

Research & development



OCI R&D center, Seongnam, Korea

// Through the OCI R&D Center, we pursue advanced projects across our full spectrum of businesses in our pursuit of cutting-edge technology. Our goal is to secure long-term competitiveness by developing technologies that create sustainable value for industry and society. Through continuous R&D, we aim to maximize long-term value and deliver superior products that will satisfy our customers in the years ahead. //

Patents granted	
Korea	176
Rest of world	84
Total	260

2017 patent applications	
Korea	101
Rest of world	67
Total	168

Strategy

There is a fundamental connection between our R&D strategy and corporate values—Change, Challenge, and Chance.

Change reflects our short-term strategy. Our focus here is on recruiting and training specialists with exceptional experience and expertise in our core technical disciplines. Optimizing process development to ensure the stability of recently developed products during the ramp-up to mass production is also a key focus.

Challenge embodies our mid-term strategy. Our top priority here is to identify and launch innovative projects that will help us overcome technical barriers to progress in our

current businesses and pave the way for future growth.

Chance empowers our long-term strategy. We are focused on looking over the horizon as we identify and explore the new business areas and opportunities that will keep us growing sustainably into the future.

2017 overview

Cost reduction is a key aspect of our short-term R&D initiatives. In the basic chemicals field, we continued to steadily reduce energy consumption for polysilicon by improving processes and equipment. More generally, we continued work on diversifying existing product lines in key fields such as electronic chemicals and reducing costs across

the board. The latter efforts resulted in the development of a new kind of refining technology that is now delivering both cost and quality improvements

Longer term, we continued to focus on strategically bolstering the technical capabilities of our carbon black business as part of a mid-term initiative to expand our high-performance specialty black product lineup in close collaboration with major tiremakers. In the energy solutions field, we continued to refine our redox flow battery system with the installation of a 250 kW/1 MWh test unit featuring a high-efficiency stack and high-performance electrolyte. We also completed development of an energy management system to integrate energy storage systems into solar PV systems.

2018 direction

We continue to foster a learning organization that is strategic and focused on the future. Building on the momentum of our short- and mid-term focused strategy, we will continue to expand our collaborative framework with our businesses to steadily reduce manufacturing costs for existing products as we also pursue R&D on new products that have a high probability of generating revenue in the mid-term. We will also be taking a multi-disciplinary approach to tackling the fundamental challenge presented by continued low oil prices to ensure our businesses remain competitive.

Intellectual property

In 2017, we applied for 168 patents. Backed by a new IP management system and systemic IP training, our researchers are well-equipped to

leverage these valuable assets to strengthen the competitiveness of OCI products and contribute to the bottom line going forward.

Global R&D network

Keeping up with the rapid pace of technical progress is crucial to our long-term success. Over the years, we have forged collaborative R&D ties with major universities and research organizations in the US, Korea, China, Japan, Malaysia, and other key markets where we have a business presence. Expanding the scope of these win-win collaborations is a key part of our efforts to gain insights on new trends and technology and secure a core competitive edge in key emerging technologies and fields that will define the future of the chemical and materials industries.



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