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## (54) Title: DOPED CATALYTIC CARBONACEOUS COMPOSITE MATERIALS AND USES THEREOF

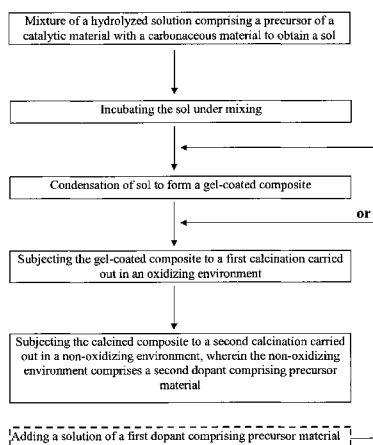


FIG. 2

(57) Abstract: The present invention is directed to a composite material of a carbonaceous substance comprising a doped catalytic compound obtained by a sol-gel method. In one embodiment, the method comprises mixing a hydrolyzed solution comprising a precursor of a catalytic material with a carbonaceous material to obtain a sol. The sol is afterwards incubated while at the same time it is mixed. After incubation the sol is condensed to form a gel. After condensation the gel formed is subjected to a first calcination carried out in an oxidizing environment followed by a second calcination carried out in a non-oxidizing environment. The non-oxidizing environment comprises a second dopant comprising precursor material. Also, a solution of a first dopant comprising precursor material is added to the solution comprising an organometallic precursor of a catalytic material before hydrolyzation or before subjecting the gel to calcination, i.e. after hydrolyzation. In a further aspect, the present invention can refer to a method of removing pollutants comprised in a liquid stream by subjecting the liquid stream to a composite material described herein. In another aspect, the present invention is directed to a photocatalytic oxidation reactor comprising a composite material including a doped photocatalytic material.

