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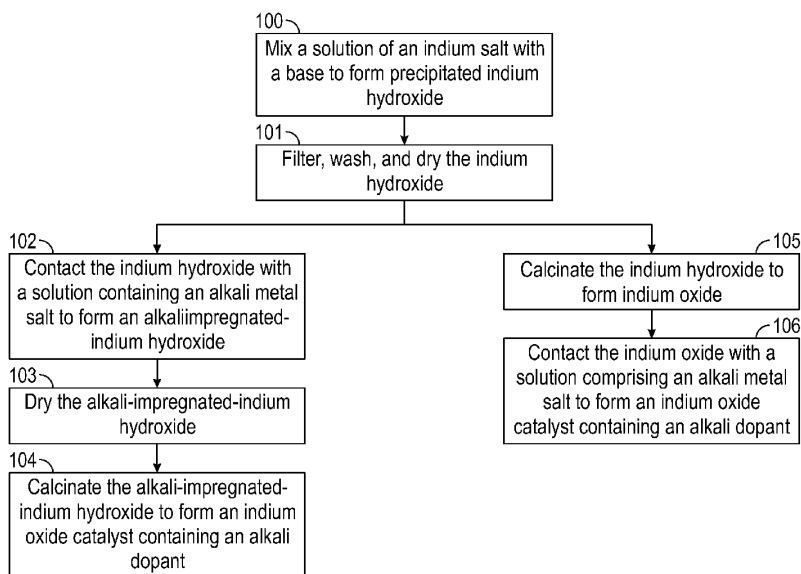


FIG. 1A

(57) Abstract: A composition of an indium oxide catalyst including an alkali dopant and a method for producing an indium oxide catalyst including an alkali dopant. The alkali dopant may include a cation of Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ , and Fr^+ . The method for producing the indium oxide catalyst including an alkali dopant includes mixing a solution of an indium salt with a base to form precipitated indium hydroxide (100), contacting the precipitated indium hydroxide with a solution including an alkali metal salt to produce an indium hydroxide solution (102), and calcinating the indium hydroxide solution to form indium oxide; thereby forming the indium oxide catalyst including an alkali dopant (104).

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