasers** that are more efficient, more cost effective, and more than just a 'like for like' replacement of lamp or diode pumped crystal lasers. The range comprises:

- **Ytterbium doped fibre lasers** - Light output ranges from 1062 to 1075 nm and these lasers provide a highly compact and mobile light source for a number of scientific and medical applications including optical tweezing. They are available as continuous wave, randomly or linearly polarised models with a standard sub-nm and single frequency, below 50 kHz, linewidths.
- **Erbium doped fibre lasers** - Operating between 1535 and 1600, nm which includes the important telecommunications C and L wavebands, these single frequency lasers are ideal choices for interferometry, coherent beam combining, free-space communication and sensing applications due to their less than 50 kHz linewidth. Linear and randomly polarized options with a standard sub-nm linewidth are also available.
- **Thulium doped fibre lasers** - With an output wavelength within 1800 to 2050 nm, these standard linewidth lasers are ideal for the laboratory, medical and industrial communities who require a wavelength selectable diffraction limited beam, turnkey maintenance-free operation, single mode fibre delivery, compact size and air-cooled modular simplicity.

For more information about these systems, please contact our **Laser Sales Team**

Chiroptical Spectroscopy becomes Circular Dichroism next week



Join us at CD2011 in Oxford

25th to 27th July



The **International Conference on Circular Dichroism** has been given a new name as it incorporates the emerging techniques of Chiroptical Spectroscopy such as vibrational CD, Raman Optical Activity and associated applications into the field.

Elliot Scientific will be joined by innovative illumination company **Energetiq** at the exhibition in Oxford next week to demonstrate the EQ-99, a laser-driven plasma-based light source that's been specifically designed for spectroscopic and microscopy applications. The revolutionary technology used in this lamp, called LDLS™, enables extreme high brightness over a broad spectral range, from 170 nm through to visible and beyond, combined with lifetimes an order of magnitude longer than traditional bulbs.

If a visit to Oxford is not on your agenda, then do **contact us** for more information about Energetiq's EQ-99, the fibre-coupled EQ-99 FC and their other LDLS solutions.

Imperial College
London

SASQC11

International Symposium
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Ultrafast Quantum Control

**Elliot Scientific and FEMTOLASERS Produktions GmbH will be at SASQC11
on the 7th, 8th & 9th of September 2011 at Imperial College, London**

The International Year of Chemistry: University of Nottingham



Regular readers of this newsletter cannot have missed how often the University of Nottingham has featured in this section devoted to the International Year of Chemistry. The University is a leader in promoting science education, especially in chemistry, with its regular public lectures and through its popular website **Periodic Videos** hosted by the head of the Chemistry department's *stereotypical* Professor **Martyn Poliakoff FRS CBE**.

Not to be outdone, the University's Physics & Astronomy department also have a video website - **Sixty-Six Symbols**.

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Laser-Gard® Protects Pilots And Law Enforcement Officers



- Laser pointer beams cause distracting glare
- Temporary flash blindness is a major hazard
- Laser attacks on aircraft are doubling each year worldwide
- Helicopter and private pilots are at a higher risk

As laser attacks on aircraft are doubling each year worldwide, with helicopter and civilian pilots at a higher risk, Elliot Scientific is introducing Sperian's Laser-Gard® aviator eyewear to offer more protection than high-end designer sunglasses selling at the same price point.

Available in a choice of truly affordable frame styles, featuring multiple adjustments for comfort, the patented lenses are available in two versions to ensure that pilots and law enforcement personnel are protected around the clock:

- Soothing bronze coloured sunglass tint for the day
- Unique salmon coloured lens that provides excellent night time vision

Sperian Laser-Gard® combines laser protection with traffic signal colour-recognition and unparalleled comfort, making it possible for anyone exposed to these lasers to do their job safely and effectively.

For more information, visit our [Sperian Laser-Gard® product page](#), or you can [contact us now](#).

PHOTONICS IRELAND 2011

September 7th - 9th 2011

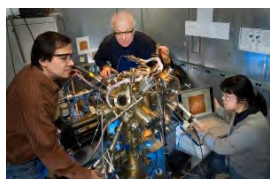
Grand Hotel Malahide, Dublin

Elliot Scientific and M Squared Lasers will be attending Photonics Ireland from the 7th to the 9th of September 2011 at the Grand Hotel Malahide, Dublin

Nano Meets Spectroscopy



**Join us at NMS 2011
NPL, Teddington
16th September**



Thursday, September 15th, sees the start of the two day conference **Nano Meets Spectroscopy** at the National Physical Laboratory (NPL) in Teddington, a leafy suburb of London.

Elliot Scientific is attending on the second day with our **Optical Tweezer** system plus demo equipment from **M Squared Lasers**, nano-positioners from **Mad City Labs**, a fibre laser by **IPG Photonics** and an EQ-99 laser-driven light source from **Energetiq**.

Nano Meets Spectroscopy is a multidisciplinary event centred on the biosciences. It will bring together leading experts in the fields of fluorescence and Raman spectroscopy who have common aims in the science and technology of molecular measurements.

Topics covered include:

- Surface plasmons
- Single molecules
- Nanoparticles
- Imaging
- Biomolecules
- Nanomedicine

Also, key areas of research involving super-resolution microscopy, metal enhanced fluorescence, protein aggregation, single-wall carbon nanotubes and metabolic sensing will be discussed.

Elliot Scientific on the Web



In addition to our company website, Elliot Scientific maintains a number of other web presences that extend and complement it. Chief among these are our YouTube Channel and Blog.

Our **Blog** was launched earlier this year and has now become the default method for getting company and product news out 'as it happens'. Linked directly to our website and **Facebook** page, the blog is the first place anything new or interesting is posted. You can also 'follow' our blog by subscribing to get each post emailed to you. We'll also enter you into our anonymous quarterly mystery prize draw as a thank you.

If a picture is worth a thousand words, then a video must add a few extra zeroes! Elliot Scientific's **YouTube Channel** has allowed us to include short clips on our website that can explain things better than any number of paragraphs of text. For example, our 'Optical Tweezers in Action: Key Facts' clip has now been viewed more than 6,500 times since it was uploaded.

Another external site we use is **Issuu**. This online library holds our catalogues, brochures and previous newsletters ready to read in a magazine-style format without the need to download anything. Enjoy!

Imperial College
London

SASQC11 International Symposium
on Attoscience and
Ultrafast Quantum Control

**Elliot Scientific and FEMTOLASERS Produktions GmbH will be at SASQC11
on the 7th, 8th & 9th of September 2011 at Imperial College, London**

The International Year of Chemistry: Events in September



From early September, the **New York Hall of Science** will be hosting **Digital'11: The Alchemy of Change**, a collection of images celebrating chemistry from the Art & Science Collaboration's 13th International Competition and Exhibition of Digital Prints.

Here at Elliot Scientific we're all partial to a bit of fried bread now and again, so the public debate on September 22nd at the **Society of Chemical Industry** regarding **The Redemption of the British Breakfast!** is your opportunity to let them know if you think bacon and eggs are really dangerous to your health.

On September 29th, Imperial College will be hosting a half-day event entitled **Amazing Chemistry Applied Daily** that will introduce you to the science involved in the development of modern cosmetics. Dr Emma Meredith from the CTPA, and a team from the Cosmetic Science unit at the London College of Fashion, will demonstrate how chemistry helps scientists to create amazing cosmetic products.

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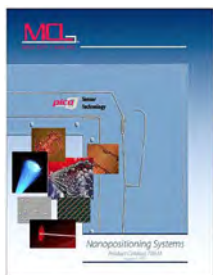
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New Mad City Labs Catalogue



Mad City Labs launched an updated and expanded 2011 Catalogue at the start of August, and Elliot Scientific has a limited number of printed copies available on a first come, first served basis. However, if you want to see the new catalogue now, you can [download a PDF version here](#) or from any Mad City Labs product page on our website.

The new 132-page catalogue is packed with information on the Mad City Labs range and includes large, high-quality photographs of the nanopositioners, detailed technical drawings, specifications, and performance data. Also included are sections on the accompanying drivers and LabVIEW™ based software, accessories for the nanopositioners - such as microscope mounting adaptors and biological sample holders, plus details on the custom engineered solutions Mad City Labs can offer.

To see the range, visit our [Mad City Labs product pages](#), or for more information you can [contact us now](#).

CRAIC Elixir™ offers multiple forensic analytical techniques in a single instrument



The new **CRAIC Elixir™** is the smart solution for the accurate and rapid analysis of trace evidence. For the first time, forensic scientists can conduct microspectroscopy, high-resolution imaging, Raman microspectroscopy and glass refractive index measurement using one, easy-to-use tool. For accurate and rapid analysis of trace evidence, nothing comes close to the cost effective, multi-functional CRAIC Elixir™.

Coaxial Capabilities

- High-resolution imaging
- Refractometry of glass
- Raman microspectroscopy
- Optical microspectroscopy by
 - Transmission
 - Reflectance
 - Absorbance
 - Fluorescence
 - Polarisation

For more information on the Elixir™ or other CRAIC microspectrophotometers, visit our [CRAIC Technologies product pages](#), or [contact us now](#).

KLASTECH High-Performance DPSS Lasers



The first delivery of one of the new series of upgraded KLASTECH DPSS lasers has just passed through our doors on its way to Ireland. Pictured here is the **Scherzo II**, a 300 mW 532 nm laser targeted at those interested in Raman spectroscopy, biofluorescence and holography.

Concerto, the world's first true 442 nm He-Cd replacement laser based on KLASTECH's proprietary iMAT® cold cavity design, is due in next. This model offers:

- Diffraction limited single longitudinal mode (<1 MHz line width) output beam
- Output powers of 25, 50, 75 & 100 mW
- Solid state design - Conductively cooled, so no fan in the laser head
- No gas tube and no Cadmium re-melts!
- Exceptional beam quality - Coherence length >100 metres

Specification sheets for the current KLASTECH range can be found [here](#), or [contact us](#) for more information.

Lake Shore Model 8404 AC/DC Field Hall Effect System is ready for new challenges



Green energy, efficient lighting, and high power device applications demand novel electronic and semiconductor materials. Materials that possess electronic properties that are increasingly difficult to measure due to their low charge carrier mobilities and the high temperatures needed to characterise them.

The DC field measurement technique has usually been sufficient to measure materials with mobilities down to approximately $1 \text{ cm}^2/\text{Vs}$. However, below this level it has been challenging to extract the small Hall voltage from the background noise that is produced by these emerging classes of photovoltaic, thermoelectric and organic electronic materials.

Earlier this year, Lake Shore revealed their forthcoming 8400 Series Hall Effect Measurement System. Now available, the instrument has an AC field Hall measurement option capable of measuring sample dependent mobilities down to $0.001^2/\text{Vs}$, allowing you to measure most exotic materials with ease.

More about Lake Shore test systems can be found [here](#), or you can [contact us](#) for pricing and specifications of the 8400 Series Hall Effect Measurement System now.



Elliot Scientific will be on Stand B10 at Photonex 2011
18th-19th October, the Ricoh Arena, Coventry

The International Year of Chemistry: Events in October



Monday, October 3rd

Science Fair Universidad de Santiago de Chile
Facultad de Química y biología, Santiago, Chile

Thursday, October 13th

The Role of Chemists in the Discovery of New Medicines
Lecture Theatre X1, School of Chemistry, University of Nottingham

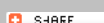
Friday, October 21st

Chemical Magic Show
Chemistry Week at the University of Costa Rica

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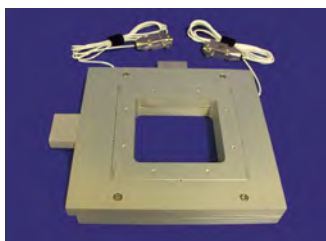
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Visit our Stand (B10) at Photonex 2011, 18th-19th October, the Ricoh Arena, Coventry

Show Preview...



Photonex takes place next week and Elliot Scientific will be there. Visit us on stand B10 to discuss how we can bring *solution science* to your application, and to experience our precision products first-hand. From our own-brand **Elliot|Martock range** of stages and flexures to the piezo-driven nanopositioners of **Mad City Labs**, Elliot Scientific is a leading supplier of the *moving world*.

We will also be showing a wide range of lasers from leading companies such as **IPG Photonics**, **M Squared**, **KLASTECH** and **FEMTOLASERS**. From the UV to the infra-red, pulsed or continuous wave, Elliot Scientific can offer a system to fulfil your requirements.

Continuing this theme, we will also be demonstrating the exciting Laser Driven Light Source from **Energetiq**.

HOLOEYE Photonics will be to the fore, with our popular display of spatial light modulation in action using their SLM systems, along with an optical cryostat from **Janis Research**.

The **Elliot Scientific laser trapping** system will be present, represented by our optical tweezer arm add-on that can be retrofitted to an existing microscope.

These are just a sample of the products we will be showing or demonstrating at Photonex, so do come and visit stand B10 to discover *solution science for research and industry*.



New Ti:S Amplifier datasheet defines the range



Austrian ultrafast laser specialist **FEMTOLASER Produktions** have just released their latest datasheet for the **FEMTOPOWER™** range of high-power multipass Ti:Sapphire amplifiers.

These are designed to be *the optimal light source* for the most demanding of applications as the FEMTOPOWER™ is the only amplifier that can provide outstanding CE-Phase stability over the longest period of time.

There are 6 basic models of the FEMTOPOWER™ and, with various options and configurations regarding peak power, pulse duration, pulse energy, repetition rates and CE-phase stabilisation available, this leads to more than 30 different systems to choose from.

So, for detailed specifications, you can [download the FEMTOPOWER™ datasheet](#), or [contact us](#) for more information.

Energetiq® LDLS™ Series datasheets updated



Energetiq® have released a new set of datasheets for their award-winning revolutionary LDLS™ – Laser-Driven Light Source – technology that's available through Elliot Scientific. Enabling extreme high brightness over a broad spectral range, Energetiq® lamps use laser activated plasma to generate light without electrodes.

Already established in the Semiconductor sector, lifescience researchers are now benefiting from these point light sources that can offer up to ten times the intensity of traditional lamps, longer working lives, and therefore lower cost of ownership in the long term. For more information, [watch this video](#), go to our **LDLS™** page, or [contact us](#).

The International Year of Chemistry: Events in November



Wednesday, 9th November

Magic, Folk Medicine, Drugs & Chemistry

Lecture Theatre 1101, Building 29, Southampton University

Saturday, 12th November

Chemistry Street Performance

Pça Pius XII, 08700 Igualada, Spain

Wednesday, 23rd to Sunday 27th November

“Your Magic – It’s Chemistry” Exhibition

Miraikan, Tokyo, Japan

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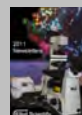
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FEMTOOPTICS – New catalogue out plus 10% off orders in November (UK & Ireland only)



FEMTOLASERS™ has expanded its popular **FEMTOOPTICS™** line of premier optical components and issued a new catalogue for 2012.

As a result of more than 15 years of experience in ultrafast laser technology and in response to the many requests for optics particularly matched to femtosecond laser systems, FEMTOOPTICS brings the full performance of your laser to the target.

FEMTOOPTICS™ are tested not only with high end conventional characterisation tools, but also with *real-life* ultrafast lasers, delivering pulses down to sub-5 fs in duration with peak powers reaching the TW level. Among the new highlights included in the catalogue are:

- Deep UV spectral range components
- Ultrabroadband reflective phase retarders
- An integrated dispersion fine tuning unit
- Dielectric beam splitters for sub-25 fs pulses

To celebrate the launch of this new catalogue, Elliot Scientific are offering 10% off the list price on all stock optics ordered by UK and Irish customers before the end of November 2011.

FEMTOOPTICS – *Designed to allow you to focus on your application and nothing else.*

→ [Download catalogue](#)

For more information on these optics and others we offer, [contact us now](#).

- Low dispersive optics
- Ultrabroadband optics
- Negative dispersive mirrors

New Products & Capabilities Brochure for 2012



Products & Capabilities 2012 is now available for download. This all-new brochure from Elliot Scientific details the broad range of products and equipment we offer from leading companies around the globe and our own ranges designed and manufactured in-house.

The sixteen page brochure has been fully updated to include all the latest products that we offer for:

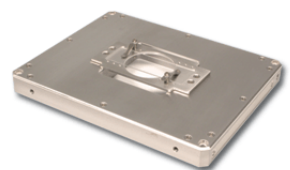
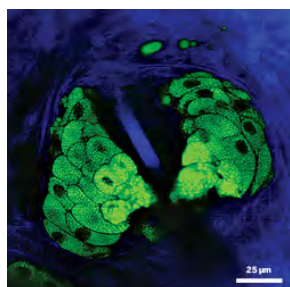
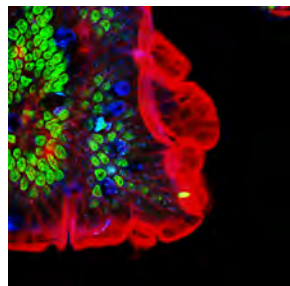
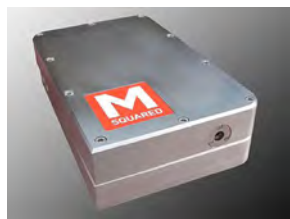
- Lasers
- Optical Laboratory Equipment
- Biophotonics
- Cryogenics and Magnetics

In December, printed copies of the brochure will be available. [Contact us](#) to have one posted to you, or simply pick one up at any conference or exhibition we are attending. Our next outing is **Photonics West** in January, with **Biophysical 56** in February and **CLEO** in May.



Photonics West 2012: 24th-26th January, San Francisco
Visit Elliot Scientific in Booth 4616

MPE and CARS driven forward by Sprite-t-XT from M Squared Lasers



Fluorescent dyes play a major role in microscopy, revealing the hidden structures within a specimen. **Multi Photon Excitation (MPE)** microscopy techniques rely on the simultaneous absorption of two or more low energy photons, rather than just a single high energy photon. Since the probability of simultaneous multi photon absorption is relatively low, it only occurs at the focal point of the laser beam and so greatly enhances the imaging resolution due to the highly localized excitation of the dye. This localisation of excitation applies not only across the plane of the sample but also above and below the focal point, thus enabling deep sections of the sample to be imaged or even to build up 3D images. Ultrafast Ti:Sapphire lasers with their short pulse Near-IR outputs are ideally suited to MPE.

To meet the needs of MPE researchers, Elliot Scientific offers the **M Squared Sprite-t-XT** ultrafast TiS oscillator that incorporates many innovative features that provide hands-free, alignment-free and maintenance-free operation, thus enabling researchers without extensive laser knowledge or experience to use the system.

Elliot Scientific also offers the complete range of **Mad City Labs nanopositioning stages** for the scanning of samples. These flexure-based nanopositioning systems deliver sub-nanometre positioning resolution and are available as single and Z-axis nanopositioners, XY and XYZ nanopositioners, and rotational or "Tip & Tilt" nanopositioners.

Another technique that can benefit from both the Sprite-t-XT ultrafast TiS oscillator and the Mad City Labs nanopositioning stages is **Coherent Anti-Stokes Raman Scattering (CARS)**. This laser-based microscopy technique permits selective imaging of biomolecules and supermolecular structures in living cells. High resolution 3D image data is obtained without the need for exogenous labelling and hence interference-free long-term monitoring of dynamic processes, such as chemical and structural changes of larger biopolymers, is therefore made possible.

Sprite-tTM-XT is a widely tunable ultrafast oscillator ideal for these latest microscopy techniques. This new turnkey laser from **M Squared** offers:

- Tuning range of 720 to 940 nm
- Onboard spectrometer
- Femtosecond or picosecond variants
- Uses compact, integrated CW 532 nm DPSS pump laser
- Hands-free, alignment-free and maintenance-free operation
- APAMTM active pump beam alignment optimisation
- Reliable selfstarting mode-locked operation
- Local or remote control and monitoring via an Ethernet connection

For more information on these products, please [contact us](#).

The International Year of Chemistry: Closing Events



Thursday, 1st December
IYC Closing Ceremony
Brussels, Belgium

Thursday, 1st December
ChemistryViews: Winners of the IYC Video Contest
www.ChemistryViews.org

Thursday, 1st to Friday 9th December
IYC 2011 Exhibition
Escuela Superior Dr. Pedro Albizu Campos, Levittown, Toa Baja, Puerto Rico

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KLASTECH - Delivering the NEXT Generation of DPSS lasers



KLASTECH Model Range:

- ◆ 266 nm Compact UV Laser
- ◆ 442 nm He-Cd Replacement
- ◆ 488 nm Argon Ion Replacement
- ◆ 532 nm Standard & High Power Versions
- ◆ 1064 nm NIR Laser

Applications:

- ◆ Raman & FT-IR Spectroscopy
- ◆ Holography & Reprographics
- ◆ Bioscience & Medical
- ◆ Metrology & Interferometry

In early 2011, **KLASTECH** engineers embarked on a radical re-development program for the company's popular series of iMAT® technology CW DPSS lasers. To ensure true OEM capability, major design changes were made to the laser heads and this, in turn, further improved their already outstanding efficiency. This work also resulted in lasers that exhibit extreme longevity in high usage industrial environments and that can achieve a power stability of <1% over 24 hours.

Development of the electronic control system has run parallel with this work, which now provides users with remote monitoring and control features for operating the laser. Uniquely, these electronics are future-proofed to allow for ongoing software and firmware upgrades.

To enable control and integration to a customer's own system, the controllers come equipped with USB. However, KLASTECH recognises that OEMs may prefer to use a different interface, so they offer connectivity to other communication buses to ensure there are no longer any barriers to integrating these lasers into a modern industrial production environment.

To complement the 1064 nm and 532 nm units, KLASTECH has also introduced the world's only true 442 nm He-Cd replacement laser together with a 100 mW 488 nm unit, completing a range of true OEM ready lasers.

These new lasers represent a step change in performance providing stable, quiet, efficient, diffraction limited and inherently single frequency laser light.

More information on these and other lasers in the KLASTECH range can be obtained by [contacting us](#).

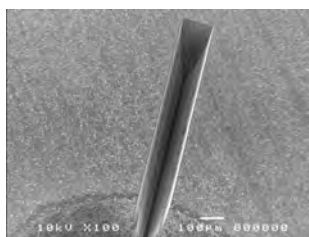
Stylish laser protection from Sperian



Sperian is a leading brand in laser eye protection. Their polymer and glass-based filters are designed to maximise visibility while providing unsurpassed attenuation by narrowing the absorption band to the specific wavelengths of the laser in use. Manufactured to stringent European and ANSI standards in an ISO certified state-of-the-art facility, Sperian's eyewear range offers performance, comfort, and style like no other as evidenced by the **New York, Milan and Rio** frames.

If you work with a laser, whether in a lab or clinic, and require spectacles, goggles or eyeshields, discuss your requirements with our specialist **Sales Team**.

Alpha is Oxford Lasers' keenest micromachining system

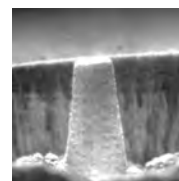


Oxford Lasers' Alpha table-top laser micromachining system demonstrates its capabilities by scribing a 50 micron slot into the surface of a diamond (pictured left).

The image to the right shows a 1.2 mm high, 400 micron diameter pillar machined into rock for mounting test samples.

Alpha is an extremely capable and compact micromachining system for metals, ceramics or polymers. It offers many features found only in systems larger than its 0.8 m² footprint, making it suitable for R&D and small scale production of parts up to 8 inches in diameter.

For more information, contact our **Alpha Sales Team**.



Photonics West 2012: 24th - 26th January, San Francisco

SPIE
Photonics West
Visit Elliot Scientific in Booth 4616

Products & Capabilities 2012



Products & Capabilities 2012 can be downloaded now. This all-new brochure from Elliot Scientific details the broad range of products and equipment we offer from leading companies around the globe and our own ranges designed and manufactured in-house.

The sixteen page brochure has been fully updated to include all the latest products that we offer for:

- Lasers
- Optical Laboratory Equipment
- Biophotonics
- Cryogenics and Magnetics

Printed copies are also available. **Contact us** to have one posted to you, or simply pick one up at any conference or exhibition we are attending next year.



Holly Berries photograph courtesy of the US Fish & Wildlife Service

Season's Greetings
and wishing you a
Happy and Prosperous 2012
from all at Elliot Scientific

We will be closed from the afternoon of Friday, December 23rd.
and will re-open on Tuesday, January 3rd.

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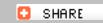
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