

## Metal free g-C<sub>3</sub>N<sub>4</sub> nanorod/graphene hybrid for Oxygen Evolution Reaction

Zerihun Desalegn Bezawit, Harsharaj Sayaji Jadhav<sup>1</sup>, 서정길<sup>1,†</sup>

명지대학교; <sup>1</sup>Myongji University

(jgseo@mju.ac.kr<sup>†</sup>)

Water electrolysis is the cleanest way to produce High purity hydrogen. However, the sluggish nature of the Oxygen Evolution Reaction (OER) requires a large amount of energy input and the use of noble metal catalysts. Previously, carbon materials have been used as supports for metal based electrocatalysts owing to their high surface area and conductivity. Nowadays metal free Carbon materials are emerging as potential electrocatalysts for OER. In this study a graphitic carbon nitride nanorod graphene Hybrid is synthesized and achieved a current density of 10 mA/cm<sup>2</sup> at an over potential of 340 mV in 1M KOH on Carbon Paper. This work was supported by the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT and Future Planning (NRF-2016R1C1B2008694).