

THE LASER USER

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AILU

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Femto Plasma Deep Learning

Precise Ultrafast Micromachining

Eye-Safe Cleaning Wavelength

Multi-Metal PBF Additive

Copper Welding With Blue Lasers

Safety of Handheld Systems



**LASER TECHNOLOGY &
MANUFACTURING TOOLS:
CLEANING, MICROMACHINING &
ADVANCED LASER WELDING**

THE LASER USER

Editor: Dave MacLellan
Sub-Editor: Catherine Rose

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The Laser User is the house magazine of the Association of Industrial Laser Users. Its primary aim is to disseminate technical information and to present the views of its members. The views and opinions expressed in this magazine belong to the authors and do not necessarily reflect those of AILU.

The Editor reserves the right to edit any submissions for space and other considerations.

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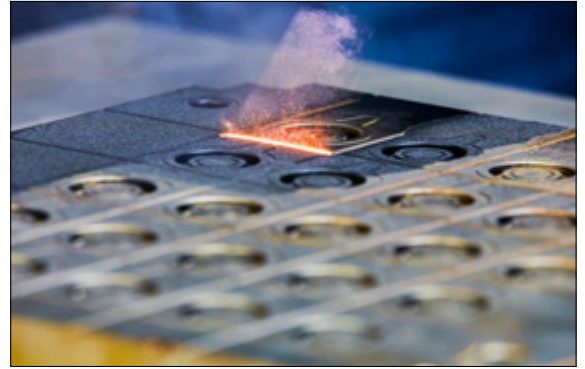
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Cover image: JETLASER hand-held laser cleaning.
Courtesy 4JET

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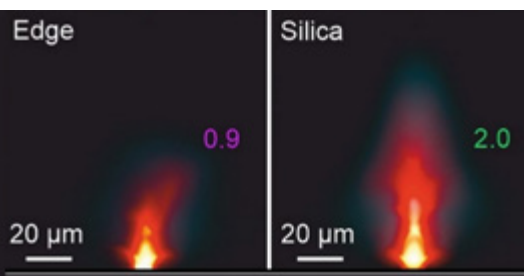
Past presidents and founder members are also able to attend committee meetings. Anyone wishing to join the AILU Steering Committee please contact the Executive Director.

WELCOME TO NEW AILU MEMBERS

Ficcp UK Ltd
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Lasit Laser UK
Barrie Rice

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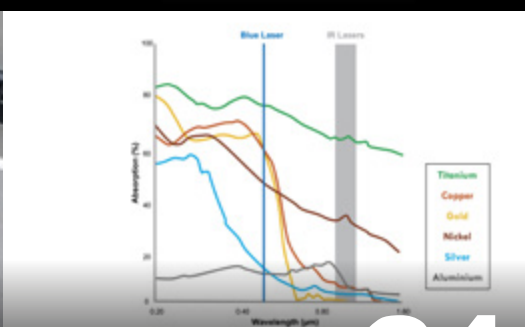
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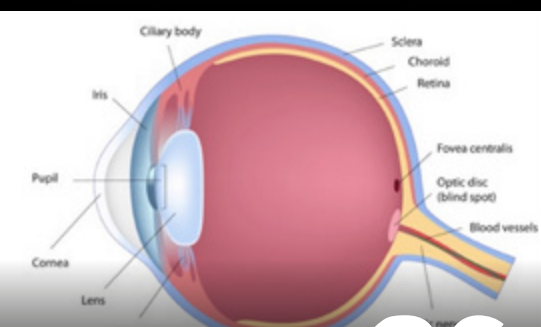
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ASSOCIATION NEWS

FIRST WORD



I would like to signpost two events for this issue of The Laser User. Firstly we have the Job Shop Annual Business meeting taking place on 22 November. Laser subcontract services are the focus of this meeting (not only cutting, but welding, marking and cleaning etc.). The Job Shop group is one of the jewels in the crown of AILU – if you are a subcontractor and you haven't manage to get along to one of

these meetings before, I urge you to come along. You will find useful business information, including saving you money, and updates on new technology, as well as our Electricity Survey, where you can benchmark (anonymously) your costs against other members.

Secondly, we are pleased to announce our event on AI & ML (Artificial Intelligence & Machine Learning). This topic has been popular in AILU workshops and at ILAS over the past 3 years especially. Skills shortages and the complexity of some laser processes are driving the demand for AI & ML to improve the usability and the consistency of

laser technology. Service interventions can be pre-empted and new systems can be ever more user-friendly, consistent and reliable, as this technology gets implemented on laser processing and application monitoring systems.

Our recent event on Laser Cleaning was a great success, but it only goes to emphasise how the mass market adoption of laser processing reveals a growing lack of knowledge from new users. Watch this space for more content aimed at first-time adopters of laser processing (be it cutting, welding or cleaning) where safety and know-how are critical to avoid the risk of accidents and poor performance.

Dave MacLellan
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PRESIDENT'S MESSAGE



Welcome all to the last edition of the Laser User for 2023 - good grief, this year has come and gone in a flash.

I am writing to you from a rather cold (the aircon is up too high!) quietish cafe right at the back of Hall 3 at the NEC as I am attending the Advanced Engineering Exhibition. I am pleased to report

that despite the frosty conditions in the cafe there is a warm and vibrant buzz throughout the hall, with plenty of activity and some great networking conversations. Also it's very pleasing to see a number of our members here exhibiting and illuminating the path to light through lasers and their applications.

Now that I have experienced (survived) my first quarter back in the President's seat I wanted to reflect on a couple of really positive changes I have seen to the way that AILU operates. Firstly we now have two working groups, an internally facing one lead by Paola de Bono (TWI) and an external facing group that is being somewhat re-modelled and reinvigorated by Richard Carter (Heriot-Watt University). Paola and Richard are Vice Presidents of the AILU Steering Committee. These smaller, agile groups are busy working away to improve the way that AILU operates and delivers benefits to our members, and I am really looking forward to seeing some of the outputs of these groups as they find their way and start to make progress.

The other aspect I would like to mention is the Early Careers Researcher group (ECR) - which looks to be going from strength to strength and is of course vital to the future of lasers and their applications. We now have a standing agenda item at committee meetings where ECR reps attend and report on their activities, whilst benefiting from the discussions around the room.

By way of an unashamed plug I would highlight to you that our ECR group is holding a seminar at the University of Manchester on Wednesday 6th December (<https://www.ailu.org.uk/event/ailu-early-career-researchers-seminar-2/>), where members of the group will present their current research/applications interests which have an industrial laser focus. After the morning seminar and lunch there will be a tour of the new laser facilities at the University of Manchester. All are welcome to attend and the event is free to AILU members!

That's all from me, just to wish you all continuing success and encourage you to engage with AILU - the more you put in the more you get out really does apply.

Ric Allott
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