

PCT No. PCT/GB94/00658 Sec. 371 Date Nov. 2, 1995 Sec. 102(e) Date Nov. 2, 1995 PCT Filed Mar. 29, 1994 PCT Pub. No. WO94/23289 PCT Pub. Date Oct. 13, 1994. A sensor to detect gases and vapors, particularly carbon monoxide and water vapor, at relatively low concentrations includes a substrate having a layer on a face of the substrate. The layer comprises a semi conductor metallic oxide (such as stannic oxide), a catalyst (such as platinum black), and a rheological agent (such as kieselguhr or sepiolite). The rheological agent induces porosity into the surface of the layer. The rheological agent affects the mixing and processing of the layer, and aids binding, resulting in a sensor with greater sensitivity and faster response.

METHANE AND SYNGAS CATALYSIS

5599510

CATALYTIC WALL REACTORS AND USE OF CATALYTIC WALL REACTORS FOR METHANE COUPLING AND HYDROCARBON CRACKING REACTIONS

Kaminsky Mark P; Huff George A; Calamur Narasimha; Spangler Michael J Winfield, IL, UNITED STATES assigned to Amoco Corporation

Dual-flow chemical reactor cores containing catalytic heat-transfer walls comprising both a gas-impervious material and a suitable catalyst which allows oxidative coupling of methane into higher hydrocarbons, dual-flow reactors having these catalytic heat-transfer walls to control and facilitate simultaneously coupling of methane and cracking of hydrocarbon compounds in separate gas streams, and chemical processes which combine coupling of methane and cracking of hydrocarbon compounds to make olefins in a dual-flow reactor having catalytic heat-transfer walls.

5599517

CATALYST FOR STEAM REFORMING OF HYDROCARBONS

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A process for the production of hydrogen and/or carbon monoxide rich gases by steam reforming of a hydrocarbon feedstock, the process comprising the step of contacting the hydrocarbon feedstock and steam with a catalyst comprising nickel as a main catalytic component, a refractory carrier material for the nickel, and at least one catalytic element for the steam reforming of the hydrocarbon feedstock, the element being selected from the group consisting of germanium, tin, lead, arsenic, antimony and bismuth.

5609845

CATALYTIC PRODUCTION OF HYDROGEN FROM HYDROGEN SULFIDE AND CARBON MONOXIDE

Cimini Ronald J; Marler David O; McCarthy Stephen; McVeigh Harry A; Teitman Gerald J Sewell, NJ, UNITED STATES assigned to Mobil Oil Corporation

There is provided a process for the catalytic production of hydrogen from the reaction of hydrogen sulfide and carbon monoxide with the elimination of the carbonyl sulfide and/or sulfur dioxide by-products. The carbonyl sulfide and the sulfur dioxide are combusted or reacted in one or more reaction steps with each other, oxygen and/or hydrogen sulfide to produce carbon dioxide, water, sulfur or sulfuric acid or a combination of these.