

Research and Development

Refining core technologies

UACJ is working to refine its core technologies used for material design and production processes by acquiring the latest technologies and expertise in collaboration with leading-edge research organizations in Japan and around the world. As part of these efforts, in fiscal 2019, the Company began fully operating a laboratory specializing in industry-collaborative research on aluminum, which has been set up at the Chubu Center of the National Institute of Advanced Industrial Science and Technology in Japan. The laboratory has launched joint research projects spanning across a wide range of fields, including methods for improving production processes, new applications for aluminum using newly developed surface finishing technologies, and data science applications in R&D.

UACJ has also been carrying out joint research with Hokkaido University, which is offering a practical course on next-generation innovations in aluminum to prepare students for working in the aluminum industry through R&D aimed at creating innovative aluminum materials. Combining the university's academic expertise with UACJ's

extensive technical development capabilities, the course is designed to equip students with the skills they will need to develop innovative and highly useful materials.

Outside Japan, UACJ has been networking with members of national research institutes in Thailand through the UACJ Thailand R&D Center. The center has also set up a system for recruiting and training engineering students from local universities to provide a solid source of skilled human resources in the future.



A university student being trained at the UACJ Thailand R&D Center

Developing products and applications

UACJ conducts R&D on aluminum and its many useful properties with a view to promote applications across a broad range of industries. In collaboration with Japan's New Energy and Industrial Technology Development Organization, the Company has been using high-strength aluminum alloys for auto parts, developing an aluminum recycling process, and assessing corrosion resistance under various driving conditions. Together with Hitachi, Ltd., UACJ has been verifying a system designed to make new material development more efficient by applying the results of computer-derived material data analyses to shorten development times. With the system, the companies are aiming to reduce the weight of auto parts and quickly develop easily recyclable can stock. In addition, UACJ has partnered with SAP Japan Co., Ltd., and Doctors, Inc., to develop a medication tracking system that notifies caregivers remotely about whether patients have taken medication or

not, made possible by a pharmaceutical packaging foil that can detect whether a package has been opened. By collaborating in this way, UACJ is aiming to offer practical solutions for caregivers and patients.



In the countries where its main production plants are based—Japan, the United States, and Thailand—UACJ has established R&D facilities to help boost productivity and support manufacturing of products tailored for regional needs.

UACJ Innovation Challenge launched to create new value with aluminum

UACJ has been successful in producing high-quality products according to customers' requests, but it will need to proactively create new value in the future to ensure further growth. From that perspective, the Company's main research and development facility, the UACJ R&D Center, launched a program called the UACJ Innovation Challenge in 2019 to generate ideas about creating new value using aluminum. Among the program's activities, the center invited members of other manufacturers and trading companies as well as students to join employees in workshops designed to brainstorm ideas that can lead to innovations. It also provides support for related projects initiated by employees.



Employees who volunteered to join the UACJ Innovation Challenge program share ideas about innovation.