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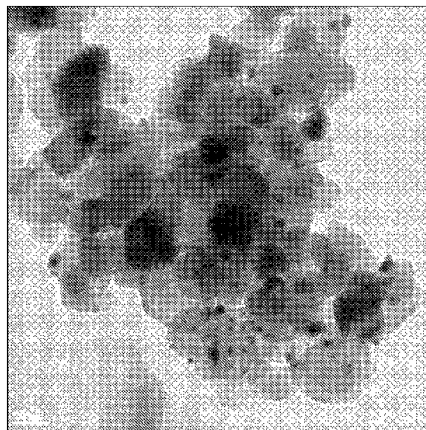
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(54) Title: CATALYST COMPRISING PLATINUM AND GOLD NANO - PARTICLES AND ITS USE FOR OXIDATION OF GLUCOSE AND PREPARATION METHOD OF SUCH A CATALYST

FIG. 1



(57) Abstract: Disclosed are catalysts comprised of platinum and gold. The catalysts are generally useful for the selective oxidation of compositions comprised of a primary alcohol group and at least one secondary alcohol group wherein at least the primary alcohol group is converted to a carboxyl group. More particularly, the catalysts are supported catalysts including particles comprising gold and particles comprising platinum, wherein the molar ratio of platinum to gold is in the range of about 100:1 to about 1:4, the platinum is essentially present as Pt(0) and the platinum containing particles are of a size in the range of about 2 to about 50 nm. Also disclosed are methods for the oxidative chemocatalytic conversion of carbohydrates to carboxylic acids or derivatives thereof. Additionally, methods are disclosed for the selective oxidation of glucose to glucaric acid or derivatives thereof using catalysts comprising platinum and gold. Further, methods are disclosed for the production of such catalysts.