



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_10924
Title of the Manuscript:	Synthesis, characterization and electrochemical studies on $\text{Li}_4\text{Fe}(\text{CN})_6$ as cathode material for Li-ion batteries
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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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	This paper is suitable for publication after minor revision; 1-Page 2 line 5; ".....material is limited "change to ".....material are limited". 2- Page 2 line 23; "Error! Reference source not found." What is this means, please omit it. 3-Page 3 line 1 after Fig.1 caption, "figur " change to "Figure" 4- Page 4 "it is found that On the other hand, the synthesized materials is free from ferricyanide impurity" ??? The Fig. Show overlap between your material and the commercial one a and c curves, and both have the same peak at 220 nm. 5- add ir- spectra of compounds $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ and add it to Fig.3 6-- add X-ray curves of compounds $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ and add it to Fig.4 7- also add SEM images of compounds $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ 8- In Electrochemical Study: Fig .6 caption; "EC + DMC" this mixture is not mentioned in Material section, add it. also the caption must be rewritten to show all data used as temp., volt range , cathode , anode and reference electrode.	1. In page 2 line 5 has been corrected 2. Reference source has been checked and it is ok. 3. Spelling has been corrected 4. Peak at 220 nm is due to $[Fe(CN)_6]^{4-}$, and thus overlapping is found in the potassium/lithium ferrocyanide (Fe^{2+}). No such peak is found with potassium ferricyanide (Fe^{3+}). 5. FTIR spectra of $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ have been added to figure 3. 6. Powder XRD pattern of $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ have been added to figure 4. 7. SEM images of $K_4Fe(CN)_6 \cdot 3H_2O$ and $K_3Fe(CN)_6$ have been added to figure 5. 8. Fig. 6 now changed to Fig.7 and "EC+DMC" this mixture is mentioned in the text also. The figure caption has been rewritten with all the information



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	Give reference(s) for Li^+ (deintercalation/intercalation) present in Fig 6 Fig. 6; Axis ; “Voltage (V) vs. Li/Li^+” what it mean ? What is the effect of scan rate on peak current (i_p) 9- Use one word (Fig. or Figure) through the paper. 10- what about diffusion coefficient of Li^+ , calculate it from Cyclic voltammetry. 11- what about the effect of Temperature on i_p and voltammograms .	suggested. Fig.7 Axis “Voltage vs. Li/Li^+” means the applied potential is shown along x-axis and the corresponding current generated due to redox reaction is measured along y-axis. The peaks current (i_p) increases with the increase in scan rate for a reversible system. 9. Fig. has been replaced by Figure throughout the text. 10. The diffusion coefficient is expected to be in the normal range of any lithium-ion battery. 11. The effect of temperature on i_p and voltammograms should at per the normal battery.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		