Investing to Create Value

The key to success for a materials manufacturer lies in building relationships of trust with customers by listening humbly to their requests and opinions, and developing and offering products that meet their needs in a timely fashion. This requires technological capabilities and speed. For this reason, a tripartite business structure incorporating sales, research and production is essential. This business structure, which Shin-Etsu established early on, now permeates throughout the Group as a kind of basic policy, and serves as an engine of Shin-Etsu's success as a continuous market leader.

Yoshiaki Ono
General Manager, Silicone-Electronics Materials Research Center,
R&D and Patent Department and New Products Department

Thorough Customer Communication and Original Technologies Produce Distinctive Products

The Shin-Etsu Group's fundamental R&D policy is to develop products that customers find valuable and to supply them ahead of competitors. We do so by using close communication to thoroughly draw needs, including latent ones, from customers.

In product development, we believe that technologies that can differentiate our products from those of other companies are essential to staying ahead of the competition. The Shin-Etsu Group consistently maintains its world-class technological competitiveness by using its core original technologies, gained through the process of adapting to increasingly diverse and high-quality products, to produce new technologies.

In these existing businesses, the Shin-Etsu Group promotes development of new applications and new products that meet customers' needs. The Group does so by rapidly sharing information with customers under its tripartite business structure. Sales and research staff work together as one team to build strong relationships with customers by following up on their needs. This enables the Shin-Etsu Group to continuously find research themes with high growth potential. The Group's semiconductor silicon and its related materials constitute an excellent example of a business that has grown significantly from beginnings as a research theme found in this manner. After developing new materials, the sales and research staff work closely with production divisions to bring them rapidly to commercial production with efforts to maintain and enhance their quality. This kind of stable commercial production capability is also a strength of the Shin-Etsu Group.

New research themes can be proposed at any time from any of Shin-Etsu's divisions, but mainly by staff at the research centers. These 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 regularly follow up and 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.

Highly successful products that have emerged from businesses created through this system include photoresists and fluororubber. Shin-Etsu Group researchers are not bound by existing research topics and can think freely to propose research themes in areas outside of their fields. This system helps to increase motivation and technological capabilities, thereby contributing to the development of the entire Shin-Etsu Group.

Number of Patents by Region

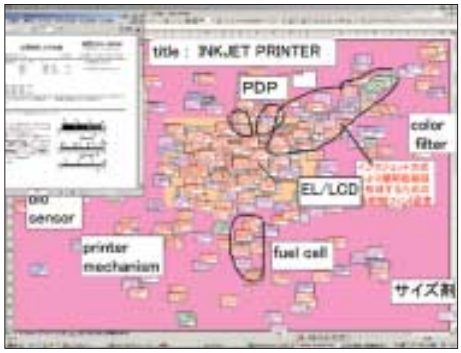
	Number of patents acquired during 2005	Cumulative number of patents acquired as of the end of fiscal 2005
Japan	406	4,187
North America	167	2,089
Asia/Oceania	192	1,068
Europe	183	1,614
Other Areas	0	10
Total	948	8,968

Intellectual Property Strategy

The Shin-Etsu Group recognizes that intellectual property, including patents and technological expertise, is an important management resource, with protection of its rights through patent acquisition positioned as the final step in the research process. The Group is enhancing the studies it makes of patent acquisition issues to determine if the Group's technologies under development are ahead of other companies and how such technologies can best be managed with patents, and aggressively using the results of these studies in business activities. The Group's intellectual property strategy has been recognized in the business community, earning top place in the ranking of corporate intellectual property strategy management conducted by Intellectual Property Bank Corp.

At the end of March 2006, the Shin-Etsu Group as a whole holds 4,187 domestic and 4,781 overseas patents. In addition, Shin-Etsu obtained 121 patents in the U.S. in 2005, ranking number one among Japanese chemical companies.

In addition, a Group company, Shin-Etsu Polymer Co., Ltd., has developed a patent data analysis system for viewing thousands of public Japanese patents. The Group uses the system to compare its research areas of focus and R&D activities with those of other companies in a variety of ways. This system has been introduced by The Japan Intellectual Property Association and other organizations.



Shin-Etsu Polymer Co., Ltd.'s patent data analysis system enables viewing of the distribution of patents by theme.

Intellectual Property Strategy Management Ranked Number One

Intellectual Property Bank Corp. (IPB), which is involved in patent evaluation, published a "Company Ranking of Intellectual Property Strategy Management" in the July 12, 2005 issue of the *Nikkei Shimbun* newspaper. Shin-Etsu was ranked first among 485 companies in the five fields of chemicals, pharmaceuticals, electricity, automobiles and precision machinery. The result was based on IPB's analysis, which determined that Shin-Etsu's collection of technological data and close cooperation among divisions were effective in strengthening the competitiveness of its products.

The Shin-Etsu Group concentrates its R&D on the three fields of flat-panel displays, mobile phones and semiconductors. The following introduces products developed in these three fields.

Flat-Panel Displays

Synthetic Quartz and Large-Size Photomask Substrates Used in the Manufacturing of LCDs

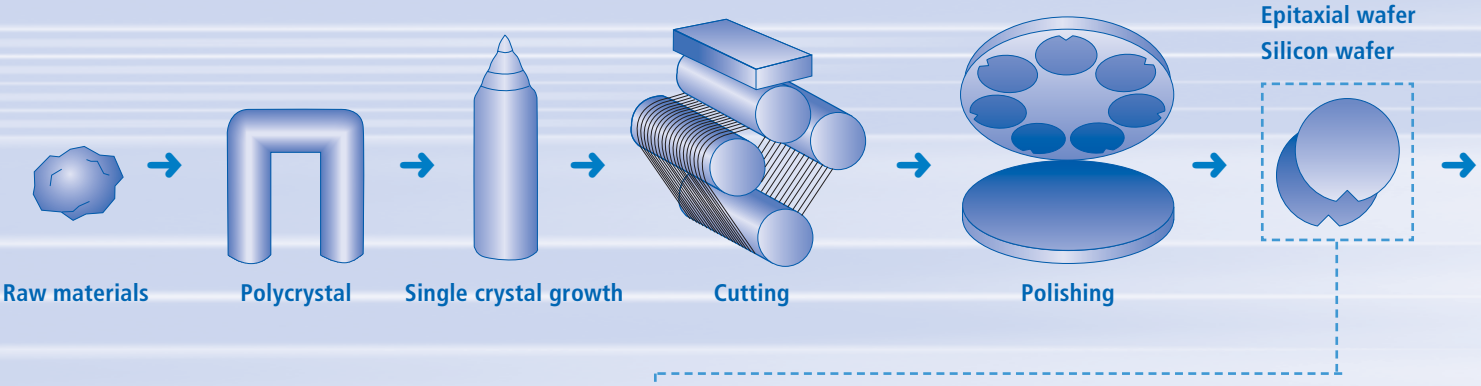
Driven by the Group's silicon technology, Shin-Etsu was the first company in the world to commercially produce super-high-purity synthetic quartz, which is significantly higher in purity than natural quartz. Shin-Etsu brought this large-size product to market ahead of other companies as a mask for integrated circuits. After this success, the Shin-Etsu Group took up the challenge of developing applications for large-size photomask substrates, which are essential to the manufacture of flat-panel displays. Fully utilizing Shin-Etsu's polishing technologies, the Group succeeded in overcoming challenging barriers to obtain a high degree of flatness in the photomask substrates. The Group has the top global market share in large-size photomask substrates for use in the manufacture of liquid crystal displays (LCD).

Mobile Phones

Silicone Rubber Keypad (Rubber Contact)

Silicone rubber for use in keypads was developed and produced by Shin-Etsu Chemical in the 1970s, and since then it has been processed by Shin-Etsu Polymer Co., Ltd. Shin-Etsu also developed selective adhesion, an epoch-making technology by which liquid silicone rubber adheres directly to plastics without adhesion to molding-metal. This significantly reduces costs, giving Shin-Etsu unrivaled cost competitiveness. In 2003, selective adhesion technology received the Silicon Chemistry Technology Award

Among these fields, various products developed by Shin-Etsu are indispensable to semiconductor materials and their production processes.



300mm Silicon Wafers

Shin-Etsu was the first company in Japan to design and produce silicon wafers. Since then, the Shin-Etsu Group has been providing products that quickly and accurately meet customers' needs, and began the world's first commercial production of 300mm silicon wafers in 2001. Shin-Etsu Handotai Co., Ltd. has established defect-free technology for single crystals, gaining strong customer trust for its commercial production capabilities and quality technologies, and has maintained its position as the world's largest manufacturer of silicon wafers.

Quartz Glass for Semiconductor Production Processes

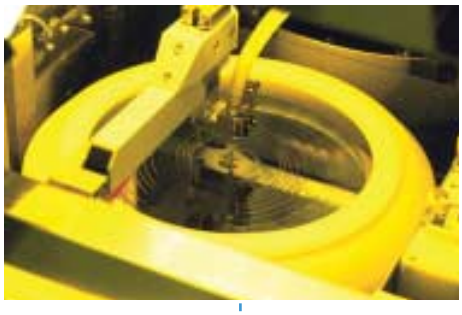
Improvements in the degree of integration of semiconductors necessitates greater levels of purity and accuracy of quartz glass for semiconductor production processes, which can be achieved through means including further miniaturizing production processes. The Shin-Etsu Group provides highly functional materials and products based on its expertise in silicon chemistry technologies. In particular, synthetic quartz glass, which has dramatically improved heat resistance, has an excellent reputation due to its ability to meet the needs of high-humidity processes in ultra-clean rooms.

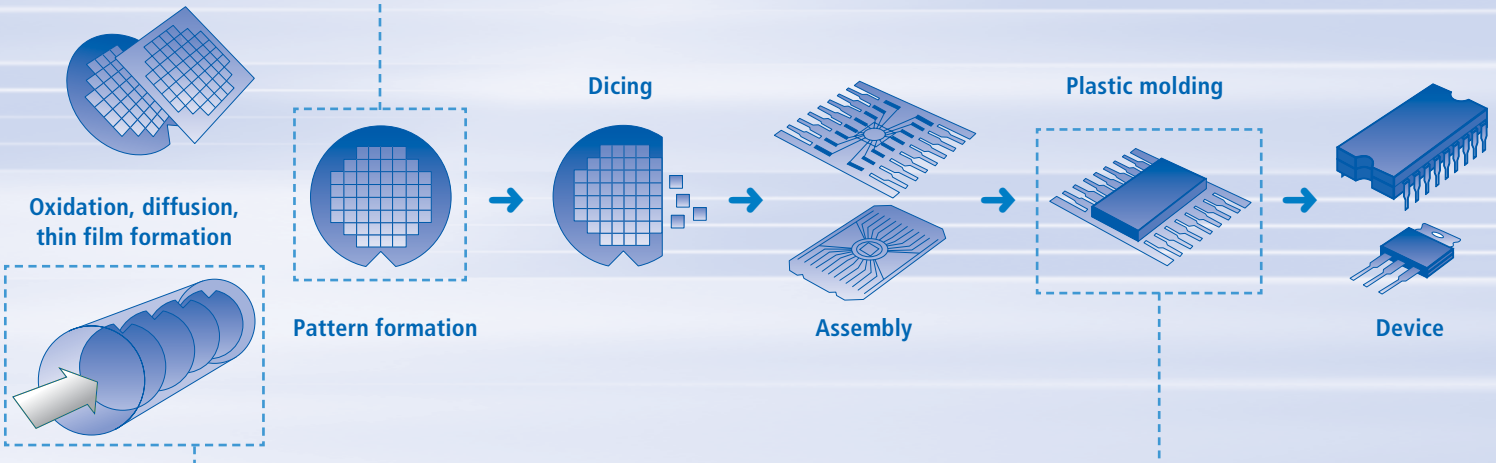
presented by The Society of Silicon Chemistry, Japan, the world's first academic society for silicon research.

Semiconductors

Photoresists

Photoresists are used to imprint integrated circuits (IC) on silicon wafers during semiconductor manufacturing. They play an important role in IC miniaturization, which influences the data volume of the semiconductor. Highly integrated semiconductor devices require both miniaturization of the circuit pattern and advanced exposure technology. In 1996, Shin-Etsu utilized its polymerization technology to develop the first photoresist for use with KrF (krypton fluoride) excimer lasers, which use short wavelengths. Shin-Etsu's strengths as the leading manufacturer in this field include: 1) status as the world's only photoresist manufacturer with an integrated production system for a range of products beginning with base polymers; and 2) its consultation process with customer engineers who make decisions relating to all aspects of production, from making specifications to product delivery.





Epoxy Molding Compounds

Epoxy molding compounds (EMCs) are widely used as an encapsulation material for all kinds of semiconductor packaging. Shin-Etsu developed EMCs using the plastic modifier technology that it had cultivated in the field of silicone development. These highly functional products meet strict requirements for plastic molding and have excellent humidity resistance, high heat-conductance and formability. In addition, Shin-Etsu has introduced a new proprietary heat-resistance system, a "green" halogen and antimony trioxide-free EMC that contributes to environmental conservation.