

## Johnson Matthey and Hystar partner to develop next-generation electrolyser technology to accelerate green hydrogen production, supporting the transition to net-zero

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Johnson Matthey, a global leader in sustainable technologies, today announced a Memorandum of Understanding with newly established Norwegian company Hystar AS, a high-tech spin-out from SINTEF, one of Europe's largest independent research institutions. Hystar is backed by AP Ventures, a significant investor focused on breakthrough technologies in the fast-growing hydrogen industry. Under the agreement, Johnson Matthey will collaborate with Hystar to provide catalyst coated membranes (CCMs) for use in their innovative proton exchange membrane (PEM) stack and electrolyser system package, which offers a significant improvement in efficiency.

The collaboration will focus on stack development and manufacturing scale-up using CCMs provided by JM and patented cell design from Hystar. This next-generation cell design and PEM electrolyser system can improve performance by 10%, enabling greater hydrogen production or lower power consumption, ultimately reducing the costs associated with green hydrogen production.

Johnson Matthey and Hystar are committed to building the hydrogen economy by developing the next generation of PEM electrolysers. Johnson Matthey has a proven track record and strong expertise in developing innovative, high-performance coating materials and CCM solutions, building on decades of experience developing fuel cell components. In addition, as the world's largest secondary refiner of platinum group metals, JM is well placed to drive the creation of closed loop recycling systems within the green hydrogen supply chain.

"Everything we do contributes towards JM's vision of a cleaner, healthier world, so we're excited to be working with Hystar to take their game-changing, innovative electrolyser system to the next level", commented Eugene McKenna, Managing Director, Green Hydrogen. "The Hystar cell design offers significant performance improvements for electrolyser users and JM's CCMs have a much thinner, lower resistance membrane than those typically used in today's commercial PEM systems."

"JM CCMs have performed extremely well under Hystar operating conditions and we are very thrilled to have the possibility to integrate CCMs that can be produced by high volume manufacturing methods into our electrolyser platform," commented Alejandro Barnett, CTO and co-founder of Hystar. "This is a clear game changer when it comes to improving the performance of our electrolysers even further"

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Johnson Matthey is a global leader in sustainable technologies that enable a cleaner and healthier world. With over 200 years of sustained commitment to innovation and technological breakthroughs, we improve the performance, function and safety of our customers' products. Our science has a global impact in areas such as low emission transport, pharmaceuticals, chemical processing and making the most efficient use of the planet's natural resources.

Today about 15,000 Johnson Matthey professionals collaborate with our network of customers and partners to make a real difference to the world around us. For more information, visit [www.matthey.com](http://www.matthey.com)

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#### About Hystar

Founded in 2020 as a spin-off from Norwegian research institute, SINTEF, Hystar makes highly efficient PEM electrolyzers for large-scale production of green hydrogen. With our patented technology, we play a key role in a greener, more sustainable future. For more information, visit [www.hystar.com](http://www.hystar.com)

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