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Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_9624
Title of the Manuscript:	Support Material Effect for Pt Catalytic Activity
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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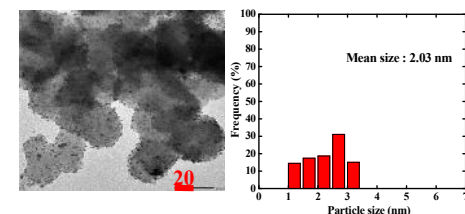
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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The article needs to be revised, because it is in first person and should be written in third person. Insufficient data on the preparation and quantification of platinum nanoparticles on the supports. DT/TGA is not a good technique to quantify nanoparticles. Could have used (atomic absorption spectroscopy). It isn't possible affirm that all materials have the same platinum content. The amount of nanoparticles on the support may influence the result. Moreover, it isn't possible affirm control of nanoparticle size.	Thank you very much for your comments. I have modified my manuscript as your suggestion in yellow part below as: "XRD and TG/DTA data can be seen in supporting information (Figure 1S and 2S). Figure 1S confirmed that 20 wt % Pt is supported on GNS, N-G and CB (commercial) by TG/DTA measurements. It indicates that all the Pt atoms in the catalyst precursors are included in the 20 wt % Pt/GNS and Pt/N-G catalysts. As shown in Figure 1S, the amounts of Pt on GNS and N-G are exactly the same as those calculated in the catalyst preparation procedure. The results indicate that all the Pt atoms in the catalyst precursors are included in the 20 wt% Pt/GNS and Pt/N-G catalysts. I can thus control the amount of Pt on GNS and N-G exactly so that one can evaluate the relationship among the particle size, the electronic structure, and the oxygen reduction reaction (ORR) catalytic activity of the Pt on GNS and N-G. Figure 2S shows XRD patterns at 2θ Bragg angles around 25° and 39° corresponding to C(002) and Pt(111) for the 20 wt% Pt/GNS, Pt/N-G and Pt/CB (commercial) catalysts, respectively. The C(002) peak appears weak and broad for Pt/GNS and Pt/N-G catalysts. The weak and broad peaks at around 25° ($d = 3.5 \text{ \AA}$) means graphene sheets are formed successfully. However, some



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	The author confuses materials and methods with results. Insufficient details of the methods/process. The author does not make clear the quantities used in the preparation of the materials, as the amount of H₂PtCl₆.6H₂O and supports. The author does not describe how 20 wt% Pt/CB material was prepared. Some analyzes and equipment are not well described in materials and methods (eg BET method and sample preparation for analysis by TEM). XRD analysis is discussed in materials and methods, but the results are not presented or discussed during the manuscript. The author includes the same analysis of MET for both 20 wt% Pt/NG and for 20 wt% Pt/CB, as shown in Figure 2 (TEM images and histograms are same). The TEM images are not good and the reference bar is low resolution, failing to identify the numbers and letters. References should be current. I suggest the author to rewrite the article, because the result is interesting to be discussed publicly.	graphitic (stacked graphene) species should remain due to the weak peak at 25° suggesting a stacking of graphene to some extent. The Pt (111) peak was very weak for all the Pt/GNS and Pt/N-G catalysts. This suggests that the Pt clusters below 1.5 nm is formed. The weak XRD peaks of Pt are characteristic for Pt/GNS catalysts [1], in contrast to the Pt/CB catalysts showing intense XRD peaks of Pt (Figure 2S). The weak and broad peaks of Pt(111) for the Pt/GNS catalysts indicate that very small particles of Pt (< 2 nm) were formed on graphene”. Thank you very much for your comments. I have modified my manuscript as your suggestion in yellow part below as: “I prepared 20 wt% Pt/GNS by using precursor H₂PtCl₆.6H₂O”. “Pt/CB commercial catalysts (Johnson Matthey)”. Thank you very much for your comments. I have modified my manuscript as your suggestion in yellow part below as:  Mean size : 2.03 nm
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<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	The author includes the same analysis of MET for both 20 wt % Pt/NG and for 20 wt % Pt/CB, as show in Figure 2. TEM images and histograms are same.-It is unethical.	