

Press Release

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Innova Research's New Report Analyzes Innovative Technologies to Reduce Carbon Footprint in Chemical Industry in China

SHANGHAI, CHINA – April 19, 2022 – Platinum group metals (PGMs) are regarded as expensive but essential elements in catalysts and other applications in chemical/petrochemical industries. Scientists are working hard to develop less expensive substitutes, such as Fe, Ni, Co, and other cheaper transition metals to replace PGMs, in order to enhance the economic feasibility in massive production. However, according to Innova Research's new report, entitled "Innovative PGM-Related Technologies to Reduce Carbon Footprint in Chemical Industry in China 2022", in some selected chemical production processes, the use of innovative PGM-related technologies actually helps to save the carbon emissions and reduce the overall production costs at the same time, compared with the current routes with non-PGM catalysts and other technologies.

Innova Research published its first report on the Chinese carbon capture, utilization, and storage (CCUS) technologies, entitled "CO₂ Management and Utilization Technology Landscape in China" in 2021. According to the report, the Chinese CCUS capacities are forecast to grow rapidly in the next decade, from a forecast 7.1 million tons in 2021 to over 22 million tons in 2030, at a CAGR 13.4% in the forecast period. While CCUS technologies directly reduce carbon emissions, innovative catalysts and other technologies that are able to indirectly reduce the carbon footprint, for example, by reducing CO₂ byproducts, energy consumptions, and/or saving feedstocks/reactants, are also important for decision makers in Chemical and other industries when considering their carbon footprint reduction strategies.

The new report looks at diversified types of innovative PGM-related technologies developed by Chinese universities, research institutes or technological companies, towards carbon footprint reduction in chemical/petrochemical industries. These included but not limited to the above mentioned indirect carbon reduction technologies. In addition, three detailed case studies are provided and lists of 48 relevant technology developers are also presented in this report.

The new report answers the following questions:

- What are the innovative PGM related technology routes that are directly/indirectly associated with carbon emission reduction in chemical industry in China?

- What are the advantages/disadvantages of using PGMs in syngas upgrading, petro-cracking, ammonia synthesis, hydrogenation, catalytic conversion, photocatalysis, dehydrogenation, oxidation, halogenation, among other technology processes?
- Who are the professor/researcher teams from leading universities and research institutes developing PGM related innovations towards carbon reduction in China?
- What are the cases of using PGM related innovations to achieve carbon reduction and/or production cost saving? What are the development stages of these innovative technologies?
- In each case, compared with traditional technology routes without PGMs, how much carbon emission is reduced? How much cost is saved? And how large are the additional PGM shipments associated with the application of the technologies in the next 10 years?

Nancy Wu, Research Director at Innova Research, commented: "China announced its ambitious plan to peak carbon emission in 2030, and reach carbon neutral in 2060, and the Chinese national carbon trading scheme started its operation in July 2021. Under this circumstance, PGM related innovations to reduce carbon footprint and/or save the production costs are expected to gain particular attentions from chemical and other relevant industry players in China in the next few years."

About Innova Research

Innova Research is a market research and consulting firm focusing on emerging technologies, including advanced materials, renewable energy and environmental technologies, advanced electronics, industry internet and robotics, energy storage, among others. The company also provides technology scouting and deal sourcing services to corporate VCs, VCs, and corporate R&D clients. Driven by primary research, Innova Research's market intelligence reports, technology scouting and consulting services help our clients to make right strategic and investment decisions in the fast-changing technology world. Visit www.innovaresearchinc.com for more information.