

Metal free g-C₃N₄ nanorod/graphene hybrid for Oxygen Evolution Reaction

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Electrochemical water splitting is considered to be a Carbon foot print free route for Hydrogen production. However, the sluggish nature of the OER renders the process highly energy intensive. Carbon based materials have been used as supports for transition metal oxides in order to increase the conductivity and surface area of the later. However, in recent years there has been an increased interest in utilizing them on their own for electrochemical applications. Herein, a high surface area g-C₃N₄ nanorod/graphene hybrid with abundant active sites and optimum conductivity is synthesized and achieved a current density of 10mA/cm² at 326 mV. This work was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (NRF 2016R1D1A1B03930855).

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