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Idemitsu Kosan Co.,Ltd.

Idemitsu to Establish Bench Manufacturing Plant for Space-Grade CIGS Solar Cells; Project Selected for JAXA's "Space Strategy Fund"

Idemitsu Kosan Co.,Ltd. has decided to invest in the establishment of a bench manufacturing plant for space-grade CIGS^{*1} solar cells at its research and development base within Advanced Technology Research Laboratories in Sodegaura, Chiba Prefecture, with operations scheduled to begin in 2027. Through the launch of this bench plant, Idemitsu aims to advance the commercialization of its space-grade CIGS solar cell technology. In addition, Idemitsu's technology development initiative for space-grade CIGS solar cells have been selected as a project under the "Space Strategy Fund"^{*2} administered by the Japan Aerospace Exploration Agency (JAXA). Funding from the program will be used for technology development and related activities toward demonstration and mass-production of space-grade CIGS solar cells.

^{*1} CIGS: A compound semiconductor material composed of copper (Cu), indium (In), gallium (Ga), and selenium (Se).

^{*2} Space Strategy Fund: A fund established by JAXA to provide mid- to long-term support for technology development and commercialization initiatives led by private companies, universities, and other organizations in Japan's space sector.

The widespread use of smartphones and IoT devices, along with the growing adoption of connected mobility that links vehicles with communication networks, is accelerating the use of artificial intelligence and the expansion of data centers. Society is increasingly shifting toward an always-connected environment where services are available anytime and anywhere. Satellites support these services, as digitalization continues to advance, and reliable power generation in space—primarily through solar cells—is essential for their stable operation. As a result, demand for advanced solar cell technologies for satellite applications is expected to grow.

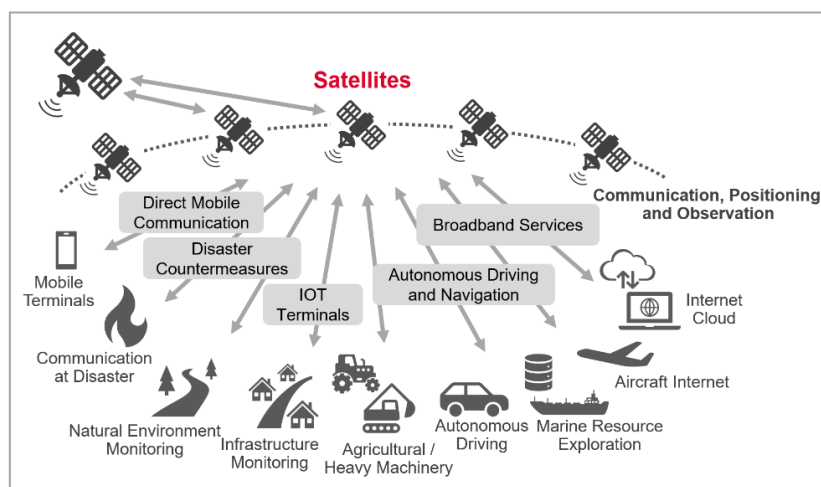


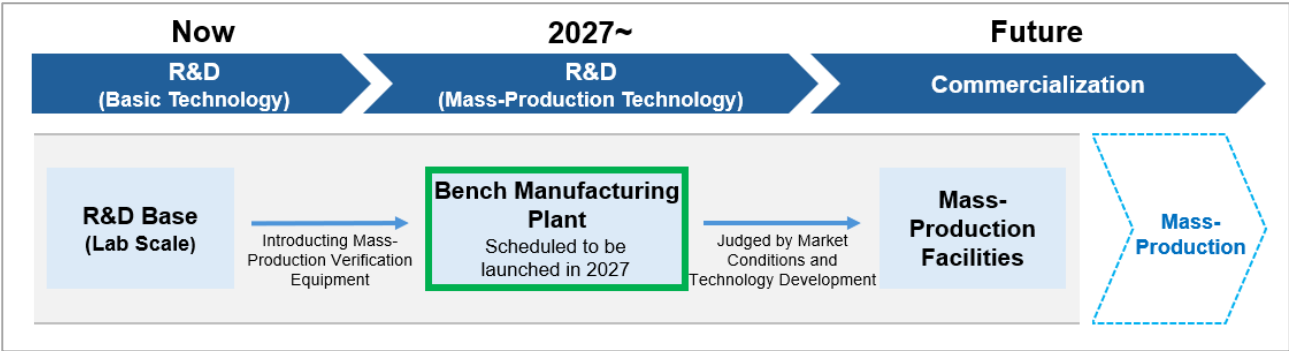
Illustration of an always-connected society enabled by the expanding use of satellites

To help address this demand, Idemitsu is developing space-grade CIGS solar cells designed to provide stable and durable power for satellites. Conventional solar cells used

in space face several challenges, including degradation caused by intense radiation, high manufacturing costs, extensive use of rare metals, and limited production capacity due to the manufacturing process that requires long time. Idemitsu's CIGS technology offers strong resistance to radiation, which can contribute to longer operational lifetimes, while also reducing the amount of rare metals required. In addition, by leveraging its proprietary manufacturing technology, Idemitsu expects to achieve high production capacity while maintaining cost competitiveness.

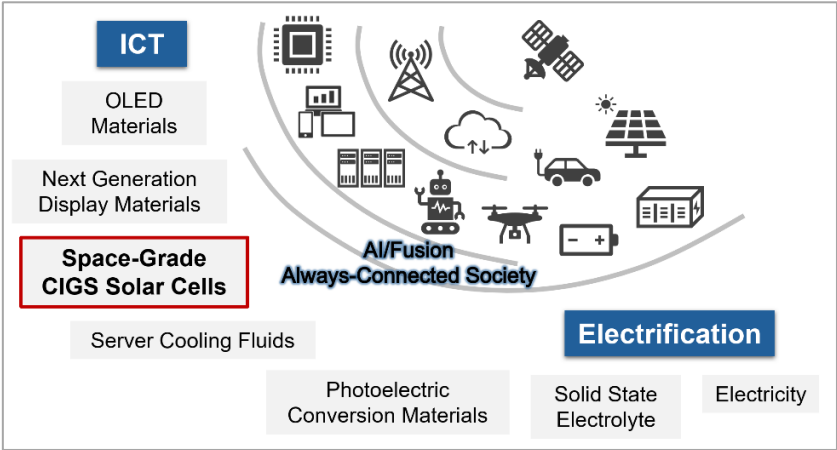
With the establishment of the bench manufacturing plant, Idemitsu plans to increase its production capacity by tens of times compared with its current facilities. This will enable the company to provide a stable supply of samples for use in space demonstration missions conducted by satellite manufacturers and other partners. The initiative is expected to expand opportunities for customer evaluation while enabling the company to accumulate data from in-orbit demonstrations.

Idemitsu will consider establishing mass-production facilities based on market conditions and the progress of technology development, aiming to commercialize space-grade CIGS solar cells. By enabling the stable supply of this technology, Idemitsu seeks to contribute to the advancement of next-generation communications infrastructure and sustainable space development.



Business roadmap of Idemitsu's space-grade CIGS solar cells

Idemitsu is also advancing its portfolio of material solutions that support the fused field of electrification and ICT. These include OLED materials, next-generation display materials that enable low power consumption and fast response, server cooling fluids for data centers, photoelectric conversion materials for high-speed communications, and solid electrolytes for all-solid-state lithium-ion batteries expected to deliver long service life, high output, and enhanced safety.



Idemitsu's key technology development themes in the fused field of electrification and ICT

(References)

- [Employee Interview \(JAXA × Idemitsu Innovation Strategy Department / Advanced Technology Research Laboratories\)](#)

Focusing on the in-orbit demonstration of next-generation space solar cells currently being conducted aboard JAXA's new space station resupply vehicle HTV-X1, a JAXA researcher and Idemitsu engineers share insights into the background of the technology development and discuss their perspectives on the future potential of the space business.

- News Release: [Idemitsu Kosan and Source Energy Company Announce Strategic Collaboration to Co-Create Next-Generation Solar Array Products for Space \(November 6, 2025\)](#)

- News Release: [Equipped with Idemitsu Kosan's CIGS Solar Cell for Space Application, Chiba Institute of Technology's nano-satellite "BOTAN" has completed its initial mission \(October 20, 2025\)](#)

- News Release: [Idemitsu Kosan's CIGS Solar Cell for Space Application has been installed on JAXA's new space station resupply vehicle HTV-X1's SDX demonstration system \(October 17, 2025\)](#)

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