

LSA



# Surface analysis solving problems in laser processing

## Tutorial and live demonstrations

Essential content for those who laser mark, micro-machine and/or whose laser processes have specific surface requirements.

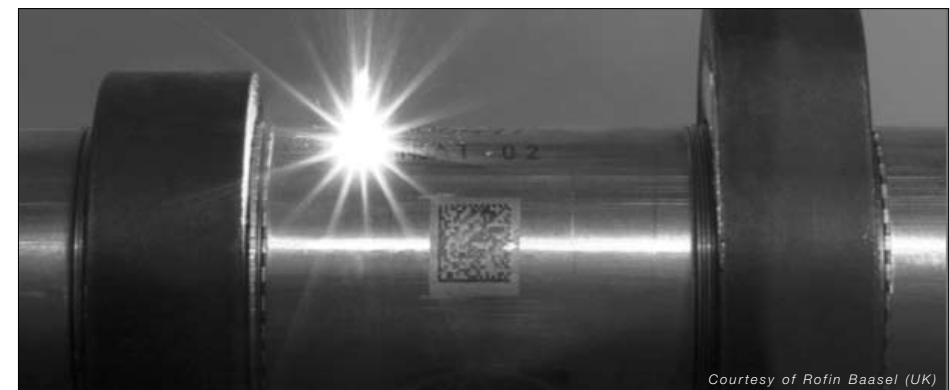
Issues dealt with include:

- staining
- particulates
- delamination
- surface mechanical properties
- surface reactivity
- corrosion and degradation
- cleanliness
- contamination
- impurities
- surface topography
- surface diffusion
- environmental compatibility
- leaching and segregation

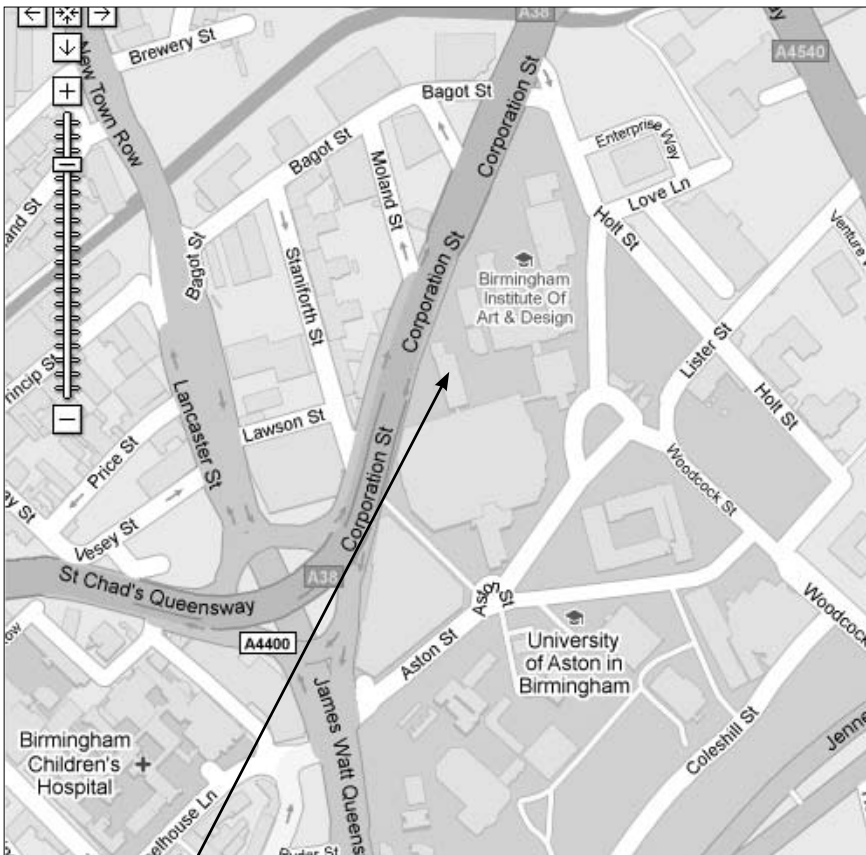
If you have the task of fixing the material related problems when they arise then this workshop is for you.

**Thursday 24 June 2010**

**Aston University, Birmingham**



Courtesy of Rojin Baasel (UK)



**Venue**  
**North Wing (Room 604)**  
**Aston University**  
**Birmingham B4 7ET**

There is plenty of public parking nearby for those travelling by car. However, the venue is easily accessible by train, bus and coach



**Association of Laser Users**

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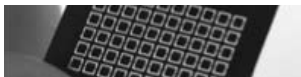
## Surface analysis solving problems in laser processing

24 June 2010

### Programme

**Presenters:** Dr Mike Petty (Loughborough Surface Analysis Ltd) and Professor John Sullivan (Midlands Surface Analysis). Chair: Dr Martin Sharp (Chair, AILU Medical Group)

**09:30 – 10:00** Registration and refreshments



*Courtesy of Micromachining Ltd*

**10:00 – 11:15** **Session 1**

#### Introduction to the day

Martin Sharp Chair of the AILU Medical Group

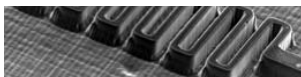
#### Overview of the day

Mike Petty Loughborough Surface Analysis (LSA) Ltd

#### X-ray photoelectron Spectroscopy (XPS): chemical state information

#### Auger electron spectroscopy (AES): elemental information, high spatial resolution

**11:15 – 11:45** Refreshment break



*Courtesy of Oxford Lasers Ltd*

**11:45 – 12:40** **Session 2**

#### Secondary ion mass spectrometry (SIMS) – ultra-high sensitivity to all elements

#### Laser induced mass analysis (LIMA) – particulate analysis

#### Atomic force microscopy (AFM), nano hardness & nano scratch testing

**13:00 – 14:00** Lunch break



*Courtesy of TLM Laser Ltd*

**14:00 – 15:30** **Session 3**

#### Laboratory Demonstrations

Laboratory demonstration of XPS, AES and AFM techniques. FREE analysis and evaluation of participants' own samples may be undertaken by prior arrangement.

**15:30 - 15:45** Refreshment break

**15:45 - 16:30** **Clinic / Open Forum**

An opportunity to discuss specific cases of interest

**16:30** **Close**

*There will be the opportunity for participants to discuss problems of a commercially confidential nature with representative from LSA and MSA on a one to one basis after the close of the meeting.*

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### Registration

If you've previously attended an AILU meeting and your contact details haven't changed since, you can simply phone/email the office with your name. Otherwise, please complete and return the form below by post or fax.

Full contact details can be found on the back page.

#### Delegate information

.....  
TITLE FIRST NAME SURNAME

**Position:** .....

**Organisation:** .....

**Address:** .....

**Post Code:** .....

**Tel:** ..... **Fax:** .....

**E-mail:** .....

#### Payment

including buffet lunch and refreshments

**AILU member rate** £70.00 + VAT (= £82.25)  
(I am attending as an employee of an AILU member company)

**Non-member rate\*** £85.00 + VAT (= £99.87)

\*Join AILU within 10 weeks of the workshop and a £15 discount will be given on your first year's membership

#### Payment options:

Please invoice :

me

or  other (name & address):

I wish to pay in advance by:

Cheque in £ Sterling, payable to AILU

or  Visa/Mastercard (delete as appropriate)

Name on Card:

Number

\_\_\_\_ / \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Exp \_\_\_\_ / \_\_\_\_

Please debit my account

Signature: .....

*AILU reserves the right to alter the programme or cancel the meeting at short notice and accepts no responsibility for the views expressed by the speakers or delegates*