Graduate School of Engineering,
Division of Electrical, Electronic, and Information Engineering

Laboratory for High Energy Density Sciences （Kodama Lab.）

Staff

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Outline

We are pioneering high energy density science by utilizing power laser facilities (high power laser, X-ray laser, etc.) in the world. In order to promote such research, we are using cutting-edge equipment both in Japan and overseas, as well as actively carrying out domestic collaborations and international joint research with researchers in Europe, North America, and Asia.

● Approach to the unexplored region

- Lasers create ultra-high-pressure materials on the Earth to explore the interior of exoplanets such as Super Earth and other planets in the solar system.
- Exploring the interaction between vacuum and laser, and the space-time distortion using the ultra-high acceleration field generated by laser

● Create new technology with lasers

- Creation of super diamond and other ultra-high-pressure materials
- Development of plasma photonic devices using lasers
- Development of technologies with lasers for laser infrastructure maintenance and construction on the moon
- Exploring fusion science with lasers

Looking to the future of society Creating the future

Global Cooperation and Collaboration