

Oct 28, 2021

Daicel and NTHU of Taiwan Sign Joint R&D Center Establishment Contract to Jointly Develop Revolutionary Desktop Chemical Plant

-Aiming for the implementation of sustainable process to support circular economy-

Daicel Corporation (DAICEL, headquartered in Osaka City, President/CEO Mr. Yoshimi Ogawa) and National Tsing Hua University (NTHU, located in Hsinchu City, Taiwan, President Dr. Hong Hocheng) are pleased to announce a partnership for the development of a Revolutionary Desktop Chemical Plant.



Desktop Chemical Plant (Image of proposed experimental plant)

Daicel has formulated a new long-term vision “Daicel Vision 4.0” that outlines the company’s ambition to help build the circular economy by deploying greener production technologies. Until now, Daicel has committed itself to production transformation and process innovation in order to conserve energy. However, building a circular economy and achieving carbon neutrality demands greater efforts, which has inspired Daicel to pursue the utmost in efficient production technology through development of the Revolutionary Desktop Chemical Plant. Professor Takehiko Kitamori, the Yushan Honorary Chair Professor of NTHU and Professor Emeritus of the University of Tokyo, will lead this joint research as the principal investigator to explore essential production know-how and volume-production technologies for implementation.

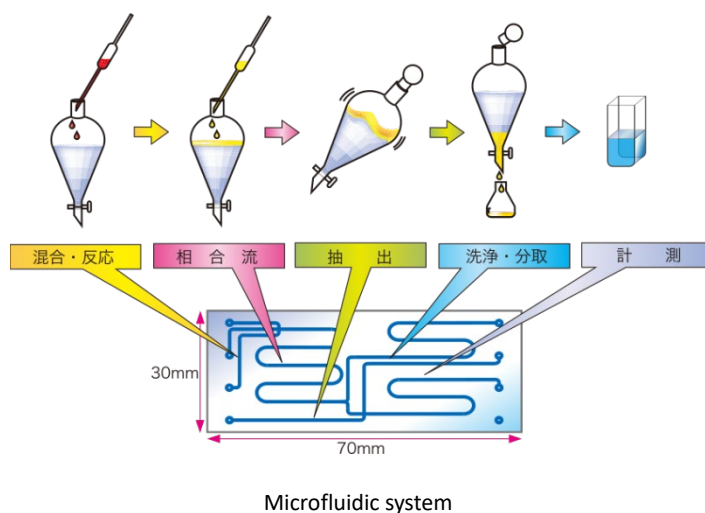
Located adjacent to Hsinchu Science Park, NTHU is acclaimed as one of the top universities in Taiwan for its prestigious research in nanotechnology. The University is also actively engaging in industry-academia alignment with Taiwanese companies. The establishment of this Daicel-NTHU Research Center will be the first one founded with a Japanese enterprise as well as the ninth joint research

center in NTHU.

This on-campus research center, functioning as the hub of the international industry-academia collaboration, is expected to accelerate the implementation of the Revolutionary Desktop Chemical Plant, which is a miniaturized chemical factory consisting of massively parallelized microfluidic devices with a gross output expected to exceed several tons annually. This research into microfluidic devices was initiated in April 2020 at the University of Tokyo by the Microfluidic Chemical Process Engineering Research Division, where Prof. Kitamori leads the study as the Project Professor.

The Revolutionary Desktop Chemical Plant is an on-demand configurable production facility, with the compelling advantages of saving both energy and resources, while generating only the output required. The implementation of such a green facility is the pathway to next-generation sustainable manufacturing that not only Daicel, but to which all sectors across the industry aspire. Daicel and NTHU will further broaden their collaboration among industry, government and academia to a global scale, to drive the realization of a circular economy and ultimate carbon neutrality.

A microfluidic system allows the mixing and extracting operations conventionally carried out with large-scale equipment to be performed using a glass chip the size of a business card. This technology has been widely used as a convenient experimental platform in diverse fields of laboratory research over the years.



<Media Contact>
Daicel Corporation
IR PR Office
TEL : 03-6711-8121