

## Electrochemical Oxidation of Ammonia Using bi-metallic PtM Catalysts with Anion Exchange Membrane

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Potential use of Ammonia (NH<sub>3</sub>) as a future hydrogen-based fuel source is tested and reported. Motivation of using ammonia lies in a expected high energy density with respect to hydrogen gas. Platinum is known to be an efficient catalyst for the electrooxidation of ammonia in alkaline media. However, it is still needed to enhance electrochemical activity of ammonia oxidation. One of the methods is to use bi-metallic PtM (M= Ru, Ir, MnO<sub>2</sub>) catalysts. In this study, oxidative activities of various PtM catalysis on ammonia were evaluated by using half-cell. Single cell test with anion exchange membrane (AEM) was also performed to investigate the viability of ammonia as a fuel.