JM

Johnson Matthey
Inspiring science, enhancing life

News Release

For release: 27 July 2021

Johnson Matthey drives world-leading fuel cell performance, increasing power density by 20%

- A significant step forward for fuel cell technology
- Yet another example of JM delivering fuel cell components capable of meeting the most challenging automotive performance targets

Johnson Matthey (JM), as part of leading European consortium GAIA, has helped deliver a fuel cell power density of 1.8 W/cm^2 @ 0.6V. This represents a twenty per cent increase versus state-of-the-art technology. This market-leading result marks a significant step forward for fuel cell technology and JM's net zero aspirations.

Working alongside BMW, Freudenberg, 3M and others, JM has been instrumental in delivering this step-change, supplying critical components within the fuel cell stack - the membrane electrode assemblies (MEAs).

This milestone is a further example of how JM is applying its heritage in fuel cell technology to help the world become cleaner and healthier, today and for future generations. The increased power density will lower overall stack cost, in turn helping to advance the commercialisation of fuel cell powered vehicles. This helps with the decarbonisation of the entire transport sector, meaning light duty vehicles such as passenger cars, as well as HGVs and trucks, contribute zero emissions.

It demonstrates how JM will help customers meet the EU's Fit for 55 proposal on 14 July which commits to reduce CO_2 emissions in the EU by 55% by 2030, as well as the UK's Decarbonising Transport roadmap, also published on 14 July, which proposes to phase out polluting vehicles weighing between 3.5 tonnes and 26 tonnes from 2035.

Jo Godden, Managing Director of Johnson Matthey's Fuel Cells business, commented:

"Developing a robust fuel cell powertrain solution to decarbonise transportation will be critical to achieving net zero goals around the world. These fuel cell stacks could be powering trucks on our roads in five years' time and will be the best in class fuel cell

Issued by: Johnson Matthey Plc
5th Floor, 25 Farringdon Street, London, EC4A 4AB United Kingdom

technology currently available. JM is proud to play a key role in the GAIA project and leverage our extensive fuel cell experience to benefit all."

The GAIA project, which started in January 2019 and will run for 3.5 years, aims to develop and bring together advanced critical proton exchange membrane (PEM) fuel cell components, integrated into a fuel cell that is capable of delivering the most challenging performance, cost and durability targets required for large-scale automotive fuel cell commercialisation.

Ends

About Johnson Matthey

Johnson Matthey is a global leader in science that enables 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 more than 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

Fuel cells

JM's fuel cell technology has moved the industry forward for over two decades, providing solutions for some of the world's most established fuel cell players and automotive OEMs. We are continually developing the next generation of the technologies that are key to driving the performance of a fuel cell, including membrane electrode assemblies, catalyst coated membranes and fuel cell catalysts.

For more information, visit www.matthey.com/en/products-and-services/fuel-cells

About the Fuel Cells and Hydrogen Joint Undertaking

The GAIA project receives funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 826097. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe Research.

For more information, visit www.gaia-fuelcell.eu

FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

For further information, please contact
Rebecca Williams, Johnson Matthey: jmpr@matthey.com 0207 269 8001

Issued by: Johnson Matthey Plc
5th Floor, 25 Farringdon Street, London, EC4A 4AB United Kingdom