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News Release

BASF Environmental Catalyst and Metal Solutions opens new hydrogen component laboratory in Hannover, Germany

- **Lab will build on competencies in precious metal catalysis, formulation and coating, and drive innovations for future anode and cathode PGM-containing components for the production and use of green hydrogen**
- **Strategic investment supports strategy to partner with component producers in the green hydrogen market**

Hannover, Germany, November 6, 2024 – BASF Environmental Catalyst and Metal Solutions (ECMS) today opened a new laboratory in Hannover, Germany, dedicated to advancing research on anode and cathode platinum group metal (PGM)-containing catalysts and components. ECMS will apply its deep expertise in catalysis and precious metals to develop next-generation catalysts for water electrolysis to meet demand in the green hydrogen market. The new laboratory will benefit from the expertise and capabilities of the Research, Development and Application (RD&A) laboratories operating in the same location.

“Hannover has served as our European powerhouse for the development of leading mobile emissions catalysts and systems for three decades,” said Saeed Alerasool, Senior Vice President of RD&A at ECMS. “Our RD&A team in Hannover has launched many innovative solutions that have enabled our automotive customers to cost-effectively meet the strictest emission standards. Its long-established expertise in

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catalysis, precious metals, formulation and coating makes it the perfect location to establish our European hub for the development of next-generation green hydrogen technologies."

The new laboratory will focus on several key areas including synthesizing and characterizing advanced water electrolysis catalysts and preparing catalyst coated membranes (CCMs). One of the goals is the development of low-iridium (Ir) catalysts, addressing the scarcity and high cost of iridium, a critical component in proton exchange membrane (PEM) electrolyzers. This research aims to significantly reduce the iridium content without compromising the efficiency or durability of the electrolyzer, making green hydrogen production more economically viable.

Additionally, the lab will conduct electrochemical testing of CCMs under various conditions to assess performance and degradation. It will also support customer-specific projects and conduct fuel cell testing, allowing ECMS to support customers in the region with product development.

The new lab is another important step for ECMS as it builds a comprehensive product portfolio that supports the entire hydrogen value chain while reducing costs for electrolyzers and fuel cells. It also aligns with ECMS's broader commitment to the global energy transition and decarbonization. ECMS will leverage extensive partnerships and networks in the business and customer industries, so research conducted in the new lab remains cutting-edge and commercially relevant.

About BASF Environmental Catalyst and Metal Solutions
Leveraging its deep expertise as a global leader in catalysis and precious metals, BASF Environmental Catalyst and Metal Solutions (ECMS) serves customers in many industries including automotive, aerospace, indoor air quality, semiconductors, and hydrogen economy, and provides full loop services with its precious metals trading and recycling offering. With a focus on circular solutions and sustainability, ECMS is committed to helping our customers create a cleaner, more sustainable world. Protecting the elements of life is our purpose and this inspires us to ever-new solutions. ECMS operates globally in 16 countries with over 4,500 employees and 21 production sites.

About BASF
At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €68.9 billion in 2023. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.