

DAY-1: JUNE 29, 2009, MONDAY

Events: Plenary Talks and 4 Parallels

10:00	<p style="text-align: center;">Opening Remark Isamu Miyamoto, Osaka University, Japan</p>
<p style="text-align: center;">Plenary Session Sponsored by Tada Electric Co., Ltd. (10:10-12:10, 120min.) Room 1 (3A)</p>	
TIME	Chair: Koji Sugioka, RIKEN, Japan
10:10	<p>#MoIPL 1-1 (#335) PLENARY TALK A selected history of lasers and laser materials processing</p> <p><u>H. Schlossberg</u> AFOSR, USA</p>
10:50	<p>#MoIPL 1-2 (#322) PLENARY TALK Three-dimensional nanoarchitecture in glasses using the combination of fs laser pulses and the new LCOS modulator</p> <p><u>K. Hirao</u>^{1,2}, <u>K. Miura</u>¹, <u>Y. Shimotsuma</u>², <u>M. Sakakura</u>² 1- Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Japan 2- Innovative Collaboration Center, Kyoto University, Japan</p>
11:30	<p>#MoIPL 1-3 (#317) PLENARY TALK High brightness solid state laser: Development and application</p> <p><u>F. Vollertsen</u>, <u>S. Neumann</u> BIAS-Bremer Institut für angewandte Strahltechnik GmbH, Germany</p>
<p>LUNCH (12:10-14:00)</p>	

LPM 1-1 Laser Micro-Welding (14:00-16:00, 120 min) Room 1 (3A)		LPM 1-2: SP L3 Laser Nanopatterning (I) (14:00-15:50, 110 min) Room 2 (2A)	
TIME	Chair: Henry Helvajian, The Aerospace Corporation, USA	TIME	Chair: MingHui Hong, National University of Singapore and Data Storage Institute, Singapore
14:00	#MoOL 1-4 (#217) Laser beam micro welding with high brilliant fiber lasers F. Schmitt, A. Olowinsky, J. Gedicke, A. Gillner Fraunhofer Institute for Laser Technology, Germany	14:00	#MoIL 2-1 (#340) INVITED Multiple beam, large area laser nano-structuring by scanning particle lens imaging L. Li, W. Guo, Z. Wang, Z. Liu The University of Manchester, UK
14:20	#MoOL 1-5 (#201) Improvement of process reliability during spot welding of high reflective materials R. Holtz, Ch. Garthoff, R. Witte LASAG AG., Switzerland	14:30	#MoOL 2-2 (#275) Picosecond laser beam interference ablation of chromium thin film on glass substrate E. Molotokaitė ¹ , M. Gedvilas ¹ , G. Račiukaitis ¹ , V. Girdauskas ² 1- Laboratory for Applied Research, Institute of Physics, Lithuania 2- Physics Department, Vytautas Magnus University, Lithuania
14:40	#MoOL 1-6 (#105) Enhancement of process stability for laser spot micro welding by using 532nm radiation D. Kracht, R. Kling, F. Otte, A. Moalem, J. Hermsdorf Laser Zentrum Hannover e.V., Germany	14:50	#MoOL 2-3 (#250) Periodic structures induced by femtosecond laser pulses inside 4H-SiC single crystal T. Okada ¹ , T. Tomita ¹ , S. Matsuo ¹ , S. Hashimoto ¹ , Y. Ishida ² , S. Kiyama ² , T. Takahashi ² 1- Institute of Technology and Science, The University of Tokushima, Japan 2- Graduate School of Advanced Technology and Science, The University of Tokushima, Japan
15:00	#MoOL 1-7 (#147) Hermetic sealing of ceramic packages with glass by ultrafast laser welding technique Y. Ozeki ¹ , H. Yamamoto ² , H. Yamaguchi ¹ , K. Itoh ¹ 1- Graduate School of Engineering, Osaka University, Japan 2- NEC Schott Components Co., Ltd., Japan	15:10	#MoOL 2-4 (#233) Nanostructuring of bilayer material by laser irradiation of a sphere array Ph. Delaporte ¹ , L. Charmasson ¹ , D. Grojo ¹ , M. Sentis ¹ , A. Pereira ² , A. Devilez ³ , N. Bonod ³ , B. Stout ³ 1- Laboratoire Lasers, Plasmas et Procédés Photoniques, campus de Luminy, France 2- Laboratoire de Physico-Chimie des Matériaux Luminescents, Université Claude Bernard Lyon 1, France 3- Institut Fresnel, Aix – Marseille université, Domaine Universitaire de St Jérôme, France
15:20	#MoOL1-8 (#215) Extending the limits of laser polymer welding using advanced irradiation strategies A. Boglea, A. Olowinsky, A. Gillner Fraunhofer Institute for Laser Technology, Germany	15:30	#MoOL 2-5 (#33) STUDENT Fabrication of the functional micro-structures using focused femtosecond pulses J.J.J. Kaakkunen, M. Silvennoinen, K. Paivasaari, M. Kuittinen, T. Jaaskelainen Department of Physics and Mathematics, University of Joensuu, Finland
15:40	#MoOL 1-9 (#108) Precise laser micro-welding of plastics using infrared absorbing dye I A Jones, P. A. Hilton TWI Ltd., UK		NONE
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 1-3 Film Growth and Crystallization (14:00-16:00, 120 min) Room 3 (2B)		HPL-1 Fundamentals (14:00-15:50, 110 min) Room 4 (3B)	
TIME	Chair: Hiroyuki Niino, AIST, Japan	TIME	Chair: Remy Fabbro, LALP (CNRS)/GIP GERAILP, France
14:00	<p>#MoOL 3-1 (# 238) STUDENT Crystal growth control of functional oxide thin films on nanopatterned substrate surfaces</p> <p><u>Y. Akita</u>¹, <u>Y. Sugimoto</u>¹, <u>Y. Kato</u>¹, <u>M. Mita</u>², <u>H. Oi</u>², <u>K. Kobayashi</u>³, <u>T. Suzuki</u>³, <u>M. Yoshimoto</u>¹ 1- Department of Innovative and Engineered Materials, Tokyo Institute of Technology, Japan 2- Kyodo International Inc., Japan 3- Taiyo Yuden Co. Ltd., Japan</p>	14:00	<p>#MoIH 4-1 (#82) INVITED How beam quality, power and wavelength influence laser cutting and welding processes</p> <p><u>D. Petring</u>, <u>F. Schneider</u>, <u>N. Wolf</u>, <u>V. Nazery</u> Fraunhofer-Institute for Laser Technology ILT, Germany</p>
14:20	<p>#MoOL 3-2 (#229) STUDENT Epitaxial growth of LaB₆ thin films on the ultrasmooth sapphire substrate with an epitaxial SrB₆ buffer by laser MBE</p> <p><u>Y. Kato</u>¹, <u>Y. Akita</u>¹, <u>N. Shiraishi</u>¹, <u>N. Tsuchimine</u>², <u>S. Kobayashi</u>², <u>M. Yoshimoto</u>¹ 1- Department of Innovative & Engineered Materials, Tokyo Institute of Technology, Japan 2- TOSHIMA Manufacturing Company Limited, Japan</p>	14:30	<p>#MoOH 4-2 (#96) Evolution of the holes morphology in laser drilling</p> <p><u>M. Schneider</u>, <u>L. Berthe</u>, <u>M. Muller</u>, <u>R. Fabbro</u> Laboratoire pour l'Application des Lasers de Puissance (UPR CNRS 1578), France</p>
14:40	<p>#MoOL 3-3 (#12) STUDENT The syntheses and characterizations of phosphorus-doped ZnO nanostructures by PLD</p> <p><u>B.Q. Cao</u>, <u>M. Matsumoto</u>, <u>T. Matsumoto</u>, <u>D. Nakamura</u>, <u>M. Higashihata</u>, <u>T. Okada</u> Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan</p>	14:50	<p>#MoOH 4-3 (#314) STUDENT Plume behaviour and refractive index distribution during laser welding</p> <p><u>S. Oiwa</u>, <u>Y. Kawahito</u>, <u>S. Katayama</u> Joining and Welding Research Institute, Osaka University, Japan</p>
15:00	<p>#MoOL 3-4 (#75) Preparation of superhard ta-C films with low internal stress by means of excimer laser ablation and irradiation</p> <p><u>S. Weissmantel</u>, <u>G. Reisse</u>, <u>M. Nieher</u>, <u>K. Guenther</u> University of Applied Sciences Mittweida, Germany</p>	15:10	<p>#MoOH 4-4 (#193) Research on characteristics of remote laser welding</p> <p><u>H.S. Kang</u>¹, <u>J. Suh</u>¹, <u>T.D. Cho</u>² 1- Intelligent Manufacturing System Research Division, Korea Institute of Machinery & Materials, Korea 2- Department of Mechanical Design Engineering, Chungnam National University, Korea</p>
15:20	<p>#MoOL 3-5 (#205) STUDENT Properties of titanium dioxide film irradiated with femtosecond laser</p> <p><u>Y. Yano</u>¹, <u>M. Tsukamoto</u>², <u>M. Fujita</u>³, <u>M. Takahashi</u>⁴, <u>N. Abe</u>² 1- Graduate school of Engineering, Osaka University, Japan 2- Joining and Welding Research Institute, Osaka University, Japan 3- Institute for Laser Technology, Japan 4- Osaka Municipal Technical Research Institute, Japan</p>	15:30	<p>#MoOH 4-5 (# 319) STUDENT High power fiber laser welding with focusing optics of long Rayleigh length</p> <p><u>Y. Abe</u>, <u>Y. Kawahito</u>, <u>S. Katayama</u> Joining and Welding Research Institute, Osaka University, Japan</p>
15:40	<p>#MoOL 3-6 (#4) Laser-induced crystallization of amorphous indium tin oxide film on glass substrate for patterning application</p> <p><u>C.W. Cheng</u>¹, <u>J.S. Chen</u>², <u>Y.J. Lee</u>², <u>W.C. Shen</u>¹, <u>C.W. Chien</u>¹, <u>H.H. Chen</u>² 1- ITRI South, Industrial Technology Research Institute, Taiwan, R.O.C. 2- Department of Mechanical Engineering, National Chung Cheng University, Taiwan, R.O.C.</p>		NONE

COFFEE BREAK (Sponsored by Ophir Japan Ltd.)

LPM 2-1 Fine Cutting and Dicing (16:20-18:00, 100 min) Room 1 (3A)		LPM 2-2: SP L3 Laser Nanopatterning (II) (16:20-18:00, 100 min) Room 2 (2A)	
TIME	Chair: Etsuji Ohmura, Osaka University, Japan	TIME	Chair: Lin Li, The University of Manchester, UK
16:20	#MoOL 1-10 (#200) Stent cutting with pulsed Nd:YAG lasers and fiber lasers R. Holtz, D. Naman LASAG AG, Switzerland	16:20	#MoOL 2-6 (#213) Gold nanorods enhanced femtosecond laser nanoprocessing M. Meunier, E. Boulais, P. Desjeans-Gauthier Laser Processing Laboratory, Ecole Polytechnique de Montreal, Canada
16:40	#MoOL 1-11 (#165) Effect of nozzle shape on fine cutting of thin steel plate by pulsed Nd:YAG laser Y. Okamoto, Y. Uno, H. Suzuki Graduate School of Natural Science and Technology, Okayama University, Japan	16:40	#MoOL 2-7 (#279) Highly parallel direct-write nanolithography using optically trapped microspheres E. Mcleod, C.B. Arnold Department of Mechanical and Aerospace Engineering, Princeton University, USA
17:00	#MoOL 1-12 (#206) Implementation of short-pulse lasers for wafer dicing and grooving applications A. Pauchard, M. Meizozo, S. Obi, N. Vago, N. Godde, K. Lee, Y. Kozuki Chemin de la Dent d'Oche, Switzerland	17:00	#MoOL 2-8 (#141) High speed fabrication of coherent sub-wavelength ripples by fs-laser writing on surfaces and in the volume J. Gottmann, M. Hörstmann-Jungemann, J. Kolf Lehrstuhl für Lasertechnik, RWTH Aachen University, Germany
17:20	#MoOL 1-13 (#107) Debris-free laser dicing for multi-layered MEMS M. Fujita ^{1,2} , Y. Izawa ² , Y. Tsurumi ² , S. Tanaka ³ , H. Fukushi ³ , K. Sueda ² , Y. Nakata ² , N. Miyanaga ² , M. Esashi ³ 1- Institute for Laser Technology, Japan 2- Institute of Laser Engineering, Osaka University, Japan 3- Department of Nano-Mechanics, Tohoku University, Japan	17:20	#MoOL 2-9 (#267) SPEAKER CHANGED Laser hybrid fabrication of nano-porous structures on metallic material surface L. Li, University of Manchester, UK Y. Kan, M. Zhong, W. Liu, M. Ma, Y. Gu, H. Zhang Key Laboratory for Advanced Materials Processing Technology, Ministry of Education, Laser Processing Research Center, Department of Mechanical Engineering, Tsinghua University, China
17:40	#MoOL 1-14 (#226) Cutting performance comparison between low power LPSS and SM Fiber laser for silicon wafers M. Naeem GSI Group, UK	17:40	#MoOL 2-10 (#207) Rapid growth of dense carbon nanotubes by single-step laser CVD J.B. Park ¹ , M.S. Jeong ² , S.H. Jeong ¹ 1- Department of Mechatronics, Gwangju Institute of Science and Technology, Republic of Korea 2- Advanced Photonics Research Institute, Gwangju Institute of Science and Technology, Republic of Korea

LPM 2-3 Micromachining and Patterning (16:20-18:00, 100 min) Room 3 (2B)		HPL-2 Monitoring (16:20-18:00, 100 min) Room 4 (3B)	
TIME	Chair: Masayuki Okoshi, National Defense Academy , Japan	TIME	Chair: Dirk Petring, Fraunhofer-Institute for Laser-Technology ILT, Germany
16:20	#MoOL 3-7 (#208) Rapid microstructuring of photosensitive glass with an ArF excimer laser projection patterning technique J. Dion ¹ , P. Masson ¹ , J.J. Dubowski ² 1- Department of Mechanical Engineering, Faculty of Engineering, Université de Sherbrooke, Canada 2- Department of Electrical and Computer Engineering, Faculty of Engineering, Université de Sherbrooke, Canada	16:20	#MoOH 4-6 (#210) Beam properties of brilliant multi kilowatt solid state lasers for material processing at the fiber and in the process zone O. Märten, S. Wolf, H. Schwede, R. Kramer, V. Brandl PRMES GmbH, Germany
16:40	#MoOL 3-8 (#43) STUDENT An automated procedure for the prediction of the material removal rate in laser milling L. Orazi ¹ , G. Cuccolini ¹ , A. Fortunato ² , G. Campana ² , A. Ascari ² , G.Tani ² 1- DISMI Department, University of Modena-Reggio Emilia, Italy 2- DIEM Department, University of Bologna, Italy		#MoOH 4-7 (#55) CANCELLED A CCD camera based on DSP for measuring temperature field in laser molten pool X.C. Yang ¹ , Z. Cao, H.M. Zhang 1-Laser Processing Center, Tianjin Polytechnic University, China
17:00	#MoOL 3-9 (#7) Ultrafast laser patterning of OLEDs on flexible substrate for solid-state lighting D. M. Karnakis, A. Kearsley, M. R. H. Knowles Oxford Lasers Ltd, UK	17:00	#MoOH 4-8 (#214) Solutions for lasers with high brightness - A deeper look into processing heads for welding and cutting M. Kogel-Hollacher ¹ , J. Mueller-Borhanian ¹ , C. Staudenmaier ¹ , B. Schuermann ¹ , K. Amano ² 1- Precitec KG, Germany 2- Precitec Japan Ltd., Japan
17:20	#MoOL 3-10 (#32) Pico-second laser micro-machining of Zirconia (Y-TZP) ceramics and the impact on material strength J.P. Parry ¹ , C. Moorhouse ² , J.D. Shephard ¹ , N. Jones ³ , N. Weston ³ , D.P. Hand ¹ 1- Applied Optics and Photonics Group. School of Engineering and Physical Sciences, Heriot-Watt University, UK 2- Coherent Scotland Ltd., UK 3- Dental Products Division, Renishaw Plc., UK	17:20	#MoOH 4-9 (#221) Real time closed loop control of full penetration keyhole welding with cellular neural network cameras F. Abt ¹ , A. Blug ² , L. Nicolosi ³ , F. Dausinger ⁴ , H. Höfler ² , R. Tetzlaff ⁵ , R. Weber ⁵ 1- FGSW Forschungsgesellschaft für Strahlwerkzeuge gGmbH, Germany 2- Fraunhofer Institute for Physical Measurement Techniques IPM, Germany 3- IEE Institut fuer Grundlagen der Elektrotechnik u. Elektronik, Germany 4- Dausinger & Giesen GmbH, Germany 5- IFSW Institut fuer Strahlwerkzeuge, Germany
17:40	#MoOL 3-11 (#255) Truncated-pyramidal light-emitting-diodes processed by laser micromachining X.H. Wang ¹ , K.N. Hui ¹ , W.Y. Fu ¹ , K.Y. Wong ² , P.T. Lai ² , H.W. Choi ¹ 1- Semiconductor Lighting and Display Laboratory, The University of Hong Kong, Hong Kong, China 2- Department of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, China	17:40	#MoOH 4-10 (#110) Detection of phaser boundaries and failure detection in laser beam welding M. Dahmen, A. Drenker, M. Ungers, S. Kaierle Fraunhofer-Institut für Lasertechnik, Germany

DAY-2: JUNE 30, 2009, TUESDAY

Events: 4 Parallels, Short Presentations and Poster Sessions

LPM 3-1 Ultrafast Laser Processing - Fundamentals and Dignostics (9:00-10:50, 110 min) Room 1 (3A)		LPM 3-2: SP L3 Laser Synthesis of Nanomaterials (I) (9:00-10:50, 110 min) Room 2 (2A)	
TIME	Chair: Ingolf Hertel, Max Born Institute, Germany	TIME	Chair: Michel Meunier, École Polytechnique de Montreal, Canada
9:00	<p>#TuIL 1-1 (#342) INVITED New phenomena in ultrafast laser micro-processing: from quill to non-reciprocal writing</p> <p><u>P.G. Kazansky</u>¹, W. Yang¹, Y. Shimotsuma², K. Hirao², Yu. P. Svirko³ 1- Optoelectronics Research Centre, University of Southampton, United Kingdom 2- Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Japan 3- Department of Physics and Mathematics, University of Joensuu, Finland</p>	9:00	<p>#TuIL 2-1 (#203) INVITED Laser ablation in liquids: Applications in synthesis of group IV semiconductor nanostructures</p> <p><u>G.W. Yang</u> The State Key Laboratory of Optoelectronic Materials and Technologies, School of Physics Science & Engineering, Zhongshan University, P. R. China</p>
9:30	<p>#TuOL 1-2 (#198) Ultrafast plasma excitation and trapping in fs laser processing of PMMA</p> <p><u>D.G. Papazoglou</u>^{1,2}, D. Abdollahpour¹, S. Georgiou¹, S. Tzortzakis¹ 1- Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology - Hellas (FORTH), Greece 2- Materials Science and Technology Department, University of Crete, Greece</p>	9:30	<p>#TuOL 2-2 (#89) Laser-induced shape changes of silver nanoparticles prepared by laser ablation in polymer solutions</p> <p><u>T. Tsuji</u>¹, S. Ozono², T. Mizuki², M. Tsuji¹ 1- Institute for Materials Chemistry and Engineering, Kyushu University, Japan 2- Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan</p>
9:50	<p>#TuOL 1-3 (#227) Measurement of the deterministic character of femtosecond laser-induced damage in fused silica</p> <p><u>O. Uteza</u>¹, N. Sanner¹, B. Bussi�re¹, Ph. Lassonde², J. C. Kieffer², <u>M. Sentis</u>¹ 1-LP3 UMR 6182 CNRS -Universit� de La M�diterran�e - Campus de Luminy, France 2-INRS EnergieMat & Telecommun, Canada</p>	9:50	<p>#TuOL 2-3 (#174) Fabrication of compound nanoparticles by laser process in various liquid environments</p> <p><u>N. Koshizaki</u>¹, Y. Ishikawa² 1- Nanotechnology Research Institute (NRI), National Institute of Advanced Industrial Science and Technology (AIST), Japan 2- Department of Advanced Materials Science, Faculty of Engineering, Kagawa University, Japan</p>
10:10	<p>#TuOL 1-4 (#111) STUDENT Free electron density measurement during femtosecond-laser-nanostructuring of a photosensitive glass</p> <p><u>A. Royon</u>^{1,3}, M. Bellec¹, L. Canioni¹, K. Bourhis², T. Cardinal², M. Richardson³ 1- CPMOH-CNRS / Universit� Bordeaux 1, France 2- ICMCB-CNRS, France 3- College of Optics and Photonics/CREOL, UCF, USA</p>	10:10	<p>#TuOL 2-4 (#222) Blue light emitting silicon nanocrystals prepared by laser ablation of doped Si wafers in water</p> <p><u>V. �vr�ek</u>, M. Kondo Novel Si Material Team, Research Center for Photovoltaics, National Institute of Advanced Industrial Science and Technology (AIST), Japan</p>
10:30	<p>#TuOL 1-5 (#290) Laser-matter interaction in fusion welding of fused silica using ultrashort laser pulses</p> <p><u>I. Miyamoto</u>¹, K. Cvecek², Y. Okamoto³, P. Bechtold², M. Schmidt² 1- Osaka University, Japan 2- Bayerisches Laser Zentrum, Germany 3- Okayama University, Japan</p>	10:30	<p>#TuOL 2-5 (#66) Ultrashort pulse laser propagation in liquids and its application to nanoparticle formation</p> <p>A. Men�endez-Manj�n, <u>S. Barcikowski</u>, B.N. Chichkov Laser Zentrum Hannover e.V., Germany</p>

COFFEE BREAK (Sponsored by Ophir Japan Ltd.)

SHORT PRESENTATIONS for POSTER SESSION

(11:10-12:10, 60 min) Room 1 (3A) & Room 2 (2A)

* As for the details, please see the Poster Session Pages.

* 2 minutes per presentation using OHP

Session Chairs: Room 1 Burkhard Fechner, Coherent GmbH, Germany, Room 2 Yasuhiro Okamoto, Okayama University, Japan

POSTER PRESENTATION

(12:20-13:50, 90 min)

Sponsored by Coherent Japan, Inc.

Exhibition Hall on 1st Floor

LPM 3-3 Lithography and Photopolymerization (9:00-10:50, 110 min) Room 3 (2B)		HPL-3 Removal (9:00-10:40, 100 min) Room 4 (3B)	
TIME	Chair: Yong-Feng Lu, University of Nebraska, USA	TIME	Chair: Akikazu Kitagawa, Hitachi Zosen Corporation, Japan
9:00	#TuOL 3-1 (#124) STUDENT Membrane-assisted transfer molding for the production of optically driven micromachines N. Yoshimura ¹ , S. Maruo ^{1,2} 1- Department of Mechanical Engineering, Graduate School of Engineering, Yokohama National University, Japan 2- PRESTO, Japan Science and Technology Agency, Japan	9:00	#TuOH 4-1 (#219) High speed imaging of laser drilling process P. Denney ¹ , J. Washko ¹ , S. Stannard ² , A. Black ² 1- CCAT/NCAL, USA 2- University of Connecticut, USA
9:20	#TuOL 3-2 (#116) STUDENT Three-dimensional molding process based on microstereolithography and floc-casting of SiO₂ slurry M. Inada ¹ , D. Hiratsuka ² , J. Tatami ² , S. Maruo ^{1,3} 1- Department of Mechanical Engineering, Graduate School of Engineering, Yokohama National University, Japan 2- Graduate School of Environment and System Sciences, Yokohama National University, Japan 3- PRESTO/JST, Japan	9:20	#TuOH 4-2 (#225) Peak power control of a single mode fiber laser for optimum materials processing M. Naeem, S. Keen GSI Group, Laser Division, UK1
9:40	#TuOL 3-3 (#53) Large-area 3D micro/nanostructure fabrication by laser microlens array lithography M. Tang, M.H. Hong, Y.S. Choo National University of Singapore, Singapore	9:40	#TuOH 4-3 (#190) A study on drilling of thin aluminum sheet using pulsed Nd:YAG laser D.G. Ahn, K.W. Jung Department of Mechanical Engineering, Chosun University, Korea
10:00	#TuOL 3-4 (#178) STUDENT Silica-based optical elements in microchannel fabricated by femtosecond laser lithography assisted micromachining M. Mizoshiri ¹ , H. Nishiyama ¹ , J. Nishii ² , Y. Hirata ¹ 1- Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan 2- National Institute of Advanced Industrial Science and Technology (AIST), Japan	10:00	#TuOH 4-4 (#258) The characteristics of laser assisted machining for Si₃N₄ by laser power and cutting feed rate J-D. Kim ¹ , S-J. Lee ² , H-J. Yoon ² , S-J. Park ³ 1- Division of Marine System Engineering, College of Maritime Sciences, Korea Maritime University, Korea 2- Graduate school, Korea Maritime University, Korea 3- Welding Research Center, RIST, Korea
10:20	#TuIL 3-5 (#58) INVITED Biocompatible and biodegradable photopolymers for micro-stereolithography J. Stampfl ² , C. Heller ¹ , M. Schwentenwein ¹ , F. Varga ³ , R. Liska ¹ 1- Vienna University of Technology, Institute of Applied Synthetic Chemistry and 2- Institute of Materials Science and Technology, Vienna, Austria 3- Ludwig Boltzmann-Institute of Osteology, Hanusch Hospital, Vienna, Austria	10:20	#TuOH 4-5 (#306) Cutting stainless steel with disc and CO₂ lasers P.A. Hilton TWI Ltd., UK
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			
SHORT PRESENTATION FOR POSTER SESSION (11:10-12:10, 60 min) Room 1 (3A) & Room 2 (2A) * As for the details, please see the Poster Session Pages. * 2minutes per presentation using OHP Session Chairs: Room 1 Burkhard Fechner, Coherent GmbH, Germany, Room 2 Yasuhiro Okamoto, Okayama University, Japan			
POSTER PRESENTATION (12:20-13:50, 90 min) Sponsored by Coherent Japan, Inc. Exhibition Hall on 1st Floor			

LPM 4-1 Ultrafast Laser Processing - Transparent Materials Processing (14:00-15:50, 110 min) Room 1 (3A)		LPM 4-2: SP L3 Laser Synthesis of Nanomaterials (II) (14:00-15:50, 110 min) Room 2 (2A)	
TIME	Chair: Gediminas Raciukaitis, Institute of Physics, Lithuania	TIME	Chair: Stephan Barcikowski, Laser Zentrum Hannover e.V., Germany
14:00	#TuIL 1-6 (#17) INVITED Femtosecond laser micromachining and microfabrication in transparent materials Y. Li, H. Cui, H. Luo, D. Liu, H. Yang, Q. Gong State Key Laboratory for Mesoscopic Physics & Department of Physics, Peking University, China	14:00	#TuIL 2-6 (#339) INVITED Laser synthesis and manipulation of gold nanomaterials H. Muto, F. Mafuné Department of Basic Science, School of Arts and Sciences, The University of Tokyo, Japan
14:30	#TuOL 1-7 (#16) Ultrashort pulse laser processing of transparent materials F. Yoshino, H. Zhang, A. Arai IMRA America, Inc., Applications Research Lab, USA	14:30	#TuOL 2-7 (#87) CANCELLED Mechanisms of particles size reduction by laser irradiation A. Pyatenko, Y. Yamaguchi, M. Suzuki Research Institute of Genome-based Biofactory, AIST, Japan
14:50	#TuOL 1-8 (#149) Stability of femtosecond laser written structures in chalcogenide glass J. Choi ¹ , N. Carlie ² , L. Petit ² , T. Anderson ¹ , K. Richardson ² , M. Richardson ¹ 1- Townes Laser Institute, The College of Optics and Photonics, University of Central Florida, USA 2- School of Materials Science and Engineering, COMSET, Clemson University, USA	14:50	#TuOL 2-8 (#341) STUDENT Dispersion of metal nanoparticles into PET using femtosecond laser pulses M. Yoshida ¹ , S. Iwasaki ¹ , T. Sano ¹ , H. Yamaguchi ² , Y. Ozeki ² , K. Itoh ² , A. Hirose ¹ 1- Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan 2- Division of Advanced Science and Biotechnology, Graduate School of Engineering, Osaka University
15:10	#TuOL 1-9 (#115) Complete characterization procedure for fs-laser written Er/Yb-codoped phosphate glass waveguides J.A. Vallés ¹ , J. Solis ² , J.A. Sánchez ¹ , A. Ruiz ² , M.A. Rebolledo ¹ , A. Ferrer ² 1- Department of Applied Physics, University of Zaragoza & Aragón Institute for Engineering Research, Spain 2- Laser Processing Group, Instituto de Optica-CSIC, Spain	15:10	#TuOL 2-9 (#80) Size control of nanoparticles using burst-mode femtosecond pulsed laser deposition M. Murakami, B. Liu, Z. Hu, Y. Che IMRA America, Inc., USA
15:30	#TuOL 1-10 (#310) Burst femtosecond laser processing with 5D spectroscopic control J. Li, P.R. Herman Department of Electrical and Computer Engineering and the Institute for Optical Sciences, University of Toronto, Canada	15:30	#TuOL 2-10 (#62) Examination of laser-induced splitting of Au and Ag flakes to produce nanoparticles in solutions D. Werner ¹ , S. Hashimoto ¹ , T. Uwada ² , T. Tomita ¹ , S. Matsuo ¹ 1-Department of Ecosystem Engineering, The University of Tokushima, Japan 2- Graduate School of Materials Science, Nara Institute of Science and Technology (NAIST), Japan
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 4-3 Laser Direct Write Fundamentals and Micro/Nanofabrication (14:00-15:50, 110 min) Room 3 (2B)		HPL-4 Welding 1 (14:00-15:50, 110 min) Room 4 (3B)	
TIME	Chair: Alberto Piqué, Naval Research Laboratory, USA	TIME	Chair: Nobuyuki Abe, Osaka University, Japan
14:00	<p>#TuOL 3-6 (#228) STUDENT Time resolved study of photopolymer assisted laser-induced forward transfer of thin ceramic films</p> <p>K.S. Kaur¹, R. Fardel^{2,3}, T.C. May-Smith¹, M. Nagel³, D.P. Banks¹, C. Grivas¹, T. Lippert², R.W. Eason¹ 1- Optoelectronics Research Centre, University of Southampton, UK 2- Paul Scherrer Institut, General Energy Research Department, Switzerland 3- Empa, Swiss Federal Laboratories for Materials Testing and Research, Laboratory for Functional Polymers, Switzerland</p>	14:00	<p>#TuIH 4-6 (#72) INVITED Limiting processes for keyhole propagation during deep penetration laser welding</p> <p>R. Fabbro LALP (CNRS)/GIP GERAILP, France</p>
14:20	<p>#TuOL 3-7 (#280) STUDENT Effect of laser transfer mechanism on damage to organic semiconducting molecules during laser direct-write printing</p> <p>N.T. Kattamis¹, N.D. McDaniel², S. Bernhard², C.B. Arnold¹ 1- Department of Mechanical and Aerospace Engineering and Princeton Institute for Science and Technology of Materials, Princeton University, USA 2- Department of Chemistry and Princeton Institute for Science and Technology of Materials, Princeton University, USA</p>	14:30	<p>#TuOH 4-7 (#129) Analysis of the keyhole and weld pool dynamics by imaging evaluation and photodiode monitoring</p> <p>A.F.H. Kaplan, P. Norman, I. Eriksson Luleå University of Technology, Sweden</p>
14:40	<p>#TuOL 3-8 (#136) Dynamics of liquid ejection in laser-induced forward transfer</p> <p>P. Serra, M. Duocastella, J.M. Fernández-Pradas, J.L. Morenza Universitat de Barcelona, Departament de Física Aplicada i Òptica, Spain</p>	14:50	<p>#TuOH 4-8 (#285) Effect of oxygen on penetration depth in fibre laser welding</p> <p>L. Zhao¹, S. Tsukamoto¹, G. Arakane¹, T. Sugino², T. DebRoy³ 1- National Institute for Materials Science, Japan 2- IHI Corp., Japan 3- Pennsylvania State University, USA</p>
15:00	<p>#TuOL 3-9 (#142) STUDENT Study of the deposition process in the laser forward transfer of liquids</p> <p>M. Duocastella, J.M. Fernández-Pradas, J.L. Morenza, P. Serra Universitat de Barcelona, Departament de Física Aplicada i Òptica, Spain</p>	15:10	<p>#TuOH 4-9 (#286) Prevention of porosity in laser and laser-arc hybrid welding</p> <p>S. Tsukamoto¹, L. Zhao¹, G. Arakane¹, T. Sugino² 1- National Institute for Materials Science, Japan 2- IHI Corp., Japan</p>
15:20	<p>#TuIL 3-10 (#20) INVITED Femtosecond laser induced forward transfer for the deposition of nanoscale, transparent, and solid-phase materials</p> <p>D.P. Banks¹, K. Kaur¹, C. Grivas¹, R. Fardel^{2,3}, M. Nagel², T.K.M. Lippert³, I. Zergioti⁴, R.W. Eason¹ 1- Optoelectronics Research Centre, University of Southampton, UK 2- EMPA, Swiss Federal Laboratories for Materials Testing and Research, Laboratory for Functional Polymers, Switzerland 3- General Energy Research Department, Paul Scherrer Institut, Switzerland 4- Physics Department, National Technical University of Athens, Greece</p>	15:30	<p>#TuOH 4-10 (#332) High-quality welding with 10kW high-brightness fiber laser</p> <p>Y. Kawahito, S. Katayama Joining and Welding Research Institute (JWRI), Osaka University, Japan</p>
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 5-1 Ultrafast Laser Processing - 3D Fabrication (16:10-18:20, 130 min) Room 1 (3A)		LPM 5-2: SP L3 Laser Synthesis of Nanomaterials (III) (16:20-18:20, 120 min) Room 2 (2A)	
TIME	Chair: Peter Herman, University of Toronto, Canada	TIME	Chair: Fumitaka Mafuné, The University of Tokyo, Japan
16:10	<p>#TuIL 1-11 (#223) INVITED Use of femtosecond lasers in three-dimensional and photonic crystal fabrication and optical data storage</p> <p><u>M. Gu</u> Centre for Micro-Photonics and Centre for Ultrahigh-bandwidth Devices for Optical Systems (CUDOS), Faculty of Engineering and Industrial Sciences, Swinburne University of Technology, Australia</p>	16:20	<p>#TuOL 2-11 (#125) Fabrication of gold and silver nanoparticles by femtosecond laser ablation. Size determination by optical extinction spectroscopy</p> <p>D.C. Schinca^{1,2}, L.B. Scaffardi^{1,2}, G.A. Torchia^{1,3}, F. Videla^{1,2}, <u>P. Moreno</u>³, L. Roso³ 1- Centro de Investigaciones Ópticas, CIOp (CONICET-CIC), Argentina 2- Área Departamental de Ciencias Básicas, Facultad de Ingeniería, Universidad Nacional de La Plata, Argentina 3- Servicio Láser, Universidad de Salamanca, Spain</p>
16:40	<p>#TuOL 1-12 (#197) Micro three-dimensional removal processing inside sapphire substrate</p> <p>K. Tokumi, <u>S. Matsuo</u>, S. Kiyama, T. Tomita, S. Hashimoto Department of Ecosystem Engineering, The University of Tokushima, Japan</p>	16:40	<p>#TuOL 2-12 (#40) Optimizing parameters for the in-situ bioconjugation of laser generated gold nanoparticles</p> <p><u>S. Petersen</u>, S. Barcikowski Laser Zentrum Hannover, Germany</p>
17:00	<p>#TuOL 1-13 (#99) STUDENT 3D micro structuring of sapphire using fs-laser irradiation and selective etching</p> <p><u>M. Hörstmann-Jungemann</u>, J. Gottmann, M. Keggenhoff Lehrstuhl fuer Lasertechnik (LLT), RWTH Aachen University, Germany</p>	17:00	<p>#TuOL 2-13 (#41) In-situ functionalised laser generated nanoparticles embedded into elastomeric and thermoplastic polymers</p> <p><u>C. Menneking</u>¹, A. Hahn¹, T. Steinke², M. Meyer², R. Schuster², S. Barcikowski¹ 1- Laser Zentrum Hannover e.V., Germany 2- Deutsches Institut für Kautschuktechnologie e.V., Germany</p>
17:20	<p>#TuOL 1-14 (#73) STUDENT Electro-optic integration of embedded electrodes and waveguides in LiNbO₃ with a femtosecond laser</p> <p>Y. Liao¹, J. Xu¹, <u>Y. Cheng</u>¹, Z. Xu¹, K. Sugioka², K. Midorikawa² 1- State Key Laboratory of High Field Laser Physics, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China 2- RIKEN - ASI, Japan</p>	17:20	<p>#TuOL 2-14 (#90) Formation of core-shell structured silicon nanoparticles by pulsed laser ablation</p> <p><u>I. Umezumi</u>^{1,2}, Y. Nakayama¹, A. Sugimura^{1,2} 1- Department of Physics, Konan University, Japan 2- Quantum Nano-technology Laboratory, Konan University, Japan</p>
17:40	<p>#TuOL 1-15 (#114) STUDENT 3D laser direct writing of nanostructures in a photosensitive glass</p> <p><u>M. Bellec</u>¹, L. Canioni¹, A. Royon¹, K. Bourhis², T. Cardinal² 1- CPMOH, Université Bordeaux 1, France 2- ICMCB, Université Bordeaux 1, France</p>	17:40	<p>#TuOL 2-15 (#29) STUDENT Dynamic formation mechanism of nanoparticles produced by laser ablation of a solid target immersed in water</p> <p><u>W. Soliman</u>¹, T. Nakano¹, N. Takada¹, K. Sasaki² 1- Department of Electrical Engineering and Computer Science, Nagoya University, Japan 2- Plasma Nanotechnology Research Center, Nagoya University, Japan</p>
18:00	<p>#TuOL 1-16 (#117) STUDENT Laser structuration and luminescence properties of silver containing glasses</p> <p><u>K. Bourhis</u>¹, T. Cardinal¹, M. Bellec², A. Royon², L. Canioni², A. Fargues¹, M. Treguer¹, J. J. Videau¹, M. Couzi³, V. Rodriguez³, M. Dussauze³ 1- ICMCB, Université Bordeaux - CNRS, France 2- CPMOH, Université Bordeaux, France 3- ISM, Université Bordeaux, France</p>	18:00	<p>#TuOL 2-16 (#282) PROGRAM CHANGED Synthesis of iron oxide by laser pyrolysis – the effect of process parameter on the properties of the nanoparticles</p> <p>I. Morjan¹, F. Dumitrache¹, R. Alexandrescu¹, I. Soare¹, C. Fleaca¹, L. Vekas², N.C. Popa², V. Kuncser³, G. Filoti³, <u>V. Ciupina</u>⁴ 1- National Institute for Lasers, Romania 2- Romanian Academy, Romania 3- National Institute of Materials Physics, Romania 4- Ovidius University of Constanta, Romania</p>

LPM 5-3 Laser Direct Write Fabrication of Microdevices and Systems (16:10-18:20, 130 min) Room 3 (2B)		HPL-5 Welding 2 (16:10-17:50, 100 min) Room 4 (3B)	
TIME	Chair: Yoshiki Nakata, Osaka University, Japan	TIME	Chair: Berndt Brenner, Fraunhofer IWS, Germany
16:10	#TuOL 3-11 (#260) Laser-based digital microfabrication <u>A. Piqué</u> , R.C.Y. Auyeung, H. Kim, K.M. Metkus S.A. Mathews Naval Research Laboratory, USA	16:10	#TuOH 4-11 (#170) Influence of a magnetic field on melt flow in laser welding of aluminium <u>M. Gatzen</u> , Z. Tang, F. Vollertsen BIAS Bremer Institut für angewandte Strahltechnik GmbH, Germany
16:30	#TuOL 3-12 (#218) Direct UV writing at the University of Southampton - substrates, structures and sensors J.C. Gates, D.O. Kundys, C.H. Holmes, B.D. Snow, R.M.Parker, H.E. Major, C.B.E. Gawith, P.G.R. Smith Optoelectronics Research Centre, University of Southampton, United Kingdom	16:30	#TuOH 4-12 (#179) Laser lap welding of Al alloy 5J32 and 6K32 <u>D.-C. Ahn</u> ¹ , C. Kim ¹ , J.-D. Kim ² 1- Advanced Welding and Joining R&D Department, Korea Institute of Industrial Technology, Incheon, Korea 2- Department of Mechanical Engineering, Inha University, Incheon, Korea
16:50	#TuOL 3-13 (#95) Picosecond-laser structuring of thin films for CIGS solar cells <u>G. Račiukaitis</u> , P.Gečys Laboratory for Applied Research, Institute of Physics, Lithuania	16:50	#TuOH 4-13 (#70) High power diode lasers in automotive brazing <u>J. Franks</u> Sales Representative Japan, Laserline GmbH, Germany
17:10	#TuOL 3-14 (#34) Direct writing of large micro-cantilever arrays for bio-MEMS devices <u>J.D. Shephard</u> , D. Varadam, W.X. Wang, J.P. Parry, W. M. Shu, D.P. Hand School of Engineering and Physical Sciences, Heriot-Watt University, UK	17:10	#TuOH 4-14 (#241) Effect of shielding gas on fiber laser welding of type 304 stainless steel <u>K.M. Hafez</u> ¹ , S. Katayama ² 1- Central Metallurgical R&D Institute (CMRDI), Egypt 2- JWRI, Osaka University, Japan
17:30	#TuOL 3-15 (#216) Fabrication of frequency-selective surface structures by femtosecond laser ablation of gold films <u>V. Mizeikis</u> ^{1,2} , S. Juodkazis ² , H. Misawa ² 1- Research Institute for Electronic Science, Hokkaido University, Japan 2- Division of Global Research Leaders, Shizuoka University, Japan	17:30	#TuOH 4-15 (#298) Visual techniques for real-time seam tracking monitoring during fiber laser welding <u>X.D. Gao</u> ^{1,2} , S. Katayama ² , Y. Kawahito ² , D.Y. You ¹ 1- Department of Mechanical and Electrical Engineering, Guangdong University of Technology, China 2- Joining and Welding Research Institute, Osaka University, Japan
17:50	#TuOL 3-16 (#287) INVITED Development of novel RF and millimeter wave structures by laser direct-write <u>S.A. Mathews</u> ¹ , M. Mirotznik ¹ , A. Piqué ² 1- The Catholic University of America, USA 2- U.S. Naval Research Laboratory, USA		#TuOH 4-16 (#133) CANCELLED 3D modeling of deep penetration laser welding under humping regime <u>E.H. Amara</u> ¹ , R. Fabbro ² 1- Centre de Développement des Technologies Avancées (CDTA), Algeria 2- LALP(CNRS)-GIP GERAILP, France

DAY-3: JULY 1, 2009, WEDNESDAY

Events: 4 Parallels, Short Presentations, Poster Sessions and Banquet

LPM 6-1 Ultrafast Laser Processing - Nanostructuring (9:00-11:00, 120 min) Room 1 (3A)		LPM 6-2: SP L1 Tailoring of Mechanical Properties (9:00-10:50, 110 min) Room 2 (2A)	
TIME	Chair: Ya Cheng, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China	TIME	Chair: Andreas Ostendorf, Ruhr-University Bochum, Germany
9:00	#WeOL 1-1 (#199) New insights on the formation of nanogratings in the bulk of fused silica <u>D.G. Papazoglou</u> ^{1,2} , D. Abdollahpour ¹ , S. Tzortzakis ¹ 1- Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology - Hellas (FORTH), Greece 2- Materials Science and Technology Department, University of Crete, Greece	9:00	#WeOL 2-1 (#333) INVITED Synthesis of high-pressure phases of condensed matter using femtosecond laser-driven shock wave <u>T. Sano</u> , A. Hirose Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan
9:20	#WeOL 1-2 (#36) Feedback effect on self-organized structures formation upon femtosecond laser ablation <u>O. Varlamova</u> , <u>J. Reif</u> Brandenburg. Tech. Univ. BTU Cottbus and Cottbus JointLab, Germany	9:30	#WeOL 2-2 (#44) Time-resolved phase measurement during fs-laser material modification using pump-probe white light interference microscopy <u>D. Wortmann</u> ¹ , I. Mingareev ¹ , A. Brand ¹ , A. Horn ² 1- Lehrstuhl fuer Lasertechnik, RWTH Aachen University, Germany 2- Experimentalphysik III, Universitaet Kassel, Germany
9:40	#WeOL 1-3 (#236) Surface nanostructure of silver induced by femtosecond laser irradiation <u>A. Hu</u> ¹ , <u>Y. Zhou</u> ¹ , <u>J. Sanderson</u> ² , <u>W.W. Duley</u> ² 1- Department of Mechanical and Mechatronics Engineering, University of Waterloo, Canada 2- Department of Physics and Astronomy, University of Waterloo, Canada	9:50	#WeOL 2-3 (#57) Indirect laser peening to introduce micro dimples and compressive residual stress using a metal foil <u>M. Kutsuna</u> ¹ , H. Inoue ¹ , K. Saito ² , H. Suzuki ² , K. Amano ³ 1- Advanced Laser Technology Research Center Co. Ltd., Japan 2- Saitoh Industry Co. Ltd., Japan 3- Aichiken Institute of Industrial Technology, Japan
10:00	#WeOL 1-4 (#113) Initiation of femtosecond laser machined ripples in steel observed by scanning helium ion microscopy (SHIM) <u>A.J. Huis in 't Veld</u> ¹ , J. van der Veer ² 1- University of Twente, Faculty of Engineering Technology, Applied Laser Technology, The Netherlands 2- TNO Science and Industry, Department Materials Technology, The Netherlands	10:10	#WeOL 2-4 (#135) Rapid fabrication of functional surfaces by parallel laser processing using DOEs <u>J. Bekesi</u> , J. Kaakkenen, J. Meinertz, T. Omairi, J. Ihlemann, P. Simon Laser-Laboratorium Göttingen e.V., Germany
10:20	#WeOL 1-5 (#94) Control of surface shape in nanostructure formed with femtosecond laser pulses <u>G. Miyaji</u> , K. Miyazaki Advanced Laser Science Research Section, Institute of Advanced Energy, Kyoto University, Japan	10:30	#WeOL 2-5 (#245) Femtosecond and nanosecond laser peening of stainless steel H. Nakano ¹ , M. Tsuyama ¹ , S. Miyauti ¹ , T. Shibayanagi ² , M. Tsukamoto ² , N. Abe ² 1- School of Science and Engineering, Kinki University, Japan 2- Joining and Welding Research Institute, Osaka University, Japan
10:40	#WeOL 1-6 (#97) Periodic structure formation on Si (110) by femtosecond laser irradiation and anisotropic wet etching <u>K. Kawahara</u> ¹ , H. Sawada ¹ , A. Yokotani ² 1- Canon Machinery Inc., Japan 2- Faculty of Engineering, University of Miyazaki, Japan		NONE

COFFEE BREAK (Sponsored by Ophir Japan Ltd.)

SHORT PRESENTATIONS for POSTER SESSION

(11:10-12:10, 60 min) Room 1 (3A) & Room 4 (3B)

* As for the details, please see the Poster Session Pages.

* 2minutes per presentation using OHP

Session Chairs: [Room 1](#) Dimitris Papazoglou, University of Crete, Greece, [Room 2](#) Pere Serra, Universitat de Barcelona, Spain

POSTER PRESENTATIONS

(12:20-13:50, 90 min)

Sponsored by Coherent Japan, Inc.

Exhibition Hall on 1st Floor

LPM 6-3 Systems, Optics and Applications of VUV and X-ray (9:00-10:40, 100 min) Room 3 (2B)		HPL-6 Welding 3 (9:00-10:50, 110 min) Room 4 (3B)	
TIME	Chair: Tatsuo Okada, Kyusyu University, Japan	TIME	Chair: Paul Denney, Connecticut Center for Advanced Technology, USA
9:00	#WeOL 3-1 (#132) F₂-laser fabrication of fiber-integrated optical elements J. Zinn, M. Schütte, J. Meinertz, <u>J. Ihlemann</u> Laser-Laboratorium Goettingen, Germany	9:00	#WeIH 4-1 (#331) INVITED Evolution of LAMP joining to dissimilar materials <u>S. Katayama</u> , Y. Kawahito Joining and Welding Research Institute (JWRI), Osaka University, Japan
9:20	#WeOL 3-2 (#283) Silica nano-ablation process induced by laser plasma soft x-ray irradiation <u>T. Makimura</u> ¹ , S. Torri ¹ , H. Niino ² , K. Murakami ¹ 1- Institute of Applied Physics, University of Tsukuba, Japan 2- Photonics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan	9:30	#WeOH 4-2 (#329) Filler added laser-arc hybrid welding (FLA welding) of thin aluminium alloy and steel sheets <u>J.B. Wang</u> ¹ , H. Nishimura ¹ , S. Katayama ² , M. Mizutani ² 1- Engineering Group, Panasonic Welding Systems Co., Ltd., Japan 2- Joining and Welding Research Institute, Osaka University, Japan
9:40	#WeOL 3-3 (#261) Laser-produced plasma source development for EUV lithography <u>H. Komori</u> ¹ , T. Abe ¹ , Y. Watanabe ² , T. Ishihara ² , K. Kakizaki ² , A. Sumitani ¹ , A. Endo ² 1- Komatsu Ltd. / EUVA (Extreme Ultraviolet Lithography System Development Association), Japan 2- Gigaphoton Inc. / EUVA, Japan	9:50	#WeOH 4-3 (#166) Parametric study on dilution in laser-arc hybrid welding through numerical simulations S-J. Na ¹ , <u>W-I. Cho</u> ¹ , M-H. Cho ² , J-B. Lee ² 1- ALPA Lab., Dept. of Mech. Eng., KAIST, Korea 2- Steel Solutions Group, Technical Research Institute, POSCO, Korea
10:00	#WeOL 3-4 (#328) Novel oxide multilayer reflectors at "water-window" wavelengths for x-ray processing <u>H. Kumagai</u> , Y. Tanaka, Y. Masuda, T. Shinagawa, A. Kobayashi Graduate School of Engineering, Osaka City University, Japan		#WeOH 4-4 (#51) CANCELLED Process stability and tensile properties of laser-MIG hybrid welded AZ31B magnesium alloy <u>M. Gao</u> , X. Zeng, Q. Hu Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, P R China
10:20	#WeOL 3-5 (#259) Micro- and nanoprocessing organic polymers using a compact laser plasma EUV source <u>H. Fiedorowicz</u> , A. Bartnik, R. Jarocki, J. Kostecki, R. Rakowski, A. Szczurek, M. Szczurek Institute of Optoelectronics, Military University of Technology, Poland	10:30	#WeOH 4-5 (#103) Improvement of gap bridging ability in CO₂ laser-GMA hybrid welding <u>C.-H. Kim</u> , Y.-N. Ahn, J.-H. Kim Advanced Welding and Joining R&D Department, Korea Institute of Industrial Technology, Incheon, Korea
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			
<p>SHORT PRESENTATIONS for POSTER SESSION (11:10-12:10, 60 min) Room 1 (3A) & Room 4 (3B) * As for the details, please see the Poster Session Pages. * 2minutes per presentation using OHP Session Chairs: <u>Room 1</u> Dimitris Papazoglou, University of Crete, Greece, <u>Room 2</u> Pere Serra, Universitat de Barcelona, Spain</p>			
<p>POSTER PRESENTATIONS (12:20-13:50, 90 min) Sponsored by Coherent Japan, Inc. Exhibition Hall on 1st Floor</p>			

LPM 7-1 Ultrafast Laser Processing - Micromachining (14:00-15:40, 100 min) Room 1 (3A)		LPM 7-2: SP L1 Laser Crystallization and Semiconductor Processing (14:00-15:50, 110 min) Room 2 (2A)	
TIME	Chair: Juergen Reif, BTU Cottbus, Germany	TIME	Chair: Jurgen Stampfl, Institute of Materials Science and Technology, Vienna, Austria
14:00	<p>#WeOL 1-7 (#303) Fabrication of Cu nanoparticles and doping of Al in BK7 glass with femtosecond laser pulses</p> <p>H. Yamaguchi¹, Y. Ozeki¹, T. Tamaki², M. Yoshida³, T. Sano³, A. Hirose³, K. Itoh¹</p> <p>1- Department of Material and Life Science, Graduate School of Engineering, Osaka University, Japan 2- Department of Control Engineering, Nara National College of Technology, Japan 3- Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University</p>	14:00	<p>#WeIL 2-6 (#294) INVITED Advances in surface modification via laser crystallization</p> <p>Y.L. Yao, A.J. Birnbaum, A. Bhatla Department of Mechanical Engineering, Columbia University, USA</p>
14:20	<p>#WeOL 1-8 (#23) Femtosecond pulsed laser machining of silica and tantalum aerogel components for use in plasma physics experiments</p> <p>J.D. Griffiths Plasma Physics Department, AWE plc, UK</p>	14:30	<p>#WeOL 2-7 (#235) Laser-induced black silicon for photovoltaic applications</p> <p>R. Torres¹, T. Sarnet¹, V. Vervisch¹, Ph. Delaporte¹, M. Sentis¹, M. Halbwx², J. Ferreira³, D. Barakel³, M. Pasquinelli³, F. Torregrosa⁴, H. Etienne⁴, L. Roux⁴</p> <p>1- Lasers, Plasmas and Photonic Processes Laboratory, campus of Luminy, France 2- IEMN CNRS UMR 8520, France 3- IM2NP CNRS UMR 6122, France 4- Ion Beam Services, France</p>
14:40	<p>#WeOL 1-9 (#45) High average power fs-laser processing of ceramic matrix composites, metals and dielectrics</p> <p>D. Wortmann¹, I. Mingareev¹, T. Mans², J. Weitenberg², P. Rußbüldt², M. Lederer³, J. Meier³, A.-L. Calendron³</p> <p>1- Lehrstuhl fuer Lasertechnik, RWTH Aachen University, Germany 2- Fraunhofer Institut fuer Lasertechnik, Germany 3- High Q Laser Innovation GmbH, Austria</p>	14:50	<p>#WeOL 2-8 (#104) STUDENT Novel silicon solar cell process by laser doping technique</p> <p>K. Hirata, A. Ogane, T. Saitoh, A. Kitiyanan, Y. Uraoka, T. Fuyuki Graduate School of Materials Science, Nara Institute of Science and Technology (NAIST), Japan</p>
15:00	<p>#WeOL1-10 (#188) Micromachining on the STAVAX mold material using the femtosecond laser</p> <p>S. Choi, J-W. Youn, J-S. Kim, H. Lee Mechanical Engineering, Kyung Pook National University, Korea</p>	15:10	<p>#WeOL 2-9 (#308) Femtosecond laser-driven shock synthesis of silicon high-pressure phases</p> <p>M. Tsujino¹, T. Sano¹, N. Ozaki¹, O. Sakata², M. Okoshi³, N. Inoue³, R. Kodama¹, A. Hirose¹</p> <p>1- Graduate School of Engineering, Osaka University, Japan 2- Japan Synchrotron Radiation Research Institute (JASRI) / SPring-8, Japan 3- National Defense Academy of Japan, Japan</p>
	<p>#WeOL 1-11 (#247) CANCELLED A study on micromachining of stainless slotted tube using femtosecond laser</p> <p>C.-P. Jiang¹, C.-C. Chen²</p> <p>1 Dept. of Power Mechanical Engineering, National Formosa University, Taiwan 2 Dept. of Mechanical Engineering, Technology and Science Institute of Northern Taiwan, Taiwan</p>	15:30	<p>#WeOL 2-10 (#63) Crystallization of silicon thin films by infrared semiconductor laser irradiation using carbon particles</p> <p>T. Sameshima¹, T. Haba¹, N. Sano²</p> <p>1- Tokyo University of Agriculture and Technology, Japan 2- Hightec Systems Corporation, Japan</p>
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 7-3 Advanced Lasers for Microprocessing (14:00-15:40, 100 min) Room 3 (2B)		HPL-7 Surface Modification 1 (14:00-15:30, 90 min) Room 4 (3B)	
TIME	Chair: Takahisa Jitsuno, Osaka University, Japan	TIME	Chair: Alexander Kaplan, Lulea University of Technology, Sweden
14:00	<p>#WeIL 3-6 (#313) INVITED Thin disk lasers: Versatile tools for micro machining</p> <p><u>F. Dausinger</u>¹, S. Sommer², M. Larionov¹ 1- Dausinger + Giesen GmbH, Germany 2- Technologiegesellschaft fuer Strahlwerkzeuge mbH, Germany</p>	14:00	<p>#WeIH 4-6 (#252) INVITED SPEAKER CHANGED To analyze and to release the residual tensile stress in laser deposition layers on Nickel base super alloy blade</p> <p><u>L. Li</u>, University of Manchester, UK D. Zhang, M. Zhong, H. Zhao, Z. Cai, K. Yao, W. Liu Key Laboratory for Advanced Materials Processing Technology, Ministry of Education, Laser Processing Research Center, Department of Mechanical Engineering, Tsinghua University, China</p>
14:30	<p>#WeOL 3-7 (#2) Excimer lasers lead material research and microprocessing</p> <p>R. Delmdahl, <u>B. Fechner</u> Coherent GmbH, Germany</p>	14:30	<p>#WeOH 4-7 (#274) Back reflection in direct high power diode laser (HPDL) cladding</p> <p><u>J. Tuominen</u>¹, J. Latokartano², J. Vihinen², P. Vuoristo¹ 1- Department of Materials Science, Laser Application Laboratory, Tampere University of Technology, Finland 2- Department of Production Engineering, Laser Application Laboratory, Tampere University of Technology, Finland</p>
14:50	<p>#WeIL 3-8 (#345) INVITED Ignition of automotive engine by micro-lasers</p> <p><u>T. Taira</u> Laser Research Center for Molecular Science, Institute for Molecular Science (IMS), Japan</p>	14:50	<p>#WeOH 4-8 (#123) Development of a laser stabilized gas metal arc cladding process</p> <p>D. Kracht, R. Kling, <u>J. Hermsdorf</u>, F. Otte, A. Beittoei Laser Zentrum Hannover e.V., Germany</p>
15:20	<p>#WeOL 3-9 (#327) Single-frequency 389-nm coherent light by efficient wavelength conversion for magnetic resonance Imaging of laser-processed 3D structures with nuclear spin polarization of ³He atoms</p> <p>S. Maeda, Y. Tabata, H. Morioka, <u>H. Kumagai</u>, A. Kobayashi Osaka City University, Japan</p>	15:10	<p>#WeOH 4-9 (#76) Direct manufacturing of components by laser metal deposition and powder bed laser melting</p> <p><u>P. Aubry</u>, T. Malot, K. Verdier, D. Hercher GIP GERALP, France</p>
<p>COFFEE BREAK (Sponsored by Ophir Japan Ltd.)</p>			

LPM 8-1 Ultrafast Laser Processing - Practical Applications (16:00-18:10, 130 min) Room 1 (3A)		LPM 8-2: SP L1 Chemical and Biological Properties of Surfaces (16:10-18:10, 120 min) Room 2 (2A)	
TIME	Chair: E. Audouard, Jean Monnet University, France	TIME	Chair: Tomokazu Sano, Osaka University, Japan
16:00	<p>#WeIL 1-12 (#13) INVITED Analysis of impact and process in shockwave bending with USP lasers</p> <p>M. Schmidt, P. Bechtold, O. Hentschel Bayerisches Laserzentrum GmbH, Germany</p>	16:10	<p>#WeOL 2-11 (#25) Surface modification of silicone rubber by ArF laser</p> <p>M. Okoshi¹, M. Iyono¹, N. Inoue¹, T. Yamashita² 1- Department of Electrical and Electronic Engineering, National Defense Academy, Japan 2- Department of Applied Material and Life Science, Kanto Gakuin University, Japan</p>
16:30	<p>#WeOL 1-13 (#212) Laser micromachining of micro-channel branching networks with a femtosecond fiber laser for prototyping of implantable artificial lungs</p> <p>D.H. Kam¹, L. Shah², J. Mazumder¹ 1- Center for Lasers and Plasmas In Advanced Manufacturing, University of Michigan, USA 2- IMRA USA Inc, USA</p>	16:30	<p>#WeOL 2-12 (#167) Formation of superhydrophobic surface of polymer substrate based on ultrafast laser treatment</p> <p>S.C. Jeoung, T.O. Yoon Division of Advanced Technology, Korea Research Institute of Standards and Science, Korea</p>
16:50	<p>#WeOL 1-14 (#289) Micro-processing and structuring of Si and CIS thin film solar cells with an ultrafast picosecond laser</p> <p>E. Steiger¹, M. Scharnagl¹, M. Kemnitzer² 1- High Q Laser Innovation GmbH, Austria 2- Munich University of Applied Sciences, Laser Centre Munich, Germany</p>	16:50	<p>#WeOL 2-13 (#8) STUDENT Fs-laser patterned super-hydrophobic metallic surfaces</p> <p>A. Kietzig¹, S.G. Hatzikiriakos, P. Englezos 1- Department of Chemical and Biological Engineering, The University of British Columbia, Canada</p>
17:10	<p>#WeOL 1-15 (#276) Periodical micro/nano-structuring by wet-chemical-assisted femtosecond laser ablation for blue/uv LED</p> <p>S. Nakashima, K. Sugioka, K. Midorikawa RIKEN-Advanced Science Institute, Japan</p>	17:10	<p>#WeOL 2-14 (#91) Alteration of polyimide wetting properties by laser texturing</p> <p>B. Least, D.A. Willis Department of Mechanical Engineering, Southern Methodist University, USA</p>
17:30	<p>#WeOL 1-16 (#253) Femtosecond laser-based polarization storage by direct-writing in diazobenzene copolymer film</p> <p>Y. Hu¹, Z. Zhang², S. Lei¹, W. Huang¹, X. Wang¹, Q. Zhang² 1- Department of Precision Machinery and Precision Instrument, University of Science and Technology of China, P.R.China 2- Key Laboratory of Soft Matter Chemistry, Department of Polymer Science and Engineering, University of Science and Technology of China, Key Laboratory of Optoelectronic Science and Technology, P.R.China</p>	17:30	<p>#WeOL 2-15 (#19) Fourier-transform infrared spectroscopy of the femtosecond laser-modified SiC</p> <p>T. Tomita¹, M. Iwami¹, S. Matsuo¹, S. Hashimoto¹, S. Saito², K. Sakai² 1- Department of Ecosystem Engineering, The University of Tokushima, Japan 2- National Institute of Information and Communication Technology, Japan</p>
17:50	<p>#WeOL 1-17 (#77) Laser micromachining of metal and silicon using high average power ultrafast fiber laser</p> <p>E. Mottay¹, Y. Zaouter^{1,2}, J. Lopez^{2,3}, C. Loumena³, M. Faucon³ 1- AMPLITUDE SYSTEMES, France 2- ALPHANOV, France 3- CELIA UMR5107 Université Bordeaux 1-CNRS-CEA, France</p>	17:50	<p>#WeOL 2-16 (#336) Excimer laser surface micro-texturing of Ti-6Al-4V for improved cell integration</p> <p>L. Li, N. Mir-hosseini, D. Whitehead Laser Processing Research Centre, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, UK</p>
TRANSPORT TO BANQUET			
BANQUET at KOBE KACHO-EN (19:00-21:00)			

LPM 8-3 Nanotechnology (16:00-18:10, 130 min) Room 3 (2B)		HPL-8 Surface Modification 2 (16:10-18:10, 120 min) Room 4 (3B)	
TIME	Chair: Jan Dubowski, Universite de Sherbrooke, Canada	TIME	Chair: Muneharu Kutsuna, Advanced Laser Technology Research Center Co.Ltd., Japan
16:00	<p>#WeOL 3-10 (#175) Carbon nanotube growth on a microelectrode tip by femtosecond laser lithography</p> <p><u>H. Nishiyama</u>¹, T. Iba¹, M. Mizoshiri¹, J. Nishii², Y. Hirata¹ 1- Osaka University, Japan 2- National Institute of Advanced Industrial and Science Technology, Japan</p>	16:10	<p>#WeOH 4-10 (#42) STUDENT Laser surface hardening of complex shapes: a computationally efficient simulation model</p> <p>L. Orazi¹, A. Fortunato², <u>G. Cuccolini</u>¹, G. Campana², A. Ascari², G.Tani² 1- DISMI Department, University of Modena-Reggio Emilia, Italy 2- DIEM Department, University of Bologna, Italy</p>
16:20	<p>#WeOL 3-11 (#162) Growth of single-walled carbon nanotubes assisted by tip-enhanced optical near-field enhancement</p> <p>Y.S. Zhou, W. Xiong, M. Mahjouri-Samani, W.Q. Yang, K.J. Yi, X.N. He, <u>Y.F. Lu</u> Department of Electrical Engineering, University of Nebraska-Lincoln, USA</p>	16:30	<p>#WeOH 4-11 (#271) STUDENT Grain boundary visualization by short-pulsed laser irradiation for controlling microstructures</p> <p><u>S. Yagi</u>¹, M. Tsukamoto², T. Shibayanagi², M. Fujita³, N. Abe² 1- Graduate school of Engineering, Osaka University, Japan 2- Joining and Welding Research Institute, Osaka University, Japan 3- Institute for Laser Technology, Japan</p>
16:40	<p>#WeOL 3-12 (#134) STUDENT Sub micron surface patterning by short pulse UV laser ablation with proximity phase mask immersion</p> <p><u>B. Borchers</u>, J. Bekesi, P. Simon, J. Ihlemann Laser-Laboratorium Göttingen, Germany</p>	16:50	<p>#WeOH 4-12 (#15) Simulation on laser peening</p> <p><u>H. Furukawa</u>¹, M. Heya², M. Yamanaka² 1- Institute for Laser Technology, Japan 2- The Graduate School for the Creation of New Photonics Industries, Japan</p>
17:00	<p>#WeOL 3-13 (#242) STUDENT Complex periodic micro-/nanostructures on 6H-SiC crystal induced by the interference of three femtosecond laser beams</p> <p><u>X. Jia</u>, T.Q. Jia, Z.R. Sun State Key Laboratory of Precision Spectroscopy, Department of Physics, East China Normal University, China</p>	17:10	<p>#WeOH 4-13 (#278) Study on the strength improvement of the ceramic part fabricated by the process of ceramic laser sintering</p> <p>M-L. Chiu¹, <u>H-H. Tang</u>², H-C. Yen² 1- Graduate Institute of Mechanical and Electrical Engineering, National Taipei University of Technology, Taiwan 2- Department of Mechanical Engineering, National Taipei University of Technology, Taiwan</p>
	<p>#WeOL 3-14 (#185) A novel laser technology for nanostructure formation in semiconductors CANCELLED</p> <p><u>A. Medvid'</u> Riga Technical University, Latvia</p>	17:30	<p>#WeOH 4-14 (#48) Metallurgical issues and work hardening reduction in laser assisted conical spin forming</p> <p><u>P. Romero</u>¹, N. Otero¹, J. Arias¹, J.M. Cabrera², D. Masegué³ 1- AIMEN, Laser Appl. Centre, Spain 2- UPC, Dept.of Materials Science and Metallurgical Engineering, Spain 3- Industrias Puigjaner, Spain</p>
17:40	<p>#WeIL 3-15 (#316) INVITED Health risks and costs related to nanoparticle emission released during laser machining</p> <p><u>S. Barcikowski</u>, J. Walter, A. Hahn Laser Zentrum Hannover e.V., Germany</p>	17:50	<p>#WeOH 4-15 (#155) Laser assisted cold spray: the effect of temperature and velocity on coating characteristics</p> <p><u>A. Cockburn</u>, M. Bray, W. O'Neill Centre for industrial Photonics, Institute for Manufacturing, Department of Engineering, University of Cambridge, UK</p>
TRANSPORT TO BANQUET			
BANQUET at KOBE KACHO-EN (19:00-21:00)			

DAY-4: JULY 2, 2009, THURSDAY

Events: 4 Parallels, Joint Session and Closing Remark

LPM 9-1 Femtosecond Laser Systems (9:00-10:20, 80 min) Room 1 (3A)		LPM 9-2: SP L2 Spatial and Temporal Beam Manipulation for High Throughput Laser Processing (9:30-10:30, 60 min) Room 2 (2A)	
TIME	Chair: Alan Arai, IMRA America, Inc., USA	TIME	Chair: Javier Solis, Instituto de Optica-CSIC, Spain
9:00	<p>#ThOL 1-1 (#121) Multi 100W fs-Innoslab-amplifier</p> <p>T. Mans¹, P. Russbuedt¹, G. Rotarius¹, J. Weitenberg², D. Hoffmann¹, R. Poprawe^{1,2} 1- Fraunhofer Institut fuer Lasertechnik, Germany 2- Lehrstuhl fuer Lasertechnik, RWTH Aachen University, Germany</p>		<p>#ThIL 2-1 (#304) INVITED CANCELLED</p> <p>Effects of spectral phase manipulation to control frequency and timing characteristics of ultrafast pulses</p> <p>M. Dantus^{1,2} 1- Department of Chemistry and Department of Physics and Astronomy, Michigan State University, USA 2- BioPhotonic Solutions Inc., USA</p>
9:20	<p>#ThOL 1-2 (#78) High average power ultrafast fiber amplifiers</p> <p>Y. Zaouter¹, E. Mottay¹, J. Bouillet², E. Cormier², D. Papadopoulos³, F. Druon³, M. Hanna³, P. Georges³ 1- Amplitude Systèmes, France 2- Université de Bordeaux, Laboratoire CELIA, France 3- Institut d'Optique Graduate School, Laboratoire LCFI, France</p>	9:30	<p>#ThOL 2-2 (#251) STUDENT Material processing using laser with controlled pulse duration in fs-region</p> <p>T. Wakamatsu¹, K. Matsumoto¹, M. Katto², A. Yokotani¹ 1- Department of Electrical and Electronic Engineering, University of Miyazaki, Japan 2- Cooperative Research Center, University of Miyazaki, Japan</p>
9:40	<p>#ThOL 1-3 (#151) An ultrafast femtosecond fibre laser as a new tool in rapid microtooling</p> <p>J. Schille, R. Ebert, H. Exner, U. Loeschner, P. Regenfuss, L. Schneider Hochschule Mittweida - University of Applied Sciences, Germany</p>	9:50	<p>#ThOL 2-3 (#122) Dynamic ultrafast laser beam spatial tailoring for parallel processing of photonic functions inside transparent materials</p> <p>G. Cheng¹, C. Mauclair¹, N. Huot¹, E. Audouard¹, A. Rosenfeld², I.V. Hertel², R. Stoian¹ 1- Laboratoire Hubert Curien (UMR 5516 CNRS), Université de Lyon, Université de Saint Etienne, France 2- Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie, Germany</p>
10:00	<p>#ThOL 1-4 (#262) Fiber optic ultrashort pulse lasers for advanced materials processing</p> <p>M. Mielke, D. Gaudiosi, K. Kim, T. Yilmaz, M. Greenberg, S. Tong, X. Gu, M. Geusen, R. Cline, M. Slovick, N. Allen, S. Sapers Raydiance Inc., USA</p>	10:10	<p>#ThOL 2-4 (#83) STUDENT Adaptive optics for optimisation of laser processing</p> <p>R.J. Beck, J.P. Parry, D.T. Reid, J.D. Shephard, D.P. Hand Heriot-Watt University, School of Engineering and Physical Sciences, UK</p>
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 9-3 Biomedical Applications (9:00-10:20, 80 min) Room 3 (2B)		HPL-9 Micro Processing (9:00-10:20, 80 min) Room 4 (3B)	
TIME	Chair: Wataru Watanabe, AIST, Japan	TIME	Chair: Takehiro Watanabe, Chiba University, Japan
9:00	<p>#ThOL 3-1 (#127) Evaluation of the effect in bone regeneration of ultrafast laser microstructuring of zirconia dental implants</p> <p>P. Moreno¹, R.A. Delgado², A. García¹, C. Prieto¹, J.R. Vázquez de Aldana¹, J.L. Calvo², L. Roso¹</p> <p>1- Servicio Láser, Universidad de Salamanca, Spain 2- Departamento de Dermatología, Estomatología, Radiología y Medicina Física, Clínica Odontológica Universitaria. Universidad de Murcia, Spain</p>	9:00	<p>#ThOH 4-1 (#54) Suppression of the focal shift in single-mode high-power lasers processing heads</p> <p>J.F. Bisson, H. Sako Amada, Japan</p>
9:20	<p>#ThOL 3-2 PROGRAM CHANGED Cell Detachment Induced by Femtosecond Laser "Tsunami" and the Force Estimation Using Atomic Force Microscope</p> <p>Y. Hosokawa¹, H. Masuhara¹ and A. Ito²</p> <p>1- Nara Institute of Science and Technology, Japan 2- The Institute of Medical Science, The University of Tokyo, Japan 2- The Institute of Medical Science, The University of Tokyo, Japan</p>	9:20	<p>#ThOH 4-2 (#312) STUDENT In-process monitoring and adaptive control for micro seam welding with fiber laser</p> <p>T. Onishi, Y. Kawahito, S. Katayama Joining and Welding Research Institute, Osaka University, Japan</p>
9:40	<p>#ThOL 3-3 (#9) Study on measurement of impulse force induced by Nd:YAG laser beam</p> <p>T. Furumoto¹, T. Ueda¹, S. Aoki², A. Kasai³, A. Hosokawa¹, R. Tanaka¹, H. Tachiya¹</p> <p>1- Institute of Science and Engineering, Kanazawa University, Japan 2- Graduate School of Natural Science and Technology, Kanazawa University 3- Faculty of Engineering, Kanazawa University</p>	9:40	<p>#ThOH 4-3 (#202) Cutting and welding characteristics by 1 kW disk laser with 50µm optical fiber</p> <p>S. Saitoh, K. Wakabayashi TRUMPF Corporation, Japan</p>
10:00	<p>#ThOL 3-4 (#196) Nano-aquarium fabrication by femtosecond laser for observation of <i>Phormidium</i> assemblage to seedling root</p> <p>Y. Hanada¹, K. Sugioka¹, I. Ishikawa², H. Kawano², A. Miyawaki², M. Iida^{1,3}, H. Takai³, K. Midorikawa¹</p> <p>1- RIKEN-Advanced Science Institute, Japan 2- RIKEN-Brain Science Institute, Japan 3- Tokyo Denki University, Japan</p>	10:00	<p>#ThOH 4-4 (#232) Laser particle removal applied to fusion reactor cleaning</p> <p>A. Vatry^{1,2}, M. Naiim Habib², Ph. Delaporte¹, M. Sentis¹, H. Roche², C. Hernandez², C. Grisolia²</p> <p>1- Lasers, Plasmas and Photonic Processes Laboratory, campus of Luminy, France 2- Association Euratom/CEA, DSM/IRFM, France</p>
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 10-1 Practical and Industrial Applications (I) (10:40-12:10, 90 min) Room 1 (3A)		LPM 10-2: SP L2 Beam Manipulation for Spatial Control and Optimization (10:50-12:20, 90 min) Room 2 (2A)	
TIME	Chair: Kunihiro Washio, Paradigm Laser Research, Japan	TIME	Chair: Craig B. Arnold, Princeton University, USA
10:40	<p>#ThIL 1-5 (#323) INVITED Milling-combined laser metal sintering system and production of injection mold with sophisticated functions</p> <p><u>S. Abe</u>¹, Y. Higashi¹, I. Fuwa¹, N. Yoshida¹, T. Yoneyama² 1- Production Engineering Research Laboratory, Panasonic Electric Works Ltd., Japan 2- Faculty of Engineering, Kanazawa University, Japan</p>	10:50	<p>#ThIL 2-5 (#309) INVITED Utilizing spatial and temporal shaping of light for interactive microscopic analysis and control</p> <p><u>J. Glückstad</u> DTU Fotonik, Department of Photonics Engineering, Technical University of Denmark, Denmark</p>
11:10	<p>#ThOL 1-6 (#30) Fabrication of conductive micropatterns on flexible polymer films by laser direct writing technique using metal nanoparticle ink</p> <p><u>A. Watanabe</u>, M. Aminuzzaman, T. Miyashita Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, JAPAN</p>	11:20	<p>#ThOL 2-6 (#146) STUDENT Optimization of computer-generated hologram in holographic femtosecond laser processing</p> <p><u>S. Hasegawa</u>, Y. Hayasaki Center for Optical Research and Education (CORE), Utsunomiya University, Japan</p>
11:30	<p>#ThOL 1-7 (#230) Laser printing of thin film transistor</p> <p>L. Rapp¹, A.P. Alloncle¹, A.K. Diallo², S. Nénon², <u>P. Delaporte</u>¹, C. Vidélot-Ackermann², F. Fages² 1- Laboratory LP3 (Lasers, plasma and photonic processes) - UMR 6182 CNRS - Université de la Méditerranée, France 2- CINaM (Centre Interdisciplinaire de Nanoscience de Marseille) - UPR3118 - Campus de Luminy, France</p>	11:40	<p>#ThOL 2-7 (#106) Production of optical waveguides by femtosecond laser writing using elliptical-astigmatic shaping with a spatial light modulator</p> <p>A. Ruiz de la Cruz, A. Ferrer, D. Puerto, W. Gawelda, J. Siegel, <u>J. Solis</u> Laser Processing Group, Instituto de Optica-CSIC, Spain</p>
11:50	<p>#ThOL 1-8 (#171) Laser-micro-sintering</p> <p>A. Streek, P. Regenfuß, R. Ebert, H. Exner, <u>J. Schille</u> University of Applied Sciences Mittweida, Germany</p>	12:00	<p>#ThOL 2-8 (#49) STUDENT 800nm and 400nm micro- and nano-processing with femtosecond spatially shaped pulses</p> <p><u>S. Landon</u>, E. Audouard, D. Bruneel, N. Huot, R. Stoian Laboratoire Hubert Curien, France</p>
LUNCH			

LPM 10-3 Fundamentals and Analysis (10:40-12:20, 100 min) Room 3 (2B)		HPL-10 Trend of Laser Processing (10:40-12:10, 90 min) Room 4 (3B)	
TIME	Chair: Yoshiro Ito, Nagaoka University of Technology, Japan	TIME	Chair: Paul Hilton, TWI Ltd., UK
10:40	<p>#ThOL 3-5 (#326) Analysis of crack propagation induced by laser irradiation in stealth dicing</p> <p><u>E. Ohmura</u>¹, K. Ogawa¹, M. Kumagai², M. Nakano², K. Fukumitsu², H. Morita² 1- Division of Materials and Manufacturing Science, Osaka University, Japan 2- Hamamatsu Photonics K.K., Japan</p>	10:40	<p>#ThIH 4-5 Program Changed Recent Researches and Applications of Laser materials and Processing in Japanese Industries</p> <p><u>S. Katayama</u>¹, T. Ishide² 1-Osaka University, Japan 2-Mitsubishi Heavy Industry, Japan</p>
11:00	<p>#ThOL 3-6 (#292) Crack propagation analysis in laser scribing of glass</p> <p><u>K. Yahata</u>¹, K. Yamamoto², E. Ohmura¹, Y. Hirata¹ 1- Div. of Materials and Manufacturing Science, Osaka University, Japan 2- Mitsuboshi Diamond Industrial Co., Ltd., Japan</p>	11:10	<p>#ThOH 4-6 (#109) National funding of laser technology in Germany: The initiatives BRIOLAS, INLAS and MABRILAS</p> <p><u>F. Bachmann</u> ROFIN-SINAR Laser GmbH, Germany</p>
11:20	<p>#ThOL 3-7 (#158) Characterisation of shock wave and spallation induced by ultra-short laser</p> <p>L. Berthe¹, J.P. Cuq-Lelandais², E. Lescouste, M. Boustie², T. de Rességuier², P. Combis³, M. Nivard¹, A. Clavierie² 1- Laboratoire pour l'Application des Lasers de Puissance, UPR CNRS n 1578, France 2- Laboratoire de Combustion et de Détonique, UPR CNRS n 9028, ENSMA, France 3- CEA/DPTA, France</p>	11:30	<p>#ThOH 4-7 (#112) The ecological footprint of laser beam welding</p> <p><u>M. Dahmen</u>, S. Kaierle Fraunhofer-Intstitut für Lasertechnik, Germany</p>
11:40	<p>#ThOL 3-8 (#156) Dynamic investigations for materials processing by ultrashort light pulses</p> <p>C. Maclair¹, R. Stoian¹, J. Bonse², A. Mermillod-Blondin³, A. Rosenfeld², <u>I.V. Hertel</u>^{3,4} 1- Laboratoire TSI (UMR 5516 CNRS), Université Jean Monnet, France 2-Newport/Spectra-Physic, Germany 3- Max-Born-Institut, Germany 4- Freie Universität Berlin Fachbereich Physik, Germany</p>	11:50	<p>#ThOH 4-8 (#192) SPEAKER CHANGED 16 kW disk laser: A new generation of industrial laser</p> <p>R. Brockmann¹, A. Killi¹, <u>K. Wakabayashi</u>², S. Saitoh² 1- TRUMPF Laser GmbH, Germany 2- TRUMPF Corporation, Japan</p>
12:00	<p>#ThOL 3-9 (#130) STUDENT Collisionnal radiative approach of the thermodynamic state and emission of LIBS plasmas</p> <p>G. Travaillé¹, O. Peyrusse², B. Bousquet¹, <u>L. Canioni</u>¹ 1- Center for Molecular, Optical, and Hertzian Physics (CPMOH) - CNRS/University of Bordeaux, France 2- CEnter for Intense Lasers and Applications (CELIA) - CEA/CNRS/University of Bordeaux, France</p>		NONE
LUNCH			

LPM 11-1 Practical and Industrial Applications (II) (13:40-15:20, 100 min) Room 1 (3A)		LPM 11-2: SP L2 Versatile Beam Shaping for Industrial Applications (13:50-15:20, 90 min) Room 2 (2A)	
TIME	Chair: Friedrich Dausinger, Dausinger + Giesen GmbH, Germany	TIME	Chair: Razvan Stoian, Universite de Lyon, Universite de Saint Etienne, France
13:40	<p>#ThIL 1-9 (#321) INVITED Recent progress in laser-CVD-based advanced laser repairing technologies for FPD's</p> <p><u>T. Torigoe</u>, Y.Yoshino, K.Mitobe FPD Business Division, OMRON LASERFRONT INC., Japan</p>	13:50	<p>#ThIL 2-9 (#311) INVITED Flattop beam generation and multi-beam processing by the use of aspheric and diffractive optics</p> <p><u>K. Fuse</u> Sumitomo Electric Hardmetal Corporation, Japan</p>
14:10	<p>#ThIL 1-10 (#14) INVITED Diode pumped solid state lasers in solar cell manufacturing</p> <p><u>R. S. Patel</u> Spectra Physics, A Division of Newport Corporation, USA</p>	14:20	<p>#ThOL 2-10 (#305) Rapidly tunable acoustic gradient index lenses for pulsed imaging and laser processing</p> <p>J. Yan, A. Mermillod-Blondin, <u>C.B. Arnold</u> Department of Mechanical and Aerospace Engineering, Princeton University, USA</p>
14:40	<p>#ThOL 1-11 (#24) High power picosecond lasers are ready for industrial production</p> <p><u>S. Weiler</u>¹, S. Russ¹, S. Massa¹, B. Faisst¹, U. Stute¹, H. Mizobe², T. Kubo², K. Wakabayashi² 1- TRUMPF Laser GmbH + Co KG, Germany 2- TRUMPF Corporation, Japan</p>	14:40	<p>#ThOL 2-11 (#22) Ultrafast parallel laser processing of OLEDs for high throughput manufacturing</p> <p><u>D.M. Karnakis</u>¹, A. Kearsley¹, M.R.H. Knowles¹, Z. Kuang², W. Perrie², S.P. Edwardson², G. Dearden², K.G. Watkins² 1- Oxford Lasers Ltd, UK 2- Laser Group, Department of Engineering, University of Liverpool, UK</p>
15:00	<p>#ThOL 1-12 (#237) Systematic optimisation of process parameters in laser drilling of 200 μ m photovoltaic silicon wafers using new kind of nanosecond IR lasers</p> <p>K.-P. Stolberg¹, S. Poggel², <u>Y. Atsuta</u>³ 1,2- Jenoptik Laser, Optik, Systeme GmbH, Germany 3- Optopia Co., Ltd., Japan</p>	15:00	<p>#ThOL 2-12 (#138) High speed and high precision fs-laser writing using a scanner with large numerical aperture</p> <p>M. Hörstmann-Jungemann, <u>J. Gottmann</u>, D. Esser Lehrstuhl für Lasertechnik, RWTH Aachen University, Germany</p>
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

LPM 11-3 Media Assisted Processing (13:40-15:30, 110 min) Room 3 (2B)		HPL-11 Welding 4 (13:50-15:20, 90 min) Room 4 (3B)	
TIME	Chair: Juergen Ihlemann, Laser-Laboratorium Goettingen, Germany	TIME	Chair: Susumu Tsukamoto, National Institute for Materials Science, Japan
13:40	#ThOL 3-10 (#169) Micro-fluidic channels on a silica glass plate fabricated by laser-induced backside wet etching H. Niino, Y. Kawaguchi, T. Sato, A. Narazaki, R. Kurosaki Photonics Research Institute (PRI), National Institute of Advanced Industrial Science and Technology (AIST), Japan	13:50	#ThIH 4-9 (#296) INVITED Latest laser welding technologies in research and industrial applications - an overview B. Brenner Fraunhofer IWS, Germany
14:00	#ThOL 3-11 (#128) STUDENT Interpretation and modeling of laser-induced backside wet etching procedure C. Vass ¹ , J. Budai ¹ , Z. Schay ² , B. Hopp ³ 1- Department of Optics and Quantum Electronics, University of Szeged, Hungary 2- Department of Surface Chemistry and Catalysis, Chemical Research Centre, Hungary 3- Research Group on Laser Physics of the Hungarian Academy of Sciences, Hungary	14:20	#ThOH 4-10 (#297) Laser welding of carbon steel tube A. Kitagawa ¹ , Y. Yamazaki ¹ , T. Hamakita ² 1- Hitachi Zosen Corporation, Japan 2- Hitachi Zosen Mechanical Corporation, Japan
14:20	#ThOL 3-12 (#182) Effect of liquid environment and hydrodynamics on laser-induced backside wet etching of glass T. Lee, D. Ahn, D. Kim Department of Mechanical Engineering, POSTECH, Korea	14:40	#ThOH 4-11 (#118) High power fibre laser welding for pipeline applications A. Gumenyuk, S. Gook, M. Lammers, M. Rethmeier BAM, Federal Institute for Materials Research and Testing, Germany
14:40	#ThOL 3-13 (#302) ITO nanopatterning by subtractive LIBWE J-Y. Cheng ^{1,2} , Y-C. Lin ^{1,2} 1- Research Center for Applied Sciences, Academia Sinica, Taiwan 2- Department of Mechanical and Mechantronic Engineering, National Taiwan Ocean University, Taiwan	15:00	#ThOH 4-12 (#137) Development of inspection and repairing technology for fast breeder reactor heat exchanger pipes A. Nishimura, K. Oka, T. Yamaguchi, T. Yamashita, A. Tagawa, O. Mihalache, Y. Shimada Japan Atomic Energy Agency - Kansai Photon Science Institute, Japan
15:00	#ThIL 3-14 (#21) INVITED Comparative study of the different indirect laser-based methods developed for microprocessing of transparent materials B. Hopp ¹ , T. Smausz ² , T. Csizmadia ² , Cs. Vass ² , G. Szabó ² 1- Hungarian Academy of Sciences and University of Szeged, Research Group on Laser Physics, Hungary 2- Department of Optics and Quantum Electronics, University of Szeged, Hungary		NONE
COFFEE BREAK (Sponsored by Ophir Japan Ltd.)			

JS-1
Joint Session: Crossover Regions of LPM and HPL
(15:40-16:40, 60 min) Room 1 (3A)

Chair: Seiji Katayama, Osaka University, Japan

15:40	<p>#ThIJ 1-13 (#318) INVITED Industrial applications of ultrashort pulsed-lasers at BOSCH</p> <p>Th. Bauer¹, J. Radtke², J. König² 1- Robert Bosch GmbH, Plant Bamberg, Technical Functions, Germany 2- Robert Bosch GmbH, Corporate Sector Research and Advance Engineering, Germany</p>
16:10	<p>#ThIJ 1-14 (#343) INVITED Modeling and measurement of fs to CW laser materials processing</p> <p>J. Mazumder, D. Kam, L.J. Song Robert H Lurie Professor of Engineering, Department of Mechanical Engineering, Department of Materials Science and Engineering, University of Michigan, USA</p>
16:40	<p>Outstanding Paper Awards</p>
<p>Closing Remark (Kazuyoshi Itoh, Osaka University, Japan)</p>	

----- THE END OF ORAL SESSIONS -----

SHORT PRESENTATIONS for POSTER SESSION

(DAY-2: June 30, Tuesday & DAY-3: July 1, Wednesday, Short Presentation Time: 11:10-12:10, 60 min per day)

* 2minutes per presentation using OHP

Room 1 (3A) & Room 4 (3B)

DAY-2:Session Chairs: Room 1 Burkhard Fechner, Coherent GmbH, Germany, Room 4 Yasuhiro Okamoto, Okayama University, Japan

DAY-3:Session Chairs: Room 1 Dimitris Papazoglou, University of Crete, Greece, Room 4 Pere Serra, Universitat de Barcelona, Spain

DAY-2: JUNE 30, TUESDAY

Room 1 (3A)	Room 4 (3B)
SP L3	3-D Micro- and Nano- Fabrication
#TuPL-1 (#234) Poster Board #1 Synthesis of copper nanoparticles by laser ablation in polysiloxane N. Mansour, J.Z. Anvari, R. Karimzadeh Department of Physics Shahid Beheshti University, Tehran, Iran	#TuPL-19 (#246) Poster Board #37 High-aspect-ratio photonic structures produced by two-photon photopolymerization M. Zamfirescu ¹ , F.Jipa ¹ , M.Ulmeanu ¹ , C.Luculescu ¹ , I.Ionita ² , R.Dabu ² 1- National Institute for Laser Plasma and Radiation Physics - INFLPR, Romania 2- University of Bucharest, Faculty of Physics, Bucharest, Romania
#TuPL-2 (#27) STUDENT Poster Board #3 Investigation on laser-annealing and subsequent laser-nanotexturing of amorphous silicon (a-Si) films for photovoltaic application I.A. Palani ¹ , N.J. Vasa ² , M. Singaperumal ¹ , T. Okada ³ 1- Precision Engineering and Instrumentation Laboratory(PEIL), Dept of Mechanical Engineering, IIT Madras, India 2- Dept of Engineering Design, IIT Madras, India 3- Graduate School of Information Science and Electrical Engineering (ISEE), Kyushu University, Fukuoka, Japan	#TuPL-20 (#52) Poster Board #39 3D microstructure fabrication in photosensitive glass by femtosecond laser irradiation H.H. Teo ^{1,2} , M.H. Hong ^{1,2} 1- Department of Electrical and Computer Engineering, National University of Singapore, Singapore 2- Data Storage Institute, Singapore
#TuPL-3 (#364) Poster Board #5 Bio-inspired synthesis and laser processing of nanostructured barium titanate thin-films: implications for uncooled IR sensor development F.E. Livingston ¹ , W.L. Sarney ² , K. Niesz ³ , T. Ould-Ely ³ , A.R. Tao ³ , D.E. Morse ³ 1-Micro/Nano Technology Department, Space Materials Laboratory The Aerospace Corporation, USA 2-Sensors & Electron Devices Directorate, Electro-Optics/Infrared Materials & Devices Branch, U.S. Army Research Laboratory, USA 3-Institute for Collaborative Biotechnologies, University of California, Santa Barbara, USA	#TuPL-21 (#131) Poster Board #41 Feasibility of 3D refractive index structures written by femtosecond laser in polymethyl methacrylate S. Liang ¹ , J. Schille ² , P.J. Scully ¹ , J. Vaughan ¹ , W. Perrie ³ 1- The Photon Science Institute & CEAS, The University of Manchester, Oxford Rd, Manchester, UK 2- University of Applied Sciences Mittweida, Technikumplatz 17 in 09648 Mittweida, Germany 3- Lairdsid Laser Engineering Centre, The University of Liverpool, Wirral, UK
#TuPL-4 (#126) Poster Board #7 Silver-silver oxide core-shell nanoparticles fabricated by ultrashort laser ablation. Analysis of size by optical extinction spectroscopy D. C. Schinca ^{1,2} , L. B. Scaffardi ^{1,2} , G. A. Torchia ^{1,3} , P. Moreno ³ , L. Roso ³ 1- Centro de Investigaciones Ópticas, CIOp (CONICET-CIC), Argentina 2- Área Departamental de Ciencias Básicas, Facultad de Ingeniería, Universidad Nacional de La Plata, Argentina 3- Servicio Láser, Universidad de Salamanca, Spain	#TuPL-22 (#161) STUDENT Poster Board #43 Three-dimensional surfaces of high-refractive-index materials fabricated by femtosecond laser lithography A. Sugawara ¹ , H. Nishiyama ¹ , M. Mizoshiri ¹ , H. Kasa ² , J. Nishii ² , Y. Hirata ¹ 1- Osaka University, Japan 2- National Institute of Advanced Industrial and Science Technology, Japan
#TuPL-5 (#61) Poster Board #9 Fabrication of palladium nanoparticles by laser ablation in water H. Azuma, A. Takeichi, T. Nishi, N.Suzuki, T. Hioki, T.Motohiro Toyota Central Research and Development Laboratories Incorporation, Japan	Microwelding and Drilling #TuPL-23 (#194) STUDENT Poster Board #45 Process analysis of laser welding in glass and plastic K. Satou ¹ , T. Maehara ¹ , K. Nakamoto ² , H. Murotani ¹ , M. Wakaki ¹ 1- Tokai University. 2- MATSUNAMI GLASS IND.,LTD
#TuPL-6 (#256) Poster Board #11 Direct growth of multiple shapes of gold nanoparticles onto gelatin nanoparticles C.-L. Yeh, H.-T. Shieh, C.-S. Yeh National Cheng Kung University, Taiwan	#TuPL-24 (#277) Poster Board #47 Laser welding of glass and crystal using a near-infrared femtosecond laser Y.-S. Kim ¹ , Y.-L. Lee ¹ , J.-H. Choi ¹ , K.-S. Lim ¹ ,* I.-B. Sohn ² 1- BK21 Physics Program and Department of Physics, Chungbuk National University, Korea 2- Gwangju Institute of Science and Technology, Korea
#TuPL-7 (#69) Poster Board #13 Nanostructuring of surfaces using a picosecond laser pulse with template of colloidal particle array M. Ulmeanu, M. Zamfirescu, L. Rusen, A. Stratan, R. Dabu National Institute for Laser, Plasma and Radiation Physics, Laser Department, Romania	High Power Laser Processing #TuPH-1 (#70)(Ref: HPL-5) Poster Board #49 High power diode lasers in automotive brazing J. Franks Sales Representative Japan, Laserline GmbH, Germany
Medical and Biological Applications	CANCELLED
#TuPL-8 (#249) Poster Board #15 Gadolinium silicate and gadolinium silicate: Eu nanoshells for biological MR and optical imaging C.-C. Huang ¹ , W. Huang ¹ , C.-N. Feng ¹ , C.-H. Su ^{1,2} , W.-S. Kuo ¹ , C.-S. Yeh ¹ 1- Dept. of Chemistry, National Cheng Kung University, Taiwan 2- Dept. of Electrical Engineering, National Taiwan University, Taiwan	#TuPH-2 (#144) Poster Board #51 3D multiphasic study of laser cladding by coaxial powder injection K. Kheloufi, E.H. Amara Centre de Développement des Technologies Avancées (CDTA), CDTA, Algeria
#TuPL-9 (#248) Poster Board #17 Near-infrared (NIR) thermoresponsive-control drug release using multifunctional polymeric nanoparticles for applications of cancer therapy in vitro and in vivo F.-Y. Cheng, C.-S. Yeh Department of Chemistry, National Cheng Kung University, Taiwan	#TuPH-3 (#153) Poster Board #53 Material processing with a 3kW single mode fibre laser L. Hartwig, R. Ebert, S. Kloetzer, J. Drechsel, S. Weinhold, F. Peuckert, J. Schille, H. Exner Hochschule Mittweida - University of Applied Sciences, Germany

DAY-2: JUNE 30, TUESDAY (Continued from the previous page)

Room 1 (3A)	Room 4 (3B)
Micro-Machining and Micro-Structuring	High Power Laser Processing (Continued from the previous page)
<p>#TuPL-10 (#64) Poster Board #19 The trade-off between transmittance and conductivity of TCO mesh patterning with UV pulsed-laser K.S. Kao¹, S.H. Chang¹, P.T. Hsieh², H.K. Lin³, D.L. Cheng¹ 1- Department of Computer and Communication, Shu-Te University, Taiwan 2- Center for Micro/Nano Science and Technology, National Cheng Kung University, Taiwan 3- Laser Application Technology Center/ Industrial Technology Research Institute South (ITRI South), Taiwan</p>	<p>#TuPH-4 (#184) Poster Board #55 Laser assisted machining process of HIPed silicon nitride J. Lee¹, S. Lim¹, D. Shin¹, H. Sohn¹, J. Kim², J. Kim³ 1- Korea Institute of Machinery & Materials, Korea 2- Korea Maritime University, Korea 3- Kookmin University, Korea</p>
<p>#TuPL-11 (#5) Poster Board #21 Micro patterning of a crystalline structure on a-ITO film deposited on plastic with 1kHz femtosecond laser pulses C.W. Cheng¹, J.S. Chen², Y.J. Lee², W.C. Shen¹, C.W. Chien¹ 1- ITRI South, Industrial Technology Research Institute, Taiwan, R.O.C. 2- Department of Mechanical Engineering, National Chung Cheng University, Taiwan, R.O.C.</p>	<p>#TuPH-5 (#211) CANCELLED Poster Board # 57 Control of direct metal deposition for rapid fabrication, repair and re-configuration L. Song¹, B. Dutta², J. Mazumder^{1,2} 1- Center for Laser Aided Intelligent Manufacturing, University of Michigan, USA 2- POM Group Inc, USA</p>
<p>#TuPL-12 (#74) Poster Board #23 Microstructuring of superhard pulsed laser deposited ta-C films using excimer and femtosecond laser pulses S. Weissmantel, G. Reisse, M. Nieher, K. Guenther, R. Boettcher, A. Engel, M. Pfeiffer University of Applied Sciences Mittweida, Germany</p>	<p>#TuPH-6 (#239) CANCELLED Poster Board #59 Research on laser-hybrid cladding of Ni-Cr alloy on copper F. Zhu, Y. Wang, N. Liu, X. Yang Laser Processing Center, Tianjin Polytechnic University, China</p>
<p>#TuPL-13 (#85) Poster Board #25 Effects of substrate absorption on processing ITO film using DPSS and femtosecond laser H.K. Lin¹, D.L. Cheng², S.H. Liu¹, K.S. Kao² 1- Laser Application Technology Center/ Industrial Technology Research Institute South (ITRI South), Taiwan. 2- Department of Computer and Communication, Shu-Te University, Taiwan</p>	<p>#TuPH-7 (#266) STUDENT Poster Board #61 Solvothermal synthesis of InOOH nanorods for dye-sensitized solar cell (DSSC) M.-Y. Liao, M.-C. Chang, C.-C. Huang, H.-P. Lin Department of Chemistry, National Cheng Kung University, Taiwan</p>
<p>#TuPL-14 (#98) Poster Board #27 Fabrication of microstructures on photosensitive glass using femtosecond laser processing and chemical etching C.W. Cheng¹, J.S. Chen², P.X. Lee², C.W. Chien¹ 1- ITRI South, Industrial Technology Research Institute, Taiwan, R.O.C. 2- Department of Mechanical Engineering, National Chung Cheng University, Taiwan, R.O.C.</p>	<p>#TuPH-8 (#269) Poster Board #63 Finite element analysis of Nd:YAG pulse laser welding for AISI 304 stainless steel plate H. Cho¹, K. Kim¹, M. Kim¹, S. Cho¹, J. Lee², J. Suh² 1- Department of Mechanical Engineering, Chungbuk National University 2- Korea Institute of Machinery & Materials, Intelligent Manufacturing Systems Research Division</p>
<p>#TuPL-15 (#189) Poster Board #29 Femtosecond laser micropatterned films for modified atmosphere packaging I.-B. Sohn¹, Y.-S. Kim¹, Y.-C. Noh¹, Y.-J. Choi² 1- Precision Optics Lab., Advanced Photonics Research Institute, GIST, Republic of Korea 2- Daerung Packaging Industry, Republic of Korea</p>	<p>#TuPH-9 (#288) Poster Board #65 Welding of high carbon steel with fiber laser & CO₂ laser S.-J. Park¹, J.-D. Kim², I. Miyamoto³ 1- Welding Research Center, Research Institute of Industrial Science and Technology (RIST), South Korea 2- Department of Marine System Engineering, Korea Maritime University, South Korea 3- Osaka University, Japan</p>
<p>#TuPL-16 (#150) Poster Board #31 Fabricated the deep cone-shaped structure of InGaN-based light-emitting diodes by using the laser shaping process C.-F. Lin, C.-M. Lin, C.-C. Yang Department of Materials Science and Engineering, National Chung Hsing University, Taiwan, R. O. C.</p>	<p>#TuPH-10 (#71) Poster Board # 67 Coaxial process control for laser direct manufacturing P. Aubry¹, M. Guiraud¹, R. Fabbro² 1- GIP GERALIP, France 2- LALP/GIP GERALIP, France</p>
Optical System	
<p>#TuPL-17 (#337) Poster Board #33 Characteristics of square core fibers for laser processing T. Nakai, T. Akutsu, T. Kinoshita, T. Yamamoto, M. Kon, H. Ohizumi, H. Taniguchi Mitsubishi Cable Industries, Ltd., Japan</p>	<p>#TuPH-11 (#18) CANCELLED Poster Board #69 Laser surface alloying of various engineering alloys for sliding wear and corrosion resistance C.T. Kwok, P.K. Wong Department of Electromechanical Engineering, University of Macau, China</p>
<p>#TuPL-18 (#338) Poster Board #35 Improvement of optical fiber end face for high power laser S. Sasaki, T. Ishida, M. Sugihara, M. Kotou, H. Taniguchi, T. Satake Mitsubishi Cable Industries, Ltd., Japan</p>	NONE

DAY-3, JULY 1, WEDNESDAY	
Room 1 (3A)	Room 4 (3B)
SP L1	SP L2
<p>#WePL-1 (#38) Poster Board #2 Controlling the hydrophobic properties of material surface using femtosecond ablation M. Silvennoinen, J. Kaakkunen, K. Paivasaari, P. Vahimaa, T. Jaaskelainen Department of Physics and Mathematics, University of Joensuu, Finland</p>	<p>#WePL-18 (#176) STUDENT Poster Board #36 Simultaneous spatial and temporal focusing performed by diffractive lens displayed on spatial light modulator K. Kimura, S. Hasegawa, Y. Hayasaki Center for Optical Research and Education (CORE), Utsunomiya University, Japan</p>
<p>#WePL-2 (#307) STUDENT Poster Board # 4 Femtosecond laser shock peening of iron and steels T. Tsukada, T. Sano, T. Nakashima, T. Ogura, A. Hirose Division of Materials and Manufacturing Science, Osaka University, Japan</p>	<p>#WePL-19 (#181) Poster Board #38 Laser drilling using precessional motion trepanning optics J. Noh, J. Lee, D. Shin, H. Sohn, J. Suh, I. Cho, J. Oh KIMM (Korea Institute of Machinery & Materials), Korea</p>
<p>#WePL-3 (#264) Poster Board #6 Proposal for removal of scale deposition on the inside wall of FBR heat exchanger pipes by laser processing F. Ito, A. Nishimura, N. Takei, N. Ishikawa, K. Oka Japan Atomic Energy Agency - Kansai Photon Science Institute, Japan</p>	<p>#WePL-20 (#324) Poster Board #40 Rapid fabrication of large scale volume gratings in Foturan glass by femtosecond laser micromachining F. He¹, Y. Cheng¹, Z. Xu¹, K. Sugioka², K. Midorikawa² 1- State Key Laboratory of High Field Laser Physics, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China 2- Laser Technology Laboratory, RIKEN, Japan</p>
<p>#WePL-4 (#231) Poster Board #8 Realization of ultra shallow junctions P⁺ and N⁺ by excimer laser annealing Y. Larmande¹, V. Vervisch¹, Ph. Delaporte¹, T.Sarnet¹, M.Sentis¹, H. Etienne², F. Torregrosa² 1- Lasers, Plasmas and Photonic Processes Laboratory, Campus of Luminy, France 2- Ion Beam Services, ZI Peynier- Rousset, France</p>	<p>Laser Direct Write</p> <p>#WePL-21 (#204) STUDENT Poster Board #42 Fabrication of DOE using laser direct write lithography system and CGH technique K. Kondo¹, S. Nakahara^{2,3}, K. Matsushima⁴, S. Hisada², S. Shingubara^{2,3} 1- Graduate school of Kansai University, Japan 2- Dept. of Mech. Eng., Kansai University, Japan 3- HRC, Kansai University, Japan 4- Dept. of Electric. Eng., Kansai University, Japan</p>
<p>#WePL-5 (#65) Poster Board #10 Analysis of crystalline volume ratio of laser induced crystallized silicon films T. Sameshima¹, W. Kato¹, N. Sano² 1- Tokyo University of Agriculture and Technology, Japan 2- Hightec Systems Corporation, Japan</p>	<p>#WePL-22 (#46) STUDENT Poster Board #44 Cellular modelling of the laser-induced forward transfer of micro- and nano-scale droplets X. Xu¹, D.P. Banks², R.W. Eason², S.P. Banks¹ 1- Department of Automatic Control and Systems Engineering, University of Sheffield, UK 2- Optoelectronics Research Centre, University of Southampton, UK</p>
<p>#WePL-6 (#224) Poster Board #12 Porous silicon synthesized by laser ablation in DMSO N. Mansour, R. Karimzadeh Department of Physics Shahid Beheshti University, Tehran, Iran</p>	<p>#WePL-23 (#143) Poster Board #46 Interference microscopic investigation of waveguides by fs-laser writing in rare-earth doped fluoride and phosphate glasses J. Gottmann, D. Esser Lehrstuhl für Lasertechnik, RWTH Aachen University, Germany</p>
<p>#WePL-7 (#183) Poster Board #14 Engineered microtexturing in SCM-440 for linear bearing using femtosecond laser H.J. Park¹, H.W. Choi¹, I.B. Sohn², J.H. Kim³, Y.K. Cha⁴ 1- Dept. of Mechanical and Automotive Engineering, Keimyung University, Daegu, Korea 2- APRI, Gwangju, Korea&D center 3- Dept. of Mechanical Engineering, Seoul National University of Technology 4- Samick-THK, Daegu, Korea</p>	<p>#WePL-24 (#177) STUDENT Poster Board #48 Lithographic fabrication of sub-wavelength structures using low-NA femtosecond laser pulses N. Furukawa, H. Nishiyama, M. Mizoshiri, Y. Hirata Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan</p>
<p>Ultrafast Laser Processing</p>	<p>#WePL-25 (#11) Poster Board #50 Q-switched Nd:YAG laser micro-machining system S. Messaoud¹, A. Allam¹, F. Siserir¹, Y. Bouceta¹, T. Kerdja¹, D. Ouadjaout² 1- Centre de Développement des Technologies Avancées, Algeria 2- Unité de Développement de la Technologie du Silicium, Algeria</p>
<p>#WePL-8 (#320) Poster Board #16 Simple method for peak intensity measurement of short pulse lasers H. Nose, T. Okuno, T. Kojima, A. Watanabe Photo-Physics Laboratory Inc, JAPAN</p>	

DAY-3, JULY 1, WEDNESDAY (Continued from the previous page)

Room 1 (3A)	Room 4 (3B)
Ultrafast Laser Processing (Continued from the previous page)	Laser Direct Write (Continued from the previous page)
<p>#WePL-9 (#295) Poster Board #18 Femtosecond laser processing for type Ib synthetic diamonds for industrial use <u>T. Kunimoto</u>¹, T. Nokubo¹, T. Kojima², H. Tsugita², M. Okuno², A. Watanebe² 1- Tokushima Bunri University, Japan 2- Photo-Physics Laboratory Inc., Japan</p>	<p>#WePL-26 (#93) Poster Board #52 Laser addressing in cholesteric liquid crystal display <u>H.K. Lin</u>, R.C. Lin Laser Application Technology Center, Industrial Technology Research Institute South (ITRI South), Taiwan 734, R.O.C.</p>
<p>#WePL-10 (#325) Poster Board #20 Ablation of silicon nitride passivation layers on photovoltaic cells with femtosecond laser source <u>Y. Atsuta</u>¹, S. Friedel², B. Kremser², M. Leitner², <u>K. Stolberg</u>² 1- Optopia Co., Ltd., Japan 2- Jenoptik Laser, Optik, Systeme GmbH, Germany</p>	<p>Fundamentals and Analysis</p> <p>#WePL-27 (#240) Poster Board #54 Measurement of rotational temperature in a molecular beam with femtosecond laser pulses <u>K. Yoshii</u>, K. Miyazaki, G. Miyaji Advanced Laser Research Section, Institute of Advanced Energy, Kyoto University, Japan</p>
<p>#WePL-11 (#160) STUDENT Poster Board #22 Fabrication of rectangular structures on cemented tungsten carbide by a femtosecond laser: Effects of focus position and scan speed <u>K. Saginawa</u>, T. Taga, R. Tanabe, Y. Ito Department of Mechanical Engineering, Nagaoka University of Technology, Japan</p>	<p>#WePL-28 (#173) STUDENT Poster Board #56 Time-resolved Raman temperature measurement during femtosecond laser microprocessing <u>M. Matsumoto</u>, K. Wada, Y. Ozeki, K. Itoh Graduate School of Engineering, Osaka University, Japan</p>
<p>#WePL-12 (#186) Poster Board #24 FPCB cutting process using picosecond laser <u>D. Shin</u>, J. Lee, H. Sohn, J. Noh, B. Paik Korea Institute of Machinery & Materials, Intelligent Manufacturing Systems Research Division, Korea</p>	<p>#WePL-29 (#281) Poster Board #58 Novel definition of laser ablation threshold considering intensity distribution at focal point <u>H. Sakamoto</u>¹, K. Morioka² and S. Shimizu¹ 1- Sophia University, Japan 2- Sony Corporation, Japan</p>
<p>#WePL-13 (#254) Poster Board #26 Novel D-type fiber optics localized plasmon resonance sensor realized by femtosecond laser engraving <u>W.-T. Wu</u>¹, T.-C. Chao², W.-C. Shen³, C.-W. Cheng³, C.-H. Chen⁴, W.-Y. Li⁵, L.-K. Chau⁵ 1- Department of Biomechatronics Engineering, National Pingtung University of Science and Technology, Taiwan 2- Department of Mechanical Engineering, National Chung Cheng University, Taiwan 3- ITRI South, Industrial Technology Research Institute, Taiwan 4- Department of Physics, National Chung Cheng University, Taiwan 5- Department of Chemistry and Biochemistry, National Chung Cheng University, Taiwan</p>	<p>#WePL-30 (#187) Poster Board #60 Process-monitoring optical modules for laser micro-machining system <u>H. Sohn</u>¹, J.H. Lee¹, J.W. Hahn², S.I. Kim³ 1- KIMM, Korea 2- Yonsei University, Korea 3- IAE, Korea</p>
<p>#WePL-14 (#334) Poster Board #28 Large area uniform nanostructures fabricated by direct femtosecond laser ablation <u>M. Huang</u>¹, F. Zhao¹, Y. Cheng², N. Xu¹, Z. Xu² 1- State Key Laboratory of Optoelectronic Materials and Technologies, Sun Yat-sen University, China 2- State Key Laboratory of High Field Laser Physics, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China</p>	<p>#WePL-31 (#140) Poster Board #62 Analyzed the piezoelectric field in InGaN-based light-emitting diodes with bias-dependent photoluminescence <u>C.-F. Lin</u>, J.-F. Chien, C.-M. Lin, C.-C. Yang, K.-T. Chen Department of Materials Engineering, National Chung Hsing University, Taiwan</p>
<p>#WePL-15 (#263) STUDENT Poster Board #30 Design and femtosecond laser fabrication of an orientation-free-performance micro heat pipe <u>H.T. Lim</u>, S.H. Kim, K.H. Oh, S.H. Jeong* Department of Mechatronics, Gwangju Institute of Science and Technology, Republic of Korea</p>	<p>#WePL-32 (#172) Poster Board #64 Silicon plume expansion in the initial stage of pulsed-laser ablation developed in the SCCS <u>Y. Iwata</u>¹, M. Muto¹, Y. Takahashi¹, S.M. Gupta^{1*}, T. Takiya² 1- Advanced Institute of Science and Technology, Japan 2- Hitachi Zosen Corporation, Japan 1* University School of Basic & Applied Sciences, Guru Gobind Singh Indraprastha University, India</p>
<p>#WePL-15 (#263) STUDENT Poster Board #30 Design and femtosecond laser fabrication of an orientation-free-performance micro heat pipe <u>H.T. Lim</u>, S.H. Kim, K.H. Oh, S.H. Jeong* Department of Mechatronics, Gwangju Institute of Science and Technology, Republic of Korea</p>	<p>#WePL-33 (#180) Poster Board #66 Influence of beam profiles on the initial stage of silicon plume expansion developed in the SCCS <u>Y. Takahashi</u>¹, <u>Y. Iwata</u>¹, S.M. Gupta^{1*}, T. Takiya² 1- Advanced Institute of Science and Technology, Japan 2- Hitachi Zosen Corporation, Japan. 1* University School of Basic & Applied Sciences, Guru Gobind Singh Indraprastha University, India</p>

DAY-3, JULY 1, WEDNESDAY (Continued from the previous page)	
Room 1 (3A)	Room 4 (3B)
Ultrafast Laser Processing (Continued from the previous page)	Fundamentals and Analysis (Continued from the previous page)
<p>#WePL-16 (#159) Poster Board #32 Fabrication of heat-resistant fiber Bragg grating by femtosecond laser processing Y. Shimada¹, A. Nishimura¹, M. Yoshikawa², T. Kobayashi² 1- Kansai Photon Science Institute, JAEA, Japan 2- Graduate School of Engineering, University of Fukui, Japan</p>	<p>#WePL-34 (#84) STUDENT Poster Board #68 Angular distribution of atoms emitted from a SrZrO₃ target by laser ablation under different oxygen pressures I. Konomi^{1,2}, T. Motohiro^{1,2}, T. Asaoka¹, H. Azuma¹, H. Nishimura³, N. Sarukura³, T. Nakazato³, T. Shimizu³, S. Fujioka³, E. Sato³ 1- Toyota Central R&D Labs, Inc., Japan 2- Toyota Technological Institute, Japan 3- Institute of Laser Engineering, Osaka University, Japan</p>
<p>#WePL-17 (#31) Poster Board #34 Defect generation in transparent materials with ultrashort laser pulses U. Loeschner, J. Schille, S. Mauersberger, R. Ebert, H. Exner Hochschule Mittweida - University of Applied Sciences, Technikumplatz, Germany</p>	<p>#WePL-35 (#92) Poster Board #70 Dynamics of laser-irradiated tin micro-droplet for EUV light source K. Okazaki¹, D. Nakamura², T. Akiyama², K. Toya², A. Takahashi¹, T. Okada² 1- Graduate School of Medical Sciences, Kyushu University, Japan 2- Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan</p>
Biomedical Applications	<p>#WePL-36 (#301) Poster Board #72 An amplitude sensitive heterodyne interferometer with excess noise and quantum noise reduction for ultra small displacement detection H.-K. Teng Graduate Institute of Electrical Engineering and Computer Science, Nan-Kai University of Technology, Taiwan</p>
<p>#WePL-38 (#291) CHANGED FROM ORAL Poster Board #76 Development of a single-channel multiple immunoassay chip T. Ooie^{1,2}, M. Tanaka¹, Y. Yamachoshi¹, T. Nakahara¹, M. Hino¹, R. Akamine¹, M. Kataoka¹ 1- AIST, Health Technology Research Center, Japan 2- Graduate School of Advanced Technology and Science, The University of Tokushima, Japan</p>	<p>#WePL-37 (#120) Poster Board #74 Analysis of backside photomechanical damages in laser ablation of thin-film Si B. Oh¹, D. Ahn¹, T. H. Kim², E. S. Jeon², N. S. Kim², D. Kim¹ 1- Department of Mechanical Engineering, POSTECH, Korea 2- EO Technics Co., Ltd., Korea</p>

----- THE END OF SHORT PRESENTATIONS -----
 for POSTER SESSION