

(54) Title of the invention : A METHOD FOR PREPARING A CALCIUM BISMUTH LAYERED DOUBLE HYDROXIDE (CABI LDH) WITH SILVER DOPED GRAPHITIC CARBON NITRIDE COMPOSITE AS A PHOTOCATALYST

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(57) Abstract :

A METHOD FOR PREPARING A CALCIUM BISMUTH LAYERED DOUBLE HYDROXIDE (CABI LDH) WITH SILVER-DOPED GRAPHITIC CARBON NITRIDE COMPOSITE AS A PHOTOCATALYST 5 ABSTRACT A method for preparing a calcium bismuth layered double hydroxide (CaBi LDH) with a silver-doped graphitic carbon nitride composite is provided. The method includes preparing the graphitic carbon nitride by calcining urea at 500 degree Celsius (0 C). 10 The method further includes introducing a silver nitrate to the prepared graphitic carbon nitride solution. The method further includes exposing the mixture of silver nitrate and graphitic carbon nitride to a light-emitting diode (LED) light source and stirring the mixture. The method further includes synthesizing the CaBi LDH by calcining one or more eggshells at 900 0 C. The method further includes adding 5 molar (M) sodium 15 hydroxide drop-wise to the mixture to form a precipitate. The method further includes mixing CaBi LDH and silver-doped graphitic carbon nitride in water and centrifuging, washing, and drying the precipitate to achieve a final CaBi LDH with silver-doped graphitic carbon nitride photo-catalyst composite. 20 [FIGS. 8 and 9]

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