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Reaction

Authors: Ali A. Ensafi, Mohsen Golbon Haghighi, Mehdi

Jafari-Asl

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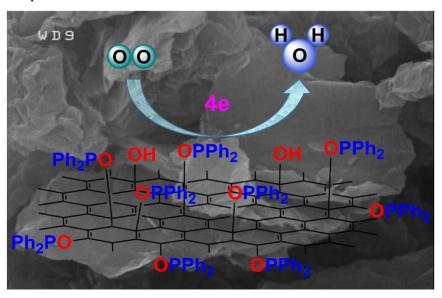


## ACCEPTED MANUSCRIPT

## Phosphine-Functionalized Graphene Oxide, A High-Performance Electrocatalyst for Oxygen Reduction Reaction

### Ali A. Ensafia, Mohsen Golbon Haghighi\*b, Mehdi Jafari-Asla

#### Graphical abstract



#### **Highlights**

- Carbon hybrid metal-free material with powerful potential for electrochemical ORR
- GO-PPh<sub>2</sub> exhibited remarkable tolerance for methanol compared to Pt/rGO
- Better durability, stability and selectivity compare to commercial electrocatalyst

#### **Abstract:**

Here, a new approach for the synthesis of phosphine-functionalized graphene oxide (GO-PPh<sub>2</sub>) was developed. Using a simple method, diphenylphosphine group was linked to the hydroxyl

<sup>&</sup>lt;sup>a</sup> Department of Chemistry, Isfahan University of Technology, Isfahan 84156–83111, Iran

<sup>&</sup>lt;sup>b</sup> Department of Chemistry, Shahid Beheshti University, Evin, Tehran 19839–69411, Iran

<sup>\*</sup>Corresponding author. Tel.: +98 21 29905713; Fax: +98 21 22431671; E-mail: m\_golbon@sbu.ac.ir (M.G.H.).

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