

마이크로 촉매반응기에서 NaBH_4 가수분해로부터
수소발생

김태규*

조선대학교

(taegy@chosun.ac.kr*)

A microreactor for hydrogen generation from sodium borohydride was designed and fabricated in the present study. The microreactor has three photosensitive glasses, including the cover, the reactor layer and the base. A nickel form was inserted in the reactor layer as a catalyst support. A Co-P-B catalyst for sodium borohydride hydrolysis was coated on the nickel form by electroless plating. The characteristics of the catalyst were studied using SEM and EDS analysis. The hydrogen generation rate of the microreactor was measured under a variety of conditions and made up 15.6 ml/min at a temperature of 40 oC. The generated hydrogen was supplied to a micro fuel cell with a maximum power output of 157 mW at a current of 0.5 A.