



2017 IEEE High Power Diode Lasers & Systems Conference

Wednesday 11th & Thursday 12th October 2017 • Ricoh Arena, Coventry, UK

CONFERENCE SPONSOR



Advances in diode lasers and diode pumped lasers continue unabated as the range of applications increases. These advances are reflected in the current drive to develop kW-class direct diode laser systems and the growth of exciting application opportunities in additive manufacturing. Since 2015, exciting advances continue in both the development of high-power visible lasers and high-power coherent beam combining. Finally, progress on diode laser pumps for solid state and fibre lasers is also providing new insights into reliability and degradation processes.

Presented will be outstanding work from industry, research institutes and universities with contributions from the completed EU FP7 BRIDLE consortium.

This meeting, the 9th in the series, enjoys a reputation for showcasing the most significant recent advances in both the technology and the applications of high power diode laser systems - and for stimulating cross-sectorial and cross-disciplinary technical exchanges.

This year's conference will host a joint session with the new conference on Metal Power-based Additive Manufacturing.

This is a truly international conference, whose importance is reflected in the participation of international leaders in the field (both from industry and from research institutes/academia).

SPEAKERS (at 23/8)

KEYNOTE (Wednesday): Dr Klaus Kleine, Coherent Inc., USA
High-power diode laser sources for materials processing

KEYNOTE (Thursday): Dr Masao Kawaguchi, Panasonic Corp, Japan
High-power GaN diode lasers and their applications

Dr Muhammad Ali, Osram Opto Semiconductors, Germany
Blue power laser diodes: new applications & recent R&D chip results

Dr Paul Crump, Ferdinand-Braun-Institut, Germany
Monolithically wavelength-stabilized high power diode lasers

Dr Yannick Deshayes, Laboratoire IMS, France
Thermal management characterization of microassembled high power distributed-feedback broad area lasers emitting at 975nm

Dr Ole Bjarlin Jensen, DTU Fotonik, Denmark
High-power diode lasers converted to the visible

Prof Juan Jimenez Lopez, Doctoral School University of Valladolid, Spain
Material issues of the catastrophic degradation of high power laser diodes

Dr Paul Leisher, Lawrence Livermore National Laboratory, USA
Root cause investigation of back-irradiance-induced failure of high power diode lasers

Dr Gaëlle Lucas-Leclin, Institut d'Optique, France
Coherent combining architectures for high-brightness laser diodes

Dr Jens Tomm, Max-Born-Institute, Berlin, Germany
Comparison of catastrophic optical damage events in GaAs- and GaN- based diode lasers.

Dr Chung-en Zah, Chief Technology Officer, Focuslight, China
Low SMILE vertical stacked laser bars enable KW modular line lasers.

CONFERENCE BENEFACTOR



A MEETING BY

Scottish Chapter of the IEEE
Photonics Society

PROGRAMME ORGANISATION

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MORE INFORMATION

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The meeting comprises a programme of invited speakers, a poster session of contributed papers and time will be allowed for networking with other delegates.

CALL FOR POSTER PAPERS

This meeting is an opportunity for you to contribute to research knowledge, to meet with like-minded researchers and to network at a high level.

The main meeting programme will be by invitation however we are keen to involve students and early career scientists who are researching novel and exciting new techniques or unique applications.

We invite contributions for posters which will be accepted on the basis of their technical content. Poster presentations will include a short (2 minute) oral introduction, one slide - posters will be located inside the PHOTONEX exhibition for maximum exposure and impact.

The Committee will review poster submissions by early career researchers (PhD students and researchers with less than 10 years of postdoctoral or equivalent industrial experience), with the best submission to be considered for oral presentation in the main programme.

The extended abstracts of papers presented at the Conference will be eligible for publication in IEEE Xplore, subject to peer review and acceptance.

The Conference focuses on the following **IEEE Xplore[®]**
Digital Library

POSTER SUBMISSION:

- Power scaling diode lasers to high-brightness kW systems
- Coherent phase-locking of high-power laser diodes
- Design considerations for high-power external cavity laser diodes
- Visible and long wavelength lasers and their applications
- High-brilliance diode lasers for spectral beam combination
- Laser diodes optimised for external cavity operation
- The role of external optical feedback
- Reliability of external cavity laser diodes
- Beam combining approaches for high-brightness direct diode laser systems
- Diode laser platforms for multi-kw applications
- Outlook for volume manufacturing of high-brightness laser diode systems
- Advances in diode pumped solid state lasers
- Applications for diode laser technology in:
Industrial & Material Processing -
Healthcare & Biophotonics - Displays
- Energy - Aerospace and Security.

Email please to info@enlightenmeetings.com and quote "Poster submission/ High Power Diode Lasers" in the subject line.

Deadline for poster submissions: 18th September 2017. Authors will receive acceptance notification on the 23rd September.

Please provide a 2-page poster paper, see template under SUBMISSION OF YOUR POSTER PAPER/INVITED PAPER on the following page:-
www.hpdls.org/call-for-papers/

CONFERENCE REGISTRATION

Registration is OPEN. Advance registration required

A COMMENT ABOUT THIS YEAR'S MEETING

The programme chair is Professor Eric Larkins from the Department of Electrical and Electronic Engineering, University of Nottingham.

"This is an exciting time for high-power diode lasers, with advances being made in brightness, beam combining and the development of kW-class direct diode lasers for industrial applications.

Having seen an increase in delegate numbers year on year, we are delighted that we are again holding this event at Ricoh Arena and alongside the UK's premier networking/showcasing event for photonics research and technology.

WHAT TO DO NEXT

1. Send this information to colleagues and associates who may also be interested.
2. Register yourself for the meeting as an attendee as soon as possible.

Other Enlighten Conference meetings include:

Graphene & Emerging 2D materials
Metal Powder-based Additive Manufacturing
Optical Engineering & Design
Optical Metrology for Industry
Silicon Photonics Adoption in UK Industry
Surface Analysis
Thin Film and Coating Technologies for Science & Industry

Are you interested in exhibiting?

Please contact Laurence Devereux by email or ld@photonex.org or call +44 (0)1372 750555