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(57) Abstract :

This invention relates to a catalyst (Cu1) for green hydrogen generation, [Cu(tBuN2Py3)](PF6)2 where tBuN2Py3 = N,N'-(pyridine-2,6-diylbis(methylene))bis(2-methyl-N-(pyridin-2-ylmethyl)propan-2-amine), a process for the preparation thereof and the use thereof for green hydrogen generation from ammonia. The novel first-row transition metal (copper)-based catalyst [Cu(tBuN2Py3)](PF6)2 (Cu1) (where tBuN2Py3 = N, N'-(pyridine-2, 6- diylbis(methylene))bis(2-methyl-N-(pyridin-2-ylmethyl)propan-2-amine)) is capable of (electro) catalytic oxidation of ammonia (NH3) into nitrogen (N2) and hydrogen (H2) at room temperature in a homogeneous condition. Fig. 3

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