

LT Metal and Impact Coatings Partner to Commercialize Catalytic Electrodes for PEM Electrolyzer Mass Production

LT Metal (Seoul, Korea) and Impact Coatings (Linköping, Sweden) have launched a collaboration to commercialize catalytic iridium oxide-coated porous transport layers (PTLs), acting as porous transport electrodes (PTEs), for improved durability and cost-efficiency of PEM electrolyzers.

The parties have successfully demonstrated catalytic iridium oxide coatings on LT Metal's titanium PTLs using Impact Coatings' PVD technology. The resulting PTEs deliver performance comparable to, or better than, conventional solutions while using significantly less iridium. Meanwhile, PVD on titanium provides exceptional durability, supporting long service life and cost efficiency of PEM electrolyzers.

In conventional manufacturing of PEM electrolyzers iridium oxide is applied to the polymer cell membrane. Applying the catalytic material to the adjacent titanium PTL instead allows for significant reduction of used iridium. In addition, integrating the iridium-oxide coating with the platinum coating of the PTL in the same PVD coating line, allows for a simplified and more cost-efficient overall manufacturing process.

LT Metal's titanium PTL is a key component applied on the anode (oxygen evolution) side of PEM electrolyzers, enabling efficient mass transport of water, oxygen, electrons, and protons under highly acidic, high-voltage, and high-current-density conditions. Leveraging its proprietary titanium processing and sintering technologies, LT Metal has developed titanium PTLs featuring a uniform pore structure, optimized porosity and thickness, excellent electrical conductivity, and outstanding chemical stability. Through standardized manufacturing processes tailored for mass production, the company ensures both consistent quality and cost competitiveness.

As one of Korea's leading precious-metal materials companies, LT Metal integrates its long-established expertise in platinum-group metals (PGM) and iridium/platinum catalyst technologies with its titanium PTL business, providing a vertically integrated supply capability from raw materials to finished components. By combining Impact Coatings' PVD catalyst coating technology with LT Metal's titanium PTL, the two companies are laying the groundwork for the mass production of catalyst-coated PTLs (PTEs) that minimize iridium consumption while delivering long service life and high performance.

Impact Coatings supply PVD technology, coating services and production equipment, with a focus on energy applications. With dedicated coating service centers in Linköping, Sweden, and Shanghai, China, the company is a leading coating supplier to PEM electrolyzer manufacturers globally. The company's INLINECOATER™ IC2000 PVD production line is a proven industrial solution for coating critical components used in PEM electrolyzers, as well as PEM and solid oxide fuel cells.

A Letter of Intent (LOI) between LT Metal and Impact Coatings, signed in June 2026, outlines the framework for joint-development and large-scale commercialization of catalytic electrodes for PEM electrolyzers. The LOI reflects the parties' intention to collaborate strategically, while the non-exclusive nature of the agreement allows both parties to continue their respective independent business operations.

About LT Metal

LT Metal (www.ltmetal.co.kr), founded in 1974, is one of Korea's leading companies specializing in precious-metal materials and components. The company has led the domestic development of precious-metal materials – including gold, silver, and platinum-group metals (PGM) – as well as the development of advanced components based on them.

LT Metal's core business covers precious-metal-based materials and components supplied to the semiconductor, electrical, electronic, and display industries – including bonding wires, sputtering targets, conductive materials, plating chemicals, contact materials, and brazing alloys – together with platinum-group metal compounds and precious-metal recycling and refining services. In parallel, the company is steadily expanding its portfolio into future energy and eco-friendly sectors, including platinum catalysts for hydrogen fuel cells, titanium PTLs for PEM water electrolysis, and pharmaceutical and environmental catalysts.

Building on more than five decades of expertise in precious-metal materials and precision component manufacturing, LT Metal is nurturing its titanium PTL and catalyst-coated electrode (PTE) businesses for PEM electrolyzers as key growth drivers for the hydrogen economy era, and is strengthening its position across the domestic and global hydrogen value chain through strategic global partnerships.

About Impact Coatings

Impact Coatings (www.impactcoatings.com) is a global technology leader and full-service provider of coating solutions using PVD technology. The company is an enabler in the energy sector for off-grid power and hydrogen-related applications, as well as in automotive and other industries with emerging PVD use cases.

PVD stands for physical vapor deposition – clean processes of applying thin layers of coatings to design surface properties, prolong lifespan, and improve product performance. The company's offer consists of efficient, modular, and flexible PVD systems, and coating services, underpinned by several decades of coating experience and expertise.

The company was founded in 1997 and has since expanded in Europe, Asia and North America. Current production facilities are located in Linköping, Sweden, and in Shanghai, China.

The Impact Coatings share is listed on Nasdaq First North Growth Market (Nasdaq Nordic). The company's Certified Adviser is Redeye Nordic Growth AB.

Press Release
13 August 2026 14:40:00 CEST



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Attachments

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