Call for Papers TILA-LIC 2023

The 9th Tiny Integrated Laser and Laser Ignition Conference 2023

Co-located with Optics & Photonics International Congress 2023

http://tila-lic.opicon.jp/

April 19 (Wed.) - 21 (Fri.) 2023, Pacifico Yokohama, Yokohama, Japan

Paper Deadline: January 13 (Fri.)

Organizer of LIC

Micro Solid-State Photonics Association, Japan

About TILA-LIC

The Tiny Integrated Laser (TILA) and Laser Ignition Conference (LIC) is an international forum for discussions on various aspects of the ubiquitous sources and phenomena associated with highly intense laser pulses. TILA-LIC offers to share information on sciences and technologies related to Giant Micro-Photonics.

"Tiny Integrated Laser (TILA)" and "Laser Ignition (LI)"

"Tiny Integrated Laser (TILA)" refers to compact integration of highly intense laser devices and peripheral systems that enables ubiquitous operation of extraordinarily accurate measurements and control of extreme material phases. Here, the word "laser ignition (LI)" originally means the laser induced breakdown ignition, and it also implies the induction of phenomena caused by the irradiation of high-brightness laser pulses.

Based on the recent photonic innovation called by Giant Micro-Photonics, ubiquitous lasers symbolized by TILA that can be operated at everywhere and anytime by everybody can become the door to promote the world to a new generation.

Location

The conference will be held on April 19 (Wed.) - 21 (Fri.), 2023 in the frame of the OPTICS & PHOTONICS International Congress (OPIC 2023), as a hybrid conference (On-site at Pacifico Yokohama, Yokohama, Japan). The exhibition OPTICS & PHOTONICS International Exhibition (OPIE 2023) will be co-located on April 19 - 21.

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SCOPES

This conference aims at collating the latest developments in laser technologies and their applications of the compact laser systems by the integration of knowledge. Papers are solicited on, but not limited to, the following topics.

A. TINNY INTEGRATED LASERS

- Integrated power lasers: modelling and simulations, design, realization and characterization.
- Miniature lasers for high power, giant-pulse generation; power-scalable laser architectures; solid-state micro-chip lasers.
- Design of laser resonators, thermal management and beam quality control.
- Pumping methods of solid-state lasers, size reduction and miniaturization solutions.

B. OPTICAL MATERIALS FOR TINNY INTEGRATED LASERS

- Laser crystals and glasses; ceramic materials as laser media.
- Nonlinear laser crystals.
- Spectroscopic characterization of solid-state gain media.
- Composite materials for laser applications, bonding techniques, laser optics.

C. LASER INDUCED PHENOMENA BY POWER MINIATURE LASERS

- Laser acceleration.
- Laser induced breakdown, laser ignition process, plasma imaging, spectroscopic characterization.
- Nonlinear optics.
- Interaction of laser radiation with matter.

D. APPLICATION OF TINY INTEGRATED LASERS

- Laser ignition for green generation (transportation, stationary natural-gas engines, aerospace applications).
- Laser diagnostics in reacting flows.
- Processing with laser radiation (laser peening, ultrafast laser processing, femtosecond machining), optical communications.
- Accessing new wavelength domains (intra-cavity wavelength conversion, visible and ultra-violet generation, THz generation and application).

E. SYMPOSIUM: GIANT MICRO-PHOTONICS

- Laser ceramics, processing for laser ceramics.
- New techniques for evaluation of properties in laser ceramics.
- Package for tinny lasers.
- Bonding techniques for laser materials.

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Conference committees

Conference chair: Takunori TAIRA (RIKEN SPring-8 Center, RIKEN, Hyogo, Japan)

Program committee

Chair:	Nicolaie PAVEL	National Institute for Laser, Plasma and Radiation Physics, Magurele, Romania)
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	Kei TAKEYA	Institute for Molecular Science, Okazaki, Japan
	Hiroyuki TAKIGAMI	RIKEN SPring-8 Center, Hyogo, Japan

Schedule

Sep. 20th, 2022:	TILA-LIC 2023 web-site will open.
Nov. 1st, 2022:	Submission site (in OPIC 2023) open.
Jan. 13th, 2023:	Submission deadline.
March 3rd, 2023:	TILA-LIC 2023 conference program will be released.
Apr. 7th, 2023:	Deadline of the early bird registration.
Apr. 19th, 2023:	TILA-LIC 2023 will start.

Contact information

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OPTICS & PHOTONICS International Congress 2023 (OPIC 2023)
Web site LIC2023 <http://tila-lic.opicon.jp/>, OPIC2023 <http://opicon.jp/>