

## **ispace and Takasago Thermal Engineering Co., Ltd. Agree to Explore Thermal Mining Technology for Water Extraction on the Moon**

TOKYO— May 9, 2025 —ispace, inc. (ispace) ([TOKYO: 9348](#)), a global lunar exploration company, announced today the signing of a memorandum of understanding with Takasago Thermal Engineering Co., Ltd., to plan for and study the feasibility of thermal mining technology for water extraction on the Moon's surface.

The agreement aims to conduct a feasibility study for joint technology development with the goal of demonstrating the extraction of water on the Moon. The culmination of the effort will be to install Takasago's thermal mining technology, which is currently in a research and development phase, on a future ispace lunar rover to conduct the exploration.

"This agreement is another step forward in lunar exploration activities and a continuation of our work with Takasago to achieve the successful water electrolysis during Mission 2," said Takeshi Hakamada, Founder & CEO of ispace. "Demonstrating Takasago's water extraction technology on the Moon will significantly contribute to the future utilization of space resources in the development of economic activity on the Moon."

"As an 'environmental creator,' Takasago Thermal Engineering is a pioneer in developing the future of humanity. We are very pleased to have formed a partnership with ispace for this new endeavor," said Kazuhito Kojima, President and Representative Director of Takasago Thermal Engineering. "Our company has been developing technologies for 'lunar water electrolysis that generates hydrogen and oxygen in the lunar environment' and 'technology for extracting water resources on the moon—thermal mining' with the goal of establishing the foundation for scientific and industrial activities that integrate Earth and the Moon. Following the 'world's first hydrogen and oxygen generation mission on the Moon,' we aim to demonstrate the feasibility of water resource extraction there as well."

Takasago Thermal Engineering Co. Ltd., Japan's largest company specializing in heating, ventilation and air conditioning (HVAC), became a HAKUTO-R Corporate Partner in 2019, to support lunar exploration. On ispace's Mission 2, "SMBC x HAKUTO-R VENTURE MOON" Takasago developed the main payload, water electrolysis equipment, to attempt to split water into molecules on the Moon.

ispace is leveraging its global presence through its three business units in Japan, the U.S., and Luxembourg, for the simultaneous development of upcoming missions. Mission 2, featuring the RESILIENCE lunar lander, is led by ispace Japan and was launched on Jan. 15, 2025. It is currently scheduled to land on the Moon on June 6, 2025 (JST). During the mission, the TENACIOUS micro rover, developed by ispace Europe SA, is set to be deployed on the lunar



surface to conduct a technological demonstration of regolith extraction as well as mobility on the lunar surface. Mission 3, debuting the APEX 1.0 lunar lander, is led by ispace-U.S. and is expected to launch in 2026. The company's fourth mission, which will utilize the Series 3 lander, currently being designed in Japan, is scheduled to be launched by 2027.

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**About ispace, inc.** (<https://ispace-inc.com>)

ispace, a global lunar resource development company with the vision, "Expand our planet. Expand our future.", specializes in designing and building lunar landers and rovers. ispace aims to extend the sphere of human life into space and create a sustainable world by providing high-frequency, low-cost transportation services to the Moon. The company has business entities in Japan, Luxembourg, and the United States with more than 300 employees worldwide. For more information, visit: [www.ispace-inc.com](http://www.ispace-inc.com) and follow us on X: [@ispace\\_inc](https://twitter.com/ispace_inc).

**About Takasago Thermal Engineering** (<https://www.tte-net.com/english/index.html>)

Takasago Thermal Engineering provides comprehensive services across the entire building lifecycle, including the design and construction of air conditioning systems, the creation of comfortable spaces that prioritize human well-being, the construction of highly managed production environments, and consulting services for optimal equipment operation and energy efficiency utilizing AI. These services are offered throughout Japan, China, Southeast Asia, India, and Mexico. Under our group purpose, "Environmental Innovation to Open the Future of the Earth," we are expanding our business domain as an "Environmental Creator®" to create technologies and services that contribute to the realization of a decarbonized and sustainable society.