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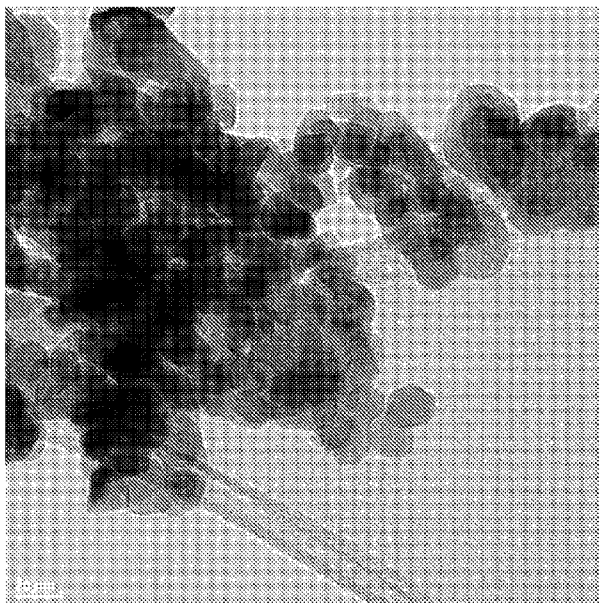


Figure 1

(57) Abstract: Disclosed are catalysts comprised of platinum and rhodium on a support selected from the group of zirconia, stabilized (doped) zirconia, zirconia-metal oxide composites, and mixtures thereof, wherein the outer surfaces of the support are selected from the group of zirconia, stabilized zirconia, and mixtures thereof. The catalysts are generally useful for the selective hydrodeoxygenation of carboxylic acids containing at least one additional hydroxyl group along the backbone thereof. More particularly, the catalysts are supported catalysts comprising platinum and rhodium, wherein the molar ratio of platinum to rhodium is in the range of about 3:1 to about 1:2. The average pore diameter of the catalyst supports is in the range of from about 5 nm to about 70 nm and the surface area is in the range of from about 15 m²/g to about 200 m²/g. Also disclosed are methods for the hydrodeoxygenation of carboxylic acids, mono- and/or di-lactones thereof having at least one hydroxyl group on the backbone thereof to corresponding acids where the backbone hydroxyl group has been reduced in the presence of the catalyst. Further disclosed is a process of producing an adipic acid product at a yield of at least about 80%.



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