Disclosed is a process for oxidizing formaldehyde to carbon dioxide and water without the addition of energy. A mixture of formaldehyde and an oxidizing agent (e.g., ambient air containing formaldehyde) is exposed to a catalyst which includes a noble metal dispersed on a metal oxide which possesses more than one oxidation state. Especially good results are obtained when the noble metal is platinum, and the metal oxide which possesses more than one oxidation state is tin oxide. A promoter (i.e., a small amount of an oxide of a transition series metal) may be used in association with the tin oxide to provide very beneficial results.

5586433

PROCESS AND APPARATUS FOR SELECTIVE CATALYZED NO-REDUCTION IN OXYGEN-CONTAINING EXHAUST GASES

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A process and apparatus for the selective catalyzed NOx reduction in oxygen-containing exhaust gases of internal-combustion engines. For improving the reduction of nitric oxides, hydrocarbons and air are supplied to the exhaust gas purifier and, for producing reactive short-chained unsaturated hydrocarbons, a defined quantity of fuel from the stored fuel intended for the fuel supply of the internal-combustion engine is catalytically cracked and is oxidized by the simultaneous supply of air. The resulting species are guided into the exhaust gas flow of the exhaust gases which are to be purified.

5587135

PROCESS FOR THE CATALYTIC DECOMPOSITION OF DINITROGEN MONOXIDE IN A GAS STREAM

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PCT No. PCT/EP94/00081 Sec. 371 Date Mar. 24, 1995 Sec. 102(e) Date Mar. 24, 1995 PCT Filed Jan. 13, 1994 PCT Pub. No. WO94/16798 PCT Pub. Date Aug. 4, 1994. A process for the catalytic decomposition of dinitrogen monoxide in a gas stream by contacting the gas stream at temperatures of 200° degrees-900°C. and pressures of 0.1 to 20 bar with a catalyst free of noble metals, the catalyst being prepared by combining a spinel CuAl2O3 with another spinel-forming metal component selected from the group consisting of tin, lead, zinc, magnesium, calcium, strontium and barium or mixtures thereof in elemental form or as an oxide or salt, and calcining at temperatures of 300°-1300°C. and under pressures of 0.1-200 bar in order to at least partially liberate the copper from the spinel by replacement with the other metal component.

5591414

SORPTIVE CATALYST FOR THE SORPTIVE AND OXIDATIVE CLEANING OF EXHAUST GASES FROM DIESEL ENGINES

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The invention relates to a sorption catalytic converter for the combined chemo-sorptive and oxidative cleaning of diesel engine exhaust gases with a high blocking activity for highly volatile