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Tuesday, 13 April 2021 Times listed as Eastern Davlight Time (EDT) (USA and Canada)				
10.00 10.05	Conference Introduction and Deview of Conference Logistics			
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10.05 10.45	VEVNOTE: Eirst Pasults on the Locar Distance Engine for Interstellar Drohos			
10:05 - 10:45	Dr. S. Deto Worden, Breaktbrough Initiatives			
	Dr. S. Pele Worden, Breakthrough Initiatives			
Cossion	Biological Applications of Lasers Chaires Dr. Tatiana Itina, CNDS & Mihaela Filinascu, National Institute for Lasers, Diasma and Dadiation Diverse			
	Chairs: Dr. Tatiana Itina, CNRS & Minaela Filipescu, National Institute for Lasers, Plasma and Radiation Physics			
10:45 - 11:05	Laser Fabricated Coatings for Biomedicine Dr. Mibaola Filinoccu, National Institute for Lasors, Plasma and Padiation Physics			
11.05 11.25	Ultra Chart Lasar Surface Functionalization: From Modeling to Picengingering			
11.05 - 11.25	Dr. Tatiana Itina, CNPS			
	Di. Talialia Iulia, CNRS Nano Misro Picintorfosos hy Lleing Losor Methods for Evaluating the In Vitro Collular Pesnonso. The Quest for			
11.25 - 11.45	Rone Regeneration Continues			
11.25 - 11.45	Mrs. Valenting Dinca, National Institute for Lacors, Plasma and Padiation Physics			
11.45 12.05	Mesonshumal Stom Colls Interaction with Hierarchical Textured Surfaces Obtained by Laser Processing			
11.45 - 12.05	Mrs. Valenting Dinca, National Institute for Lasers, Plasma and Padiation Physics			
	DOSTED: Exprisation of Bioconsors for Honey Motal Detection by Laser Transfor			
	Dr. Mihaela Eilinescu, National Institute for Lasers, Plasma and Padiation Physics			
12.05 - 12.25	Dr. Willaela Tilipescu, National Institute for Lasers, Flashia and Natiation Physics			
12:05 - 12:35	Announcements & Keynote Introduction			
12:35 - 12:40	KEVNOTE: Shaning Eemtosecond Laser Interactions Inside Silica Eihers and Eilms			
12.40 - 1.20	Prof. Deter Herman, University of Toronto			
Eundam	entals of Ultra-Short and Ultra-High Power Laser-Matter Interactions: Theory, Simulations, Experiments, and			
Fundani	Technology Develonments			
Session Ch	air: Dr. Victor Hasson, Consultant-Lasers and Electro-Ontic Systems and Prof. Leonid Zhigilei, University of Virginia			
1:20 - 1:40	Controllable Ablation of Nano-Laver Thin Films by Single-Pulse Femtosecond Laser Irradiation			
1.10	Dr. Biliana Gaković. Vinča Institute of Nuclear Sciences			
1:40 - 2:00	Nonlinear Excitation of Solids and Transient Band Gap Dynamics upon Femtosecond Laser Irradiation of			
	Semiconductors: Insights from First Principles Simulations			
	Dr. Thibault Derrien. HiLASE Centre - Institute of Physics CAS			
2:00 - 2:20	Advances and Perspectives of Laser-Generated Metal-, Allov-, and Oxide-Based Nanomaterials in Heterogeneous			
	Catalysis			
	Dr. Sven Reichenberger. University of Duisburg-Essen			
2:20 - 2:40	Large-Scale Atomistic Simulations of Nanoparticle Generation and Surface Modification by Short Pulse Laser			
	Ablation in Liquid Environment			
	Prof. Leonid Zhigilei. University of Virginia			
2:40 - 3:00	Modeling of Water Droplet Excitation and Shattering by Ultrashort Laser Pulses			
	Dr. Anton Rudenko, College of Optical Sciences			
3:00 - 3:15	Break			
3:15 - 3:35	Long Wavelength Ultrafast Carrier Interactions in Semiconductors and Gases: From Mode-Locking in			
	Semiconductor Disk Lasers to Kerr Nonlinearity Suppression in the Atmosphere			
	Prof. Jerome Moloney, University of Arizona			
3:35 - 3:55	Time-Domain Model of Non-Monochromatic Photoionization of Direct-Gap Non-Metal Crystals by Ultrashort			
	Laser Pulses			
	Dr. Vitaly Gruzdev, University of New Mexico			
3:55 - 4:15	Multiphysics Full-Wave Numerical Modeling of the Femtosecond Laser Surface Processing Formation Dynamics in			
	Metals			
	Dr. Larousse Khosravi Khorashad, University of Nebraska-Lincoln			
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	HPLA INTERNATIONAL HIGH POWER LASER ABLATION		
4:15 - 4:35	Hydrodynamic Effects in BiSn Eutectic at a (ns) Pulsed Laser Ablation Process		
	Mr. Tariq Alharby, University of Missouri-Kansas City		
4:35 - 4:55	Ultrashort Bessel Laser Beam for Material Structuration		
	Mr. Sebastian Lavin-Varela, Laser Physics Centre - The Australian National University		
	Simulations of the Atmospheric Propagation of High Power 10.6-Micron Square Frame Beams Generated by		
4:55 - 5:15	Unstable CO2 Resonators		
	Dr. Paris Panagiotopoulos, University of Arizona		
5:15 - 5:35	Million Degrees Celsius for Igniting Fusion is Not Longer Needed: Use Non-Thermal ps-CPA-Laser Pulses		
	Prof. Dr. Heinrich Hora, The University of New South Wales		

Wednesday, 14 April 2021					
Times listed as Eastern Daylight Time (EDT) (USA and Canada)					
10:00 - 10:05	Conference Introduction and Re	eview of Confe	erence Logistics		
	Dr. Claude Phipps, Photor	nic Associates			
10:05 - 10:45	KEYNOTE: High-Power Fiber Laser	s in Directed I	Energy Applications		
	Dr. Fabio Di Teodoro, Rayth	eon Technolog	gies		
Panel: The B	usiness Side of High Power Beam Applications	Time-Resolv	Time-Resolved Imaging and Probing of Ablation Plumes and		
Session Chair	: Ms. Julie Mikula, NASA Ames Research Center		Material Transformations		
10.45 10.50	lutur du stinus	Sessio	n Chair: Dr. Erik Brambrink, European XFEL		
10:45 - 10:50	Introductions	10:45 - 11:05	Surface Dynamics of Warm Dense Plasmas Upon		
			Figh-Intensity Laser Irradiation Investigated by		
			Motoaki Nakatsutsumi European XEEL GmbH		
10.50 - 11.00	Peaceful Lise of Lasers in Snace	11.05 - 11.25	Laser Ablation Pronulsion: New Advances in		
10.50 11.00	Dr. Nikola Schmidt, Charles University	11.05 11.25	Investigating the Influence of Repetitive Ablation		
			Dr. Séverine Boyer. MINES Paris PSL - CEMEF CNRS		
			7635		
11:00 - 12:00	Panel Discussion with:	11:25 - 11:45	Ultrafast-Electron-Diffraction Experiments Reveal		
	- Jonathan Coopersmith, Texas A&M		the Elastic-Plastic Strain Transition in Dynamically		
	University, (Beamed Energy		Compressed Al		
	Commercialization Road Map)		Dr. Mianzhen Mo, SLAC National Accelerator		
	- Dr. Edl Schamiloglu, University of New		Laboratory		
	Mexico (Identification of Technology Gaps	11:45 - 12:05	Continuous Multi-Cycle Terahertz Measurements		
	and Best Methods for Inserting Game		of the Electrical Conductivity of Free-Electron Laser		
	Changing Innovation)		Irradiated Warm Dense Gold		
	- Dr. Jonn Lonr, DIII-D National Fusion		Dr. Zhijiang Chen, SLAC National Accelerator		
	(Applications)		Laboratory		
	Industries (Gyrotrons for High-Power Beam				
	Applications)				
	- Mr. Geoff Cushman, NASA Ames (High				
	Power Lazer Facilities - Applications				
	/Use/Facilities)				
	- Ms. Julie Mikula, Mr. Seth Schisler, Mr. Todd				
	Stinchfield, NASA Ames Research Center, Q&A,				
	DataBase, Next Steps				
12:00 - 12:05	Summary & Close				
12:05 - 12:35	Networking Roundtables				
12:35 - 12:40	Announcements & Keynote Introduction				

VIRUAL
INTERNATIONAL HIGH POWER LASER ABLATION Second Status 1:240 - 1:20 Dr. David Geohegan, Oak Ridge National Laboratory Laser-Induced Modification of Material Microstructure and Session Chair: Prof. Leonid Zhigliej, University of Virginia High Power, Ultra-Short Pulse Lasers: Applications In Materials Science and Partice Acceleration Session Chair: Prof. Leonid Zhigliej, University of Virginia 1:20 - 1:40 Laser Processing of Silicon Nanostructures for Optical Applications Dr. Costas Grigoropoulos, University of California, Berkeley Laser-Wakefield Accelerators for High-Resolution X-Ray Imaging of Complex Microstructures Dr. Anima Hussein, University of Alberta 1:40 - 2:00 Rotical Applications Prof. Bärbel Rethfield, University of Kaiserslautern Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Microstructures 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:20 - 2:40 Prober High Heeld and High Energy Physics Studies Using High Power High Intensity Laser Dr. Tatiana Itina, CMRS 2:20 - 2:20 High Power Kigh Heeld Atomics 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Craig Zuhike, University of Nebraska - Lincoln 2:40 - 3:00 Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Ultrashort Laser Pulses Dr. Altery Volkov, University of Albabama
KEYNOTE: Harnessing Pulsed Laser Interactions and Ablation Plasmas for the Synthesis of Novel Nanomaterials Dr. David Geohegan, Oak Ridge National Laboratory Laser-Induced Modification of Material Microstructure and Session Chair: Prof. Leonid Zhigliei, University of Virginia High Power, Ultra-Short Pulse Lasers: Applications In Materials Science and Particle Acceleration 202 1:40 Laser Processing of Silicon Nanostructures for Optical Applications 1:20 - 1:40 Laser-Wakefield Accelerators for High-Resolution Networks Grigoropoulos, University of California, Berkeley 1:40 - 2:00 Prot. Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers 1:40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Barbel Rethfeld, University of Kaiserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures 1:40 - 2:00 Prof. Brey Power High Intensity Lasers Prof. Dr. Georg von Freymann, Technische Universitate Kaiserslautern 2:00 - 2:20 High Fleid and High Energy Physics Studies Using High-Power Laser Induced Self-Organization Dr. Antan Rudenko, College of Optical Sciences Dr. Anton Rudenko, College of Optical Sciences Dr. Anton Rudenko, College of Optical Sciences Dr. Craig Zuhike, University of Nebraska - Lincoln Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Dr. Craig Zuhike, University of Nebraska - Lincoln Nanoparticle Layering of Micro/Nan
12:40 Dr. David Geohegan, Oak Ridge National Laboratory Laser-Induced Modification of Material Microstructure and Surface Morphology High Power, Ultra-Short Pulse Lasers: Applications In Materials Science and Particle Acceleration 1:20 - 1:40 Laser Processing of Silicon Nanostructures for Optical Applications Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Barbe Hefeld, University of Kalserslautern 1:20 - 1:40 Laser-Wakefield Acceleration and Creation of Warm, Dense Materials using mich Microstructures 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- mor. Barbe Hefeld, University of Kalserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:00 - 2:20 Miditive Manufacturing of 3D Metallic Nano- and Microstructures 2:00 - 2:20 High Power High Intensity Lasers Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:00 - 2:20 Development of a Terawatt Carbon Dioxide Laser Dr. Attana Unacko, College of Optical Sciences 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Craig Zuhlke, University of Nebraska - Lincol Materials Using Femtosecond Laser Sito - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Sito - 3:20 Volume Synthesis of Exotic Silicon Polymorphs by Laser Induced Shock Applications 3:30 - 3:32
Laser-Induced Modification of Material Microstructure and Surface Morphology High Power, Ultra-Shor Pute Lasers: Applications In Materials Science and Particle Acceleration 3:20 - 1:40 Laser Processing of Silicon Nanostructures for Optical Applications 1:20 - 1:40 Laser-Wakefield Accelerations for High-Resolution X-Ray Imaging of Complex Microstructures 1:40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Bärbel Rethfeld, University of Kaiserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffer, General Atomics 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures Prof. Dr. Georg von Freymann, Technische Universitet Kaiserslautern 2:00 - 2:20 High Field and High Energy Physics Studies Using High Power High Intensity Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of 1on Doped Porous Dielectric and Semiconductor Films: Pr. Anton Rudenko, College of Optical Sciences 2:40 - 3:00 Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Utrashort Laser Pulses 3:00 - 3:20 Suburface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Dr. Carlig Zuhlke, University of Nebraska - Lincol Pord. Andrei Rode, Australian National University Pord. Andrei Rode, Australian Mational University Prof. Andrei Rode, Australian Mational University Prof. Andrei Rode, Australian Mational University Prof. Andrei Rode, Australi
Session Chair: Prof. Leonid Zhigliel, University of Virgina Materials Science and Particle Acceleration 1:20 1:40 Laser Processing of Silicon Nanostructures for Optical Applications Dr. Costas Grigoropoulos, University of California, Berkeley 1:20 - 1:40 Laser Processing of Silicon Nanostructures for Optical Applications 1:40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Bärbel Rethfeld, University of Alaers Ablation Prof. Bärbel Rethfeld, University of S1D Metallic Nano- and Microstructures 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures 2:00 - 2:20 High Field and High Energy Physics Studies Using High Power High Intensity Lasers 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films; Mechanisms and Applications Dr. Anton Rudenko, College of Optical Sciences 2:40 - 3:00 Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Ultrashort Laser Pulses Dr. Anton Rudenko, College of Optical Sciences 3:00 - 3:20 Volume Synthesis of Exotic Silicon Polymorphs by Laser Induced Asustralian National University Prof. Andrei Rode, Australian National University Prof. Andrei Rode, Australian National University Prof. Andrei Rode, Australian National University Prof. Philip Lubin, University of California, Santa Barbara 3:35 - 3:55 Real Plasmatic Conrol Mrs. Ma
Session Chair: Prof. Leonid Zhigliel, University of Virginia Session Chair: Prof. Peter Herman, University of Toronto 1:20 - 1:40 Laser Processing of Silicon Nanostructures for Optical Applications 1:20 - 1:40 Laser Nakefield Accelerators for High-Resolution 0.r. Costas Grigoropoulos, University of California, Berkeley 1:20 - 1:40 Laser Nakefield Accelerators for High-Resolution 1.40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics 1:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films: Mechanisms and Applications 2:20 - 2:40 Development of a Terawatt Carbon Dioxide Laser Dr. Attery Volkov, University of Alabama 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/N
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Optical Applications Dr. Costas Grigoropoulos, University of California, BerkeleyX-Ray Imaging of Complex Microstructures Dr. Amina Hussein, University of Alberta1:40 - 2:00Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Barbel Rethfeld, University of Alberta1:40 - 2:00Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics2:00 - 2:20Additive Manufacturing of 3D Metallic Nano- and Microstructures Prof. Dr. Grog von Freymann, Technische Universitaet Kaiserslautern2:00 - 2:20High Flewer High Intensity Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory2:20 - 2:40Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films: Mechanisms and Applications Dr. Tatiana Itina, CNRS2:40 - 3:00Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Ultrashort Laser-Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences Dr. Craig Zuhike, University of Nebraska - Lincoln Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Dr. Craig Zuhike, University of Nebraska - Lincoln Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Dr. Craig Zuhike, University of California, Santa Bratara3:00 - 3:20Simulations of Physical Sciences and Technologies Session Chair: Dr. Fabio Di Teodoro, Raytheon Technologies3:30 - 3:20Simulations of Copper Traces On Polymers by Electroplating Mr. Vitalij Fiodorov, Center for Physical Sciences and Technologies3:20 - 3:35Directed Energy Prof. Andrei R
Dr. Costas Grigoropulos, University of California, Berkeley Dr. Amina Hussein, University of Alberta 1:40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Bärbel Rethfeld, University of Kaiserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:00 - 2:20 High Field and High Energy Physics Studies Using High Power High Intensity Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films; Mechanisms and Applications Dr. Tatiana Ithia, CNRS 2:20 - 2:40 Development of a Terawatt Carbon Dioxide Laser Dr. Yu-hsin Chen, Naval Research Laboratory 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences Dr. Anton Rudenko, College of Optical Sciences Dr. Anton Rudenko, College of Optical Sciences Dr. Aratora Ultrashort Laser Pulses Dr. Aratora Rudenko, College of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Dr. Craig Zuhlke, University of Nebraska - Lincoln Manoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Dr. Craig Zuhlke, University of Nebraska - Lincoln Manoparticle Layersity of Nebraska - Lincoln Mr. Tabio Di Teodoro, Raytheon Technologies 3:30 - 3:20 Volume Synthesis of Exotic Silicon Opper Traces
1:40 - 2:00 Influence of External Fields on the Energy Dissipation at the Initial Stage of Laser Ablation Prof. Barbel Rethfeld, University of Kaiserslautern 1:40 - 2:00 Proton Acceleration and Creation of Warm, Dense Materials using High-Power Short-Pulse Lasers Dr. Christopher McGuffey, General Atomics 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:00 - 2:20 High Power High Intensity Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films Mechanisms and Applications Dr. Tatiana Itina, CNRS 2:20 - 2:40 Development of a Terawatt Carbon Dioxide Laser Dr. Yu-hsin Chen, Naval Research Laboratory 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser -Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences 2:40 - 3:00 Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Ultrashort Laser Pulses Dr. Alexey Volkov, University of Alabama 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser 3:00 - 3:20 Volume Synthesis of Exotic Silicon Polymorphs by Laser Irradiation at Relativistic Intensity Prof. Andrei Rode, Australian National University 3:20 - 3:35 Directed Energy Session Chair: Dr. Fabio Di Teodoro, Raytheon Technologies 3:30 - 3:25 Real Delamination in L
1:40 - 2:00 Influence of external relias on the Energy 1:40 - 2:00 Materials using High-Power Short-Pulse Lasers 0 Dissipation at the Initial Stage of Laser Ablation Materials using High-Power Short-Pulse Lasers 2:00 - 2:20 Additive Manufacturing of 3D Metallic Nano- and Microstructures Victor Acceleration and Creation of Warm, Dense Dr. Christopher McGuffey, General Atomics Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2:00 - 2:20 High Power High Intensity Lasers Diversitaet Kaiserslautern Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory Wechanisms and Applications Dr. Tatiana Itina, CNRS 2:20 - 2:40 Development of a Terawatt Carbon Dioxide Laser Dir. Yu-hsin Chen, Naval Research Laboratory Dr. Anton Rudenko, College of Optical Sciences Dr. Altor Audenko, College of Optical Sciences Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures 3:00 - 3:20 Yuleue Synthesis of Exotic Silicon Polymorphs by Laser Irradiation at Relativistic Intensity Dr. Craig Zuhlke, University of Nebraska - Lincoln Dr. Craig Zuhlke, University of Nebraska - Lincoln Session Chair: Tr. Fabio Di Tecdoro, Raytheon Techno
 Displation at the initial stage of Laser Anatomic Prof. Bärbel Rethfeld, University of Kalserslautern C. Christopher McGuffer, General Atomics Dr. Christopher McGuffer, General Atomics Dr. Christopher McGuffer, General Atomics Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory 2:20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films: Mechanisms and Applications Dr. Tatiana Itina, CNRS 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences Dr. Anton Rudenko, College of Optical Sciences Dr. Craig Zuhlke, University of Nebraska - Lincoln Dr. Craig Zuhlke, University of Nebraska - Lincoln Surface Processing Dr. Craig Zuhlke, University of Nebraska - Lincoln Surface Processing Dr. Craig Zuhlke, University of California, Santa Barbara 3:35 - 4:15 Coherent Beam Combining of 61 Femtosecond Filer
2:00 - 2:20Additive Manufacturing of 3D Metallic Nano- and Microstructures Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern2:00 - 2:20High Field and High Energy Physics Studies Using High Power High Intensity Lasers Dr. Stepan Bulanov, Lawrence Berkeley National Laboratory2:20 - 2:40Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films: Mechanisms and Applications Dr. Tatiana Itina, CNRS2:20 - 2:40Development of a Terawatt Carbon Dioxide Laser Dr. Auton Rudenko, College of Optical Sciences2:40 - 3:00Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences2:40 - 3:00Simulations of Plasma Plume Expansion Induced by Irradiation of an Aluminum Target with Bursts of Short and Ultrashort Laser Pulses Dr. Alexey Volkov, University of Alabama3:00 - 3:20Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser Surface Processing Dr. Craig Zuhlke, University of Nebraska - Lincoln Dr. Craig Zuhlke, University of Nebraska - Lincoln3:00 - 3:20Volume Synthesis of Exotic Silicon Polymorphs by Laser Induced Shock Applications Session Chair: Dr. Fabio Di Teodoro, Raytheon Technologies3:35 - 3:55Directed Energy - The Path to Radical Propulsion Advancement Prof, Philip Lubin, University of California, Santa Barbara3:35 - 4:15Laser Induced Shock Applications Session Chair: Dr. Michael Boustie, CNRS3:55 - 4:15Coherent Beam Combining of 61 Femtosecond Fiber Amplifiers3:55 - 4:15Laser Shock Peening with Solid Confinement Mr. Corentin Le Bras,
 2.00 - 2.20 Additive Waindracturing of Dimetalic Value's and Page Prosessing Prof. Dr. Georg von Freymann, Technische Universitaet Kaiserslautern 2.20 - 2:40 Femtosecond Laser Direct Nanostructuring of Ion Doped Porous Dielectric and Semiconductor Films: Mechanisms and Applications Dr. Tatiana Itina, CNRS 2:40 - 3:00 Role of Inhomogeneous Absorption & Hydrodynamics in Ultrashort Laser-Induced Self-Organization Dr. Anton Rudenko, College of Optical Sciences 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser 3:00 - 3:20 Subsurface Analysis of Grain Structure and Nanoparticle Layering of Micro/Nanostructures Formed on Metals Using Femtosecond Laser 3:20 - 3:35 USE Concessing Dr. Craig Zuhlke, University of Nebraska - Lincoln Discide Laser Induced Session Chair: Dr. Fabio Di Teodoro, Raytheon Technologies 3:35 - 3:55 Directed Energy The Path to Radical Propulsion Advancement Prof. Priof. Philip Lubin, University of California, Santa Barbara 3:55 - 4:15 Coherent Beam Combining of 61 Femtosecond Fiber Amplifiers
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Fiber Amplifiers Mr. Corentin Le Bras, Airbus
Dr. Jean-Christophe Chanteloup, École
Polytechnique
4:15 - 4:35 Towards LSP Delivered by Fiber: Laser/Matter 4:15 - 4:35 Laser-Driven Detonation Wave in a Dielectric Film
Interaction for Small Focal Spots Prior to Ablation
Mr. Alexandre Rondepierre, Thales LAS France and Dr. David Dunlap, University of New Mexico
PIMM (Arts et Métiers ParisTech)
4:35 - 4:55 Diode Pumped 5kW Monolithic CW Fiber Laser for 4:35 - 4:55 Multi-Parabola Configuration for Improving Beam
Material Processing Applications Riding Performance of Laser Propulsion Vehicle
Dr. Wei Shi, Tianjin University Dr. Masayuki Takahashi, Tohoku University
A:55 - 5:15 Reaction Modeling for Defense Applications: Case 4:55 - 5:15 Efficient Drilling, Milling, and Polishing on Metals
A:55 - 5:15 Reaction Modeling for Defense Applications: Case Studies 4:55 - 5:15 Efficient Drilling, Milling, and Polishing on Metals using Ultrashort Bursts and Bibursts



	Thursday, 1	.5 April 2021			
10.00 10.05	Times listed as Eastern Daylight Time (EDT) (USA and Canada)				
10:00 - 10:05	Conference Introduction and Review of Conference Logistics				
	KEVNOTE: Integrated Photonic	Accelerators D	riven hy Illtrafast Laser Pulses		
10:05 - 10:45	Dr. R. Joel England SI	AC National Ac	celerator Laboratory		
Laser Al	plation for PLD and MAPLE	Laser-	Enabled Scientific and Societal Applications		
Session	Chair: Dr. Enikö Gyorgy, CSIC-ICMAB		Session Chair: Dr. Thierry Sarnet, CNRS		
10:45 - 11:05	Pulsed Laser Deposition of Functional Oxides	10:45 - 11:05	Mechanisms of Generation of Laser-Induced		
	Thin Films		Periodic Surface Structures on Si and Ge by		
	Prof. Maria Dinescu, National Institute for Laser,		Deep-UV Femtosecond Laser Pulses		
	Plasma and Radiation Physics		Dr. Vitaly Gruzdev, University of New Mexico		
11:05 - 11:25	Nanohybrid Surface Layers Grown by Matrix	11:05 - 11:25	THEIA High Power, High Energy Diode-Pumped		
	Assisted Pulsed Laser Evaporation for Energy		Solid State Laser for Industrial Applications		
	Storage Applications		Dr. Hervé Besaucele, THALES LAS FRANCE		
	Dr. Enikö Gyorgy, CSIC-ICMAB				
11:25 - 11:45	Analysis of Multielemental Thin Films by	11:25 - 11:45	High Power Laser System for ELI NP		
	Calibration-Free Laser-Induced Breakdown		Mr. François Lureau, THALES LAS FRANCE		
	Spectroscopy				
11.45 12.05	Dr. Jorg Hermann, CNRS	11.45 12.05	The UED Instrument at the European VEEL.		
11:45 - 12:05	Structuring of Polystyrene Surface with	11:45 - 12:05	Unique Canabilities to Study Material Properties		
	Ultraviolet to Near-Infrared Wavelengths		of Laser-Compressed Matter		
	Mr. Jan Hrabovsky, Hil ASE Centre, Institute of		Dr. Frik Brambrink, European XEEL		
	Physics of the Czech Academy of Sciences				
12:05 - 12:35	Netv	working Roundt	ables		
Beamed Energy Propulsion and Thermal Coupling in Laser and					
	Microwave Propulsion Problems	continuation of	FLaser-Enabled Scientific and Societal Applications		
Session Chair:	Prof. Hideyuki Horisawa, Tokai University and Dr.				
Stefa	an Scharring, German Aerospace Center				
12:35 - 12:55	Laser Propulsion for Space Debris Recycling	12:35 - 12:55	Near Perfect Hemispherical Emissivity Produced		
	Dr. Egor Loktionov, Bauman Moscow State		Using Femtosecond Laser Surface Processing		
	Technical University		Mr. Andrew Reicks, University of Nebraska-		
12.55 1.15	Threat Efficiency Associate Dhoos Evaluation	12.55 1.15	Lincoln		
12:55 - 1:15	Throshold in Lagor Ablation Propulsion	12:55 - 1:15	Dynamic Sneath Formation and Sub-THZ Rediction Emission from Lasor Motel		
	Dr. Jacono Terragni, University of Trento				
	Dr. Jacopo retragili, oniversity of frento		Dr. Asher Davidson, Naval Research Laboratory		
			Plasma Physics Division		
1:15 - 1:35	Laser Ablation with Ultra-Short Double Pulses –	1:15 - 1:35	Evaluation of Surface Processing Efficiency with		
	Effects of Shielding, Re-Deposition and their		Powerful Pulsed Lasers for Large-Scale		
	Impact on Space Propulsion Systems		Real-World Industrial Applications		
	Mr. Daniel Förster, University of Stuttgart		Prof. Andrei Rode, Australian National University		
			Lasers in Additive Manufacturing		
		Sessio	on Chair: Prof. Ji Ma, University of Virginia		
1:35 - 1:55	Review: Multiple Pulse Coupling on Metal and	1:35 - 1:55	Modelling of Dielectric Material Structuring using		
	Plastic Targets at 6 and 70ps		Train of Spatially Chirped Femtosecond Laser		
	Dr. Claude Phipps, Photonic Associates		Pulses		
			Mr. Paul Quinoman, CELIA		

HPLA 13-15 APRIL 2021 VIRTUAL					
	INTERNATIONAL HIGH POWER LASER ABLATION		A CARACTER AND A		
1:55 - 2:15	Control and Stability of Laser/Microwave-Propelled Sails Dr. Edl Schamiloglu, University of New Mexico	1:55 - 2:15	Unusual Strain Relaxation Mechanism in Metastable β Ti-Nb Alloy after Laser Melting Mr. Wenhao Lin, University of Virginia, Department of Material Science and Engineering		
2:15 - 2:35	The Influence of Surface Roughness and Irradiance on Thermal Coupling for Aluminum Space Debris Removal Dr. John Sinko, St. Cloud State University	2:15 - 2:35	A Novel Mechanism of Metal Spattering During High-Power Laser Processing Prof. Tao Sun, University of Virginia		
2:35 - 2:50	Break				
2:50 - 2:55	Announcements & Keynote Introduction				
2:55 - 3:35	KEYNOTE: Laser Systems for Precise Orbit Measurement and Traffic Management of LEO Debris				
_	Mr. (Christophe Bon	nal, CNES		
continuat	ion of Beamed Energy Propulsion and Thermal	Laser Syste	ems for Precise Orbit Measurement and Traffic		
Coupling	In Laser and Microwave Propulsion Problems	Session Cl	Management of LEO Debris nair: Dr. Richard Haglund, Vanderbilt University		
3:35 - 3:55	Thrust Generation through Interaction of Ultraviolet Light-Emitting Diodes and Solid Polymers for Space Propulsion Applications Prof. Hideyuki Horisawa, Tokai University	3:35 - 3:55	Conceptual Study on Laser Networks for Near-Term Collision Avoidance for Space Debris in the Low Earth Orbit Dr. Stefan Scharring, German Aerospace Center		
3:55 - 4:15	Molecular Dynamics Analysis for Laser Ablation Propulsion Using Graphite Dr. Naofumi Ohnishi, Tohoku University	3:55 - 4:15	High-Efficiency Optical Limiter in the Near-Infrared Based on a Phase-Changing Metasurface Dr. Richard Haglund, Vanderbilt University		
4:15 - 4:35	Proposal and Simulation of Microwave-Driven In-Tube Accelerator Dr. Masayuki Takahashi, Tohoku University	4:15 - 4:35	Air and Vacuum Impulse Measurements at 1064nm for Laser Remediation of Aluminum Space Debris Dr. John Sinko, St. Cloud State University		