Research and Development Network

- A Seed for Innovation

In cooperation with Hitachi, Ltd., we, Hitachi Chemical group, are actively expanding our global research and development centers to realize the next “Wonders” for the solution of social issues.

We will further accelerate our development and commercialization speed by expanding our research networks with outside organizations, and by alliances with venture enterprises that have unique state-of-the-art technologies.

Global Research and Development Network

We have established research and development centers in three regions, Japan, the United States and China, to grasp state-of-the-art technological trends and to speedily incorporate society and customer needs in its research and development hand in hand with local corporations and group companies.

Advanced Technology Research & Development Center

Conducting its operations mainly in Tsukuba, Yamatsuku, Shihrome and Saitama in Japan. We will continue to extensively develop innovative core technologies for creating new businesses.

Overseas Centers

Hitachi Chemical Co., America, Ltd. R&D Center (in the United States, left picture)
Hitachi Chemical Shanghai Jiao Tong University R&D Center (China, right picture)

Promotion of Open Innovation

In the commercialization phase, Hitachi Chemical group is promoting joint development, technical collaboration, and other alliance schemes with venture enterprises that have unique technologies, in addition to joint research with external research organizations. In 2017, we opened the “Innovation Center,” a facility for new innovations through collaborative creation. We exhibit our technologies through experience-based exhibitions, there, and are accelerating the creation of “wonders,” to exceed the expectations of customers.

Research and Development Solutions

Solving Problems with You as a Partner

In collaboration with the manufacturers of equipment and other materials, Hitachi Chemical group makes proposals stepping into the know-how of material combinations and manufacturing processes, in addition to the supply of materials, to solve product development problems encountered by customers.

Under the concept of “Collaborative Creation,” we will actively undertake these to provide solutions.

Flow for Proposal

Material Design and Development

- Resin design, device design, etc.
- Setting of material usage conditions

Prototyping

- Recreation of customer manufacturing environment
- Test run of a series of manufacturing processes

Reliability Evaluation

- Varying chemistry among materials
- Varying fitness with equipment or system

Case of Activity in Semiconductor Materials

Hitachi Chemical group supplies a wide range of semiconductor materials, including photosensitive coating materials and CMP slurries used in the wafer process as well as die-bonding materials and molding compounds used in the fabrication process. At our Packaging Solution Center in Shin-Kawasaki launched in 2019, we have packaging equipment, analysis and evaluation equipment, and simulation systems for thermal stress and fluid analysis, which allow for the prototyping of next-generation semiconductor packages. We are making efforts to shorten the development period for new materials and to propose new packaging processes by performing packaging and evaluation together with our customers, equipment manufacturers, and other material manufacturers.

Product Development Operations Outside of Japan

We are opening sites which operate product development, provide technical support, and design outside of Japan to quickly provide solutions to our overseas customers.