

News Release

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BASF starts up the world's first production plant for 3D-printed catalysts in Ludwigshafen

- **New plant produces X3D[®] catalysts on an industrial scale**
- **Three-dimensional (3D) printed catalysts reduce costs, lower emissions and increase efficiency**
- **Register now for virtual trade media briefing**

Ludwigshafen, March 19, 2026 – BASF today started up the world's first production plant for catalysts based on X3D[®] technology at its Ludwigshafen site. With the commissioning of this facility, BASF is scaling the additive manufacturing of catalysts to an industrial level and strengthening its leading role in innovative solutions for the chemical industry.

Utilizing X3D technology, catalysts can be produced with optimally designed geometries that combine high mechanical stability with an open structure. This significantly reduces pressure drop in reactors while simultaneously increasing the catalytically active surface area. As a result, customers achieve higher reactor throughput and improved product quality at substantially lower energy consumption compared to conventional catalysts.

X3D technology already proven in customer applications

BASF has been supplying X3D catalysts to production plants for several internal and external customers for many years. The technology is highly versatile and can

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be applied to a broad range of catalyst materials, including precious and base metal catalysts as well as various support materials. The new production plant in Ludwigshafen provides the foundation for making this technology more widely available and for further shortening development and market introduction timelines.

In 2025, the Chinese-based fine chemical company An Hui Jintung filled their production plant with BASF's sulfuric acid catalysts O4-115 X3D. "The plant started up smoothly, and plant performance has significantly improved compared to before. Production achieved a record high, generating substantial economic benefits for our company. We will continue our collaboration with BASF to promote catalyst upgrades and replacements across additional units," said Eter Zhu, General Manager at An Hui Jintung.

"We are pleased that X3D technology already gives our customers a real competitive edge: We can supply catalysts tailored precisely to their specific chemical processes – quickly and in large quantities. At the same time, we help customers reach their goals, as our catalysts enable them to increase production performance while improving the efficiency of the raw materials they use," said Detlef Ruff, Senior Vice President Chemical Catalysts and Adsorbents at BASF. "I am truly excited to see these groundbreaking innovations and honored to take on the responsibility for a business that serves as a key enabler of chemical reactions," said Yaqian Liu, who will succeed Detlef Ruff as of April 1.

BASF invites trade journalists to a virtual media briefing in April. Please register [here](#) to join BASF experts in discussing X3D and gain exclusive insights into this innovative technology.

About BASF's chemical catalysts and adsorbents

BASF is a leading global manufacturer of catalysts for the chemical industry, with solutions across the chemical value chain. The business comprises chemical catalysts, adsorbents and custom catalysts. Priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions. To learn more, visit www.chemical-catalysts-and-adsorbents.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. Our ambition: We want to be the preferred chemical company to enable our customers' green transformation. We combine economic success

with environmental protection and social responsibility. Around 108,000 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, as core businesses, the segments Chemicals, Materials, Industrial Solutions, and Nutrition & Care; our standalone businesses are bundled in the segments Surface Technologies and Agricultural Solutions. BASF generated sales of around €60 billion in 2025. 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.