**Friday, April 29, 2016**

**Room Brussels**

**Session 2: Laser Material Processing – Micro**

**Micro Joining**
Chairman: Dr. Alexander Olowinski, Fraunhofer ILT, Aachen (D)

8.30  An Innovative Joining Process for Thermally Sensitive Components – LIMBO
Simon Britten, Fraunhofer ILT, Aachen (D)

9.00  Laser Welding + Wirebonding = Laserbonding.
A New Joining Process for Applications in Power Electronics and Battery Technology
Dr. Josef Sedlmair, F&K Detektiv GmbH & Co. KG, Ottobrunn (D)

9.30  PMJoin – Laser-Based Joining of Metal to Plastic for Automotive Seat Structures
Dr. Geert Verhaeghe, Faurecia AutoSitz GmbH & Co. KG, Stadthagen (D)

10.00  Coffee Break – Visit of the Sponsors’ Exhibition

**Ultrafast Lasers – Applications**
Chairman: Dr. Arnold Gillner, Fraunhofer ILT, Aachen (D)

11.00  High Power Ultrashort Pulses Lasers in Tool Technology –
Productive Processes for Microstructures on Macro Components
Christian Forneroli, Fraunhofer ILT, Aachen (D)

11.30  Lasers in the Production of Circuit Carriers
Dr. Roman Orthold, LPKF Laser & Electronics AG, Gартен (D)

12.00  Present Status and Trends of Femtosecond Laser Processing
in Next Generation Displays, AMOLED Manufacturing Industry
Sung-Hak Cho, KIMM Korea Institute of Machinery & Materials, Daejeon (KR)

12.30  Lunch – Visit of the Sponsors’ Exhibition

**Polishing and Thin Film Processing**
Fraunhofer ILT, Aachen (D)

14.30  Laser-based Production of Thin Films for Electronic Applications
Dr. Christian Vedder, Fraunhofer ILT, Aachen (D)

15.00  Q-switched CO Laser Opens New Opportunities in Laser Material Processing
Dr. Matthias Busch, Fhwa Laser Tec GmbH, Bitterfeld-Wolfen (D)

15.30  Application – Adapted Intensity Distribution by Free-Form Optics for Laser Surface Treatment
Dr. Christian Wenzel, INNOLITE GmbH, Aachen (D)

16.00  Outlook
Room Berlin
Prof. Reinhart Poprawe, Fraunhofer ILT, Aachen (D)

16.30  End of the Lectures

**Room Lisbon**

**Session 3: Laser Beam Sources**

**Ultrafast Lasers – Beam Sources**
Chairman: Dr. Peter Ruboldt, Fraunhofer ILT, Aachen (D)

8.30  Femtosecond Lasers over 100 Watts
Dr. Clemens Hönninger, Amplitude Systèmes, Pessac (F)

9.00  Kilowatt Ultrafast Disk Laser
Dr. Dominik Bauer, TRUMPF Laser GmbH, Schramberg (D)

9.30  Fiber Beam Delivery for Ultrafast Lasers – Status Quo and Outlook
Dr. Björn Wedel, PT Photonic Tools GmbH, Berlin (D)

10.00  Coffee Break – Visit of the Sponsors’ Exhibition

**Lasers with Tailored Wavelengths**
Chairman: Dr. Bernd Jungbluth, Fraunhofer ILT, Aachen (D)

11.00  High-Power Lasers with Application-Specific Pulse Length and Wavelengths in UV, VIS and NIR
Peter Genter, ROPIN-SINAR Laser GmbH, Bergkirchen (D)

11.30  Cutting Edge Fiber Laser Technology around 2 μm
Dr. Shibin Jiang, AdvValue Photonics Inc., Tucson (USA)

12.00  Architecture, Performance and Application of High-Power High Repetition Rate UV Laser with Flexible Pulse Control
Dr. Rajesh S. Patel, Spectra-Physics, Santa Clara (USA)

12.30  Lunch – Visit of the Sponsors’ Exhibition

**Diode Lasers**
Chairman: Martin Traub, Fraunhofer ILT, Aachen (D)

14.30  Development of the Performance and the Effectiveness of Diode Lasers with Maximum Power
Volker Krause, Laserline GmbH, Mulheim-Kärlich (D)

15.00  Recent Results and Future Scaling Potential of the T-Bar Design
Dr. Jens Biesenbach, DILAS Diodenlaser GmbH, Mainz-Hechtsheim (D)

15.30  Laser Scanner – A Crucial Step towards Automated Driving
Gunnar Busse, VALÉO GmbH, Bietigheim-Bissingen (D)

16.00  Outlook
Room Berlin
Prof. Reinhart Poprawe, Fraunhofer ILT, Aachen (D)

16.30  End of the Lectures
Present Status and Trend of Femtosecond Laser Processing in Next Generation Display, AMOLED Manufacturing Industry

Prof. Dr. SUNG HAK CHO
shcho@kimm.re.kr

Head, Department of Laser & Electron Beam Application
KIMM (Korea Institute of Machinery & Materials)

Professor, Korea University of Science and Technology
KIMM URL: http://www.kimm.re.kr
www.femto-kimm.kr (UST-KIMM)
Introduction

KIMM Research Activities – fs laser processing

Need of laser processing in Manufacturing Industry
- Display, Semiconductor, Mobile phone, LED TV, Medical Devices
- AMOLED

Present status and trend of laser application for display, AMOLED in KOREA
- fs Laser processing for AMPLED panels
- fs Laser processing for AMOLED components
- fs Laser processing for advanced products (VR, Wearable devices, Smart Watch, Tablet PC)

Future Trends