Welcome to PLD’14

Pacific-rim Laser damage (PLD) was initiated by Prof. Jianda Shao of Shanghai Institute of Optics and Fine Mechanics in China at 2009. This conference was held as a satellite meeting of SPIE Laser Damage Symposium at Boulder. The purpose of this meeting is to communicate with researchers in the field of laser damage and related phenomena especially in Pacific-rim area. Normally, PLD meeting was held biyearly at Shanghai in China, but due to special request of Prof. Shao, PLD meeting will be held in Japan as a part of OPIC conference.

Topics of the PLD’14

PLD’14 includes 7 sessions as follows.
1) Joint session; PLD/LIC1
   This joint session is proposed by Prof. T. Taira, Conference Chair of LIC’ 14, of Institute for Molecular Science, Japan, because the LIDT is an important factor for laser ignition devices. This session includes 5 talks on laser process and damage phenomena.
2) Plenary session; PLD2
   This session includes Conference Co-Chairs (Prof. J. Shao and I), with a talk of revolutional grating fabrication form Plymouth Grating Laboratory (D. Smith).
3) High Power Laser Damage; PLD3
   This session includes 5 talks on high energy and high peak power laser systems.
4) Poster session; PLD4
   Poster session includes 8 reports on LIDS, laser systems and optical materials.
5) Nonlinear crystals and laser; PLD5
   This session includes reports on nonlinear crystal and laser amplifier.
6) High laser damage resistant coating; PLD6
   Coating, material, and damage detection will be reported.
7) Defect, contamination, polishing and surface damage; PLD7
   10 papers on fundamental research of this subject will be reported.

We expect 41 papers in PLD’14. We hope we will have useful discussions and mutual communications. Special contribution of SPIE, and SIOM should be mentioned. This conference is supported by Chinese Academy of Science as Japan-China Bilateral Forum. It is also a part of activities in Project for Creation of Research Platform and Sharing of Advanced Research Infrastructure promoted by Ministry of Education, Japanese Government.
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OPIC2014 Events

Tuesday, April 22
(see OPIC2014 Plenary Special Sessions pp. -)

9:30-9:40
Opening Remarks of OPIC ‘14
Room 301&302

9:40-12:10
Keynotes Lectures of OPIC ‘14
Room 301&302

13:30-15:10
Joint Plenary Sessions of OPIC ‘14
Session A
Room 301&302

Session B
Room 303
Pacific-rim Laser Damage '14

**PLD’14**

**Tuesday, April 22**

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<td>10:00-12:45</td>
<td>Joint Session PLD&amp;LIC 1</td>
<td>Room 303</td>
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<tr>
<td>15:30-17:15</td>
<td>Joint Session PLD&amp;LIC 1</td>
<td>Room 303</td>
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<tr>
<td>11:15</td>
<td>(Invited) Giant micro-photonics: a key to extending the horizons of laser peening</td>
<td>Y. Sano, Toshiba Co., Japan</td>
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<tr>
<td>15:45</td>
<td>(Invited) The microchip-laser based high energy probe laser for the Thomson scattering plasma diagnostics</td>
<td>R. Yashara, National Institute for Fusion Science, Japan</td>
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<tr>
<td>16:45</td>
<td>(Invited) High resistant multi-layer coating for thin disk laser amplifier</td>
<td>Y. Ochi1, K. Nagashima1, H. Okada3, M. Maruyama1, R. Tateno2, Y. Furukawa2, and A. Sugiyama2</td>
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<tr>
<td>17:15</td>
<td>Influence of longitudinal mode beating on laser-induced damage in fused silica</td>
<td>R. Diaz1, M. Chambonneau1, P. Grua1, J.-L. Rouiller1, J.-Y. Natoli2 and L. Lamaignère1</td>
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<tr>
<td>17:30</td>
<td>Suppression of Parasitic Green Light in Optical Parametric Oscillator by Engineered Quasi-Phase-Matching structures</td>
<td>H. Lim1, S. Kuriyama1, N. Yu2</td>
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<td>10:45-11:05</td>
<td>Joint Session PLD&amp;LIC 2</td>
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<td>15:30-17:15</td>
<td>Joint Session PLD&amp;LIC 3</td>
<td>Room 303</td>
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<td>11:15</td>
<td>Investigation of electric field formed in a multilayer mirror under simultaneous irradiation of two wavelengths</td>
<td>M. Sugihara1, K. Tamura1, M. Kobiyama2, S. Motokoshi1 and T. Jitsuno1</td>
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<tr>
<td>12:00</td>
<td>Femtosecond laser induced damage of dispersive mirrors</td>
<td>J. Zhang, Y. Xie, X. Cheng, Z. Wang</td>
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<td>10:45-12:00</td>
<td>Joint Session PLD&amp;LIC 4</td>
<td>Room 303</td>
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<tr>
<td>16:45</td>
<td>Ul workforce UV laser induced damage in dielectric coating materials before laser damage</td>
<td>J. Du1, Z. Li2, T. Kobayashi3,4, Y. Zhao5, Y. Leng1</td>
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<tr>
<td>13:00-15:30</td>
<td>Joint Session PLD&amp;LIC 5</td>
<td>Room 303</td>
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<tr>
<td>17:30</td>
<td>Laser induced damage in fused silica and metal mirror for plasma application</td>
<td>R. Yasuhara, National Institute for Fusion Science, Japan</td>
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--- Lunch Break (12:15-13:15) ---

**Wednesday, April 23**

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<tr>
<td>9:00-10:30</td>
<td>Plenary</td>
<td>Room 413</td>
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<tr>
<td>15:30-17:15</td>
<td>Joint Session PLD&amp;LIC 6</td>
<td>Room 303</td>
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<tr>
<td>11:15</td>
<td>Contribution of the metrology of multiple longitudinal modes to the study of laser induced damage in fused silica</td>
<td>R. Diaz1, M. Chambonneau1, R. Courchonoux1, J. Luce1, J.-Y. Natoli2 and L. Lamaignère4</td>
</tr>
<tr>
<td>12:00</td>
<td>Temperature dependence of laser-induced damage threshold by ultra-short IR laser pulse</td>
<td>K. Mikami1,2, S. Motokoshi1, T. Somekawa1, T. Jitsuno1, M. Fujita1,2, and K. A. Tanaka2</td>
</tr>
<tr>
<td>13:15-15:30</td>
<td>Joint Session PLD&amp;LIC 7</td>
<td>Room 303</td>
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<tr>
<td>10:00</td>
<td>Laser removal for highly ion-implanted novolak resist without occurring laser-induced surface damage</td>
<td>T. Kiriyama1, Y. Kuroki1, Y. Kasajima1, H. Kuramae1, T. Kamimura1, and H. Horibe2</td>
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--- Break (10:30-10:45) ---

--- Lunch Break (12:15-13:15) ---
LDPd4-4 Ablation rate dependence on incident angle and polarization for copper irradiated by femtosecond laser pulses
Y. Miyasaka*, M. Hashida, T. Nishii, S. Inoue, and S. Sakabe
Kyoto University, Japan

PLDp5 High-efficiency cavity-dumped micro-chip Yb:YAG laser
University of Fukui, Japan

PLDp6 Thin-rod Yb:YAG regenerative laser amplifier
University of Fukui, Japan

PLDp7 Relation between crystal structure and laser damage of Calcium Fluoride
E. Nakahata, M. Azumi
Nikon Corporation, Japan

PLDp8 Temperature Dependence of Laser-Induced Damage Thresholds in Dielectric Crystals
T. Sugita1, K. Mikami2, M. Azumi1, T. Jituno3
1)Nikon Corporation, 2) ILE Osaka Univ., Japan

----- Break (15:30-15:45) -----

15:45-17:15 PLD5: Nonlinear Crystals and Lasers Room 413

Chair: S. Motokoshi, Institute for Laser Technology, Japan

PLD5-1 (Invited) Laser induced bulk damage of KDP crystals prepared by rapid growth
Y. Zhao1, Y. Wang1, G. Hu1, J. Shao1, J. Chang1, X. Liu1, D. Li1, Y. Yao1, X. Lin1, G. Zheng1
1) SIOM, 2) Fujian Institute of Research on the Structure of Matter, China

PLD5-2 Laser induced defect decrement in KD*P crystals varied with photon energy
Y. Wang1, Y. Zhao1, M. Zhu1, G. Hu1, L. Yang1, D. Li1, X. Liu1, and Q. Xiao1
1) SIOM, 2) University of Chinese Academy of Sciences, Beijing, China

PLD5-3 Pulsed laser-induced damage behavior in KH2PO4/KDP2PO4 frequency conversion crystals
C. Li1, B. Feng2, Q. Zhu1, X. Wei2, W. Zheng2, and X. Ju1
1) University of Science and Technology Beijing, 2) Research Center of Laser Fusion, Mianyang, China

PLD5-4 Nonlinear optical frequency conversion for lasers in space
A. Potreck1, H. Schröder1, M. Lammers1, A. Santangelo1, C. Tenzer2, G. Tzeremes3, W. Riede1
1) Institute of Technical Physics, German Aerospace Center, 2) University of Tübingen, Germany, 3) European Space Agency, Netherlands

PLD5-5 150-mm-diameter Nd:glass rod amplifier
A. Shaykin, A. Fokin, A. Soloviev, A. Kuzmin, I. Shaykin, K. Burdonov, E. Khazanov
Institute of Applied Physics, Russia

Thursday, April 24

9:00-10:15 PLD6: High Laser Damage Resistant Coating
Room 413

Chair: K. Yoshida, Okamoto Optical Works, Japan

PLD6-1 An effective design method for trapezoidal pulse compression metal multilayer dielectric gratings
H. Guan1, Y. Jin1, J. Wu1, K. Kong1, K. Yi1, and J. Shao1
1)SIOM, 2) Graduate School of Chinese cademy of Sciences, Beijing, China

PLD6-2 Femtosecond laser-induced damage threshold of electron-beam deposited materials for broadband high-reflective coatings on large optics
A. Hervy1, L. Gallais2, G. Chériaux3, D. Mouricaut1
1) REOSC, 2) Institut Fresnel, 3) Laboratoire d’Optique Appliquée, France

PLD6-3 Rapid detection and radiation calibration of laser-induced damage on optical components
L. Liang, Y. Jiang, X. Li
SIOM, China

PLD6-4 Discrimination between statistic pseudo fatigue and real modification in optical materials induced by multiple irradiations
J.-Y. Natoli, F. Wagner, C. Gouldief
Aix Marseille Université, CNRS, France

PLD6-5 Polygon-binaryzation modeling of laser damage morphologies on dielectric coating to describe their wavefront properties
Y. Zheng*, Z. Liu, P. Ma, F. Pan
Chengdu Fine Optical Engineering Research Center, China

----- Break (10:15-10:30) -----

10:30-15:15 PLD7: Defects, Contamination, Polishing and Surface Damage
Room 413

Chair: T. Kamimura, Osaka Institute of Technology, Japan

PLD7-1 Laser-induced surface damage measurements with large beams: From initiation to growth
L. Danaignère, A. Bourgeade, R. Courchinoux, T. Donval, G. Dupuy, A. Roques
CEA CESTA, France

PLD7-2 The impact of different cleaning processes on the laser damage threshold of antireflection coatings for Z-backlighter optics at Sandia National Laboratories
Ella Field, John Bellum, Damon Kliteckel
Sandia National Laboratories, USA

PLD7-3 Damage morphology change condition and thermal accumulation effect on dielectric coatings at 1064nm
Z. Liu, Y. Zheng, J. Luo, S. Chen, Z. Zhang and P. Ma
Fine Optical Engineering Research Centre, Chengdu, China

PLD7-4 (Invited) Optical component requirement for ultra- short and ultra-intense lasers
J. Zou
Ecole Polytechnique, France

10:45-12:15
PLD7-5  11:45  (Invited) Three-dimensional micro / nano fabrication by integration of additive and subtractive laser direct writing processes
W. Xiong\textsuperscript{1)}, Y. S. Zhou\textsuperscript{1)}, L. J. Jiang\textsuperscript{1)}, J.-F. Silvain\textsuperscript{1,2)}, L. Jiang\textsuperscript{3)}, Y. F. Lu\textsuperscript{1)}
\textsuperscript{1)} University of Nebraska-Lincoln, USA
\textsuperscript{2)} Université Bordeaux, France
\textsuperscript{3)} Beijing Institute of Technology, China

----- Lunch Break (12:15-13:15) -----