

عنوان مقاله:

Effect of caustic treatment of reduced graphene oxide on its structure and performance toward ORR

محل انتشار:

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تعداد صفحات اصل مقاله: 1

نویسندگان:

Ali Farzaneh - *Department of Chemical Engineering, Ferdowsi University of Mashhad, Mashhad, P.O. Box 91779, Iran*

Nasser Saghatoleslami - *Department of Chemical Engineering, Ferdowsi University of Mashhad, Mashhad, P.O. Box 91779, Iran*

Elaheh K. Goharshadi - *Department of Chemistry, Ferdowsi University of Mashhad, Mashhad, P.O. Box 91779, Iran*

Hossein Gharibi - *Department of Chemistry, Tarbiat Modares University, Tehran, P.O. Box 14115-175, Iran*

خلاصه مقاله:

Oxygen reduction reaction (ORR) plays an important role in electrochemical devices such as fuel cells, metal-air batteries, and advanced chlor-alkali cells [1]. Currently due to sluggish kinetics of ORR, notable studies for achievement of active and durable electrocatalysts were done [2]. During last decade, graphene-based electrocatalysts demonstrated remarkable performance toward ORR [3]. In synthesis of graphene-based electrocatalysts, corrosive chemicals have been used for pH control or as treatment agents. In the present work, the effect of caustic on the structure and performance of reduced graphene oxide was investigated by using Raman, FTIR, XRD, and voltammetry techniques. The results revealed that caustic treatment introduced some defects in the graphene planes. These defects might play as active sites to promote ORR activity

کلمات کلیدی:

Fuel cells, Electrocatalyst, Oxygen Reduction Reaction, Graphene, Caustic Treatment

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