

# Metal-organic Framework Market Size, Share & Trends Analysis Report By Application (Gas Storage & Separation, Catalysis, Energy Storage, Sensors & Electronics), By Region (North America, Europe, Asia Pacific), And Segment Forecasts, 2025 - 2033

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## Abstracts

The global metal-organic framework market size was estimated at USD 143.8 million in 2024 and is projected to reach USD 443.4 million by 2033, growing at a CAGR of 13.7% from 2025 to 2033. The market growth is primarily driven by the increasing utilization of MOFs in gas storage & separation and catalysis applications, owing to their high surface area, tunable pore structure, and superior adsorption properties.

Expanding use across oil & gas and chemical & petrochemical industries, supported by ongoing advancements in material engineering and process efficiency, further propels market demand. Sustainability and responsible production practices are becoming integral to expanding the Metal-Organic Framework (MOF) market. Industry participants and governments emphasize energy-efficient synthesis methods, ethical sourcing of raw materials, and traceable supply chains to minimize environmental impact and align with global Environmental, Social, and Governance (ESG) standards. Integration of recycled precursors and circular economy principles is reducing dependence on conventional chemical inputs while enhancing resource efficiency.

Technological advancements that improve adsorption performance, stability, and scalability further accelerate MOF adoption across industrial sectors. Supportive government frameworks promoting clean energy, carbon capture, and green chemistry are driving demand, particularly in the Asia Pacific, North America, and Europe. As demand rises from oil and gas and chemical and petrochemical industries for sustainable gas separation, purification, and catalytic processes, Metal-Organic

Frameworks are emerging as a strategic, eco-efficient, and commercially viable material platform enabling the transition toward a low-carbon industrial future.

## Global Metal-organic Framework Market Report Segmentation

This report forecasts global, country, and regional revenue growth and analyzes the latest trends in each sub-segment from 2021 to 2033. For this study, Grand View Research has segmented the global metal-organic framework market report based on application and region:

### Application Outlook (Revenue, USD Million, 2021 - 2033)

Gas Storage & Separation

Catalysis

Energy Storage

Sensors & Electronics

Others

### Regional Outlook (Revenue, USD Million, 2021 - 2033)

North America

U.S.

Canada

Mexico

Europe

Germany

France

UK

Italy

Asia Pacific

China

India

Japan

South Korea

Latin America

Brazil

Middle East & Africa

South Africa

**This report can be delivered to the clients within 5 Business Days**

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