

Press Release

Linde Establishes New Electronics R&D Center in Taiwan

Center to focus on analysis, materials and applications development

Taichung, Taiwan, September 1st, 2016 – Technology company The Linde Group has opened their new Electronics R&D Center in Taichung, Taiwan on September 1st. The event was attended by invited customers, partners and government representatives.

Linde has invested approximately EUR 5m to establish a new Electronics R&D Center in Asia Pacific, which will support local customers and development partners with its state-of-the-art analytical and product development laboratory.

The R&D Center is part of an ongoing expansion and investment in the Asia Pacific region for Linde Electronics. Last year Linde commissioned the world's largest on-site fluorine plant to supply SK Hynix, in addition to bringing multiple new electronics projects on-stream in Asia. This year Linde announced that they have been awarded multiple gas and chemical supply wins for a number of world-leading photovoltaic cell manufacturers in Southeast Asia.

Linde assists customers in realizing continuous technology progress through improvements in the ability to reduce chemical variability in existing products and in the development of new materials that are critical to support customers technology roadmaps. The Linde Electronics R&D Center will be used for improvement of product quality through advanced synthesis, purification, packaging and new applications development. These improvements are enabled by Linde's advanced analytical processes and quality control systems that verify compositions and manage impurities.

In recognizing the growing need to collaborate with key regional partners, Linde will also be strengthening their local research network. As a first important step, Linde will be entering into a collaboration agreement with the Industry Technology Research Institute (ITRI) in Taiwan. The Vice President of ITRI, Jia-Ruey Duann, stated "ITRI values the cooperation on Electronic Specialty Gases (ESG) Production & Analysis with The Linde Group, and we look forward to working together to develop new products and services that benefit Taiwan's electronics industry".

Working closely with local research partners and customers the new center will also support development of local supply chains and local special gases manufacturing capabilities.

"Inventiveness and innovation are ingrained in Linde's DNA. The official opening of the Electronics R&D Center in Taiwan provides further proof of the importance of Asia for our electronics business and our customer-centric approach to development. This latest investment in our R&D capabilities

in the region sends a strong signal confirming Asia's role as an innovation hub for Linde and our development partners," commented Sanjiv Lamba, Member of the Executive Board of The Linde Group and Chief Operating Officer of Asia Pacific.

Linde has existing R&D Centers in the US, Europe and China supporting the application activities in those regions. These centers will collaborate in global and local R&D initiatives through the sharing of technology, training and capability building in applications technology development.

"As a leading global technology company, sustained research and development is vital to Linde's long-term business success and the success of our customers. Our innovations can have wide ranging benefits for our customers such as increase energy efficiency, improve product quality, lower emissions and safety improvements. Linde's drive for continued innovation helps us to discover new applications for our gases, and ensuring that we are close to our customers enables us to better understand their needs and better support and improve their processes. This is the vision of the Linde Electronics R&D Center in Taiwan, which will form an important part of Linde's global research network," says Dr. Christian Bruch, Member of the Executive Board of The Linde Group.

About The Linde Group

In the 2015 financial year, The Linde Group generated revenue of USD 19.7 bn (EUR 17.944 bn) , making it one of the leading gases and engineering companies in the world, with approximately 65,000 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development.

For more information, see The Linde Group online at www.linde.com

Linde Electronics is an industry leader in gases for the electronics market—semiconductor, solar, display and LED. Linde Electronics helps electronics companies achieve their goals through a strong focus on quality and environmental leadership, its expertise, commitment to the industry through ongoing investments in processes, engineering, and on-site and localized solutions, a broad portfolio that includes environmentally sustainable and highly specialized and rigorously measured electronic specialty gases (ESGs), bulk/pipeline gases, equipment, and services, and through working closely with customers to better meet their evolving needs. For more information, visit www.linde-gas.com/electronics or contact electronicsinfo@linde.com.

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