

# THE LASER USER

ISSUE 107  
WINTER 2023

**AILU**

## IN THIS ISSUE:

*Combining AM & Moulding*

*Improving Aluminium Build Rate*

*Femtosecond Stent Cutting*

*Tin Oxide Texturing With DLIP*

*Portable Laser Shock Peening*



# ADDITIVE MANUFACTURING: HIGHER SPEEDS AND GREATER ADOPTION

## 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: EHLA coating applied to an automotive brake disc.

Courtesy TWI Ltd



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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.

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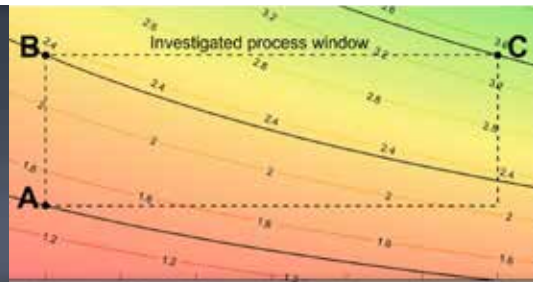
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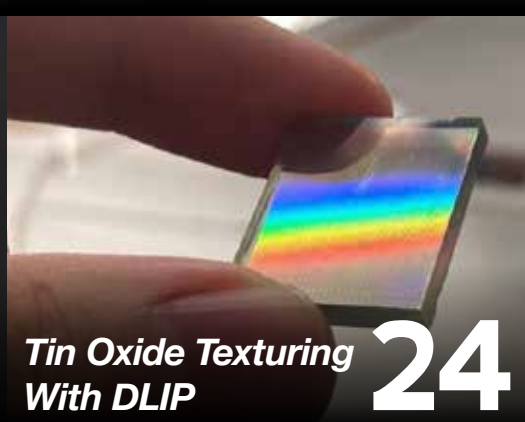
# HIGHLIGHTS...



**Interview: Helix Geospace** **14**

**Combining AM & Moulding** **18**

**Improving Al Build Rate** **20**



**Femtosecond Stent Cutting** **22**

**Tin Oxide Texturing With DLIP** **24**

**Portable Laser Shock Peening** **26**

**ASSOCIATION NEWS**

First Word	4
President's Message	4
Ric's Ramblings	4
Obituary - Silke Pflüger	5

**BUSINESS NEWS**

**CASE STUDIES**

**FEATURE**

Going Green in 2023	8
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**ILAS 2023**

**EARLY CAREER RESEARCHERS**

**EDITORIAL**

Interview: Simon Leisten (Helix Geospace)	14
Job Shop Corner	16
A Funny Thing...	34

**FEATURE**

Raw Material Challenges	29
-------------------------	----

**PRODUCT NEWS**

**EVENT REVIEWS**

Forthcoming Events	35, 36
--------------------	--------

**MAIN FEATURES**

<b>Best of both worlds: a framework for combining AM and IM</b> Nameer Syed et al.	18
<b>Increasing the build rate of high-strength aluminium alloys</b> Giuseppe Del Guercio & Marco Simonelli	20
<b>Manufacturing medical devices using femtosecond lasers</b> Bogusz Stępak et al.	22
<b>Improving the spread of light in tin oxide thin films using DLIP</b> Herman Heffner et al.	24
<b>Next-Generation Laser Shock Peening: A Compact LSP System</b> Pratik Shukla	26
<b>Observations</b>	28

**CONTENT BY SUBJECT**

<b>Business News</b>	6
<b>Job Shop News</b>	16
<b>Product News</b>	30
<b>Energy &amp; Carbon Reduction Planning</b> Going Green in 2023	8
<b>Additive Manufacturing</b> Combining AM & Moulding Improving Al Build Rate	18 20
<b>Medical Device Manufacture</b> Femtosecond Stent Cutting	22
<b>Surface Texturing/Engineering</b> Tin Oxide Texturing With DLIP Portable Laser Shock Peening	24 26
<b>Automated Material Storage</b> Solving Raw Material Challenges	29
<b>Events</b>	9, 35, 36

## ASSOCIATION NEWS

## FIRST WORD

As we are on the final countdown in the weeks before ILAS 2023, I want to encourage you to invite someone new to ILAS this year. There is simply no better place to top up your know-how of laser processing and the technologies that enable it. Putting on great events is one thing, but getting new people to attend them is more of a challenge and that is where you can help!

Over the past 5 months we have held 4 workshops, all in-person. This has helped people to renew connections and make new ones as well as sharing their know-how and new products. This is a fuller schedule than we have previously had in the run-up to ILAS, and has also enabled us to put together workshops on all the topics we had identified for 2022. Now we are pushing the reset button, so check out our draft workshop plans for 2023 (page 35) and see whether you would like to participate as a speaker, exhibitor or delegate.

An in-person Photonics West has just finished (sadly I couldn't be there this year) and another Laser World of Photonics is coming in June, so the international calendar is also very full.

Finally we have several new members since January – welcome on board! Hope to see as many of you as possible in 2023.

**Dave MacLellan**  
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## PRESIDENT'S MESSAGE

**This issue's President's Message has an AI co-author – I am starting to think that my job is under threat...**

**" Dear readers of the Association of Industrial Laser Users Magazine, it's an honor to have the opportunity to write a welcome message for such a prestigious publication. AILU plays a vital role in advancing the field of laser technology, and this magazine serves as a platform to share the latest developments and insights from both business and research organisations.**

**In this edition of the magazine, you'll find a wealth of interesting contributions from experts in the field. From case studies and technical articles to feature interviews and news from the industry, there is something for everyone. Whether you are an experienced laser user, a researcher, or simply someone with a passion for technology, you'll find a wealth of information to inspire and inform you.**

**We are living in a rapidly changing world, and the field of laser technology is no exception. With new developments and breakthroughs happening all the time, it's more important than ever to stay up-to-date with the latest trends and advancements. AILU's magazine provides an essential source of information and inspiration, and I encourage you to make the most of it.**

**In conclusion, I hope that you enjoy this edition of the magazine and that it helps you stay at the forefront of the laser industry. And remember, this message was written by ChatGPT, an AI language model developed by OpenAI.**

**Best regards, ChatGPT (and Adam Clare!)"**

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positives that came from this so-called "failure". The bounce back, get up, dust yourself down and come back stronger messages and words of encouragement from all those involved and importantly all those watching from the side-lines was something impressive to witness. So often in the UK we get lambasted for failure, how refreshing it was to get the sense that its actually ok to fail, we will learn from this and make it better next time. I for one am convinced that the UK will launch satellites (be that from Cornwall, Scotland or elsewhere) and that our space industry will flourish because of it. So let us not look at failure in such negative terms, let us instead see what opportunities it might open up in future.

Having got through "blue Monday" I for one am now looking forward to what 2023 will bring. After all It's not long until ILAS 2023 (22/23 March), when we can all get together to exchange thoughts, ideas, opportunities and laughs. And guess what, I can even see the sun starting to peep through the clouds - now that's much better...



**Ric Allott**  
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## RIC'S RAMBLINGS

I am writing this close to the day in January when everyone and everything is at a low ebb. The festive season has come and gone in a blink of an eye. The days are still shockingly short and the weather is just plain rubbish. Yes, we have just passed "blue Monday" which, I have always thought of as the first 12" single I purchased by New Order (for the younger readers of the Laser User, yes I am talking about actual vinyl - a thing you hold in your hand before placing on a turntable and resting a physical stylus upon it to play the music).

To compound my feelings of dejection and depression brought on by January I recently witnessed the UK Space launch "failure". There was so much excitement about the fact that a rocket was to be launched carrying satellites from UK soil for the first time ever (my LinkedIn pages were full of the pre-launch buzz). At last closing the circle to create a real end-to-end space ecosystem in the UK. We are excellent in the UK at designing, building, testing and putting instruments onto space hardware. Not so good it appears at launching them into space. But hey this was the first ever attempt to do this and, well at least half of it worked.

We launched the rocket carrying the satellites on a big aeroplane without a glitch, but then the rocket bit went wrong. So yet another reason to be depressed around "blue Monday". The reason I mention this is not however to be all doom and gloom - but to look at the