

June 29 - July 2, 2009 Kobe Convention Center, Kobe, Japan

LPM2009- The 10th International Symposium on Laser Precision Microfabrication

HPL2009- The 5th International Symposium on High Power Laser Processing

ORGANIZERS: JLPS- Japan Laser Processing Society, Japan

AIST- National Institute of Advanced Industrial Science and Technology, Japan

RIKEN- The Institute of Physical and Chemical Research, Japan

Abstract Submission: URL: <http://www.lamp2009.org/>

LPM TOPICS

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| <ol style="list-style-type: none"> 1. Fundamental aspects (Dynamics, modeling, simulation, etc.) 2. Process monitoring and control 3. Laser and Photochemistry 4. Laser-based direct-write techniques 5. Ultra-short pulse laser processing 6. VUV laser and X-ray processing 7. Advanced laser processing (fiber laser, disc laser, FEL, etc.) 8. Micro-patterning and micro-structuring 9. Micro-machining 10. 3-D micro- and nano-fabrication 11. Drilling and cutting 12. Welding and bonding 13. Micro-forming 14. Wafer dicing | <ol style="list-style-type: none"> 15. Marking and trimming 16. Packaging and mounting process 17. Lithography (including EUV source and application) 18. Manufacture of micro devices and systems 19. Film deposition and synthesis of advanced materials (PLD, CVD, etc) 20. Medical and biological applications 21. Optics and systems for laser microprocessing 22. Laser devices 23. Industrial applications 24. Others 25. SP L1) Laser based functionalization of surfaces 26. SP L2) Advanced beam manipulation techniques 27. SP L3) Laser fabrication of nanomaterials and nanostructures |
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HPL TOPICS

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| <ol style="list-style-type: none"> 1. Fundamentals of laser-materials interactions 2. Laser-induced plasma 3. Monitoring and control 4. Modeling and simulation 5. Materials and metallurgical aspects 6. Evaluation of properties (Strength, etc.) 7. High power laser diode 8. Gas laser 9. Solid-state laser (YAG, Fiber, Disk, etc.) 10. Optics 11. Beam delivery system 12. Welding 13. Welding of light metals and alloys 14. Tailored-blank welding 15. Remote Welding | <ol style="list-style-type: none"> 16. Hybrid welding 17. Brazing and soldering 18. Joining of dissimilar materials 19. Drilling and cutting 20. Cleaning 21. Surface modification (Quenching, alloying, etc.) 22. Cladding 23. Rapid prototyping 24. Forming and shaping 25. New and innovative applications (Sandwich panel, etc.) 26. Applications (Automobiles, ship, trains, airplanes, steel, motors, parts, nuclear fields, etc.) 27. Present status and future prospects 28. Others |
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Abstract Due Date: ~~December 1, 2008, Monday, JST~~ December 31, 2008 (Extended)

Early Registration Due Date: May 1, 2009, Saturday, JST

Registration Due Date for Presenting Authors: May 1, 2009, Friday JST

LAMP2009 CALL FOR PAPERS

AIM AND SCOPE

Welcome to join us at LAMP2009, one of the 30th anniversary events of JLPS!

The International Congress on Laser Advanced Materials Processing (LAMP) deals with science and technology of advanced laser materials processing covering precision microfabrication and high power laser processing. Basically LAMP is held every four years, and the former LAMPs have won the good reputation and popularity as the one of the most excellent international meetings in the world. LAMP2009 is held during June 29 – July 2, 2009, in Kobe, which is known as a city having a unique style with the exotic atmosphere in Japan, and flourished as the international port since old days, approx. 8th century. LAMP2009 consists of International Symposia on Laser Precision Microfabrication (LPM) and High Power Laser Processing (HPL) and covers hardware as well as software for fundamental research and industrial applications in both micro and macro processing. LAMP2009 is planned as a four-day event with a plenary session, oral and poster sessions, special sessions dealing with topical issues, and the exhibition with inviting most important world authorities in this field. The aim of this congress is to provide a forum for discussion of fundamental aspects of laser-matter interaction, the state-of-the-art of laser materials processing, and topics for the next generation with fundamental scientists, end users and laser manufactures. We expect that LAMP2009 would play an important role not only for understanding fundamental knowledge of laser materials processing but also forecasting future technologies to be developed and the future laser market.

SPECIAL SESSION (LPM)

SP L1) Laser based functionalization of surfaces

Session Organizer: Andreas Ostendorf (Ruhr-University Bochum, Germany)

Surface engineering and tuning the functionality of surfaces is one of the most challenging tasks in modern technical applications. There are several opportunities and advantages of laser processing of surfaces due to the flexibility of laser parameters. Surfaces can be structured or ablated on the micro- or nanoscale in order to achieve a specific functionality, e.g. modification of optical or mechanical behavior, and surfaces can be modified, e.g. mechanically compressed, hardened or electronically functionalized like in annealing processes using excimer lasers. Finally, the chemical composition of surfaces can be tuned by laser irradiation which is important for many organic materials and biomedical applications.

However, the difficulty is how to structure surfaces by a serial method, provided by laser spot focussing. This special session on surface functionalization will provide solutions for these questions.

SP L2) Advanced beam manipulation techniques

Session Organizers: Javier Solis (Instituto de Optica, CSIC, Spain); Razvan Stoian (Universite Jean MONNET, France); Craig Arnold (Princeton University, USA)

Laser beam manipulation techniques have been crucial for the development of laser processing since the advent of lasers. They include, in a broad sense, those utilized in order to modify/control the spatial intensity/phase distribution, the spectrum or the temporal profile of a laser beam at a given spatial location, or along its propagation. In addition to conventional beam shaping tools, such as diffractive optical elements, axicons, light pipes, micro-lens arrays, etc., newer tunable optical elements, such as spatial light modulators or acousto-optical elements, have enabled a wide variety of approaches to control the spatial and temporal characteristics of laser beams with real-time feedback. This is essential in order to control the energy deposition profile in adaptive schemes or even the structural transformation path, as recently demonstrated for the case of programmable tailoring of laser pulse intensity envelopes. Optical tweezers based in the use of "exotic" beam profiles (Bessel, Laguerre, Hermite-Gaussian, etc.) dynamic pre-compensation of aberrations, focal volume shaping in laser processing and microscopy or polarization temporal shaping are other examples of advanced beam manipulation techniques exploiting the use of tunable optical elements. This special session will focus on state of the art advanced laser beam manipulation techniques and applications including both spatial and temporal control approaches. Original works on ultrafast laser pulse temporal shaping, hybrid non-linear/thermal laser processing, adaptive optics applications, generation and applications of "exotic" laser beams, DOE's for parallel laser processing, and in general contributions showing progress towards the development of laser beam manipulation techniques capable of offering high degree of precision or solutions for specific material

processing issues will be considered.

SP L3) Laser fabrication of nanomaterials and nanostructures

Session Organizers: Michel Meunier (Ecole Polytechnique de Montreal, Canada); Hong Minghui (National University of Singapore and Data Storage Institute, Singapore); Stephan Barcikowski (Laser Zentrum Hannover, Germany)

Lasers offer clear advantages for processing various types of materials on the nanoscale. Nanoparticles and nanostructures generated by laser ablation of a solid in vacuum, air or in a liquid show unique properties in its structures, purity and stability. Alternatively, laser fragmentation of micro/nanomaterials suspended in a liquid or a solid leads to materials with activated surfaces. Other topics include laser nanostructuring based on near field approaches, nano-template and nano-mold fabrication for imprinting, laser interference and laser thermal lithography. Special focus is given on the applications of these nanomaterials and nanostructures in nanoplasmonics, metamaterials, THz devices, and biomedicine. Original papers are solicited showing progress in the basic understanding and technology development of laser nanofabrication process and their applications in various fields such as nanophotonics, nanoelectronics and biomedicine.

Registration Fee	JLPS MEMBER	NON-MEMBER
Early Full-Registration	JPY 54,000	JPY 60,000
Onsite / Late Full-Registration	JPY 70,000	JPY 76,000
One Day Participants	JPY 36,000	JPY 39,000
Student		JPY 12,000
Banquet	One Day Participants	JPY 12,000
	Student	JPY 6,000
	Accompanying Person with Full Registration Participant*	JPY 6,000
	Accompanying Person with Invited Speaker	Free

*Accompany Person(s) are limited to family members only.

Due Time

Early Registration Deadline: May 1, 2009 JST
 Late Registration Deadline: June 15, 2009 JST
 On-site registration is available at the Registration Desk during the congress.

Full Registration Fee includes:

- 1) Technical Digest and Congress Program
- 2) Online Proceedings of LAMP2009
- 3) Banquet
- 4) Exhibition

One Day / Student Registration Fee includes:

- 1) Technical Digest and Congress Program
- 2) Proceedings of LAMP2009
- 3) Exhibition

*Please note that Banquet ticket will not be sold on-site.

ABSTRACT SUBMISSION

Please submit your abstract through LAMP2009 website at <http://www.lamp2009.org/>
Abstract Submission Due Date: ~~December 1, 2008 JST~~ December 31, 2008 (Extended)

PROCEEDINGS

The LAMP 2009 Proceedings will be published online after the event. Full/Student Registration will include the access to the online Proceedings.

- * Manuscript Guidelines [PDF, WORD] Coming soon!
- * Copyright Transfer Form [PDF]

Submission Due Date: July 10, 2009, Friday, JST

JLMN- JOURNAL OF LASER MICRO/NANOENGINEERING

The authors have a chance to publish their proceedings manuscripts in "Journal of Laser Micro/Nanoengineering". The manuscripts will be peer reviewed. Authors who wish to submit their manuscripts to this Journal should check the box in the Copyright Transfer Form of LAMP2009 Proceedings. Then the submitted manuscript will be automatically passed to the review process. The authors can suggest possible reviewers. If the authors have possible reviewers, please attach the list of at least three names, with full information on postal and e-mail addresses, telephone number, and fax number, to the Copyright Transfer Form.

JLMN Website: <http://www.jlps.gr.jp/jlmn>

All accepted authors are requested to submit their manuscripts.
 Detailed information will be available at this website.

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VENUE

Kobe Convention Center

Japan's closest connection between an airport and an international conference center, Kobe is easy to reach from any country. Located on an island, Kobe's primary convention facilities are all just minutes from one another, including conference and exhibition halls, hotels and restaurants. Trains from an adjacent station run every 5 minutes to downtown Kobe and connect to Japan's very best tourism attractions.

LAMP2009 is held in 2nd BLDG of Kobe International Exhibition Hall located in Kobe Convention Center.

ADDRESS

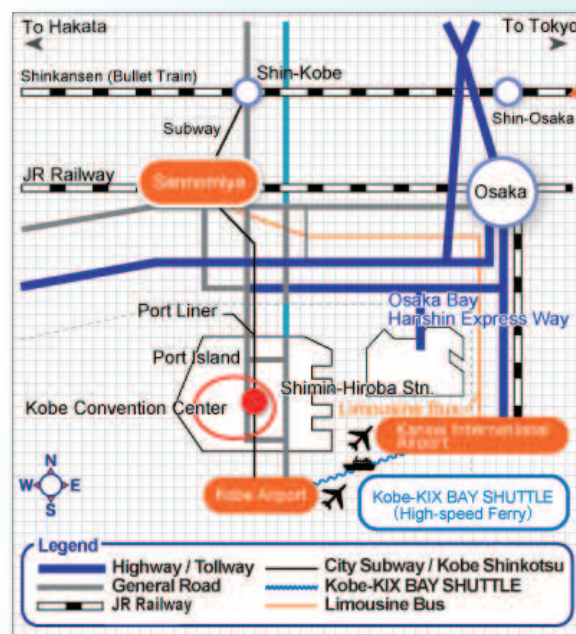
6-11-1 Minatojima-nakamachi, Chuo-ku, Kobe, 650-0046, Japan

ACCESS

Kobe is located in Mid-Western Japan and has convenient access from all Japan's major cities. Kobe is also at the heart of Japan's premiere tourism region, less than an hour from ancient cities such as Kyoto, Nara and Himeji.

The nearest station to Kobe Convention Center is Shimin-Hiroba Station on the Port Liner urban transport line. Trains run every few minutes. The venue is just 2 minutes walk from the station.

- From Tokyo: 2 hours and 49 minutes by Bullet Train (Shinkansen)
- From Osaka Itami Airport, 45 minutes by Limousine Bus to Sannomiya.



CORPORATIONS

- JSAP-the Japan Society of Applied Physics
- HTS-High Temperature Society of Japan
- JSPE-The Japan Society for Precision Engineering
- JWS-The Japan Welding Society
- LSJ-The Laser Society of Japan

EXHIBITION

Industrial Laser Japan 2009
June 30-July 2, 2009
Kobe Convention Center, Kobe, Japan

Contact:

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