

**IONIC CONDUCTIVITY MECHANISM IN CURED DEPROTIENIZED
NATURAL RUBBER (DPNR) ELECTROLYTE SYSTEM**

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NOVEMBER 2007

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim.

Assalamualaikum.

First of all, I was grateful and would like to thanks to Allah S.W.T for His blessing and wisdom for give me the strength until I finished this final project. In preparing this thesis, I was in contact with many people, researchers, academicians and librarians. They have contributed towards my understanding and thoughts. I wish to extend my deepest gratitude and profound appreciation to my thesis supervisor, Dr. Famiza Abdul Latif from the chemistry Department, Faculty of Science, Universiti Teknologi Mara for her invaluable supervision.

To all my friends, Faizal, Hafiz and Hilmi, thanks for the support. My sincere apprieciation also extends to my UiTM colleagues who had supported me.

Last and not least, special thanks to my beloved friends, Saniyah and families who have in more ways than one contributed to the completion of this work.

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CHAPTER 1

INTRODUCTION

1.1 Current issue

Nowadays, battery is one of the most important power sources that are commonly used in the world. The most popular type of batteries is the alkaline battery. An alkaline battery is a liquid base electrolyte. This type of battery is widely used in many electrochemical devices like mobile phone, camera, laptop and etc.

However, the liquid base electrolyte exhibits some problems such as leakage of toxic liquid content and sometimes it may explode. This situation is harmful to the users and also to the environment. Furthermore, this liquid base electrolyte has short lifetime and need time to recharge. Therefore, many researchers had focused on a new development of solid base electrolyte system that can exhibit several advantages over the liquid base electrolyte such as:

- a. It is much more stable than liquid base electrolyte and long shelf life.
- b. Wide operating temperature range.
- c. No gassing, corrosion and leakage. Not harmful towards environment.
- d. Easy to prepare in thin film and safe to use.

However, solid polymer electrolyte has poor electrode electrolyte contact and need to be improved.