



pades | project 2

High-Performance Catalysts

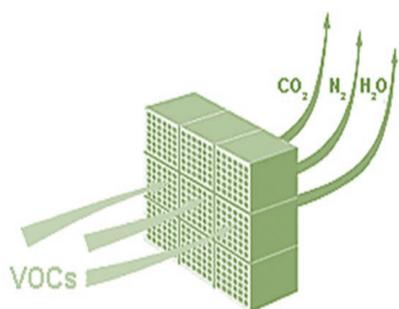
Catalysis is the key technology of the 21st century where substances react with each other in an energy-saving manner thanks to a catalyst. Innovative and in particular highly efficient catalysts are needed for an ever-growing number of applications. In light of resources becoming increasingly scarce, catalysts should, if possible, not require rare and persistent components such as precious metals.

Thanks to our technologies, we are capable of generating tailor-made highly complex material structures that perfectly suit the desired application, thus creating catalytic materials with extraordinary activity.

The high activity is due not only to the chemical composition but also to the particle morphology and structural defects. Our technologies allow an exact and reproducible adjustment of these property parameters.

Thanks to our mixed metal oxide catalysts, we are now able to achieve a new level of catalytic activity. As a result, our customer-specific catalysts are perfectly suited for the conversion of volatile hydrocarbons (VOCs) such as methane or for applications such as electrolysis of water.

The catalytic activity of mixed metal oxide catalysts is determined in a complex interaction of the production process, the type and quantity of the raw materials and additives (binding agents, pore formers), the post-treatment (influence of temperature and gas atmosphere) as well as the preparation (e.g. fine grinding, deagglomeration, suspension), shaping and coating. We have the necessary know-how and technologies for all these processing steps.



Our range of products:

- Highly efficient catalytic materials in the form of powder, pellets or tiles
- Innovative technologies for producing and processing catalytic materials
- Innovation support thanks to our process competence for your material development
- Exhaust gas purification systems and water electrolyzers, custom-made for your application



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Catalyst Innovation Alliance

The following expert partners offer a new generation of catalytically active materials, their incorporation into catalyst system units, and even complete ready-to-use systems:

JENOPTIK KATASORB GMBH (KATASORB) is an expert in the field of catalysis and sells both components such as catalysts and complete catalytic systems.

Kumatec GmbH (Kumatec) specializes in the engineering and construction of special-purpose machines as well as in the production of small-series and mass-production components and assemblies.

The Friedrich-Schiller-Universität Jena (FSU) (Friedrich Schiller University) deals with the key aspects energy storage and transformation, catalysis, mechano-chemistry, cavitation and green engineering in research and education.

Maicom Quarz GmbH is an expert engineering firm that specializes in technology developments for the processing and modification of ultra-clean materials and in the design and modification of individual equipment and complete turn-key production lines for microelectronic processes.

The Fraunhofer Institute for Ceramic Technologies and Systems (IKTS) is a research and technology service provider developing ultramodern high-performance materials, industrially relevant manufacturing processes, prototype components and systems.



Learn about our services and secure a reliable supply source for materials exactly tailored to your application. Gain a competitive advantage through extraordinary functionality.

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