Leading with **Science** for **Sustainability**

LG Chem

We Connect Science
Contents
Introduction of LG Chem

01 — Introduction of LG Group
02 — Introduction of LG Chem
03 — Business of LG Chem
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
Workforce (Worldwide): 270,000 (Approx.)
Annual Revenue: USD 150bn (Approx.)
## LG Group | Main Products & Services Overview

### Sustainable Innovation for a Better Life

<table>
<thead>
<tr>
<th>Chemicals</th>
<th>Electronics</th>
<th>Telecommunications &amp; services</th>
</tr>
</thead>
</table>
| ABS Plastics  
Global No.1               | Large OLED TV Panel / Rollable TV  
World’s 1st  
Global No.1                     | **U+ 5G**  
5G Network  
World’s 1st                        |
| Life Sciences                  | Home Appliance  
Domestic 1st  
Global No.1                            | **IoT @home**  
Home IoT  
Domestic No.1                           |
| Domestic 1st  
New Drugs  
U.S FDA Approval           | Automotive Display  
Global No.1                              | **Platform Business**                      |
| Battery for EV  
Global No.1 (by Contract Size) | Smartphone Camera  
/3D Sensing Module  
Global No.1                                | **CloudXper**  
LG CNS Cloud Service & Platform                       |
| Cosmetics                      |                                                   | **Cityhub**  
LG CNS Smart City Platform                     |
| Domestic No.1                  |                                                   |                                                   |

*LG Group* Confidential  
ⓒ 2023 LG Chem, Ltd. All rights reserved.
Introduction of LG Chem

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

<table>
<thead>
<tr>
<th>1947 - 1999</th>
<th>2000 - 2009</th>
<th>2010 - 2023</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 Hannong)</td>
</tr>
<tr>
<td>1949</td>
<td>2003</td>
<td>2017</td>
</tr>
<tr>
<td>Listed on Korea Stock Exchange</td>
<td>Acquired Hyundai Petrochemicals</td>
<td>Merged with LG Life Sciences Co., Ltd</td>
</tr>
<tr>
<td>1974</td>
<td>2004</td>
<td>2020</td>
</tr>
<tr>
<td>Renamed as Lucky Corporation</td>
<td>Developed the world’s first nanotechnology-applied new EP material</td>
<td>Spinned-off battery business (now LG Energy Solution)</td>
</tr>
<tr>
<td>1976</td>
<td>2005</td>
<td>2021</td>
</tr>
<tr>
<td>Completed construction of Yeosu PVC Resin Plant</td>
<td>Established LG Chem (China) Investment Co., Ltd</td>
<td>Launched LEITZero of Eco-friendly Materials brand</td>
</tr>
<tr>
<td>1979</td>
<td>2007</td>
<td>2022</td>
</tr>
<tr>
<td>Opened Daedeok Central R&amp;D Center</td>
<td>Merged with LG Petrochemicals Co., Ltd</td>
<td>Established a separator joint venture LG-Toray (in Hungary)</td>
</tr>
<tr>
<td>1991</td>
<td>2008</td>
<td>2023</td>
</tr>
<tr>
<td>Developed the world’s first 4th-generation cephalosporin antibiotics</td>
<td>Developed Korea’s first metalloocene-based elastomer</td>
<td>Acquired AVEO Oncology</td>
</tr>
<tr>
<td>1995</td>
<td>2009</td>
<td>2023</td>
</tr>
<tr>
<td>Renamed as LG Chem, Ltd.</td>
<td>Spinned off Industrial Materials Business (now LX Hausys)</td>
<td>Started construction of Cathode Material Plant (in Tennessee)</td>
</tr>
</tbody>
</table>
## Top 10 Most Valuable Brands

<table>
<thead>
<tr>
<th>Rank</th>
<th>Brand</th>
<th>Change</th>
<th>2023 Value</th>
<th>2022 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BASF</td>
<td>—</td>
<td>$8.35bn</td>
<td>$8.353bn</td>
</tr>
<tr>
<td>2</td>
<td>Saudi Aramco</td>
<td>—</td>
<td>$4.72bn</td>
<td>$4.57bn</td>
</tr>
<tr>
<td>3</td>
<td>LG Chem</td>
<td>—</td>
<td>$4.53bn</td>
<td>$4.30bn</td>
</tr>
<tr>
<td>4</td>
<td>DOW</td>
<td>—</td>
<td>$4.27bn</td>
<td>$4.29bn</td>
</tr>
<tr>
<td>5</td>
<td>Linde</td>
<td>—</td>
<td>$4.14bn</td>
<td>$3.58bn</td>
</tr>
<tr>
<td>6</td>
<td>Lyondellbasell</td>
<td>—</td>
<td>$2.84bn</td>
<td>$3.03bn</td>
</tr>
<tr>
<td>7</td>
<td>Sinopec</td>
<td>▲ 1</td>
<td>$2.56bn</td>
<td>$2.30bn</td>
</tr>
<tr>
<td>8</td>
<td>CORTeva</td>
<td>▲ 3</td>
<td>$2.31bn</td>
<td>$1.88bn</td>
</tr>
<tr>
<td>9</td>
<td>ShinEtsu</td>
<td>▲ 1</td>
<td>$2.24bn</td>
<td>$2.10bn</td>
</tr>
<tr>
<td>10</td>
<td>Nutrien</td>
<td>NEW</td>
<td>$2.10bn</td>
<td>$1.81bn</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.
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
Towards Top Global Science Company
Carbon-neutral growth by 2030, Net-Zero by 2050

- **Acceleration of low-carbon transition**
  - Expansion of eco-friendly product portfolio
  - Transition to renewable energy
  - Offset carbon emissions

- **Enhancement of competitive edge in low-carbon products**
  - Introduction of new processes and expanded use of eco-friendly raw materials and fuels
  - Establishment of Scope 3 management system, measurement and supervision of suppliers’ carbon footprints

- **Implementation of net-zero through partnerships**
  - Demonstration of global leadership to combat climate change
  - Development of innovative technologies and a circular economy through cross-industry collaboration
Towards Top Global Science Company
Accelerate of Growth Engine Business

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

Towards World’s Top Comprehensive Battery Materials Company
- Produce first-rate cathode materials in the world
- Expansion of higher value-added battery materials business
- Reinforce R&D for next-gen battery materials

World-class innovative drug development
- Enhancement in the quality of new drug pipeline
- Develop global clinical trials and accelerate business
- Bolster investment in R&D for new drug development
Towards Top Global Science Company
World-class Science company with strong R&D capability

- 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
    - Cost innovation in cathode material development
    - Development of flame-arresting materials
    - Development of next-generation materials (pure silicon, materials for all-solid-state batteries)

- Gain leadership in cancer/autoimmune diseases, diabetes/metabolic diseases
  - Acceleration of global clinical development for major new drugs against gout and cancer
  - Multi-modality strategy: synthetic, bio, cellular therapeutics

* Various approach to drugs
Eco-friendly Materials 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

- **Recycle**
  Produce the PCR materials by mechanical and chemical recycling enables the recycled waste plastics

- **Bio Material**
  Reduce fossil fuel consumption and carbon emission by incorporating raw materials in the manufacturing process

- **Compostable**
  Decompose within months in the ground through microbial action

**Representative Materials**

- **PCR (Post Consumer Recycled)**
  ABS, PC, PC/ABS, PE, PP, PVC, Plasticizers
  OBP(Ocean Bound Plastic)

- **Bio-Based**
  Bio-PA, PLA

- **Bio-Circular Balanced**
  SAP, NPG, IPA, Acrylates, ABS, PC, PC/ABS, PE, PP, PVC, NBL, BR...
LG Chem | R&D Status

* Included Subsidiaries

R&D Expense
Unit: Million USD

<table>
<thead>
<tr>
<th>Year</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1,212</td>
<td>1,385</td>
<td>1,596</td>
</tr>
</tbody>
</table>

R&D Workforce
Unit: Person

<table>
<thead>
<tr>
<th>Year</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>6,286</td>
<td>7,151</td>
<td>7,429</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Region</th>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>16,857</td>
<td>17,876</td>
</tr>
<tr>
<td></td>
<td>29,517</td>
<td>32,100</td>
</tr>
</tbody>
</table>

2021 2022 2023
### LG Chem | Financial Results

* Included Subsidiaries

#### Sales in 2023

USD **42.3bn** (Approx.)

#### Workforce

19,250 (Person)

Domestic 14,360 / Overseas 4,890

#### Sites of business

65

Domestic 17 / Overseas 48

#### Graphs

- **Sales**
  - (Unit: Billion USD)
  - 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
  - 2023: 2.0

- **Operating profit**
  - (Unit: Billion USD)
  - 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
  - 2023: 2.0

#### Notes

- USD 42.3bn (Approx.)
- Workforce: 19,250 (Person)
- Sites of business: 65
- Domestic 14,360 / Overseas 4,890
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
  - Electronic Materials
  - RO Membrane

- Life Sciences
  - Primary Care
  - Specialty Care
  - Aesthetic
  - AVEO Oncology
01

Introduction of LG Chem

Petrochemicals Company
Petrochemicals Company

**Establishment (Year)**
1976

**Sales ($)** *As of 2023*
13.8bn (Approx.)

**Workforce (Person)**
Domestic 6,442 / Overseas 2,264

**Business Area**
Petrochemical Products

- **2023**
  Started the construction of Korea’s first supercritical pyrolysis plant and next-generation insulator plant
  Launched COMPOSTFUL™ of compostable brand
  Established the CS Center of Europe in Germany

- **2022**
  Launched Asia’s first plant-based eco-friendly ABS

- **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

- **2003 ~ 2010**
  Acquired Dow Polycarbonate business(10)
  Merged with LG Petrochemicals Co., Ltd(’07)
  Acquired PVC Business of Hyundai Petrochemicals Co., Ltd.(’03)

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

- **1976**
  Completed construction of Yeocheon PVC resin factory
  Entry into the petrochemical business
Leading Business Sustainability with Eco-Friendly Materials

Focused cultivation of sustainability business and achievement of net zero

- Acquired 58+ ISCC Plus-certified products
- Mass-produced world’s first bio-circular balanced SAP, launched Asia’s first bio-based ABS
- Stable sourcing of raw materials through internalization of bio-based material production and partnerships (NESTE, ADM)

Bio Material

- Stable quality and sourcing of raw materials through internalized production processes
- Developed own simulation modeling technology for compostability
- Obtained international compostability certifications and complies with food contact substance regulations

Compostable

- Built a product portfolio of global brands (PCR)
- Secured a stable pool of raw material supplies through a technology partnership on chemical recycling with MURA
- Established a closed loop through strategic partnerships

Recycling

- Produces higher value-added products for solar panels and lithium-ion batteries
- Established an eco-friendly biomass power plant
- Constructed CCU plants to produce blue hydrogen

Energy Transition

(Establish circular economy of waste plastics)
(Discover new renewable energy materials)
## Production Capacity  (As of 4Q, 2023)

<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>SM</td>
<td>520</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>HDPE</td>
<td>550</td>
</tr>
<tr>
<td>LLDPE</td>
<td>600</td>
</tr>
<tr>
<td>PP</td>
<td>380</td>
</tr>
<tr>
<td>LDPE/EVA</td>
<td>460</td>
</tr>
<tr>
<td>PVC</td>
<td>1,280</td>
</tr>
<tr>
<td>Plasticizer</td>
<td>175</td>
</tr>
<tr>
<td>Alcohol</td>
<td>300</td>
</tr>
<tr>
<td>PC</td>
<td>170</td>
</tr>
<tr>
<td>NAOH</td>
<td>1,020</td>
</tr>
<tr>
<td>Acrylic Acid</td>
<td>650</td>
</tr>
<tr>
<td>IPA</td>
<td>205</td>
</tr>
<tr>
<td>NPG</td>
<td>175</td>
</tr>
<tr>
<td>Synthetic Rubber</td>
<td>365</td>
</tr>
<tr>
<td>Specialty Resin</td>
<td>310</td>
</tr>
<tr>
<td>POE</td>
<td>380</td>
</tr>
<tr>
<td>CNT</td>
<td>3</td>
</tr>
<tr>
<td>SAP</td>
<td>500</td>
</tr>
<tr>
<td>NBL</td>
<td>555</td>
</tr>
</tbody>
</table>
Sustainable Materials

LG Chem conducts various sustainability businesses centered on eco-friendly materials in the fields of bio, recycling, and energy transition. We also present innovative sustainability solutions to our customers and contribute to the creation of future value through our eco-friendly material brand LETZero, which embodies our determination to achieve net zero carbon emissions and damage to the environment.

Compostable (COMPOSTFUL™)
Bio (Bio-Circular balanced, Bio-based)
Recycle (PCR, Circular balanced)
Energy Transition (POE, CNT)

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.

<table>
<thead>
<tr>
<th>LD, LLD, HD, EVA</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /> <img src="image2.png" alt="Image" /> <img src="image3.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Applications**

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

Polyvinyl chloride (PVC) is a material with excellent durability and insulation, processed with plasticizers to give it flexibility. It is used in various building materials and household products, such as flooring, windows, and artificial leather. Caustic soda is used in many industries, from basic to advanced sectors such as cathode manufacturing. Polycarbonate (PC) is also widely used in electronics, automobiles, and mechanical components due to its excellent impact and heat resistance. LG Chem aims to lead the eco-friendly trend by producing bio-circular balanced products from bio materials and post-consumer recycled (PCR) PVC and PC using recycling technology.

PVC, caustic soda, plasticizers, alcohol, PC

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, Acrylic Acid 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.

Applications

<table>
<thead>
<tr>
<th>SAP Resin</th>
<th>Semiconductor cleaning agent</th>
<th>Eco-friendly powder coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint</td>
<td>Hand Sanitizers</td>
<td>Bathroom Appliances</td>
</tr>
</tbody>
</table>
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.
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.
Advanced Materials Company

Establishment (year)
1999

Sales ($) * As of 2023
5.7bn (Approx)

Workforce (Person)
Domestic 4,062 / Overseas 2,050

Business Area
Battery Materials,
Engineering Materials,
Electronic Materials

• 2023  Started construction of Cathode Material Plant (in Tennessee)
• 2022  Established a cathode material joint venture LG-HY BCM (in Gumi)
         Established a separator joint venture LG-Toray (in Hungary)
• 2021  Commercialized battery separators
         (Acquired separator business from LG Electronics)
• 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

- **Capacity building of separator business**
  - Development of next-generation high-safety separators
  - Expand a global production base in Poland (2021) and Hungary (2022)

- **Upgrading the battery Materials portfolio**
  - Expanding business in higher value-added battery materials such as CNTs, anode binders, cathode dispersants

- **Increased investment in R&D**
  - Differentiate technology and gain market leadership

**Timeline**

- 100K tons in 2023
- 470K tons in 2028
- 1200 tons in 2023
- 110B in 2023
- x10 in 2028
- x2 in 2028
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.

Cathode materials, separators, Flame Barrier Sheet
And anode binders, etc.

Applications

Automotive batteries  Mobility & IT batteries  ESS batteries

Major Customers

LG Energy Solution  GM  TOYOTA  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 (PC, PBT, PA, etc.)

Applications

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

Major Customers

- Hyundai Motor Group
- GM
- VW
- Ford
- Stellantis
- LG
- Dell
- Amazon
- Google
Electronic Materials

LG Chem produces light-emitting materials for OLEDs and semiconductor back-end process materials, which are key materials for IT devices. We are also working to accelerate the growth of our electronic film and adhesive products used in e-mobility.
RO Membrane

LG Chem’s seawater desalination and industrial RO Membrane 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

acci@na  METI@O  GS Inima  Suez
Life Sciences
Company
Life Sciences Company

Establishment (Year)
1984

Sales ($) *As of 2023
1.1bn (Approx.)

Workforce (Person)
Domestic 1,962 / Overseas 407

Business Area
Pharmaceuticals, Vaccines, Aesthetic

- **2023** Acquired AVEO, a US-based cancer drug company
- **2022** Applied for global Phase III clinical trial for Tigulixostat (new drug for gout) in 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, US
- (Now LG Chem Life science USA, Inc.)
- **2012** Developed 1st Korean diabetes medicine, 'Zemiglo'
- **2003** 1st Korean new chemical entity (NCE) approved by U.S. FDA (Factive)
- **1996** 1st Korean hepatitis B vaccine ‘Euvax’ 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

5 or more innovative new drugs by 2030

- Enhanced the quality of new drug pipeline
- Invest over USD 250mil in annual R&D
- Strengthening of Open innovation

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

Accelerate clinical developments and business growth worldwide

- New tasks for global clinical development
- Continued growth of AVEO's oncology business in the US
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, Zemidapa)

Cardiovascular Disease (Rovatitan)

Musculoskeletal Disease (Hyruan One)

Autoimmune Disease (Eaceut)
**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
AVEO Oncology

AVEO Oncology, acquired by LG Chem in 2023, is an oncology-focused biopharmaceutical company based in Boston, U.S. Approved by U.S. FDA in 2021, AVEO is expanding its Kidney cancer drug (Fotivda®) sales, and is accelerating pipeline development including Head and Neck cancer drug. Through AVEO Oncology, LG Chem aims to strengthen competitive edge in U.S. market for New drugs and become a global leading Oncology company.

**Representative Product**

Kidney Cancer Drug **FOTIVDA®**

**Pipeline**

<table>
<thead>
<tr>
<th>Projects</th>
<th>Indications</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIERCE-HN</td>
<td>Head and Neck Cancer</td>
<td>Phase III</td>
</tr>
<tr>
<td>AV-380</td>
<td>Solid Tumor</td>
<td>Phase I</td>
</tr>
<tr>
<td>TiNivo-2</td>
<td>Kidney Cancer</td>
<td>Phase III</td>
</tr>
</tbody>
</table>
Introduction of LG Chem

Subsidiaries
LG Energy Solution

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.

Crop Protection Products

- No. 1 domestic market share

Fertilizer

- No. 2 domestic market share

Seed

- No. 2 domestic market share
THANK YOU