

November 22, 2023

ADEKA CORPORATION

ADEKA to construct a new research building
— Building an R&D structure for creating innovative new products —

ADEKA CORPORATION (President and Chief Executive Officer: Hidetaka Shirozume; hereafter, “ADEKA”) announced today that it has decided to construct a new research building on the premises of the Kuki R&D Center to improve its R&D capabilities in the field of electronics and IT materials. The total construction cost will be approx. 10 billion yen, and the building is planned to be completed in January 2026.

ADEKA has been advancing the expansion of its business to achieve ADEKA VISION 2030: an innovative company contributing to a sustainable future and affluent lifestyles, which is its vision for 2030. ADEKA decided to construct the building to achieve the continued expansion of its ALD materials* for semiconductors, which are core products in its electronics and IT materials business and its peripheral materials business, and a major leap forward in process materials for semiconductor packages (post-process).

The new research building will serve as the core research center for deepening and integrating technologies for the R&D of chemical products and for developing cutting-edge semiconductor materials. It will play a core role in R&D aimed at expanding the electronics and IT materials business. In the functional chemicals business, ADEKA will change its business style from one based on the provision of materials to a solution-based style in which it will provide essential game-changing materials to the entire market, to ensure the timely provision of performance and products which are in demand in the mobility and electronics markets.

Further, ADEKA will establish processes for the evaluation, analysis and deposition of semiconductor products at domestic and overseas facilities including the ADEKA KOREA R&D Center in Korea and ADEKA FINE CHEMICAL TAIWAN CORP. Through these and other initiatives, ADEKA will work to create innovative new products in a solid R&D structure and through collaborations with Group companies and close internal cooperation.

*ALD: atomic layer deposition. It is a method used in the semiconductor manufacturing process in which flat, elaborate thin films (such as nitride films and oxide films) are formed by controlling film thickness at the atomic layer level.



▲ A D E K A Kuki R&D Center “The new research building” Rendering of Completion

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■ Outline

Location	20 Showanuma, Shobucho, Kuki City, Saitama Prefecture
Total construction cost	Approx. 10 billion yen
Scale	Seven floors above ground, steel construction Building area: 1,932 square meters Total floor area: 11,567 square meters
Key facilities	Laboratory, clean room, analysis lab, meeting room and other facilities
Construction	Obayashi Corporation
Schedule	Commencement of construction: April 2024 Completion: January 2026 (plan)

■ Features of the new research building

Its greatest feature is a clean room with an area greater than 850 square meters on a single floor. With high expandability and freedom, the clean room will enable the timely development of new products catering to customer needs.

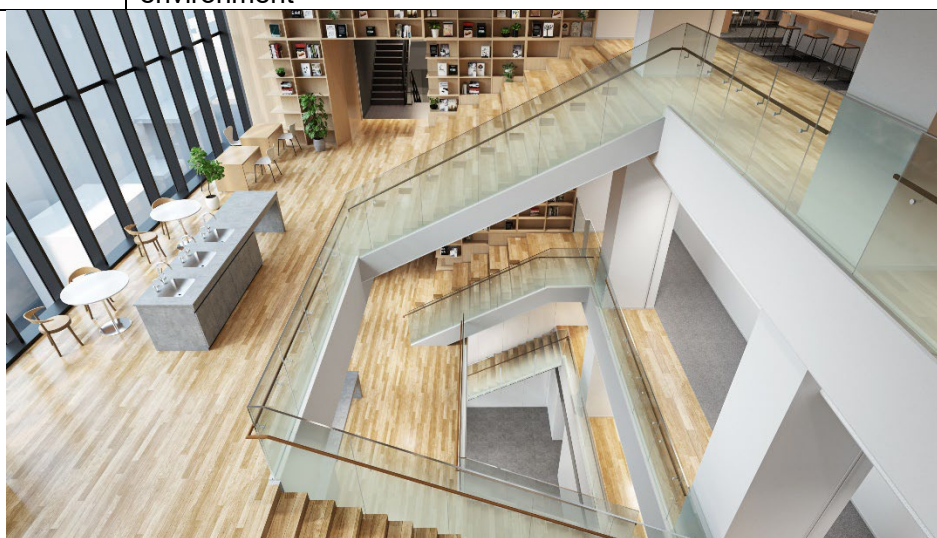
In addition, the new building will come with convenient, environmentally friendly functions for the future as a next-generation research facility guided by the concepts of technology integration, the health and safety of researchers and consideration for the environment.

The design of the new research building will also consider energy efficiency and the reduction of environmental impact. According to the evaluation and review of its basic design, it is expected that the building will acquire a Rank A or higher certification in the Comprehensive Assessment System for Built Environment Efficiency (CASBEE).*

*The Comprehensive Assessment System for Built Environment Efficiency (CASBEE) is a method of comprehensively assessing and rating the environmental performance of buildings developed mainly by the Institute for Built Environment and Carbon Neutral for SDGs.

[Concept]

Combining technologies	A facility where researchers can always create new products and ideas through technological exchange
Health and safety	Providing an environment where employees can work safely in good health
Consideration of the environment	Developing a comfortable R&D environment by reducing environmental impact through efforts such as energy efficiency and consideration for the local environment



▲ A mezzanine aimed at encouraging communication (2.5、3.5Floor)

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■ Products to be developed in the new research building and the background

The new research building will play the core role in R&D for expanding the electronics and IT materials business, serving as the core research center for the development of ALD materials and peripheral materials for advanced semiconductors and new process materials for semiconductor packages (post-process).

It is forecast that semiconductor packages, which are expected to expand in the future, will become more highly integrated, through developments such as 2.xD and 3D packaging. The development of the materials that will be needed in this process, such as interposers, insulating materials and underfill materials, has been energized. The development of process materials for post-processes must to be worked in ways that integrate the individual laboratories' information networks and technologies. ADEKA will surely link these development themes to actual demand. In the new research building, ADEKA will focus its efforts on the development of new ALD materials for DRAM, NAND, and logic semiconductors and the basic design of ALD materials, such as the basic design of film-forming aids, baseline assessment and materials compatibility.

The ADEKA KOREA CORP. R&D Center, which is located in an overseas R&D base, will work to establish new disposition processes using cutting-edge materials, new reaction gases and film-forming aids to be developed at the new research building.

ADEKA will deliver cutting-edge materials from overseas bases in Korea, where it is pushing forward with aggressive investment for future growth, and its base in Taiwan, where the production and supply of materials for advanced logic semiconductors has become possible, as well as at the Chiba Plant, where production equipment for photoacid generators has been completed, and other bases. ADEKA will push forward with the expansion of the domain through close internal cooperation, aiming to be a world-leading semiconductor materials manufacturer.

Supplement: Information about ADEKA's Electronics and IT Materials Business

ADEKA provides a large number of indispensable advanced materials in the semiconductor and display fields for the development of an advanced ICT society. The ADEKA ORCERA Series of high-k materials for advanced semiconductor memory have the largest share of the global market.*

ADX 2023 (from fiscal 2021 to fiscal 2023), the medium-term management plan of ADEKA Group, positions the next-generation ICT field as one of the important fields to enhance scale dramatically.

As a result of aggressive investments focused on advanced semiconductor materials, the amount of capital invested (including approved investments) has been above 120% of the target investment amount in the electronics and IT materials business under ADX 2023, far exceeding the plan.

Major capital investment in the electronics and IT materials business

- Increase of the high-k materials for advanced semiconductor memory production capacity (2.3 billion yen/Korea: Operation scheduled to begin in FY2024)
- Building a new plant for advanced logic semiconductor materials (2.5 billion yen/Taiwan: Operation scheduled to begin in FY2024)
- Increase of the high-k materials for advanced semiconductor memory production capacity (2.1 billion yen/Korea: Operation scheduled to begin in FY2023)
- Expansion and relocation of ADEKA KOREA R&D Center (1.3 billion yen/Korea: Relocated in FY2023)
- Increase of the photoacid generators for cutting-edge photoresists production capacity (2.7 billion yen/Japan: Operation begun in August 2023)

*From 2020 Current Status and Future Prospects of Semiconductor Material Market by Fuji Chimera Research Institute Inc.

■ Contacts

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