



Showcasing research from Professor Jeongsuk Seo's laboratory, Department of Chemistry, College of Natural Sciences, Chonnam National University, Gwangju, Republic of Korea.

A N-doped NbO_x nanoparticle electrocatalyst deposited on carbon black for oxygen reduction and evolution reactions in alkaline media

There is a growing interest in the novel bifunctional electrocatalyst for oxygen reduction (ORR) and evolution reactions (OER), for application in electrochemical energy conversion systems. N-doped NbO_x/CB nanoparticles of approximately 3 nm in size, for the first time, are introduced as an active and stable bifunctional oxygen electrocatalyst in alkaline media. The nanosize control and modified surface of the NbO_x catalyst composed of multivalence, originating from the synthesis route including potentiostatic electrodeposition in a nonaqueous solution and subsequent annealing in a NH₃ flow, largely promote the oxygen electrocatalyses.

As featured in:



See Jeongsuk Seo *et al.*,
Mater. Adv., 2022, 3, 5315.