

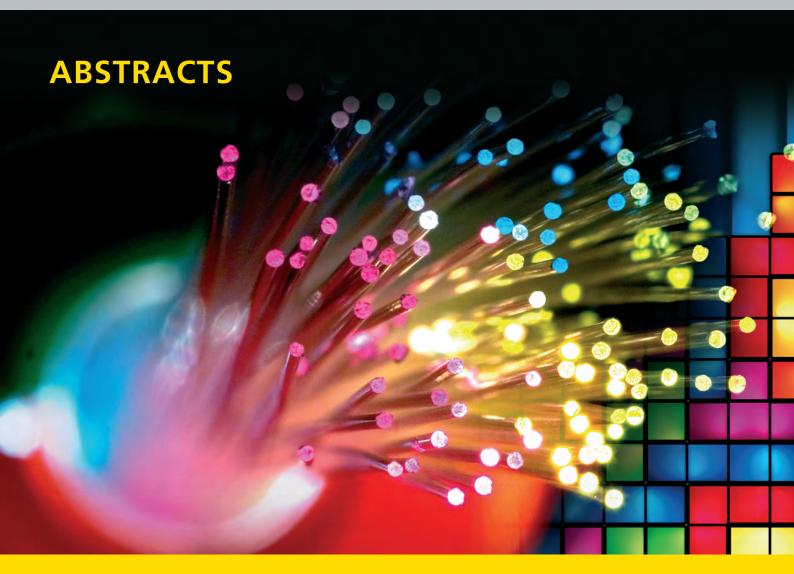
Dresden IWS





10th INTERNATIONAL LASER SYMPOSIUM & INTERNATIONAL SYMPOSIUM »TAILORED JOINING«

MOTTO: INDUSTRY 4.0



February 27–28, 2018 International Congress Center Dresden, Germany



Contents

International Laser Symposium 2018

Plenary session I		
Prof. Dr. Engelbert Westkämper	Industry 4.0 – Future prospects	10
Klauf Löffler	Industry 4.0 and laser technology: future for manufacturing	11
Prof. Dr. Christoph Leyens	Industry 4.0: game changer in laser materials processing?	12
Prof. Dr. Minlin Zhong	Nano-scale LAM-laser printing of graphene	13
Laser Systems & Applications		
George Oulundsen	CO laser technology and commercial applications	15
Mathew Finuf	High power blue lasers – a reality for copper and copper alloys high quality welding and process speed	16
Dr. Eyal Shekel	Digitalizing the industrial laser – high power laser with SM dynamic beam using Optical Phased Array (OPA) for material processing	17
Brian Victor	Laser processing of battery components	18
Systems Technology & Components I		
Dr. Christoph Ullmann	The blue diode laser opportunity	20
Dr. Otto Märten	New concepts for laser beam diagnostics in the workspace of laser systems for additive manufacturing with one or multiple laser sources	21
Berthold Kessler	Optimized fiber laser tools with integrated control	22
Systems Technology & O	Components II	
Dr. Markus Kogel-Hollacher	Qualified for guidance? Can sensors in laser material processing put processes on a leash?	24
Dr. Balthasar Fischer	Using a laser to listen to the quality of an automated manufacturing process	25
Dr. Andreas Wetzig	New ways of fast beam deflection using scanner technology	26
Laser Direct Writing & Applications		
Dr. Koji Sugioka	Keynote: Femtosecond laser 3D microprocessing for fabrication of advanced biochips: hybrid approach using subtractive, additive and undeformative processing	28
Dr. Gert-Willem Römer	Laser-induced Periodic Surface Structures (LIPPS), fundamentals and applications	29
Thomas Kuntze	Defect-free scribing of organic photovoltaics on barrier layer with ultra- short pulsed laser	30
Large Area Laser Processing & Functionalization		
Prof. Antonio Ancona	Ultrafast laser surface micro-texturing to tailor lubricates friction of steel	32
Prof. Dr. José Luís Ocaña	Direct generation of superhydrophic microstructures in metals be UV laser sources in the nanosecond regime	33
Dr. Rainer Kling	Functionalization of technical surfaces with ultra-short pulsed lasers	34

Author/s

Contact:

Abstract

Literature