

Catalysis, the Pillar of Energy Transition and Sustainability

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Catalysis has an essential role and a direct impact on the life of every human being.

The role of catalysis in the chemical industry has always been essential. Many of the most important chemical processes, such as NH₃ and syngas production, catalytic cracking of oil, synthesis of sulphuric and nitric acid, are possible thanks to catalysis.

Casale owes its very existence to the discovery of one catalyst: the ammonia synthesis one. This catalyst alone has allowed the increase in agricultural production during the 20th century that allow most of the world today's population to enjoy an abundant and diversified food availability

Today the challenge for scientists and engineers is to solve the climate change crisis.

Again, the role of catalysis is central to this solution, as it has the potential to allow producing clean hydrogen and chemicals at low overall costs.

Casale is fully committed to participate in this challenge, by developing new and advanced catalysts, together with the equipment and processes that are needed for their efficient utilization, with the goal of producing ammonia, methanol, and other basic chemicals with low or zero emissions of pollutants and greenhouse gases in an economic way.

These developments do not only aim at emissions reduction but also to increase the overall sustainability of these processes.

The presentation illustrates Casale's approach and activities in this area.