



SDI FINAL EVALUATION FORM 1.1

PART 1:

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

PART 2:

FINAL EVALUATOR’S comments on revised paper (if any)	Authors’ response to final evaluator’s comments
There are still significant deficiencies in format and content. First of all, the language does not comply with journal’s standard, the author keep using informal writing such as: <i>“I focus about the ORR catalytic activity...”</i> <i>“Thereby, I can know the support...”</i> <i>“I prepared two kinds support materials...”</i> On the other hand, the scientific content still exhibits significant inconsistencies within the experimental data. Despite adding supporting information, the author does not show BET isotherms, neither cyclic voltamograms, which could support his statements about catalytic activity and surface area. Instead he shows thermograms and diffractograms that to me seem inconsistent. Particularly, the fact that XRD is a semiquantitative technique, which should confirm high metal loading (20%) by intense peaks for Pt, which is not the case. Besides I strongly suggest a more insightful interpretation of XRD in order to clarify the occurrence of other peaks not indexed. Finally, I am still not convinced about why the electronic structure might change using a different carbonaceous support; rather than simply changing due to the morphology of the Pt nanoparticles. In addition, I see no trend, particularly, since the results in Table 1 are contradictory. How come, the catalyst with the highest activity is not the one with the highest binding energy, but the one with smallest particle size? Therefore why should I accept an effect on the type of support to attribute such catalytic activity? The experimental work described, seems to be of interest, however, it is not enough to support the statements of the author. I highly recommend improving interpretation of his results, and repeating experiments to confirm a trend or discard experimental inconsistencies.	a. Thank you very much for your comment, I have revised as your comment in my manuscript (yellow part) as below: “In this paper, the ORR catalytic activity of Pt/GNS, Pt/N-G and Pt/CB commercial catalyst as reference were studied, respectively”. b. Thank you very much for your comment, I have modified as your suggestion in my manuscript (yellow part). “Finally, I expect the support material effect for ORR catalytic activity based on Pt catalyst can be clarified”. c. Thank you very much for your comment. I modified my manuscript (yellow part) as your suggestion as below: I prepared two kinds support materials d. The surface area of carbon black (CB), GNS and N-G was determined by the Brunauer Emmett and Teller (BET) adsorption method are 45, 318 and 594 m² g⁻¹, respectively (Line 94-95, please see in manuscript) and CV (Line 170-175). e. Base on XRD data, I only focus for Pt(111) due to it indicates Pt atom and C(002) relates to stacking layers. f. Relationship between support material and Pt electronic structure and Pt particles has been described in manuscript (254-261; 263-272).