

# Staying on the Cutting-edge and Realizing Future Ambitions



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Technology convergence is accelerating with each passing day, and competition continues to grow more severe, increasing uncertainty in the market and raising technology barriers. LG Chem first got into information & electronic materials through in-house R&D and now this segment has been cultivated into a mainstay business. To stop research means to go backwards, but we must accelerate our advance. We are developing core technologies that will set us apart and are bolstering our product competitiveness. These core competencies will allow us to also develop new business lines to serve as new growth engines. To this end, we are first focusing of furthering our capabilities in information & electronic materials to go beyond simply satisfying customers. Our goal is to play a key role in transforming the products our customers use.

We are developing new applications for chemicals & polymers. At the same time sophisticated IT tools such as computer simulations are being used to develop processes that can greatly improve profitability.

Moving to industrial materials, new technologies are being integrated applied to develop new-concept items that boost profitability in the Korean market. We are also seeking out new breakthroughs that will allow us to globalize this product line.

New businesses that will mainly drive future growth include next-generation displays, environmental protection and energy. We will accelerate our progress in these areas in the coming year by stepping up R&D and forming new alliances with global partners.

Constant innovation and strong execution in R&D will fuel our effort to develop truly “world-class” products that rend existing items obsolete.

## 2003 RESULTS

The 2001 breakup of LG Chemical set LG Chem on a new course, and the company has increased research spending over 20% annually since then. Development of core technologies indicates how the company intends to upgrade product lines and overall business structure. In 2003, rechargeable batteries and polarizers have laid a solid foundation for a thriving information & electronic materials business. New items have been steadily introduced in the chemicals & polymers and industrial materials areas as well. As a result, sales of new items developed in-house have accounted for 30% of total sales.

For example, LG Chem has exclusively developed basic technology to make materials for OLED, a future business with strong potential. The company is now in a position to develop new OLED materials in Korea for the first time, diminishing domestic reliance on imports.

LG Chem introduced the world to the first cylindrical 2,400mAh rechargeable battery, seizing a competitive edge in the global market.

Research in chemicals & polymers have led to multiple applications of new catalysts and processes that elevated the quality and price competitiveness of the company's mainstay

products. At the same time, R&D continued to create new specialty products. The company-developed environment-friendly plasticizers produce downstream products that can satisfy increasingly stringent environmental regulations worldwide.

R&D for industrial materials is aimed at introducing new-concept products that can stand out in the highly competitive domestic and international markets. Heatix, a dry air indoor heating system, is garnering favorable attention for its high quality and easy installation. In addition, newly developed finishing materials for the construction and interior design industries reduce or eliminate harmful elements in the indoor environment.

### THE ROAD AHEAD

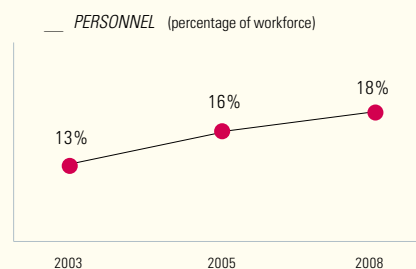
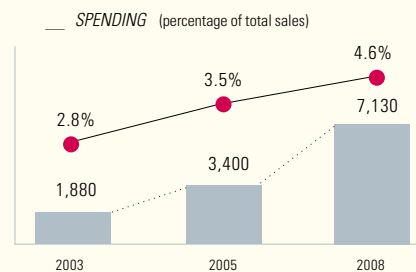
The market is characterized by accelerated new technology development and convergence, and speed is now an essential factor for success. LG Chem is now focused on speeding up progress on the following three levels to be a global leader in an uncertain future:

First, technology development will not only allow the company to enter markets with high growth potential but hasten the creation of new emerging markets. For example, LG Chem will devote tremendous efforts to achieve tangible results in future growth engines such as organic microelectronics, environmental protection and energy.

Second, distinctive new products developed with core technologies will let the company be first to break into areas with great growth potential but will soon be hotly contested. To this end, organic synthesis catalysts, processes, adhesives, coatings, computer modeling & simulation, analysis, and other essential technologies owned by the company are being upgraded and applied. At the same time, strategic alliances are being formed for joint research that will quicken development of new high-performance items. Third, the price and quality competitiveness of items in mature markets will be raised faster than ever before. This is being done by applying new processes and catalysts as well as using IT tools to improve productivity.

These steps will make R&D a robust growth engine allowing the company to achieve its vision for innovation.

### >> R&D INVESTMENT



Research Facilities	Key Research & Development Areas	Location
Corporate R&D	<ul style="list-style-type: none"> <li>Core Technology Platforms (Catalysis, Process, Analysis, Modeling &amp; Simulation, Adhesive, Coating)</li> <li>New Business (Semiconductor materials, Organic microelectronics, Optical materials, Functional materials, etc)</li> </ul>	Daedeok
Battery Research Institute	High-performance Lithium ion batteries (LiLB, LiPB)	Daedeok
Battery Tech Center	Lithium ion batteries Development & Spec-in	Daedeok, Ochang, Seoul
Information & Electronic Materials Research Institute	Optical materials for displays, PCB materials, Digital Imaging materials, Phosphors, Color photoresists for LCD	Daedeok
Industrial Materials Research Institute	High-performance industrial materials, Decorative materials, Industrial Films	Cheongju, Daedeok
Petrochemical Product & Process Research Institute	Specialty chemicals, Polymers, Acrylates	Yeosu, Naju, Daedeok
Polyolefin Research Institute	Polyolefin resins, metallocene catalyst	Daedeok, Daesan
Performance Polymers Research Institute	High-performance ABS & ASA, functional latex resins	Yeosu, Daedeok
Technology Intelligence Center	Intellectual property, technology intelligence, and IT services	Daedeok
Maryland Satellite Lab	Polymer processing Modeling	Maryland, USA
Compact Power Inc.	Electric vehicle lithium battery module	Colorado, USA