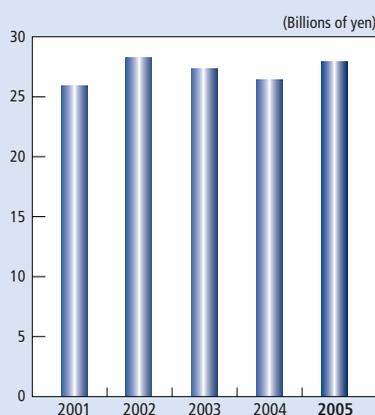


Research and Development Activities

R&D Policy and Organization

While technological innovation is rapidly progressing in a wide diversity of fields, the role that R&D plays in management is becoming increasingly important. The Shin-Etsu Group's fundamental R&D policy is to place importance on market and customer needs. Toward this goal, we strive to detect not only those needs that are already clear but also those that are still latent. We also aim to develop and offer products to customers in the timeliest way.

R&D Expenses



In product development, we pursue the application of technologies that can differentiate our products from those of other companies because that approach is the essential element to win in the competitive marketplace. Accordingly, the Shin-Etsu Group, with its own proprietary technologies as a core, has created new technologies that have led to the development of new products with the world's top level of technological competitiveness. In addition, by organically utilizing the Shin-Etsu Group's 11 research centers in Japan and Germany and its more than 900 researchers, the Group has in place an efficient and dynamic R&D organization that through selection and concentration is producing impressive research results.

Number of Patents by Region

	Number of patents acquired during 2004	Cumulative number of patents acquired as of the end of fiscal 2005
Japan	347	4,112
North America	216	2,079
Asia/Oceania	206	891
Europe	298	1,492
Other Areas	0	9
Total	1,067	8,583

Innovation Enhances Existing Businesses

In The Shin-Etsu Group's existing businesses, it is important to build strong relationships of trust by fully satisfying customers' needs through the unified linkage of the tripolar areas of R&D, production and sales. The Group's present R&D is focusing on efforts to provide total customer satisfaction, and our researchers are striving to maintain and improve technologies and product quality while maintaining close contact with customers. The Group will continuously seek to develop new applications and new products and thereby help develop and strengthen the Group's competitive edge.

Emphasis on New Business Development

New research theme proposals can be submitted at any time from any of Shin-Etsu's divisions, but mainly are proposed by staff at the research centers, and new themes are selected by the New Z Committee, chaired by the Company president, based on the standards of technology, market size, growth potential and expected profitability. A new research project will start after the most appropriate researchers are gathered together from throughout the Company. The New Z Committee will follow up and regularly check the progress of the project with the aim of commercializing a new product over the medium term. Currently, over 10 research themes are progressing with

high expectations for commercialization.

The Shin-Etsu Group regards patents as the capstone of R&D activities, and thus concentrates on the acquisition of intellectual property rights. As important management assets, the Group uses patents to positively develop its business activities. At the end of March 2005, the Shin-Etsu Group as a whole holds 4,112 domestic and 4,471 overseas patents. In addition, Shin-Etsu obtained 173 patents in the U.S. in 2004, ranking No. 1 among Japanese chemical companies.

An Efficient, Effective R&D

To effectively use its limited research resources and to make the research more efficient, the Shin-Etsu Group has been aggressively working on joint research projects with other companies and universities. In particular, such coordinating projects with universities are an effective way to conduct basic research and create innovative technologies, and we plan to continue making strong efforts of this type.

The Shin-Etsu Group considers that R&D with originality is the driving force for its future growth and development. By intensively searching for the answers to such key questions as "What do our customers need now?" and "What is being sought in the market?" we will aggressively develop R&D activities that will continue to fulfill the needs of the times and also lead to improved product quality and productivity of existing products.

PVC & Polymer Materials Research Center



(Shin-Etsu Chemical, Kashima, Japan)
This research center supports the Shin-Etsu Group's worldwide PVC manufacturing bases, with research on the manufacturing process aiming for productivity improvement and higher consistent quality of PVC, in addition to applied research. Furthermore, the center is developing flexible copper-clad laminates that use the Company's proprietary plastic-molding technologies.

Silicone-Electronics Materials Research Center



(Shin-Etsu Chemical, Gunma, Japan)
As a comprehensive development center of silicones and organic electronics materials, this is the Group's largest research center and engages in a broad range of R&D areas from basic research to applications. This center also takes charge of developing SHIN-ETSU SIFEL®, a new liquid fluoroelastomer developed with the Group's own raw material and proprietary synthetic technologies.

Specialty Chemicals Research Center



(Shin-Etsu Chemical, Naoetsu, Japan)
Using proprietary organic synthesis technologies, this center is working to develop a variety of cellulose derivatives, synthetic aroma chemicals, synthetic pheromones, and specialty silanes. The center is also active in the development of synthetic quartz substrate materials.

New Functional Materials Research Center



(Shin-Etsu Chemical, Naoetsu, Japan)
This center is a base for the development of KrF photoresists for excimer lasers, in which the Group holds the top share in the world market. It is also presently working on the development of next-generation photoresists materials such as ArF.

Advanced Functional Materials Research Center



(Shin-Etsu Chemical, Gunma, Japan)
Based on its accumulated single-crystal-growing, fine-processing, and thin-film technologies, this center is undertaking development in a wide range of advanced materials including oxide single crystals and synthetic quartz. In addition, this center is in charge of developing optical components for isolators and other applications.

Magnetic Materials Research Center



(Shin-Etsu Chemical, Takefu, Japan)
Supporting our rare-earth-related businesses, this comprehensive research center engages in a wide spectrum of research ranging from the separation and refining of rare earths to their applications. This center also concentrates on research on applications for rare-earth metals and oxides, and on the development of rare earth magnets. In particular, this facility has earned high acclaim from customers for its magnetic field analysis and magnetic circuit design technologies.

Semiconductor Research Centers



Isobe

(Shin-Etsu Handotai, Isobe and Shirakawa, Japan)
Based on cooperative ties, these centers are working to support improvements in the quality of silicon wafers in such areas as crystallization and flatness. They are also progressing with the development of technologies for the introduction of large-diameter and high-flatness wafers.



Shirakawa

Research Center of Product & Process Development of Cellulose Derivatives



(SE Tylose, Wiesbaden, Germany)
Built beside the SE Tylose plants, this center focuses on methylcellulose and hydroxyethylcellulose.