

**ELECTRICAL PROPERTIES OF MG49
AMMONIUM TRIFLATE
BASED GEL ELECTROLYTE**

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NOVEMBER 2008

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ACKNOWLEDGEMENT

Firstly, syukur Alhamdulillah to Allah Al-Mighty. This thesis would not have been written without the help, advice, guidance and information given so willingly by very many people. Their name are endless.

Here, I would like to express my gratitude to my supervisors:

Dr. Abd Malik Marwan Ali who always showed me a lot of new ideas

Dr. Muhd Zu Azhan Yahya who always provided helpful comments and further insights.

I would also like to express my real appreciation and thanks to the followings for their help with research and technical problems: Sahak for assisting me to fabricate the ammonium triflate battery and Sherene for sharing with me her knowledge.

Finally, I would like to thank all my friends and classmate for the support and encouragement given to me for making this thesis a success.

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ABSTRACT

This project were conducted in order to understand and observed the electrical properties of MG-49. This present research aims to use poly (methyl-methacrylate)-grafted natural rubber (MG49) as the polymer host. This polymer host will provide medium for ion transport. This present research aims to replace lithium ion salt and uses ammonium triflate ($\text{NH}_4\text{CF}_3\text{SO}_3$) as the dopant salt. After investigation has been carried out, the conductivity was found to increase with addition of certain weight percentage of MG-49. The highest ionic conductivity of the electrolyte was $3.28 \times 10^{-2} \text{ S cm}^{-1}$ with addition of 11% of weight percentage of MG-49. Other than that, with the used of zinc and polypyrrole in the battery, the highest specific capacity obtained at the first cycle was 7.0 mAhg^{-1} .