

MONDAY 25TH JUNE**MORNING****PLENARY PRESENTATIONS**

David Payne
Michael Campbell
Nootada Okada

The Fibre Laser Revolution
Inertial Confinement Fusion Overview; Status, Plans, and future Prospects
High Speed 3D Printer Using Laser Metal Deposition

University of Southampton, UK
University of Rochester, USA
Toshiba Corp, Japan

AFTERNOON: PARALLEL SESSIONS**SPECIAL SESSION: LASER SURFACE MICRO/NANO STRUCTURING (PART 1)**

Antonio Ancona (invited speaker)
Emmanuel Brousseau
Stephan Brüning
Andrés Lasagni
Giuseppe Giannuzzi
Denys Moskal
Kira van der Straeten
Paul Justus Sieffert
Florian Rößler

Modifying steel surface tribology by ultrafast laser micro-texturing
Investigation of microstructural changes in a Zr-based amorphous alloy with nanosecond laser surface melting
Large scale ultrafast laser micro texturing with multi-beams
Micro-nano structuring of sleeves for roll-to-roll embossing processes using Direct Laser Interference Patterning
Surface texturing of steel with bursts of femtosecond laser pulses
Shifted laser surface texturing (sLST) in burst regime
Influence of Climatic Changes on the Joint Strength of Laser Joined Plastic-Metal Hybrids
Influence of laser induced microstructures on the oxidation of solid carbon on platinum
Fabrication of hierarchical surface pattern using direct laser interference patterning as protection against mechanical damage

Institute of Photonics and Nanotechnologies, Italy
Cardiff University, UK
Schepers GmbH & Co KG, Germany
Technical University, Dresden, Germany
Institute of Photonics and Nanotechnologies, Italy
University of West Bohemia, Czech Republic
Fraunhofer ILT, Germany
Robert Bosch GmbH, Germany
Technische Universität Dresden, Germany

ELECTRONICS

Gediminas Račiukaitis
Yasuhiro Okamoto
Aryak Singh
Hiroyuki Katayama
Vahid Nasrollahi
Riccardo Geremia
Woo-Sik Chung
Baohua Jia (invited speaker)
Jiyeon Choi

Local copper deposition on dielectrics using Selective surface activation induced by laser (SSAIL)
Effects of Polarization on Removal Characteristics of Silver Nanowires in Transparent Conductive Film by fs Pulsed Laser
Damage-free ablation process for back-contacted silicon hetero-junction solar cells
Femtosecond laser irradiation for the low contact resistance electrode fabrication on p-type gallium nitride
Analytical and empirical approach for improving morphology and aspect ratio of micro holes' drilling with ultra-short pulsed lasers
Laser pulse overlap optimisation for ultrafast thin film patterning in an industrial environment
Investigation to Increase the Welding Joint Area with Modulated Laser Beam Welding over Gap
High precision laser fabrication of two-dimensional materials and devices
Ultrafast laser processing and engineering of material properties to innovate manufacturing of organic electronics

Center for Physical Sciences and Technology, Lithuania
Okayama University, Japan
Institut für Energie und Klimaforschung, Germany
Tokushima University, Japan
University of Birmingham, UK
Oxford Lasers, UK
Fraunhofer ILT, Germany
Swinburne University of Technology, Australia
Korea Institute of Machinery and Materials, South Korea

MODELLING

Isamu Miyamoto
Hongyu Zheng
Mohamed Darwish
Nadezhda Bulgakova (invited speaker)
Jie Qiao (invited speaker)
Andreas Otto (invited speaker)
Zongji Zheng
Marc Schmid
Takashi Takahashi

Effects of laser wavelength in internal modification of glass by ultrashort laser pulses
Femtosecond laser-induced thermal effects on thick polystyrene samples
Design, analysis and simulation for gas-assisted flow of supersonic nozzles for laser cutting
Sequential processes of volumetric restructuring of transparent materials by ultrashort laser pulses:
Differentiating non-thermal ablation and heat accumulation toward ablation-cooled ultrafast-laser processing
Vienna University of Technology, Austria
Research on the factors affecting the processing results of laser ablation
Temperature dependency of optical properties of metals: comparing ellipsometric data with theoretical models
The impact of fluence and intensity on the pulse laser ablation

Osaka University, Japan
Singapore Institute of Manufacturing Technology, Singapore
University of Modena and Reggio Emilia, Italy
HiLase, Czech Republic
Rochester Institute of Technology, USA
Vienna University of Technology, Austria
Xi'an Jiaotong University, China
Bern University of Applied Science, Switzerland
University of Tokyo, Japan

TUESDAY 26TH JUNE**MORNING: PARALLEL SESSIONS****SPECIAL SESSION: LASER SURFACE MICRO/NANO STRUCTURING (PART 2)**

Sietse van der Linden
Yasutaka Hanada
Anton Rudenko
Tatiana Itina (invited speaker)
Jianjun Yang (invited speaker)
Alfredo Aguilar
Melissa Sikosana

Liquid covered picosecond pulsed laser ablation of stainless steel: effect of liquid layer thickness on ablation efficiency
Microfabrication of transparent thermosetting polymer PDMS using cavitation bubbles induced by conventional ns laser
Ultrashort laser-induced surface nanostructuring: from electromagnetic to hydrodynamic effects
Multi-physical modeling of laser nano- and micro-structuring of glasses
Flexible nanostructuring of metal surfaces by femtosecond laser pulses
Homogeneously distributed microstructures produced by Direct Laser Interference Patterning
The TRUE antifouling capabilities of Laser processed surfaces, bio-inspired by springtails and tested under REALISTIC conditions

University of Twente, The Netherlands
Hirosaki University, Japan
University St Etienne, France
University St Etienne, France
Naikai University, China
Fraunhofer IWS, Germany
Leibniz-Institut für Polymerforschung, Germany

INDUSTRIAL APPLICATIONS

Marcus Lau
Cliff Jolliffe
Adam Rosowski

Optical modification of ITO particles by sequential UV laser irradiation in a free liquid jet
Combined galvanometer scanners and motion platforms over standard industrial networks
Drilling of microholes using temporal pulse shaping with ns pulsed fiber lasers

TRUMPF GmbH, Germany
PI (Physik Instrumente), UK
SPI Lasers, UK

Mark Thompson
Hiroyuki Niino

Ultra-short fiber lasers enable low cost of ownership applications
Laser-induced ejection of millimeter-sized liquid droplet from metal surface with a 1 Joule/pulse ns-laser
How a new random trigger-feature for ultrashort-pulsed laser increases throughput, quality and accuracy in micromachining applications
High power industrial femtosecond lasers for μ -machining applications with highest quality and efficiency
Recent Advances in Fiber Laser Microfabrication

IPG Photonics, UK
AIST, Japan

Andreas Oehler
Victor Matyitsky
Marco Mendes

Lumentum Switzerland
Spectra-Physics, Austria
IPG Photonics, USA

MICROJOINING

Kristian Cvecek
Viktor Mamuschkin
Julio Coroado
Nam-Phong Nguyen
Jack Gabzdyl
Anne Henrottin
Richard Carter
Supriyo Ganguly (invited speaker)

On-line interferometric observation of thermomechanically induced refractive index changes during glass welding by ultra-short laser pulses
Investigations on the interplay between focusing and absorption in absorber-free laser transmission welding
Application of fibre lasers in micro joining of thin structural alloys
Localised modifications inside polycarbonate by using ultrashort laser pulses for microwelding applications
Micro joining of dissimilar metals with ns pulsed fiber lasers
New approach for assembling dissimilar materials: laser technology
Towards industrial application of ultrafast laser microwelding
Application of pulsed fibre lasers in dissimilar joining of ultra-thin alloys (invited)

Bayerisches Laserzentrum (blz), Germany
Fraunhofer ILT, Germany
Cranfield University, UK
Fraunhofer ILT, Germany
SPI Lasers, UK
LASEA, Belgium
Heriot-Watt University, UK
Cranfield University, UK

FUNCTIONAL SURFACES

Daniel Arnaldo del Cerro
Rosie Horner
Andreas Brenner
David Rico Sierra

Laser surface texturing of sintered and grey cast iron for tribological applications in refrigeration hermetic compressors: the effect of pulse duration on ablated crater rim formation
Solving the Problem of Biofouling by Using Laser Micro-Machining
Increasing productivity of ultrashort pulsed laser ablation for combination process with ns-laser
Fabrication of superhydrophobic surfaces on titanium alloy using a nanosecond pulsed laser and thermal post-processing
Enhancing surface functionalities by Direct Laser Interference Patterning – Basic principles, industrial approaches and structure lifetime
Biomimetic structures on glass fabricated with femtosecond laser pulses
Short and ultrashort pulsed laser processing of zinc: resolidification morphology of ablated craters
Formation of broadband ultra-black absorbers using laser micro-structuring

Oxford Lasers, UK
LJMU, UK
Fraunhofer ILT, Germany
University of Liverpool, UK

Tim Kunze
Camilo Florian
Hasib Mustafa
Catherine Barmina

Fraunhofer IWS, Germany
CSIC, Spain
University of Twente, The Netherlands
Russian Academy of Sciences, Russia

AFTERNOON: PARALLEL SESSIONS

SPECIAL SESSION: LASER SURFACE MICRO/NANO STRUCTURING (STUDENT SESSION)

Jean-Michel Romano
Luigi Capuano
Antonio García Girón
Fotis Fraggelakis
Gagandeep Singh Joshi
Tobias Stark

Subwavelength laser texturing using microsphere-assisted photonic jet array
Towards a numerical model of picosecond laser-material interaction in bulk sapphire
Study of wear resistance of laser-textured hardened stainless steel surfaces with superhydrophobic properties
Controlling and upscaling laser induced surface structuring
Experimental investigation of the tribological and wettability properties of laser-textured martensitic steel surfaces
Positive effect of laser structured surfaces on tribological performance
Analysis and modelling of icing of engines' air intake protection grid structures and improvement of performances with surface laser patterning

University of Birmingham, UK
University of Twente, The Netherlands
University of Birmingham, UK
ALPhANOV, France
Institute of Photonics and Nanotechnologies, Italy
Robert Bosch GmbH, Germany

Vittorio Vercillo
Marek Mezera
Sabri Alamri

Laser-Induced Periodic Surface Structures (LIPSS) on polymers processed with picosecond laser pulses
Advanced micro-structuring strategies on polymers using Direct Laser Interference Patterning

Airbus Central Research & Technology, Germany
University of Twente, The Netherlands
Fraunhofer IWS, Germany

MONITORING & DIAGNOSTICS

Aleksandra Michalek
Benedikt Bornschlegel
Sören Hollatz
Madhura Somayaji
Heinz Huber
Indhu Radhakrishnamurthy
Paul Dryburgh
Malte Kumkar (invited speaker)

Inline LIPSS monitoring method employing light diffraction
In-Situ Analysis of USP Ablation with High Repetition Rates
Measurement of Keyhole Depth during Laser Beam Micro Welding with Scanners
Time resolved study of plasma luminescence in different dielectrics irradiated by subpicosecond besel laser pulses
Early motion of matter observed by ultrafast transient studies of reflectivity and absorption
Study on Cholesterol Contents Detection Using Laser Induced Breakdown Spectroscopy
Targeted rework of powder bed fusion additive manufacturing
Multi Pulse Pump-Probe Diagnostics for Development of Advanced Transparent Materials Processing

University of Birmingham
Aachen University, Germany
Fraunhofer ILT, Germany
Universit' e de Lyon, Universit' e Jean Monnet, France
Munich University of Applied Sciences, Germany
SSN College of Engineering, India
University of Nottingham, UK
TRUMPF GmbH, Germany

LIPSS

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| <p>Godai Miyaji (invited speaker) Stefan Rung Noemí Casquero Maroto Anthony Abou Saleh Tahseen Jwad Masayuki Kakehata Masayuki Fujita Inam Mirza Miguel Martínez Calderón</p> | <p><i>Excitation of surface plasmon polaritons on non-metallic materials with intense femtosecond laser pulses and its application to nanoprocessing</i> <i>Static and dynamic contact angle of water influenced by femtosecond laser based ripple structures on metals</i> <i>Polarization conversion on nanostructured metallic surfaces fabricated by LIPSS</i> <i>Stress-induced defects versus high-spatial Frequency nanostructures on ultrafast laser-irradiated metal surfaces</i> <i>Laser induced ripples' gratings for fabrication periodic pattern of diffraction holograms</i> <i>Laser-induced periodic surface structures on Ytria-stabilized Zirconia ceramics by femtosecond double-pulse irradiations</i> <i>Formation of laser-induced periodic surface structure on transparent materials with metal coating by femtosecond lasers</i> <i>Femtosecond laser induced surface structuring of large bandgap dielectrics</i> <i>Tailoring diamond's optical properties via direct femtosecond laser nanostructuring</i></p> | <p>Tokyo University of Agriculture and Technology, Japan University of Applied Sciences Aschaffenburg, Germany Ceit, Spain University St Etienne, France University of Birmingham, UK AIST, Japan Institute for Laser Technology, Osaka, Japan HiLase, Czech Republic Ceit, Spain</p> |
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DIRECT WRITE

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| <p>Jun Guan Akito Katayama Valdas Sirutkaitis Javier Solis Yang Liao Giro D'Amico Sergey Lotarev Vytautas Purlys Jian Xu</p> | <p><i>Microscopic characterization of laser-written phenomena for component-wise testing of photonic integrated circuits</i> <i>Femtosecond laser direct writing of PDMS/metal composite microstructure under different metal ion concentrations</i> <i>Chemically assisted femtosecond laser micromachining in lithium niobate</i> <i>Design of fs-laser writable borate glasses for the inscription of photonic devices</i> <i>Suppression of bend loss in writing of three-dimensional optical waveguides with femtosecond laser pulses</i> <i>Lowering the Threshold for Ultrafast Laser Photoinscription in Chalcogenide Glasses by Thermal Annealing</i> <i>Fast femtosecond laser-induced seed crystal precipitation in lanthanum borogermanate glass</i> <i>Fabrication of photonic crystal spatial filters in glass using Gaussian and Bessel beams</i> <i>Fabrication of 3D metallic microstructures in glass using femtosecond laser microfabrication and electroless plating</i></p> | <p>University of Oxford, UK Keio University, Japan Vilnius University, Lithuania CSIC, Spain Shanghai Institute of Optics and Fine Mechanics, China Universit'e de Lyon, Universit'e Jean Monnet, France Mendeleev University of Chemical Technology of Russia Vilnius University, Lithuania East China Normal University, China</p> |
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WEDNESDAY 27TH JUNE

MORNING: PARALLEL SESSIONS

SPECIAL SESSION: ULTRA-SHORT PULSED LASERS FOR LARGE-AREA AND/OR HIGH THROUGHPUT PROCESSING (PART 1)

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| <p>Steffen Sommer (invited speaker) Eric Audouard Joerg Schille Arnold Gillner Bilal Gökce (invited speaker) Chao He David Lawton</p> | <p><i>Large area surface structuring of metallic materials</i> <i>Beam on demand for high throughput femtosecond processing</i> <i>High-precision surface profiling using multi-hundred Watts ultrashort pulse lasers and ultrafast polygon-mirror based scanner</i> <i>High power laser processing with ultrafast and multi-parallel beams</i> <i>High-throughput nanoparticle generation by ultra-short pulsed laser ablation in liquids</i> <i>High-efficiency sub-micrometer multi-beam interference structuring for large-scale surface using ultrashort laser pulses</i> <i>Safety Implications of using lasers during precision microfabrication</i></p> | <p>Dausinger + Giesen GmbH, Germany Amplitude Systemes, France Laserinstitut Hochschule Mittweida, Germany Fraunhofer ILT, Germany University of Duisburg-Essen, Germany Aachen University, Germany Lasermet, UK</p> |
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OPTICAL DEVICES

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| <p>Saood Nazir Julen Azkona Juergen Ihlemann Susumu Noda (invited speaker)</p> | <p><i>A monolithic gimbal micro-mirror fabricated and remotely tuned with a femtosecond laser</i> <i>Femtosecond Laser fabrication of Volume-Phase Gratings in CdSxSe1-x Quantum Dot doped Borosilicate Glass</i> <i>Laser processing of silicon suboxide for the fabrication of multilevel fused silica diffractive phase elements</i> <i>Photonic Crystal Lasers</i></p> | <p>École Polytechnique Fédérale de Lausanne, Switzerland Ceit, Spain Laser-Laboratorium Göttingen, Germany Kyoto University, Japan</p> |
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LASERS AND NANOPARTICLES IN LIQUIDS

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| <p>Dongshi Zhang Koh Momoki Manikandan Esakkimuthu</p> | <p><i>Spontaneous growth of femtosecond laser synthesized Ag@C nanoparticles and ex-situ formation of functional nanocomposites with SU-8</i> <i>Silicon nanoparticle generation by nanosecond pulsed laser irradiation on waste silicon powder</i> <i>Preparation of printable conductive ink for flexible RF devices by laser ablation</i></p> | <p>RIKEN, Japan Keio University, Japan SSN College of Engineering, India</p> |
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MEDICAL & BIOLOGICAL APPLICATIONS

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| <p>Yingchun Guan Chen Li Stephan Ströbl David Bruneel Syam Mohan Mohanan Rainer Beck Marco Götz</p> | <p><i>Tailoring Surface Properties of Rare Earth Magnesium Alloy for Biomedical Application Induced by Laser Processing</i> <i>Biomimetic Anti-adhesive Surface Micro/Nano Structures of Electrosurgical Knife Fabricated by Fibre Laser</i> <i>Ultrafast-laser fabrication of optical fiber diffusers for medical applications</i> <i>Femtosecond micromachining of complex geometries for biomedical applications</i> <i>515 nm ultrashort pulsed laser resection of colon tissue in a porcine model</i> <i>Ultrafast laser resection for high precision treatment of colorectal cancer</i> <i>Investigation of Laser Processing of Biodegradable Nanofiber Nonwovens with Different Pulse Durations</i></p> | <p>Beihang University, China Shaanxi University of Science and Technology, China Vorarlberg University of Applied Sciences, Germany LASEA, Belgium Heriot-Watt University, UK Heriot-Watt University, UK University of Applied Sciences Mersebrug, Germany</p> |
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3D MICRO & NANO FABRICATION (Part 1)

Hiroshi Yoshikawa (invited speaker)

Zhiwei Fang
Linus Jonušauskas
Isabelle Geoffray

Yoshiki Nakata (invited)

Airán Rodenas
Nicholas Charipar

Spatiotemporal control of crystal growth of biomolecules by laser ablation
Fabrication of high quality factor lithium niobate double-disk using a femtosecond laser
Quantitative laser induced damage threshold investigation of femtosecond laser lithography produced 3D structures
Structure modifications in ultra-low density metallic foams under laser radiation
Rapid fabrication of nanostructures in lattice
Direct laser writing of nanophotonic structures inside crystals
Laser Patterning of Plasmonic Metasurfaces

Saitama University, Japan
Shanghai Institute of Optics and Fine Mechanics, China
Femtika, Lithuania
Centre de Valduc, France
Osaka University, Japan
Institute of Photonics and Nanotechnologies, Italy
Naval Research Laboratory, USA

AFTERNOON: PARALLEL SESSIONS

SPECIAL SESSION: ULTRA-SHORT PULSED LASERS FOR LARGE-AREA AND/OR HIGH THROUGHPUT PROCESSING (PART 2)

Udo Löschner (invited speaker)

Sergey Kudryashov
Eric Mottay

High-rate laser micro processing - quo vadis?
High-throughput ultrashort laser micromachining by MHz-THz pulse bursts
High efficiency femtosecond ablation with GHz pulses

University of Applied Sciences Mittweida, Germany
Lebedev Physical Institute, Moscow, Russia
Amplitude Systemes, France

SPECIAL SESSION: LASER MICRO/NANO ADDITIVE MANUFACTURE (PART 1)

Jack Campbell (invited speaker)

Chung-Wei Cheng
Andreas Koglbauer

3D nano-printing custom laser targets: Development and first commercial use
Single Track of Selective Laser Melting Process: Modeling and Experimental Comparison
Advanced Beam Path Analysis in 3D Additive Manufacturing Systems

Material Science Solutions, USA
National Chiao Tung University, Taiwan
PRIMES, Germany

LIFT (PART 1)

Ioanna Zergioti
Kristin Charipar

Fluid dynamics of jetting by means of Laser Induced Forward Transfer
Low-profile interconnects via laser-induced forward transfer

National Technical University of Athens, Greece
Naval Research Laboratory, USA
National Institute of Advanced Industrial Science and Technology, Japan
Munich University of Applied Sciences, Germany
Holst Centre / TNO, The Netherlands
Universitat de Barcelona, Spain
Universitat de Barcelona, Spain
Naval Research Laboratory, USA

Aiko Narazaki
Jun Zhang
Merijn Giesbers
Pol Sopeña
Pere Serra
Alberto Piqué

Apatite coating based on laser-induced forward transfer for dental treatment
Sacrificial-layer free laser-induced forward transfer of mammalian cells
Printing with Light
Laser-induced forward transfer of silver nanowires for the production of transparent electrodes
Laser-induced forward transfer with continuous wave radiation
Use of an elastomeric donor for LIFT of metal foils

DRILLING, CUTTING & MILLING

Matthias Domke
Shoaib Sarfraz
Xiaozhu Xie
Gregoire Laporte
Maximilian Brosda
Aurélien Sikora
Qianliang Li
Alexander Kroschel
Dominik Banat

Towards laser cutting in the ablation-cooled regime: Comparing 154 MHz fs-pulse bursts with single fs- and ns-pulses
Cost Modelling of Laser Drilling Process
Micro/nano suspended particles assisted laser-induced backside wet dicing (LIBWD) of sapphire substrate
400W laser Microjet technology: high work rate drilling and cutting
Laser cutting of polymers with adapted NIR diode- and fiber laser systems
Parametric study of smooth sidewall micromachining by picosecond lasers
Femtosecond laser ablation of Polyether ether ketone
Model of the Borehole Geometry for Helical Laser Drilling with Ultrashort Laser Pulses
Application of latest generation fibre pulsed laser technology in scoring of ultrathin aluminium foils

Vorarlberg University of Applied Sciences, Austria
Cranfield University, UK
Guangdong University of Technology, China
Synova SA, Switzerland
Fraunhofer ILT, Germany
Aix-Marseille University, France
University of Liverpool, UK
Robert Bosch GmbH, Germany
Cranfield University, UK

3D MICRO & NANO FABRICATION (PART 2)

James Grant-Jacob
Nikolay Busleev
Andrius Žemaitis
Jin Qin
Darius Gailevičius

Precision manufacturing of laser-fabricated nanofoam
Femtosecond laser fabrication, testing and modeling of plasmonic nanostructures
Efficient ultrafast laser ablation for 3D structuring and engraving
Enhancing the depth of sub-wavelength nano-focusing by hyperbolic metamaterials
True 3D nano-structuring of crystalline inorganics

University of Southampton, UK
Lebedev Physical Institute, Russia
Center for Physical Sciences and Technology, Lithuania
University of Science and Technology of China
Vilnius University, Lithuania

BEAM SHAPING (PART 1)

Chaowei Wang
Guodong Zhang
Hiroyuki Suhara
Vladimir Zhukov

SLM-based Two-photon polymerization of controllable micropillar arrays in controlled flow for particles trapping
Application of ultrashort Bessel beams in the photoinscription of highly efficient waveguide Bragg Gratings in fused silica
Beam shaping method using beam size and wavefront converters in ultrashort-pulse laser processing
Strong enhancement of laser energy coupling to transparent materials upon in-bulk focusing of doughnut-shaped laser pulses

University of Science and Technology of China
Universit'e de Lyon, Universit'e Jean Monnet, France
RICOH Company, Japan
HiLase, Czech Republic

Mikhael El-Khoury

Utilizing diffractive focus beam shaper for flat-top laser intensity generation for direct laser interference patterning

Fraunhofer IWS, Germany

THURSDAY 28TH JUNE

MORNING: PARALLEL SESSIONS

SPECIAL SESSION: LASER MICRO/NANO ADDITIVE MANUFACTURE (PART 2)

Meisam Askari

Multimaterial manufacture through combining optical tweezers with multiphoton fabrication

University of Nottingham

Daniela Serien

Femtosecond Two-Photon Polymerization of Photoinitiator-Free Proteinaceous Microstructures Made From Serum Albumins

RIKEN, Japan

Rob Eason (invited speaker)

Laser direct-write of microfluidic flow channels via additive manufacturing for paper-based rapid diagnostics

University of Southampton, UK

Hong-Bo Sun (invited speaker)

Miniaturized intelligent robots enabled by femtosecond laser 3D nanoprinting

Tsinghua University, Beijing, China

Mangirdas Malinauskas

Multi-Scale Rapid Laser 3D Printing

Vilnius University, Lithuania

Ofer Fogel

3D Printing of Functional Metallic Microstructures and its Implementation in Electrothermal Actuator

Orbotech Ltd, Israel

Wojciech Gora

Laser polishing for post-processing Additively Manufactured CoCr and Ti6Al4V parts

Heriot-Watt University, UK

LIFT (PART 2)

Philippe Delaporte (invited speaker)

Dual laser printing of metal

Aix-Marseille University, France

Yuval Berg

Embedded 3D interconnects in glass substrates by a combined laser trenching and printing process

Orbotech Ltd, Israel

Justinas Miksys

The effect of pulse duration for Laser-Induced Forward Transfer of viscous silver nanoparticle inks

University of Twente, The Netherlands

Matthias Feinaeugle

Laser-induced forward transfer (LIFT) of water soluble polyvinyl alcohol (PVA) polymers for use as support material for 3D-printed structures

University of Twente, The Netherlands

MICROFLUIDICS

Krystian Wlodarczyk

Laser-manufactured microfluidic devices for the study of mechanisms governing transport in porous media

Heriot-Watt University, UK

Gian-Luca Roth

Vertical microchannels for microfluidic multilayer interconnections in PMMA – An innovative approach by fs laser radiation

University of Applied Sciences Aschaffenburg, Germany

Simas Butkus

Fabrication of High Aspect Ratio Channels in Fused Silica Using Femtosecond Pulses and Chemical Etching at Different Conditions

Vilnius University, Lithuania

Roberto Osellame (invited speaker)

Femtosecond laser micromachining of transparent materials: an enabling tool for advanced applications

Istituto di Fotonica e Nanotecnologie (IFN) – CNR, Milan

GLASS & CERAMICS

Jincheng Ni

Helical microstructures fabricated by femtosecond structured optical vortices

University of Science and Technology of China, Hefei

Alexey Lipatiev

Crystalline architectures in glass: from space-selective glass crystallization to crystal-in-glass erasing and rewriting

Mendelev University of Chemical Technology of Russia

Sandra Stroj

Transparent antifogging glass surfaces generated by direct femtosecond laser structuring

Vorarlberg University of Applied Sciences, Austria

Christian Kalupka

Ultrashort pulse processing of transparent ceramics: The role of electronic and thermal damage mechanisms

Fraunhofer ILT, Germany

Eric Gärtner

Improvement of accuracy and surface roughness in laser micro machining of alumina

Fraunhofer IWU, Germany

Jens Gottmann (invited speaker)

Subtractive 3D printing glass by selective laser-induced etching - fundamentals, applications and process chains

LightFab GmbH, Germany

Simon Schwarz

Axicon fabrication with ultrashort pulsed and CO₂ laser

University of Applied Sciences Aschaffenburg, Germany

Rémi Meyer

High-aspect-ratio elliptical nanochannels for ultrafast laser stealth dicing of glass

FEMTO-ST Institute, France

Amiel Lopes

High speed ultrafast laser based machining of glass

Heriot-Watt University, UK

BEAM SHAPING (PART 2)

Pavel Danilov

High-precision femtosecond laser patterning of plasmonic films using diffractive optical elements

P.N. Lebedev Physical Institute of RAS

Guangyu Zhu

Femtosecond Inscription inside Poly-Methyl Pentene with Numerical Aperture, Wavelength and with Polarized Helical Beams carrying

University of Liverpool, UK

Dmitriy Mikhaylov

High power, high pulse energy ultrashort pulse laser ablation of metals using spatially shaped beam profiles

Robert Bosch Manufacturing Solutions GmbH, Germany

Paulius Gečys

Elliptical Bessel beam for glass dicing

Center for Physical Sciences and Technology, Lithuania

Vitalis Vosylius

Vector beams with parabolic and elliptical cross-sections for laser material processing applications

Center for Physical Sciences and Technology, Lithuania

Stuart Edwardson (invited speaker)

Thermal and optical characteristics of a spatial light modulator

University of Liverpool

Satoshi Hasegawa

Holographic femtosecond laser processing using complex amplitude modulation for generating sub-diffraction-limit spot

Utsunomiya University, Japan

Patrick Salter

Adaptive optics laser writing of fibre Bragg gratings

University of Oxford

Ehsan Alimohammadian

Enhancing and inhibiting of femtosecond nonlinear interactions with spatial light modulated beams for elongating filaments, lower in

University of Toronto, Canada

AFTERNOON: FINAL SESSION - INVITED SPEAKERS

Boris Chichkov

3D laser printing of biomaterials, nanoparticles, and living cells

Laser Zentrum Hannover, Germany

David Grojo

Exceeding the threshold of ultrafast laser writing in bulk Si: opening the horizon for 3D silicon photonics

Aix-Marseille University, France

Vassilia Zorba

Novel Ultrafast Laser Ablation Sampling Approaches in Chemical Imaging

Lawrence Berkeley National Laboratory, USA