Review Form 1.7

Journal Name:	**Journal of Materials Science Research and Reviews**
Manuscript Number:	**Ms_JMSRR_96235**
Title of the Manuscript:	**Correlation of Mg2+ And Li+ Salts on the Conductance of Dimethyl Sulfoxide-Tetrahydrofuran Binary Mixture for Magnesium and Lithium Cells**
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.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(https://journaljmsrr.com/index.php/JMSRR/editorial-policy)

Review Form 1.7

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 **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. Yes** **2. New suggested title: Effect of Mg^{2+} And Li^{+} concentration on electrical conductivity of Dimethyl Sulfoxide-Tetrahydrofuran Binary mixture for fabricating Mg and Li based energy storage devices** **3. The abstract should be re-written. Since the main conductivity change is due to different cations not anions, so instead of salt ion concentration may be written for more clarity. Salt term is confusing the reader in the Aim section. In the methodology section the mixture is quantitavely studied w.r.t. which parameter mention clearly.** **4. Yes** **5. Good findings. But the explanation of the finding seems to be not sufficient.** **6. For establishing scientifically correct it needs more studies. However, findings can be appreciated.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	No	
Optional/General comments	1. Remove the chemical structure of DMSO and THF, no significance here. 2. 2. In materials and methods section, please write elaborately the experimental set-up for electrical property study, such as which are electrodes, how they are connected to measure the electrical property. If possible, please incorporate the schematic diagram for clear understanding. 3. For making a good paper, a real battery can be fabricated by using the optimized composition electrolyte along with characterising the said battery,that will contribute more to the scientific community. 4. When the various parameters like cell voltage, Gibb's free energy are explained write their significance in battery system and how your output is supporting the working mechanism of battery systems w.r.t. these parameters. 5. More supporting data/explanation is required for variation of electrochemical cell voltage in case of Li_2SO_4-DMSO-THF and $MgSO_4$-DMSO-THF in 3.3 section.	

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Jayashree Mohanty**
Department, University & Country	**C.V. Raman Global University, India**