

Accompanying programs of LASER World of PHOTONICA CHINA

2021:

What you can expect

PHOTONICS CONGRESS CHINA 2021, with rich topics and highlights concerning new findings and progress in laser technology, advanced lasers, fiber lasers, optics, optical detection, intelligent manufacturing, infrared imaging, laser safety, lidar, and automatic driving, will be held along with LASER World of PHOTONICA CHINA 2021. Last year, the congress attracted a total of 2,678 on-site audience and 12,441 online attendants. Thanks to its highly professional presentations and an innovative model connecting online and offline spaces, the congress was highly accredited by the audience. Preparations for **PHOTONICS CONGRESS CHINA 2021** have begun, and we will continue to bring you exciting news.

PHOTONICS CONGRESS CHINA 2021 consists of the following conferences: 16th International Laser Processing and Systems Conference (LPC 2021), 2021 Chinese Laser Market Summit, 2021 Optical Made in China 2025 Forum, and Workshop on Safety of Industrial Lasers and Systems Use. In addition, the exhibition will also hold other forums and technological conferences: Infrared Detection Technology Frontier Forum, LIDAR Technology and Application Frontier Forum, Optical Metrology and Intelligent Manufacturing Forum, and China (Shanghai) Machine Vision Technology & Application Conference. The rich and wonderful programs closely connect science, R&D and industrial applications, and endow scientific research with more practical value.

16th International Laser Processing and Systems Conference (LPC 2021)

Laser technologies are profoundly transforming our scientific research, industrial production and daily life. In order to promote the continuous innovations and revolutions of laser technologies in the world, the 16th International Laser Processing and Systems Conference (LPC 2021) will be held online during 5 – 7 March 2021. It has become not only the most authoritative laser academic event in the world, but also a great platform for the cooperation with Chinese laser processing and systems industries.

There were 32 wonderful reports in the last edition, the number of online visits reached 4998.

2020 is destined to be recorded in history. The sudden outbreak of the COVID-19 has caused a shutdown and severe damage to the global manufacturing industry. Along with the tempestuous global economic and trade situation, traditional markets will shrink to varying degrees, but the era of post-COVID-19 will definitely give birth to an emerging blue ocean market. Despite facing various challenges, the laser industry and research fields have continued to perform well in the past year. The scale of traditional markets such as laser cutting, welding, and marking has remained roughly the same as the previous year; while in the laser micromachining fields represented by 5G, new display devices, and circuit boards, etc, has ushered in a significant growth momentum. As the basis of the key technology of smart manufacturing equipment, laser will play an even more vital role in the future.

The technology development and strategic improvement of productivity rely a lot on the in-depth understanding of the processes and the increasingly emphasis on simulation and modelling is visible in the research and application developments. Therefore, in the coming LPC 2021, special emphasis is laid on new processes and new beam sources, and also on methods and results in theoretical and practical modelling and simulation of classical and recent

process development.

The LPC 2021 conference aims to strengthen the laser industry and build up an international platform for the integration of production, teaching and researches. It will focus on "Exploring Laser Frontier Technology and Promoting the Development of Laser Industry". The conference will show the latest developments of the global laser industries and introduce the latest applications of laser technologies in various industries in the world.

2021 Chinese Laser Market Summit

Today, the world is facing major changes and challenges, something unseen in a century. With the introduction of a major strategy by the Chinese government - the establishment of a "dual circulation" development pattern in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement - the high-end smart technologies represented by lasers are bound to become the preferred choice in a new round of upgrades in manufacturing. At the same time, the continuous development of the "internal circulation" market will help promote the localization of intelligent laser equipment and accelerate the replacement of traditional manufacturing technologies by laser technologies.

With the rapid development of 5G-related facilities and new infrastructure construction, Internet of Things, smart manufacturing, engineering, machinery, new energy vehicles, consumer/industrial/medical electronics and other downstream sectors, higher requirements are put forward for advanced manufacturing technology, and as a result, laser technology and processing will be able to exert more of its potential. How can the Chinese laser industry find a path that truly leads to high-quality development in the future? How to overcome the technology bottlenecks? How to seize the valuable opportunities of a global supply chain restructuring and "inner circulation", and develop a path of sustainable development? How to promote independent innovation and take on a leading role on the international stage...

In addition, with the increasingly fierce competition in the laser industry, a new phase of progresses in both quality and efficiency is needed, and we have to further integrate market and capital resources, and increase our international presence. The sustainable development of the laser industry demand deviation from the traditional low-tech and low-value-added growth model, and embrace the "accelerated" transformation and "new engine" of economic growth that will create more potential "blue ocean" market and expand laser applications. In so doing, the industry may start a differentiated competition.

The 2021 Chinese Laser Market Summit will invite leading figures, experts and entrepreneurs in the laser industry at home and abroad, especially the presidents of multinational companies to give in-depth interpretation of the above questions. The summit is hosted by the Laser Processing Committee of the Chinese Optical Society, and is co-organized by Messe Muenchen.

2021 Optical Made in China 2025 Forum

Based on the great success of the last forum, the 2021 Optical Made in China 2025 Forum will feature a "high-end, high-quality, simple and firm-grounded" conference that combines industrial production, academic study, scientific research, and daily applications. It aims to present a high-end international academic event that focuses on topics about Optical Free Surface and Microstructure Array Surface Manufacturing, in addition to the latest industry information, market trends and applications, so stay tuned!

Workshop on Safety of Industrial Lasers and Systems Use

This workshop targets at personnel concerning laser R&D, production, operation and management, and specifically gives lectures on the types of laser radiation and possible injuries, Chinese and foreign laser safety standards, and effective measures for laser safety protection. Therefore, we hereby appeal to all laser practitioners to be responsible for themselves, society and customers, and raise their awareness of laser safety protection. Only a systematic understanding of lasers and correct use of lasers can exert the most out of this powerful technology.

Infrared Detection Technology Frontier Forum

The 2021 Infrared Detection Technology Frontier Forum invited experts from Chinese and foreign scientific research institutes, military and aerospace institutes and leading enterprises in the infrared industry to talk about the latest technology and market development. It is a rare opportunity for participants to meet outstanding scientists, technicians and experts. The concurrent LASER World of PHOTONICA CHINA 2021 and the special show "Infrared Technology and Applications" will provide information on cutting-edge technologies, products, equipment and scientific research findings in the infrared detection industry.

LIDAR Technology and Application Frontier Forum

The core components of a LIDAR system include: photodetectors, lasers, collimating lenses, scanning mirrors, digital-to-analog converters, etc. Leading companies from these fields will gather at the LASER World of PHOTONICS CHINA show in March 2021. The "Lidar Technology and Application Frontier Forum" will be held along with the show, and will attract well-known manufacturers of key components such as laser light sources, optical components, and sensors. Chinese and foreign LIDAR suppliers, representatives of research institutions, and industrial users from industrial automation, automotive Tier 1 suppliers and OEM automotive manufacturers will participate in the meeting to discuss the future of the LIDAR industry.

Optical Metrology and Intelligent Manufacturing Forum

The 2021 Optical Metrology and Intelligent Manufacturing Forum will be held along with LASER World of PHOTONICS CHINA on March 18, 2021. The conference focuses on hot topics such as optical inspection and imaging technology, advanced optical processing and inspection, intelligent manufacturing, and the application of big data technology in optical instrument production. The forum provides a platform for know-how exchanges for experts, scholars and industry representatives.

The intelligent technology is developing rapidly in recent years, and optical inspection is an important guarantee for product quality, accuracy and performance in industrial manufacturing. In this era of intelligent manufacturing, the combination of the two has great potential. In response to "Made in China 2025" initiative, and to promote intelligent manufacturing, Messe Muenchen Shanghai Co., Ltd. and the Optical Testing Committee of the Chinese Optical Society (COS-TCOM) will jointly host the forum.

China (Shanghai) Machine Vision Technology & Application Conference

November 1, 2020 marks the first anniversary of the official commercial use of 5G in China. In the year past, China has consistently promoted the integration and innovation of "5G + Industrial Internet", and tried to make them a powerful driving force for the upgrade of quality and efficiency. At the exhibitions in Shanghai and Shenzhen this year, more and more artificial intelligence companies have joined the machine vision exhibition and showcased their latest technologies and products in intelligent vision. More artificial intelligence companies are expected to participate in 2021. The integration of innovative technologies such as 5G, edge computing, artificial intelligence, deep learning, embedded vision systems, and machine vision will be another highlight of the exhibition.

Following this trend, the organizer will host a seminar on machine vision technology and industrial application with the theme of "Powered by AI+Machine Vision+5G+Industrial Internet" in the Hall OV of Shanghai New International Expo Center. The organizer will invite industry representatives and experts to talk about practical cases to help accelerate industrial and manufacturing transformation.