



Showcasing research from Dr. Sung Ki Cho's laboratory, Center of Hydrogen and Fuel Cells, Korea Institute of Science and Technology, Seoul, Republic of Korea.

A MoO_x -incorporated RuAu composite electrocatalyst for the hydrogen evolution reaction in proton exchange membrane water electrolysis

Electrocatalytic activity of RuAu for hydrogen evolution reaction (HER) is improved by incorporating MoO_x into the electrocatalyst. RuAu- MoO_x composite prepared through facile electrodeposition outperforms Ru and RuAu. Theoretical analyses demonstrate MoO_x finely modulated the H-binding free energy of nearby Ru, which realizes the lowest overpotential. Proton exchange membrane water electrolysis cell with RuAu- MoO_x exhibited a high performance with a superior mass activity of electrocatalyst.

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