Title (en)

METAL UTILIZATION IN SUPPORTED, METAL-CONTAINING CATALYSTS

Title (de)

METALLVERWENDUNG IN GETRÄGERTEN, METALLHALTIGEN KATALYSATOREN

Title (fr)

UTILISATION DE MÉTAL DANS DES CATALYSEURS SUPPORTÉS CONTENANT UN MÉTAL

Publication

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Application

EP 09739952 A 20090501

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Abstract (en)

[origin: WO2009135150A2] Generally, the present invention relates to improvements in metal utilization in supported, metal-containing catalysts. For example, the present invention relates to methods for directing and/or controlling metal deposition onto surfaces of porous substrates. The present invention also relates to methods for preparing catalysts in which a first metal is deposited onto a support (e.g., a porous carbon support) to provide one or more regions of a first metal at the surface of the support, and a second metal is deposited at the surface of the one or more regions of the first metal. Generally, the electropositivity of the first metal (e.g., copper or iron) is greater than the electropositivity of the second metal (e.g., a noble metal such as platinum) and the second metal is deposited at the surface of the one or more regions of the first metal by displacement of the first metal. The present invention further relates to treated substrates, catalyst precursor structures and catalysts prepared by these methods. The invention further relates to use of catalysts prepared as detailed herein in catalytic oxidation reactions, such as oxidation of a substrate selected from the group consisting of N-(phosphonomethyl)iminodiacetic acid or a salt thereof, formaldehyde, and/or formic acid.

IPC 8 full level

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