

ABSTRACT

The present invention discloses a hydrogen generating composition, reactor, device and hydrogen production method. The composition includes sodium borohydride and a filler. The filler is a substance having a chemical stability and a water solubility of less than 10g per 100g of water under an alkaline or neutral condition at a temperature of 130°C to 140°C. The filler has a bulk volume of 0.02~16 times the bulk volume of the sodium borohydride. A mass ratio between the filler and the sodium borohydride is less than or equal to 2:1. The filler has a bulk density of less than 16 and has a mean particle size smaller than that of the sodium borohydride. The present invention has a high hydrogen production density, adequate reaction, lower cost and is environmentally friendly, practical and simple to pause and restart.