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(54) Title: CATALYST FOR CO OXIDATION COMPRISING DISPERSED GOLD ATOMS

(57) **Abstract:** The present invention generally relates to catalyst systems and methods for oxidation of carbon monoxide. The invention involves catalyst compositions which may be advantageously altered by, for example, modification of the catalyst surface to enhance catalyst performance. In particular, the catalyst composition comprises nickel and is modified with gold atoms such that gold atoms randomly replace nickel atoms. Catalyst systems of the present invention may be capable of performing the oxidation of carbon monoxide at relatively lower temperatures (e.g., 200 K and below) and at relatively higher reaction rates than known catalysts. Additionally, catalyst systems disclosed herein may be substantially lower in cost than current commercial catalysts. Such catalyst systems may be useful in, for example, catalytic converters, fuel cells, sensors, and the like.



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