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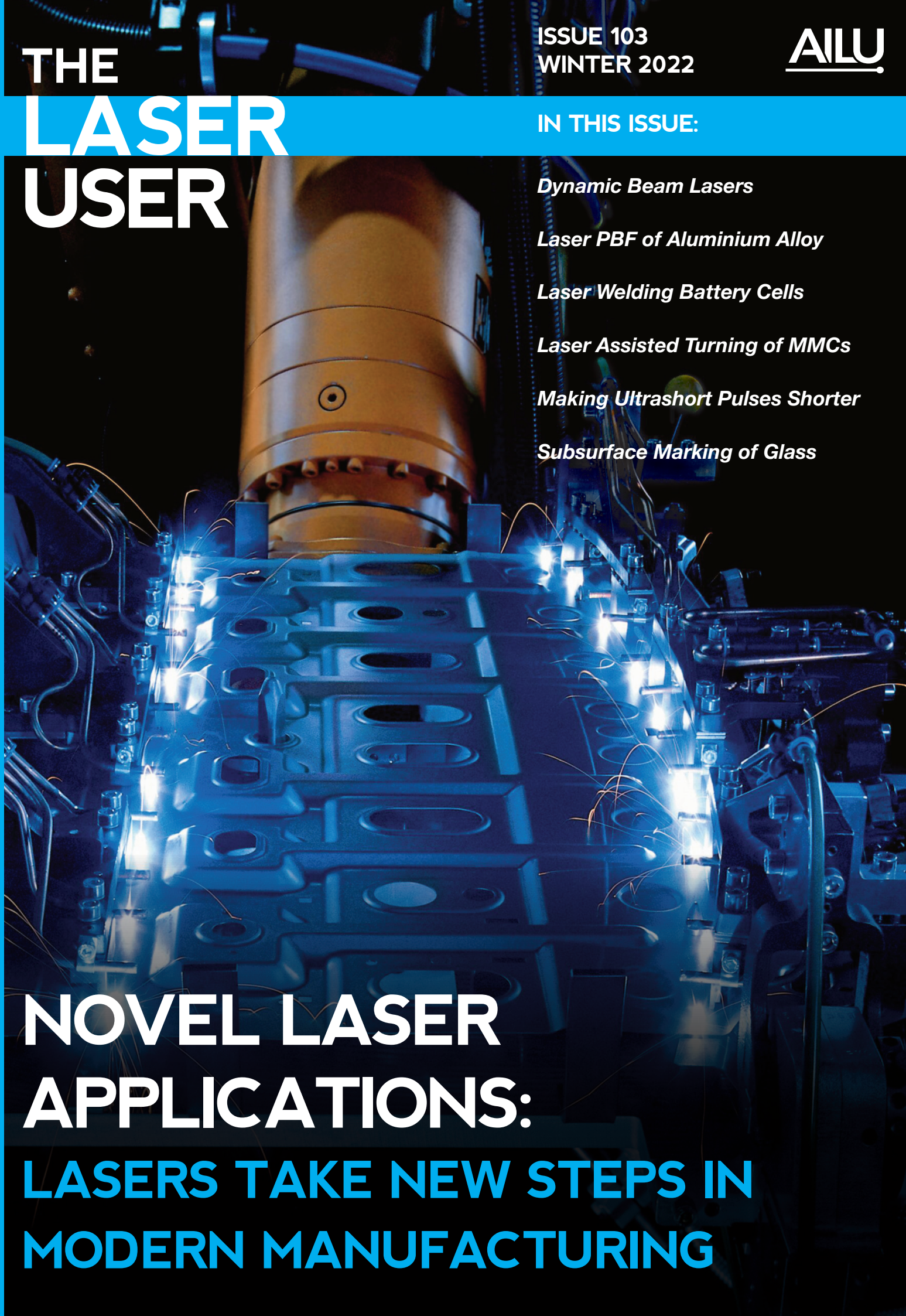
AILU

THE LASER USER

IN THIS ISSUE:



NOVEL LASER APPLICATIONS:

LASERS TAKE NEW STEPS IN MODERN MANUFACTURING

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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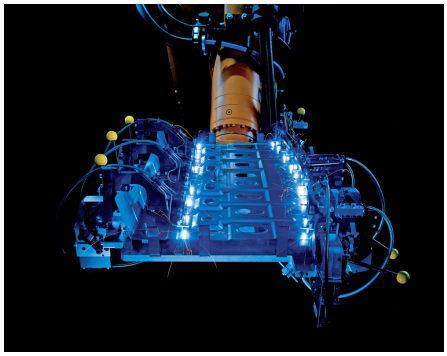

Cover image: Laser welding with a high speed scanner.

Courtesy of TRUMPF Group

AILU
ASSOCIATION OF INDUSTRIAL LASER USERS

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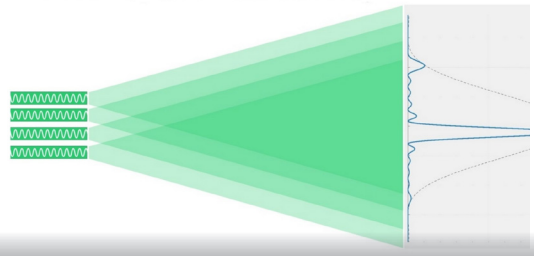
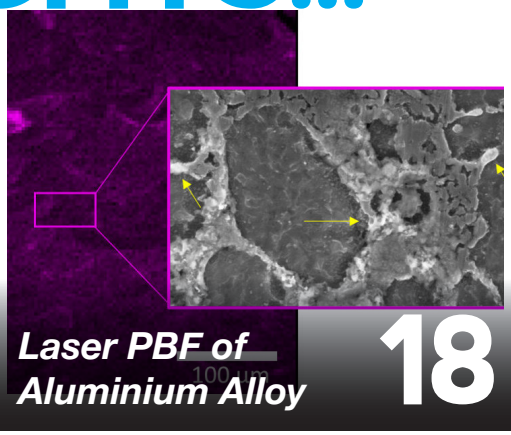
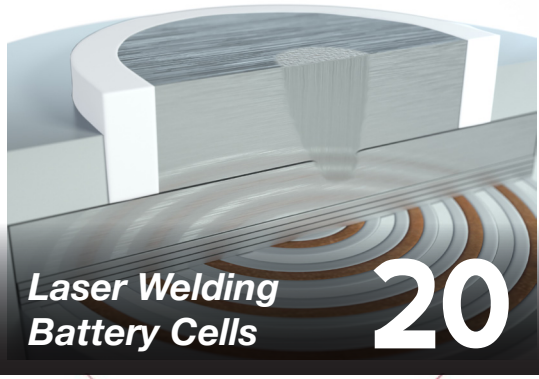
Past presidents and founder members are also able to attend committee meetings. Anyone wishing to join the AILU Steering Committee please contact the Executive Director.

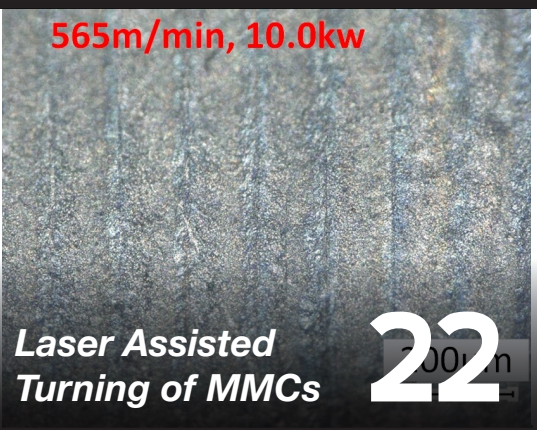
CONTENTS

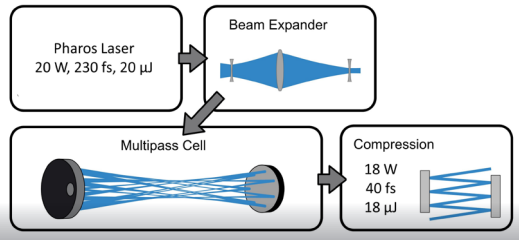
HIGHLIGHTS...

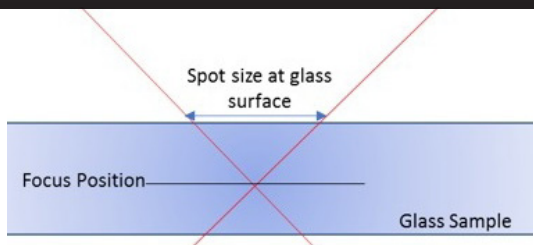












ASSOCIATION NEWS

FIRST WORD

January saw the launch of our new website, and the first new member who signed up and paid for membership online – welcome to AILU, LumOptica! If you haven't signed in or registered on the new website, give it a test drive today. Need help with accessing your record or updating your products and services? Contact Liz via info@ailu.org.uk in the first instance.

Also noteworthy is MACH 2022, the exhibition returns to the UK NEC at the beginning of April – and at the end of April, the chance for the global laser community to gather in Munich at the Laser World of Photonics 2022. I hope to see lots of you there!

AILU is reaching out and becoming better connected around the world via organisations that are working in overlapping areas. We are pleased to announce our first joint webinar with BLZ (Bayerisches Laserzentrum). Check out the webinar at the end of March to meet and make connections.

Dave MacLellan
dave@ailu.org.uk

PRESIDENT'S MESSAGE

Happy New Year and all the best for 2022. I wish all of our members great success in their endeavours both personal and professional.

Ahead of the Christmas break I had the pleasure of joining AILU's Early Career Researchers Committee at one of their twice-yearly meetings. Our colleagues at the earlier stages of their career hold special importance within our community and I would like to use my column in this issue to explore why.

The laser industry must draw upon a huge range of skill sets to create, develop and deploy lasers and allied technologies. Transforming these to a commercial proposition and providing these services also requires an equally special portfolio of business and technological understanding. Naturally talented young people who have these skills have options. Attracting and retaining the best-of-the-best into lasers is therefore a key concern for all of us.

How do we accomplish this? My advice on the matter would be to speak with our early career members. We have a wealth of talent within the community. Why not take the time to get to know this group of people?

With a fair wind AILU's meetings will return to in-person before too long. Why not make it your new year's resolution to engage with our early career forum. I would be delighted to see more senior members giving some of their time to help develop earlier stage colleagues. If this sounds like something you would like to do please get in touch.

Adam Clare
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RIC'S RAMBLINGS

A celebration of human knowledge, skill and ingenuity…

A very large chunk of my career has been spent working with, developing, using and thinking about lasers and in particular high power lasers. However behind all this is my passion for all things "photonic". So it was with great excitement I watched the launch of the James Webb Space Telescope on Christmas Day (well I watched it on catch up to be honest, 2 days later). I've been following the progress of this absolutely incredible feat of engineering excellence ever since.

As I write, Webb is 834490 miles from Earth travelling at 0.155 miles per second with just 64211 miles left to go until it hits the L2 orbit. By the time you read this- it will have reached its orbit point nearly 1 million miles away from us back on earth. This telescope has a sunshield the size of a tennis court and will be looking for the very first photons from the beginnings of the universe some 13.5 billion years ago.

The primary mirror is 6.5 m across and made up of 18 hexagonal segments – each one individually controlled and aligned with incredible precision from back here on earth. There is a hot side facing the sun and a cold side that must be kept not too far above zero kelvin in order for the instruments to operate correctly and with minimal "noise" from surrounding radiation. The telescope seeks light in the near and mid-infrared region of the spectrum.

It has 4 key instruments on board and I am very proud to say STFC have had a large part to play in one of these instruments. All in all this is a phenomenal piece of kit that is using the power of photonics to answer some of the big questions about our universe.

Yes, I know this is a magazine about lasers, but a photon is a photon, right? Next time you are sitting scratching your head trying to come up with a solution to an engineering or optical problem, don't give up, think of Webb and what the human brain and spirit is capable of. I strongly encourage you to look up Webb (on the web!) and see what it is up to – currently 834709 miles from Earth and counting…

Ric Allott
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