

# PRESS RELEASE

-----  
**PRESS RELEASE**September 20, 2016 || Page 1 | 3  
-----

## Launch of New Industry Working Group for Process Control in Laser Material Processing

**At AKL'16, the International Laser Technology Congress held in May this year, interest in the topic of process control was greater than expected. Appropriately, the event was also used to launch the Industry Working Group for Process Control in Laser Material Processing. The group provides a forum for representatives from industry and research to initiate pre-competitive projects and discuss issues such as standards, potential cost savings and feasibility.**

In the age of industry 4.0, laser technology is firmly established within manufacturing. A wide variety of laser techniques – from USP ablation and additive manufacturing to laser polishing – are now commonplace in large-scale production. Cost structures, new materials and new processes are framing the demands placed on lasers and process engineering, of which process control is an essential element. Process control has developed steadily over the past few years in terms of performance and reliability, and is being used more and more by manufacturing companies.

### More stringent demands placed on process monitoring

New sensors paired with innovative signal analysis now permit more accurate diagnosis of faults in laser-based processes. Today's lasers offer equally high levels of performance and brilliance. This means that laser processes are becoming ever faster, which often leads manufacturers to exhaust process limits as they seek to maximize profitability. Process windows are thus becoming narrower and narrower, which in turn raises the importance of process monitoring. The demands placed on the sensor technology in process control are thus correspondingly high: suitable measuring points need to be identified in the manufacturing process, the correct sensors need to be integrated and appropriate automated processes need to be found to ensure rapid detection of quality issues. Overall this represents a considerable challenge for users and manufacturers.

### Accumulated expertise: the Industry Working Group for Process Control

At the process control seminar during AKL'16, it was apparent that there is great interest among users in new developments in process control. To meet users' needs for support in this area, the Fraunhofer Institutes for Laser Technology ILT and for Production Technology IPT in Aachen announced the launch of the Industry Working Group for Process Control in Laser Material Processing.

---

#### Editorial Notes

**Petra Nolis M.A.** | Group Manager Communications | Phone +49 241 8906-662 | [petra.nolis@ilt.fraunhofer.de](mailto:petra.nolis@ilt.fraunhofer.de)  
Fraunhofer Institute for Laser Technology ILT | Steinbachstraße 15 | 52074 Aachen, Germany | [www.ilt.fraunhofer.de](http://www.ilt.fraunhofer.de)  
Steinbachstraße 15 | 52074 Aachen, Germany | [www.ilt.fraunhofer.de](http://www.ilt.fraunhofer.de)

**FRAUNHOFER INSTITUTE FOR PRODUCTION TECHNOLOGY IPT  
FRAUNHOFER INSTITUTE FOR LASER TECHNOLOGY ILT**

---

**PRESS RELEASE**

September 20, 2016 || Page 2 | 3

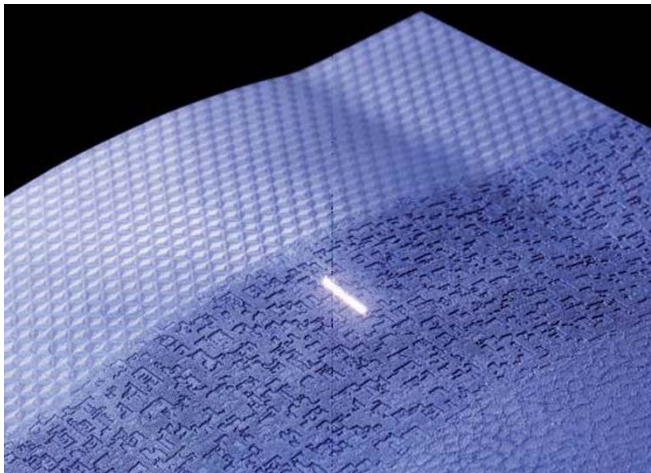
---

The working group is aimed at users of laser techniques across a wide variety of sectors. Together with the research units, users in the working group can define and carry out pre-competitive projects such as feasibility studies or develop benchmarks, for instance. Members of the working group have access to the latest expert knowledge and trend analyses. Particular emphasis is placed on encouraging an exchange of information, both among users themselves and with experts. Moreover, members have direct access to research and funding projects as well as training opportunities. The activities of the working group are funded by membership fees. To date, some ten companies have expressed interest and are in discussions with the organizers. Further members are very welcome!

With the inaugural meeting planned for autumn 2016, interested parties are now free to submit topics and questions for discussion.

Become a member of our working group! If you would like more details, get in touch with the contacts listed below.

[www.laserprocesscontrol.org](http://www.laserprocesscontrol.org)



**Image 1:**  
**Surface structuring with  
laser radiation.**  
© Foto Fraunhofer IPT,  
Aachen, Germany.

**FRAUNHOFER INSTITUTE FOR PRODUCTION TECHNOLOGY IPT  
FRAUNHOFER INSTITUTE FOR LASER TECHNOLOGY ILT**



**Image 2:**  
**Process monitoring and  
adaptive control for laser  
MSG hybrid welding.**  
© Fraunhofer ILT, Aachen,  
Germany.

-----  
**PRESS RELEASE**

September 20, 2016 || Page 3 | 3  
-----

---

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 67 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 24,000, who work with an annual research budget totaling more than 2.1 billion euros. Of this sum, more than 1.8 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. Branches in the Americas and Asia serve to promote international cooperation.

**For further information**

**Dipl.-Ing. Peter Abels** | Group Manager Process Control and System Technology | Telephone +49 241 8906-428  
peter.abels@ilt.fraunhofer.de

**M.Sc. Ulrich Thombansen** | Coordination of Industry Working Group for Process Control | Telephone +49 241 8906-320  
ulrich.thombansen@ilt.fraunhofer.de | Fraunhofer Institute for Laser Technology ILT, Aachen, Germany | [www.ilt.fraunhofer.de](http://www.ilt.fraunhofer.de)

**Dipl.-Ing. Reik Krappig** | Manager Business Unit Optics | Telephone +49 241 8904-327 | [reik.krappig@ipt.fraunhofer.de](mailto:reik.krappig@ipt.fraunhofer.de)

**M.Sc. Philippe Ackermann** | Telephone +49 241 8904-540 | [philippe.ackermann@ipt.fraunhofer.de](mailto:philippe.ackermann@ipt.fraunhofer.de)  
Fraunhofer Institute for Production Technology IPT, Aachen, Germany | [www.ipt.fraunhofer.de](http://www.ipt.fraunhofer.de)