Call for Papers: **TILA-LIC2024**

The 10th Tiny Integrated Laser and Laser Ignition Conference 2024

Co-located with Optics & Photonics International Congress 2024

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

April 24 (Wed.) – 26 (Fri.), 2024, Pacifico Yokohama, Yokohama, Japan
(In-person meeting only)

Organizer of TILA-LIC2024

Micro Solid-State Photonics Association, Japan

Co-organizer of TILA-LIC2024 (tentative)

RIKEN SPring-8 Center, Japan
Institute for Molecular Science, Japan
Japan Fine Ceramic Association, Japan

Paper submission

Submission site will open:	**October 18th (Wed), 2023**
Submission deadline:	**January 4th (Thu), 2024. (extended)**
Paper submission URL:	**https://opicon.jp/submission/**

About TILA-LIC

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

"Tiny Integrated Lasers"

Tiny Integrated Lasers refer 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.

"Giant Micro-Photonics"

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.

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SCOPES

A. TINNY INTEGRATED LASERS

- Integrated power lasers: modelling and simulations, design, realization and characterization.
- Miniature lasers for high power, giant-pulse; 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 (intracavity wavelength conversion, visible and ultra-violet generation, THz generation and application).

E. GIANT MICRO-PHOTONICS

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

Invited speakers of TILA-LIC2024

- Young Uk JEONG (Korea Atomic Energy Research Institute - KAERI, Daejeon, South Korea)

  "Development and prospects of compact terahertz free electron lasers"

- Thomas KANE (Independent optical engineer, and contract engineer for Gener8 (Gener8.net).)

  "Overview of diode pumped solid-state lasers (tentative)"

- Gerhard KROUPA (Silicon Austria Labs., Villach, Austria)

  "Recent Applications of the Miniaturized HiPoLas Ignition System"

- Ju Han LEE (University of Seoul, Seoul, South Korea)

  Title: to be decided

- Qiang LI (Beijing University of Technology, China)

  "Large core diameter crystal waveguide - a new device for high brightness solid-state lasers"

- Xavier MATEOS (Universitat Rovira i Virgili, Tarragona, Spain)

  "Materials for waveguide lasers in the visible"

- Anna ONO-SUZUKI (Ruhr University Bochum, Bochum, Germany)

  "Development of high-power ultrafast laser sources at 2.1 µm wavelength"

- Fabian ROTERMUND (Korea Advanced Institute of Science and Technology, South Korea)

  "Ultrafast 1-micron waveguide laser and its noise and timing jitter characteristics"

- Tadatomo SUGA (Collaborative Research Center, Meisei University, Tokyo, Japan)

  "Room temperature direct bonding (tentative)"

- Jinwei ZHANG (Huazhong University of Science & Technology, Wuhan, China)

  "High power mode-locked thin-disk laser oscillator"

- Mariastefania DE VIDO (STFC Rutherford Appleton Laboratory, Didcot, UK)

  "Demonstration of stable, long-term operation of a nanosecond diode-pumped solid state laser at 10 J, 100 Hz"

- Laurent ZIMMER (CNRS and CentraleSupélec and Université Paris Saclay, Paris, France)

  "Laser induced ignition and plasma spectroscopy using 10 kHz Nd:YAG lasers on spray facilities"

Organizing committees of TILA-LIC2024

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