

### NAD<sup>+</sup> hydrogenation on Au and Ru electrodes deposited on glassy carbon

임지연<sup>1</sup>, Gul Rahman<sup>1,2</sup>, 주오심<sup>1,\*</sup>

<sup>1</sup>한국과학기술연구원;

<sup>2</sup>University of Science and Technology

(joocat@kist.re.kr\*)

In this study, ruthenium and gold nanoparticles were electrodeposited on modified glassy carbon. Scanning electron microscopy (SEM), cyclic-voltammetry, chronoamperometry and linear sweep voltammetric techniques were implied to characterize AuNP and RuNP deposits. The result of these studies showed that the particle's size is small with a significantly high particle density which can be attributed to the electrochemical modification of glassy carbon. The resultant AuNP/GC and RuNP/GC electrodes showed high catalytic activity towards hydrogenation of NAD<sup>+</sup> to NADH, indicating its potential for electro-catalytic applications.