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Press Release

October 2, 2023

Blue Laser Fusion Energy Research Division
Aiming for pioneering fusion energy using power lasers
Full-scale activity Period from October 1st 2023 to March 31st 2028

❖ Outline

The Institute of Laser Engineering at Osaka University (Director: Ryosuke Kodama, hereafter referred to as "ILE") and Blue Laser Fusion Inc. (CEO: Shuji Nakamura, hereafter referred to as “BLF”) are set to launch the “Blue Laser Fusion Energy Research Division,” which aims to develop laser fusion (*1) energy using power lasers.

This joint research division will develop original and innovative high average power lasers. Researchers at the division will study pioneering fusion reactions that emit radiation that is non-harmful or less harmful to the human body, and clarify directions for the social implementation of the clean fusion energy produced by power lasers.

Blue Laser Fusion Inc. was founded on November 4, 2022, in Pala Alto, California, by Prof. Shuji Nakamura (Nobel Laureate in Physics in 2014, University of California, Santa Barbara, USA) and Hiroaki Ohta (General Partner, Waseda University Ventures, Inc.) and others. BLF has abundant knowledge and technology in the field of laser science and is developing unique and innovative power lasers to realize laser fusion energy.

world-class research center for power laser science and high-energy-density science, and its knowledge of power lasers will accelerate BLF's development of original and innovative power lasers. Furthermore, ILE has abundant knowledge and technology in nuclear fusion research using power lasers and has produced world-renowned results, especially in the fast ignition (*2) laser fusion method. Establishing this joint research division will dramatically advance the academic foundation for generating non-deuterium-tritium fusion reaction energy using the fast ignition method of laser fusion.

BLUE LASER FUSION

Blue Laser Fusion Inc. Logo

In addition to ILE and BLF, this joint research chair will include diversity-rich faculty, technical staff, and researchers from the Graduate School of Engineering at Osaka University, Hiroshima University, and other institutions.

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❖ Terminology

※1 Laser fusion

A method of obtaining energy from a fusion fuel by using a high-power laser to compress the fuel to a high density and heat it to a high temperature, thereby causing a nuclear fusion reaction. Research on laser fusion is being conducted in Japan, the United States, France, China, Russia, and other countries.

※2 Fast ignition

A method in which an ultra-intense laser instantaneously heats fusion fuel that has been compressed by a laser. The U.S. National Ignition Facility, which recently achieved fusion ignition by laser fusion, uses the central ignition method.

❖ Remark

For consultation on non-deuterium-tritium fusion reactions using power lasers, we were assisted by the One-Stop Office of the ”Power Laser DX Platform” via research equipment shared in the MEXT Project for Promoting Public Utilization of Advanced Research Infrastructure (Program for advanced research equipment platforms).

❖ Contact information

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