Submission deadline: January 4, 2024

http://opicon.jp/ **https://www.ile.osaka-u.ac.jp/heds2024/**

OBJECTIVE

Recent progress in high-power laser technology and the advent of X-ray free electron lasers have energetically advanced our understanding of matter in extreme environments. Materials dynamically compressed by high-power laser irradiation, which reach ultra-high pressure and temperature states or warm dense matter states, are closely related not only to plasma physics and material science but also to earth and planetary science and inertial confinement fusion research. Since such materials are highly complex systems, they are interdisciplinary research interests where both experimental and computational contributions are essential. In the scientific research area, we recognize that it is beneficial to hold a conference to promote international and interdisciplinary collaboration and overview the current status and prospects of the related fields. Thus, we propose to hold an international conference at the annual HEDS meeting with a topical focus on "Matter in Extreme Conditions". The conference aims to discuss a definite theme with distinguished overseas scientists with experiences in high-pressure science, shock physics, materials science, earth and planetary science, first-principles calculations, high-power lasers, and X-ray free electron lasers, increasing the number of foremost participants in related fields.

INTERNATIONAL CONFERENCE ON HIGH ENERGY DENSITY SCIENCES 2024 (HEDS2024) is organized to share recent advances in science and technology on the matter under extreme high-energy-density conditions. The conference will be held on April 22- 26, 2024, at Pacifico Yokohama, organized by Institute of Laser Engineering, Osaka University.

SCOPE

Particle Acceleration in Laboratory and Astrophysical Plasmas
--- Shock, Turbulence, and Magnetic Reconnection ---

HEDS covers the high energy density sciences with high power lasers and its application. The Primary topics of HEDS2024 is on particle acceleration in laboratory experiments and astrophysical phenomena.

Particle acceleration is a physical process common to both laboratory and astronomical plasmas. The origin of high-energy cosmic rays is one of the critical issues in astrophysics and has been studied intensively using numerical simulations. Particle acceleration has also been studied experimentally using such as intense laser experiments. HEDS2024 hopes to promote interdisciplinary discussions by gathering knowledge on particle acceleration physics in various fields.

The following categories are considered as specific topics.

(A) Collisionless shock acceleration
(B) Turbulence acceleration
(C) Magnetic reconnection acceleration
(D) Laboratory High-Endergy-Density experiments
(E) Advanced numerical simulations

COMMITTEE MEMBERS

Conference Chair
Ryosuke Kodama (Osaka Univ.)
Takayoshi Sano (Osaka Univ.)

Steering Committee Chair
Youichi Sakawa (Osaka Univ.)

REGISTRATION

Registration Type		On/Before 8 April 2024	After 9 April 2024
General	Member	JPY 56,000	JPY 61,000
	Non-Member	JPY 66,000	JPY 71,000
Student / Retiree	Member	JPY 19,000	JPY 22,000
	Non-Member	JPY 22,000	JPY 24,000

OPTICS&PHOTONICS International Congress 2024 (OPIC2024) https://opicon.jp/

16 international conferences held simultaneously. By registering for this conference, you can participate in all international conferences.

- ALPS - The 13th Advanced Lasers and Photon Sources
- BFSS - Business and Finance in Sustainable Society ～towards the expansion of photonics industry～
- BISC - The 10th Biomedical Imaging and Sensing Conference
- HEDS - International Conference on High Energy Density Science 2024
- ICNN - International Conference on Nano-photonics and Nano-optoelectronics 2024
- IP - Information Photonics 2024
- LDC - Laser Display and Lighting Conference 2024
- LEDIA - The 10th International Conference on Light-Emitting Devices and Their Industrial Applications
- LSC - Conference on Laser and Synchrotron Radiation Combination Experiment 2024
- LSSE - Laser Solutions for Space and the Earth 2024
- OMC - The 11th Optical Manipulation and Structured Materials Conference
- OPTM - Optical Technology and Measurement for Industrial Applications 2024
- OWPT - The 6th Optical Wireless and Fiber Power Transmission Conference
- SLPC - The 5th Smart Laser Processing Conference
- TILA-LIC - Tiny Integrated Laser and Laser Ignition Conference 2024
- XOPT - International Conference on X-ray Optics and Applications 2024

SUBMISSION OF PAPERS

A 300-word abstract form should be submitted though OPIC2024 web. If you have anything to ask, please contact to “heds2024@lie.osaka-u.ac.jp”. The abstract template will be available through the Web site.

POSTER SESSION

The author(s) of poster presentations will be informed of the size of bulletin board for displaying summary, figures, tables, etc., when selected as poster papers.

POST DEADLINE PAPERS

A limited number of post deadline papers will be accepted for presentation at post deadline sessions.

OFFICIAL LANGUAGE

The official language of HEDS2024 is English.

PLENARY, INVITED TALKS and FURTHER INFORMATION

The speakers and latest information on the conference will be presented on the Web site,

”https://www.ile.osaka-u.ac.jp/heds2024/”.

LOCATION OF CONFERENCE SITE

The HEDS2024 takes place at Pacifico Yokohama, Yokohama city, Kanagawa prefecture, JAPAN. Yokohama city, the center of Kanagawa prefecture is located south of Tokyo. Pacifico Yokohama is conveniently located about 40 min. by Limousine Bus from Haneda Airport and 90 min. from Narita Airport.

Pacifico Yokohama
http://www.pacifico.co.jp/english/index.html
1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan
Transportation Guide: TEL +81-45-221-2166, Info.: +81-45-221-2155& FAX +81-45-221-2136