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Hokkaido University

Mitsui Chemicals, Inc.

Mitsui Chemicals Reaches Basic Agreement on Establishing Chemical Reaction Design Innovation Department at Hokkaido University ICRéDD

Hokkaido University (Sapporo; President: HOUKIN Kiyohiro) and Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) have reached a basic agreement to establish an industry creation research department. The new department will see knowledge from the fields of computational science, information science and experimental science brought together to facilitate the joint design of innovative chemical reactions, in pursuit of novel reactions that will contribute to the development of high-performance materials and the achievement of a circular society. Located within the Institute for Chemical Reaction Design and Discovery (ICReDD) at Hokkaido University's Creative Research Institution, the Mitsui Chemicals-ICReDD Innovative Chemical Reaction Design Laboratory (Mitsui Chemicals-ICReDD Laboratory) is due to begin operating in April 2023.

Hokkaido University and Mitsui Chemicals will seek to make a wide-ranging contribution to society by developing high-performance materials and new reactions here, based on the science of chemical reaction design and discovery.

Overview of Mitsui Chemicals-ICReDD Laboratory

Official name	Mitsui Chemicals-ICReDD Innovative Chemical Reaction Design Laboratory
Focus of collaboration	Establishing and jointly operating Mitsui Chemicals-ICReDD Laboratory
Objective	Generating innovation in the field of computer-based reaction pathway design technology focused on complex chemical reactions
Period	April 1, 2023 – March 31, 2028
Location	Institute for Chemical Reaction Design and Discovery, Creative Research Institution, Hokkaido University
Areas of research	(1) Development of high-performance materials (2) Design of new reactions that will help achieve a circular society (3) Development of new technology in the fields of computational science and information science

◆ Aims of Mitsui Chemicals-ICReDD Laboratory

Mitsui Chemicals-ICReDD Laboratory will be the venue for joint research focused on the swift, high-precision design of new reactions that will contribute to the development of high-performance materials and the creation of a circular society. In doing so, the new department will draw both upon ICReDD's strength in the interdisciplinary science of chemical reaction design and discovery, which brings together computational science, information science and experimental science, and upon Mitsui Chemicals' knowledge of materials development. Additionally, efforts will focus on achieving further advances in chemical reaction design and discovery via research and development of new computational science and information science technologies.



◆ About WPI-ICReDD

The Institute for Chemical Reaction Design and Discovery (ICReDD) was founded at Hokkaido University in October 2018 after being selected for inclusion in the World Premier International Research Center Initiative (WPI), a grant program launched by the Ministry of Education, Culture, Sports, Science and Technology to promote the formation of international research centers. ICReDD is one of 17 centers established as part of WPI, whose objective is to build within Japan “globally visible” research centers that boast a very high research standard and outstanding research environment.

Under the guidance of the institute's director, ICReDD researchers seek to economically design and control the chemical reactions essential to the future survival of humanity by blending knowledge from the disciplines of computational science, information science and experimental science. They also aim to create new chemical reactions and materials, and to establish the new interdisciplinary academic field of chemical reaction design and discovery, which will facilitate the economical, efficient development of chemical reactions.

◆ About Hokkaido University

Founded in 1876 as Sapporo Agricultural College, Hokkaido University is one of the oldest, largest, and most prestigious universities in Japan. The university attracts prospective students all around the globe with the diverse degree programs offered and the all year round scenic beauty. The campuses are located in the cities of Sapporo and Hakodate of Hokkaido and 21 facilities are spread throughout Hokkaido and mainland Japan, contributing towards the resolution of global issues.

◆ About Mitsui Chemicals

In formulating its VISION 2030 Long-Term Business Plan in 2021, Mitsui Chemicals made digital transformation a key business priority and set out on company-wide efforts toward this end. The company believes that by leveraging digital transformation to strengthen its development capabilities for products and businesses, it will be able to achieve a corporate transformation, and in turn contribute to the solution of various social issues. Mitsui Chemicals is also pursuing initiatives that focus on using the company's supply of products to help bring about a circular society in harmony with the environment.