

## **A good year for the Photonics KTN laser networks**

Thanks to support from the Photonics KTN, the Association of Laser Users (AILU) has been able to establish three Special Interest Groups (SIGs): Medical, Micro:Nano and Product and Process Innovation (PPI). Each draws together members with a common shared laser-related interest from a wide range of backgrounds and expertise, and each addresses one or more key areas of current laser-related research and industrial activity.

### **Medical Group**

The Medical Group comprises clinicians, researchers, engineers and equipment and service providers involved in the development, manufacture and use of equipment in medical applications, and the field of biology in general. The scope is very wide: 'equipment' includes surgical tools, implants and prostheses; laser-based diagnostic equipment and instruments, lab-on-a-chip; laser scalpels and equipment for corrective refractive eye surgery. Formed in November 2007 the medical group currently has over 60 members.

In 2008 the group organised three events: a workshop on 'opportunities for laser micromachining: developments and applications in the medical sector' at the National Maritime College of Ireland in Cork on 22 May 2008; a one day event of invited speakers titled 'Lasers in medicine and biophotonics' as part of the Industry and Technology Programme at the Photon08 Conference at Heriot-Watt University, Edinburgh on 27 August 2008; and a 1 day meeting on 'Industrial innovation with lasers in the medical sector' at the Photonex 08 exhibition at Stoneleigh Park, Coventry. In recognition of its growing status, the PKTN/AILU Medical Group will take a stand and provide a major seminar at Medtec UK (NEC 25–26 March 2009), the exhibition and conference of manufacturing and automation technology, materials and outsourced expertise for medical device manufacturers based in the UK

### **Micro:Nano Group**

Lasers are a key technology in the micro and nano-engineering fields, where they provide high-resolution, accuracy, speed and flexibility. The engineering of micro features is key to the technical and commercial success of many mass-produced components ranging from photovoltaic cells, inkjet print heads and flat panel displays, to MEMS components and disposable medical instruments. It was to address the special needs of this burgeoning sector that AILU launched the Micro:Nano group on 4 June 2008 at AILU's annual micro and nano-processing workshop. Membership of the group currently stands at 82.



Caption: Networking refreshment break at the 'Funding opportunities in High Value Manufacturing: Micro/Nano laser processing success stories' organised by the Micro:Nano Group. (left to right) Mike Damzen (Midaz Laser), Andrew Kearsley (Oxford Lasers), Duncan Proctor (Specialised Laser Products), Malcolm Gower (Nanophoton Technologies and Chair of the Micro: Nano Group, and Jagjit Sidhu (Advanced Technology Centres – Sowerby)

Supported by both the Photonics and Nanotechnology PTNs, this group organised the one day event on 25 November 2008 titled 'Funding opportunities in High Value Manufacturing: Micro/Nano laser processing success stories', which attracted over 40 delegates.

### **Product and Process Innovation**

The aim of the Product and Process Innovation (PPI) group is to provide a focus for academic and industrial organisations involved in the research and development of laser source and delivery technology, and laser materials processing applications; to identify common needs and create the possibility of joint initiatives and activities. As such, this SIG will play an increasing role in developing collaborative research projects.

Of particular interest at the present time is the Technology Strategy Board competition 'High Value Manufacturing: step change in competitiveness'. Laser based materials processing can be a key enabler for increasing manufacturing efficiency and capability and should figure largely in this call. In the first of many informal meetings, a lunchtime event has been organized at the AILU workshop 'Laser processing of polymer, metal and ceramic composites' on 3 December to disseminate information about the competition and to offer workshop delegates the chance to meet up with potential project partners.

The PPI group will also be at the heart of a 2 day AILU workshop, scheduled for June 2009 at TWI Cambridge and aimed at translating research developments into industrial applications. Other projects that the PPI group is keen to develop include the setting up of a consortium of UK laser processing research centres and a web site portal to facilitate industrial access to laser materials processing research.

### **Why join a Special Interest Group?**

Members of a SIG are alerted to workshops and other networking events in their area of interest and are given the opportunity to influence the program of group activities. Also, members have access to an on-line Forum, where they can post question or discussion points or respond to other peoples inputs.

Thanks to the continued support of the Photonics KTN, membership of the Medical, Micro:Nano and PPI SIGs is free. Further information on these and other AILU SIGS can be found at [http://www.ailu.org.uk/association/laser\\_user\\_groups.html](http://www.ailu.org.uk/association/laser_user_groups.html). To become a member, simply contact the AILU office (T: 01235 539595; E: [admin@ailu.org.uk](mailto:admin@ailu.org.uk)) and request to join. Unless you are already a member of AILU or the Photonics KTN, your full contact details and a brief summary of laser-related activities and/or interests will also be required.

Dr Mike Green, Executive Secretary Association of Laser Users