Leading with Science for Sustainability

LG Chem

WeConnectScience
Contents

Introduction of LG Chem

01 ——— Introduction of LG Group
02 ——— Introduction of LG Chem
03 ——— Business of LG Chem
**LG Group History**

- **1947**: Established as Lucky Chemical Industrial Co. (now LG Chem)
- **1958**: Established as Goldstar Co. (now LG Electronics)
- **1987**: Completed ‘Lucky Gold Star Tower’
- **1995**: Established as a New Corporate Identity (Lucky Goldstar → LG)
- **1996**: Established as LG Telecom (now LG U+)
- **2003**: Established as LG Corp.
- **2017**: LG Group’s 70th Anniversary
- **2021**: LG Group spined-off LX Group
LG Group | Affiliates

**Chemicals**
- LG Chem
- LG Energy Solution
- LG Household & Healthcare
  etc.

**Electronics**
- LG Electronics
- LG Display
- LG Innotek
  etc.

**Telecommunications & services**
- LG U+
- LG CNS
- LG Sports
  etc.

**Affiliates**
- 63
  *Overseas Corporations 350 (Approx)*

**Workforce (Worldwide)**
- 280,000 (Approx)

**Annual Revenue**
- USD 120.8bn (Approx)
Sustainable Innovation for a Better Life

**Chemicals**
- ABS Plastics  
  Global No.1
- Life Sciences  
  Domestic 1st New Drugs  
  U.S FDA Approval
- Battery for EV  
  Global No.1 (by Contract Size)
- Cosmetics  
  Domestic No.1

**Electronics**
- Large OLED TV Panel / Rollable TV  
  World’s 1st Global No.1
- Home Appliance  
  Domestic 1st (W/M, REF, A/C)
- Automotive Display  
  Global No.1
- Smartphone Camera /3D Sensing Module  
  Global No.1

**Telecommunications & services**
- U+ 5G  
  5G Network  
  World’s 1st
- IoT @home  
  Home IoT  
  Domestic No.1
- Platform Business
  - CloudXper
  - Cityhub
## LG Chem | History

Since its founding, LG Chem is vigorously moving forward towards a sustainable future.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>2001</td>
<td>2016</td>
</tr>
<tr>
<td>Established as Lucky Chemical Industrial Corporation</td>
<td>Spinned off business entities (LGCI, LG Chem, LG Household &amp; Healthcare)</td>
<td>Acquired Dongbu Farm Hannong (Farm Hamong)</td>
</tr>
<tr>
<td>1969</td>
<td>2003</td>
<td>2017</td>
</tr>
<tr>
<td>Listed on Korea Stock Exchange</td>
<td>Acquired Hyundai Petrochemicals Factive became first Korean new drug to receive U.S. FDA approval</td>
<td>Merged with LG Life Sciences Co., Ltd</td>
</tr>
<tr>
<td>1974</td>
<td>2004</td>
<td>2019</td>
</tr>
<tr>
<td>Renamed as Lucky Corporation</td>
<td>Developed the world's first nanotechnology-applied new EP material</td>
<td>Completed construction of Korea's largest petrochemical tech center (in Osan)</td>
</tr>
<tr>
<td>1976</td>
<td>2005</td>
<td>2019</td>
</tr>
<tr>
<td>Completed construction of Yeosu PVC Resin Plant</td>
<td>Established LG Chem (China) Investment Co., Ltd</td>
<td>Opened the Global Innovation Center in the bio sector (in Boston)</td>
</tr>
<tr>
<td>1979</td>
<td>2007</td>
<td>2020</td>
</tr>
<tr>
<td>Opened Daedeok Central R&amp;D Center</td>
<td>Merged with LG Petrochemicals Co., Ltd</td>
<td>Acquired separator business</td>
</tr>
<tr>
<td>1991</td>
<td>2008</td>
<td>2021</td>
</tr>
<tr>
<td>Developed the world's first 4th-generation cephalosporin antibiotics</td>
<td>Developed Korea’s first metalloocene-based elastomer</td>
<td>Started construction of Cathode Material Plant for Gumi-type jobs (LG BCM)</td>
</tr>
<tr>
<td>1995</td>
<td>2009</td>
<td>2022</td>
</tr>
<tr>
<td>Renamed as LG Chem, Ltd. Completed construction of Tianjin PVC plant in China</td>
<td>Spinned off Industrial Materials Business (now LX Hausys)</td>
<td>Established a separator joint venture with Toray in Hungary</td>
</tr>
</tbody>
</table>
2019: First Korean Chemical Company in

GLOBAL TOP 10

* Source: Chemical & Engineering News, American Chemical Society)
### Top 10 Most Valuable Brands

<table>
<thead>
<tr>
<th>Rank</th>
<th>Brand</th>
<th>Change</th>
<th>2021</th>
<th>2020</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BASF</td>
<td>↓</td>
<td>$8.3bn</td>
<td>$7.3bn</td>
<td>+15%</td>
</tr>
<tr>
<td>2</td>
<td>SABIC</td>
<td>▲ 1</td>
<td>$7.7bn</td>
<td>$4.0bn</td>
<td>+16%</td>
</tr>
<tr>
<td>3</td>
<td>LG Chem</td>
<td>▲ 1</td>
<td>$4.3bn</td>
<td>$3.6bn</td>
<td>+19%</td>
</tr>
<tr>
<td>4</td>
<td>Dow</td>
<td>▼ 1</td>
<td>$4.3bn</td>
<td>$3.7bn</td>
<td>+15%</td>
</tr>
<tr>
<td>5</td>
<td>Linde</td>
<td>↓</td>
<td>$3.6bn</td>
<td>$2.7bn</td>
<td>+34%</td>
</tr>
<tr>
<td>6</td>
<td>Evonik</td>
<td>↓</td>
<td>$3.0bn</td>
<td>$2.3bn</td>
<td>+33%</td>
</tr>
<tr>
<td>7</td>
<td>Asahi Kasei</td>
<td>↓</td>
<td>$2.3bn</td>
<td>$2.1bn</td>
<td>+9%</td>
</tr>
<tr>
<td>8</td>
<td>Shinetsu</td>
<td>NEW</td>
<td>$2.3bn</td>
<td>$1.6bn</td>
<td>+43%</td>
</tr>
<tr>
<td>9</td>
<td>Mitsubishi Chemical</td>
<td>↓</td>
<td>$2.1bn</td>
<td>$1.9bn</td>
<td>+14%</td>
</tr>
<tr>
<td>10</td>
<td>Samsung</td>
<td>NEW</td>
<td>$2.1bn</td>
<td>$1.4bn</td>
<td>+55%</td>
</tr>
</tbody>
</table>

**Brand value of chemical companies**

“Global No.3”

*Source: Brand Finance Group, U.K.*
Prospering In the pandemic

TOP 100

* Source: Financial Times, 2020
To achieve our vision, “We Connect Science to Life for a Better Future,” LG Chem will become Top Global Science Company that leads with Science for Sustainability.
LG Chem Sustainability Roadmap

Through the implementation of our sustainability strategy, we will secure future growth engines and enhance ESG competitiveness.

LG Chem Innovative Sustainability

**Vision**
Deliver advanced, innovative and sustainable solutions for our environment and society

**Strategic Directions**
- Leading Sustainable Innovation for Customer
- Managing the Impacts of Climate Change
- Making a Positive Contribution to Society

**Key areas**
- Responsible Products *
- Circular Economy *
- Environment Protection (ZWTL) *
- Climate Action *
- Renewable Energy *
- Water Management *
- Responsible Supply Chain *
- Human Rights / Diversity
- Safety / Wellness

* LG Chem’s top priority
Carbon-neutral growth by 2030, Net-Zero by 2050

**Accelerate decarbonization**
- Convert to low-carbon fuel by introducing hydrogen and eco-friendly raw materials
- Convert 100% to renewable energy
- Offset carbon emissions

**Strengthen competitiveness of low-carbon products through LCA**
- To be applied for all Korean/overseas products in 2023

**Become a global leader in climate response**
- The first and only Asian member of WEF Alliance of CEO Climate Leaders

*Alliance of CEO Climate Leaders: Climate alliance with over 30 corporate CEOs and government officials worldwide.*
Towards Top Global Science Company

Sustainable business centered around eco-friendly materials
- Accelerate development of bio materials
- Establish circular economy of waste plastics
- Foster renewable energy material business

Battery material-oriented e-Mobility
- Produce first-rate cathode materials in the world
- Expand core material business for secondary batteries
- Reinforce R&D for next-gen battery materials

World-class innovative drug development
- Expand domestic top-level pipelines
- Develop global clinical trials and accelerate business
- Bolster investment in R&D for new drug development
Eco-friendly Material Brand LETZero

A compound word of “Let” and “Zero,” which means “to turn harmful substances to the environment and the net increase in carbon emissions into zero.”

LETZero Product Line

<table>
<thead>
<tr>
<th>Recycle</th>
<th>Bio materials</th>
<th>Biodegradable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR ABS</td>
<td>Bio-circular balanced SAP</td>
<td>PLA</td>
</tr>
<tr>
<td>PCR PC, PCR PC/ABS</td>
<td>Bio-circular balanced NPG</td>
<td>PLH</td>
</tr>
<tr>
<td>PCR PP, PCR PE</td>
<td>Bio-circular balanced IPA</td>
<td>PBAT</td>
</tr>
<tr>
<td></td>
<td>Bio-based PA56</td>
<td></td>
</tr>
</tbody>
</table>

LETZero Certification

Royal Botanic Toothpaste by LG Household & Health Care with LETZero Certification

PCR (Post-Consumer Recycled) Bus stop built, remote control with PCR materials
Towards Top Global Science Company

**Foster bioplastics and low-carbon technology**
- Mechanical/chemical recycling technologies
  - Develop and commercialize biodegradable plastics
  - CO2 capture/utilization technology

**Improve battery performance and safety**
- Develop next-gen battery materials
  - Develop single-crystal cathode materials
  - Develop new materials for separators/pure silicon electrode materials
  - Material technology for all-solid-state batteries

**Gain leadership in cancer/autoimmune diseases, diabetes/metabolic diseases**
- Accelerate global clinical development for new drug projects, e.g., gout, NASH, and obesity
- Implement multi-modality strategies for cell/gene therapy

* Various approach to drugs
LG Chem | R&D Status

* Included Subsidiaries

**R&D Expense**
Unit: Million USD

- 2020: 990
- 2021: 1,212
- 2022: 1,385

**R&D Workforce**
Unit: Person

- 2020: 5,300
- 2021: 6,300
- 2022: 7,151

**Intellectual Properties (Patents & Trademarks)**
Unit: Number of registrations

- **Domestic**
  - 2020: 16,148
  - 2021: 16,857
  - 2022: 17,876

- **Overseas**
  - 2020: 26,686
  - 2021: 29,517
  - 2022: 32,100
LG Chem | Financial Results
* Included Subsidiaries

**Sales in 2022**
USD 40.2bn (Approx.)

**Workforce**
19,500 (Person)
Domestic 14,500 / Overseas 5,000

**Sites of business**
60
Domestic 17 / Overseas 43

**Sales (Unit: Billion USD)**

- 2010: 2.4
- 2011: 2.6
- 2012: 1.7
- 2013: 1.6
- 2014: 1.2
- 2015: 1.6
- 2016: 1.7
- 2017: 2.6
- 2018: 2.0
- 2019: 0.7
- 2020: 1.5
- 2021: 4.4
- 2022: 2.3

**Operating profit (Unit: Billion USD)**

- 2010: 16.9
- 2011: 20.5
- 2012: 20.7
- 2013: 21.1
- 2014: 21.5
- 2015: 17.9
- 2016: 17.8
- 2017: 22.7
- 2018: 25.6
- 2019: 23.2
- 2020: 25.5
- 2021: 37.3
- 2022: 40.2
LG Chem | Business Area

Petrochemicals

- Sustainability
- Nexolution
- NCC / Polyolefins
- PVC / Plasticizers
- ABS
- Acrylates
- HPM (High Performance Materials)
- Catalyst

Advanced Materials

- Cathode Materials
- Battery Separator
- Engineering Materials
- IT Materials
- RO Filter

Life Sciences

- Primary Care
- Specialty Care
- Aesthetic
Introduction of LG Chem

Petrochemicals Company

LG Chem
Petrochemicals Company

Establishment (Year)
1976

Sales ($) *As of 2022
17.5bn (Approx)

Workforce (Person)
Domestic 6,660 / Overseas 2,294

Business Area
Petrochemical Products

- 2022
  Launched Asia's first plant-based eco-friendly ABS
  Signed a joint venture agreement to build an eco-friendly bioplastic plant with ADM in Illinois, US

- 2021
  Launched digital CRM system LG Chem On

- 2019
  Established the largest petrochemical tech center in Korea (Osan CS Center)

- 2015
  Launched Hwanam Tech Center in Nanjing, China

- 2010
  Acquired Dow Polycarbonate business

- 2007
  Merged with LG Petrochemicals Co., Ltd.

- 2003
  Acquired PVC Business of Hyundai Petrochemicals Co., Ltd.

- 1995 - 1998
  Established Manufacturing Subsidiary in China / India / Vietnam (PVC, ABS)

- 1976
  Completed construction of Yeocheon PVC resin factory
  Entry into the petrochemical business
About 50 bio products certified by ISCC Plus

World's first mass production of bio-circular balanced SAP

Launched Asia's first plant-based ABS

Strengthened partnership to internalize bio materials production/development (e.g. joint venture with ADM)

Produce high value-added products for solar panels

Establish eco-friendly biomass power plant

Establish CCU plant to produce blue hydrogen

Produce mechanical recycling products

Establish mass production and chemical recycling system

Establish Closed-Loop system of waste plastics

(Discover new renewable energy materials)

(Establish circular economy of waste plastics)
# Production Capacity (As of 2022)

<table>
<thead>
<tr>
<th>Material</th>
<th>Capacity (KTA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene</td>
<td>3,350</td>
</tr>
<tr>
<td>Propylene</td>
<td>1,980</td>
</tr>
<tr>
<td>BD</td>
<td>510</td>
</tr>
<tr>
<td>BZ</td>
<td>900</td>
</tr>
<tr>
<td>EG</td>
<td>180</td>
</tr>
<tr>
<td>SM</td>
<td>515</td>
</tr>
<tr>
<td>Phenol</td>
<td>710</td>
</tr>
<tr>
<td>BPA</td>
<td>505</td>
</tr>
<tr>
<td>ABS/SAN</td>
<td>2,290</td>
</tr>
<tr>
<td>PS</td>
<td>40</td>
</tr>
<tr>
<td>EPS</td>
<td>90</td>
</tr>
<tr>
<td>POE</td>
<td>280</td>
</tr>
<tr>
<td>HDPE</td>
<td>730</td>
</tr>
<tr>
<td>LDPE/EVA</td>
<td>460</td>
</tr>
<tr>
<td>mLLDPE</td>
<td>600</td>
</tr>
<tr>
<td>PP</td>
<td>380</td>
</tr>
<tr>
<td>CA/EDC</td>
<td>1,150</td>
</tr>
<tr>
<td>VCM</td>
<td>1,353</td>
</tr>
<tr>
<td>NAOH</td>
<td>1,020</td>
</tr>
<tr>
<td>PVC</td>
<td>1,278</td>
</tr>
<tr>
<td>Plasticizer</td>
<td>278</td>
</tr>
<tr>
<td>PC</td>
<td>170</td>
</tr>
<tr>
<td>Oxo-Alcohol</td>
<td>299</td>
</tr>
<tr>
<td>Acrylic Acid</td>
<td>715</td>
</tr>
<tr>
<td>Acrylate</td>
<td>732</td>
</tr>
<tr>
<td>IPA</td>
<td>205</td>
</tr>
<tr>
<td>NPG</td>
<td>175</td>
</tr>
<tr>
<td>SAP</td>
<td>502</td>
</tr>
<tr>
<td>NBR Latex</td>
<td>344</td>
</tr>
<tr>
<td>Specialty Resin</td>
<td>315</td>
</tr>
<tr>
<td>Synthetic Rubber</td>
<td>365</td>
</tr>
<tr>
<td>CNT</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Sustainable Materials

LG Chem’s key competitiveness is in sustainability business, a global mega-trend that includes renewable energy and biomaterials. Using biodegradable plastics, recycling, and biomaterials, we are reducing the generation of carbon during our manufacturing processes. POE, used as a heat-sealing sheet for solar power, and carbon nanotubes (CNT), the conductive additives for lithium-ion batteries, are critical materials for eco-friendly energy development.

<table>
<thead>
<tr>
<th>Biodegradable (PLA, PH, PBAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycle, Bio-circular balanced,</td>
</tr>
<tr>
<td>Renewable energy (POE, CNT)</td>
</tr>
</tbody>
</table>

Applications

- Mulching Film
- Compostable Bag
- Electronics housing
- Solar power film
- Lithium-ion batteries
- Conductive Plastics
Nexolution materials

LG Chem is working ceaselessly to develop new functional materials with high technology barriers. Our super absorbent polymer (SAP), a highly absorbent resin used in diapers and feminine hygiene products, acquired the world’s first ISCC+ certification using plant-based materials, and our NBR latex, used in medical and industrial gloves, is recognized for the world’s highest quality with excellent tensile strength and chemical resistance. Aerogel is an effective insulant with high durability used in industrial applications such as plant piping.

SAP, NBR Latex, Aerogel

Applications

Diapers  Diapers for Seniors  Medical Gloves

Industrial Gloves  Petrochemical Plant Insulant  Marine Plant Insulant
Naphtha Cracking Center (NCC)

NCC (Naphtha Cracking Center) is a process for producing base oils for petrochemical products, such as ethylene and propylene. They are supplied as raw materials for various products such as PO, synthetic rubber, and ABS. In addition to achieving the world’s highest energy efficiency, LG Chem discovers and supplies alternative raw materials such as bio-materials and pyrolysis oil from waste plastic to reduce carbon, and develops various technologies for renewable energy and carbon capture for the eco-friendly conversion of our petrochemical plants.
**Polyolefin (PO)**

PE (polyethylene) and PP (polypropylene) are general-purpose plastics that are used in everyday life, used to make containers, packaging, and medical equipment. After use, discarded products transform into PCR PE and PCR PP through LG Chem’s mechanical recycling technology, used to produce packing film and containers.

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**LD, LLD, HD, EVA**

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**Applications**

- Medical equipment
- Ondol pipes
- Product containers
- Cable insulators
- Packaging film
- Automotive interior and exterior parts
PVC / plasticizers

PVC (polyvinyl chloride) is a material used in flooring, window frames, and building materials, characterized by excellent thermal insulation and durability. LG Chem supplies PVC made from renewable plant-based materials. Plasticizers give flexibility to PVC, and caustic soda is used in a variety of advanced industries such as wastewater neutralization and manufacturing of cathode materials. PC (polycarbonate) has excellent impact resistance and heat resistance properties and is used in home appliance housings and automotive materials.

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PVC, caustic soda, plasticizers, alcohol, PC

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Applications

- Sashes
- Flooring
- Pipes
- Cable sheath
- Cathode materials
- Car headlamps
Acrylonitrile Butadiene Styrene (ABS)

Acrylonitrile Butadiene Styrene (ABS) is a highly functional material mainly used in automobiles, home appliances, and IT devices for its excellent heat resistance, shock absorbance, and processability. LG Chem provides differentiated solutions to our customers, from producing chemical industry’s very first white-colored PCR ABS and Asia’s first eco-friendly ABS made of plant-based materials.
Acrylates

LG Chem is the only manufacturer of acrylic acid, IPA, and NPG in Korea, and produces high-quality products based on proprietary technology. Mainly used in paints, plasticizers, and SAP, Acrylates have a myriad of applications in various fields for its excellent chemical reactions. IPA is a semiconductor cleaning agent with the highest level of purity, and NPG is a highly favored eco-friendly material used to make powder coating.
High Performance Materials (HPM)

Synthetic rubber is used to produce automotive tires and golf balls. Methacrylate Butadiene Styrene (MBS) is used as an additive for impact reinforcement agents and for enhancing adhesion with other resins in bio plastic compounds. Styrene Butadiene Styrene (SBS) is used as a modifying agent for asphalt and a special additive that imparts various functions.

Rubber, SBS, MBS

Applications

- Asphalt modifiers
- Golf balls
- Shoes
- Impact modifiers
- Bio degradable
- Asphalt
Catalyst

Catalysts are the core technology for various petrochemical processes. We are the Korea’s first and world’s fourth company to independently develop catalysts for acrylic acid production. Polymer catalysts are used to manufacture metallocene polyolefins and functional chemical materials. We provide tailored solutions to customers with exceptional technology.
Introduction of LG Chem

Advanced Materials Company
Advanced Materials Company

Establishment (Year)
1999

Sales ($) * As of 2022
6.4bn (Approx)

Workforce (Person)
Domestic 4,049 / Overseas 2,217

Business Area
Battery Materials, Engineering Materials, IT Materials

- 2022 Established a cathode material joint venture with B&M, a subsidiary of Zhejiang Huayou Cobalt Co., Ltd. (Gumi)
  Established a separator joint venture LG-Toray
- 2021 Commercialized battery separators
  (Acquired separator business from LG Electronics, established LG-Toray J/V in Hungary)
- 2019 Reorganized Advanced Materials Company
  (to provide customized solutions in high-performance materials)
- 2018 Established Chinese joint venture for manufacturing
  Precursor and cathode material
- 2016 Acquired GS E&M, a renowned cathode manufacturer
- 2006 Commercialization of battery materials (cathode material, electrolyte)
- 2003 Established IT&E Manufacturing Subsidiary in Nanjing, China
- 2000 – 2004 Commercialized LCD, OLED, Process materials
- 2000 First to develop PDP fluorescent substance in Korea.
Towards World's Top Comprehensive Battery Materials Company

Global Top Tier Cathode Materials
- Strengthen metal competitiveness through owning mines and strategic cooperation with smelting and refining companies
- Develop leadership in high capacity and cost-innovative technology
- Expand business sites worldwide

Separator Business
- Initiated the development of next-generation high-safety separators
- Established a global production base in Poland (2021) and Hungary (2022)

CNT Capacity Expanded Over 10x
- Bolster market leadership in battery conducting materials

Focused Resources for R&D
- Differentiate technology and gain market leadership

- 90K tons in 2022, 360K tons in 2027
- 800 tons in 2022, x10 in 2027
- 190B in 2022, x2 in 2027
Battery Materials

In addition to cathode binders and dispersants, LG Chem is producing over 10 types of battery materials, including cathode materials and separators, which are core materials for secondary batteries. We are also bolstering R&D across a wide range of fields, such as developing new materials for the technological advances in the next-generation batteries. LG Chem will continue to strive to become the world's No. 1 comprehensive battery materials company with the highest level of safety and competitiveness.

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Cathode materials, separators, anode binders and CNT

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Applications

- Mobility & IT batteries
- Automotive batteries
- ESS batteries

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Major Customers

- LG Energy Solution
- GM
- VW
- TESLA
Engineering materials

In mega trends such as e-mobility and sustainability, LG Chem is striving to create world no. 1 products by producing high-strength, lightweight automotive materials and eco-friendly PCR materials that are optimized for customer products and processes.

EPC, TPEE, Specialty Compound

Applications

- Automotive interior and exterior materials
- Engine parts
- Recycled materials (PCR)

Major Customers

- HYUNDAI
- GM
- Volkswagen
- Ford
- STELLANTIS
- LG전자
- Dell
- Amazon
- Google
IT Materials

LG Chem produces light-emitting materials and various high-functional film materials for OLED, which are critical for IT devices, as well as materials for the back-end process of manufacturing semiconductors.

OLED Materials,
Display Materials,
Advanced semiconductor
Materials

Applications

OLED Display Materials
OLED TV
Board for Semiconductor Packages

Major Customers

LG Display
LG Innotek
BOE
SAMSUNG
SAMSUNG DISPLAY
SK hynix
RO Filter

LG Chem’s seawater desalination and industrial RO filter is a water treatment filter that utilizes our proprietary Thin-Film Nanocomposite (TFN) nanotechnology. This product is leading the global market with an unrivaled removal efficiency of 99.89%.

SW R/ES/ GR/SR

Applications

Seawater Desalination  Industrial Water  Wastewater Reuse

Major Customers

accioma  METITI  GS Inima  SUEZ
Introduction of LG Chem

Life Sciences Company
Life Sciences Company

Establishment (Year)
1984

Sales ($)  As of 2022
0.7bn  (Approx)

Workforce (Person)
Domestic 1,933 / Overseas 271

Business Area
Pharmaceuticals, Vaccines, Aesthetic

- **2022** Applied for global Phase III clinical trial for Tigulixostat (new drug for gout) with the US
- **2021** Established LG Jiansheng Life Science in China
  Successfully completed Phase II clinical trial for new gout drug in the US
- **2019** Established Life Sciences Innovation Center in Boston, USA
- **2012** Developed 1st Korean diabetes medicine, ‘Zempio’
- **2003** 1st Korean new chemical entity (NCE) approved by U.S. FDA (Factive)
- **1996** 1st Korean hepatitis B vaccine ‘Euvox’ approved by WHO PQ
- **1991** Developed World’s first 4th generation Cephalosporin
- **1984** Start of pharmaceutical business
  (Established Pharmaceuticals business division)
- **1961** Acquire of manufacturing license pharmaceuticals products
Toward a World-Class Innovative Drug Developer

- First-rate pipelines in Korea
- Invest over USD 250mil in annual R&D
- Open innovation

- Diabetes, metabolic diseases, cancer, autoimmune diseases
  Expand new drug pipelines in clinical development stage

- Accelerate clinical developments and business growth worldwide
  - Reinforcing talent pool of clinical/regulatory specialists
  - Increase overseas sales by 50%
Primary Care

LG Chem has developed Korea’s first diabetes drug, Zemiglo, and arthritis drug, Synovian, increasing its competitiveness in Korea as well as overseas, and has expanded its efforts to develop new drugs and to collaborate with other companies through partnerships in the areas of diabetes and cardiovascular, musculoskeletal, and autoimmune diseases.

Representative Products

- **Diabetes** (Zemiglo, Zemimet SR)
- **Cardiovascular Disease** (Rovatitan)
- **Musculoskeletal Disease** (Hyruan One)
- **Autoimmune Disease** (Eucept)
Specialty Care

LG Chem is the first company in Korea that has successfully developed a growth hormone stimulator, and is also concentrating its R&D capabilities on treatments for special diseases.

LG Chem has been strengthening competitiveness in the global market with its WHO-approved hepatitis B and pentavalent combination (5-in-1) vaccine.

Representative Products

- **Grow Hormone (Eutropin S pen)**
- **Ovulation Induction (Follitrope)**
- **Pentavalent Combination (Eupenta)**
- **Polio Vaccine (Eupolio)**
Aesthetic

YVOIRE, the first hyaluronic acid filler developed with LG Chem’s proprietary technology in Korea, is receiving attention for its superior product quality leading to expanding market share.

Representative Products

Y-SOLUTION, Global

YVOIRE, Global

YVOIRE, China

Y-SOLUTION, China
LG Energy Solution embarked on a new journey as a global battery company when we became a separate entity from LG Chem’s battery business in 2020.

We were the first to mass-produce lithium-ion batteries and supply them for electric vehicles, and have been offering a comprehensive portfolio of products related to automotive batteries.

LG Energy Solution also provides battery systems for ESS batteries in various applications, including power grids, residential and commercial use, and uninterruptible power supplies (UPS).

- Automobile Battery: No. 1 in automotive battery global market
- Mobility & IT Battery: 1st in Korea to successfully mass produce small lithium-ion batteries
- ESS Battery: No. 1 in ESS batteries globally
Farm Hannong

Farm Hannong, an LG Chem’s affiliate, is the top domestic agricultural company—No. 1 in agricultural chemicals and No. 2 in the fertilizer and seed in the Korean Market—and aims to be a global leader in green agriculture and ICT industry technologies.
THANK YOU

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