

**PREPARATION AND CHARACTERIZATION OF ALUMINUM-AIR
BATTERY**

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NOVEMBER 2008

ACKNOWLEDGMENT

First and foremost, praise to ALLAH s.w.t for his blessings and mercy for giving me an excellent health in completing this project. I would like to express my gratitude to many parties. My heartfelt thanks go to my supervisor, Dr Ab Malik Marwan Ali and my Co. supervisor, Dr Muhd Zu Azhan Yahya for her time consuming in guiding and improving the content of my final project report, for being understanding regarding on the problem face and provided more time upon completion of this project. I gratefully acknowledge for the opportunity to be supervised by him.

I am also highly thankful to Dr. Yusof Theeran, Project Coordinator of B.Sc.(Hons) Physics programme, for giving helpful information, guidance and suggestions regarding the content of this project, I gratefully acknowledge the detailed work on supervision, assessment, evaluation and format for student project.

My warmest thanks are due to my father Hendon B. Marimin and mother, Abidah Bt. Halidi and my sibling Jamil Azmie, Abdul Rahim Azhari, Mohd Farid Naquiuddin and Muhammad Adib Addin for helping, understanding, patient and never-ending support and encouraging all this time.

Furthermore, I express to my course mate in Physics and all individual that have contributed ideas, comment, and criticized for having made my time in completing this project so enjoyable, thank you so much.

Last but not least, I would like to thank University Teknologi MARA Shah Alam, especially Faculty of Applied Sciences for providing the facilities and wonderful education.

Luqman Hakim

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ABSTRACT

THE PERFORMANCE ALUMINUM-AIR BATTERY

An aluminum-air battery was fabricated using aluminum metal foil as the anode; potassium hydroxide (KOH) in hydroponics gel was used as the electrolyte. Commercial manganese-based as the air cathode, the air cathode consists of laminated structures of fibrous carbon dispersed with a manganese catalyst and supported by a nickel mesh. The air side consists of Teflon layer. The electrolyte was put into a cell holder. The potassium hydroxide with 3M has been chose as the electrolyte. The fabrications of aluminum-air battery were characterized according to their open circuit voltage OCV. Lastly, the batteries were analysed according to their self-discharge. The highest voltage produced was 1.5 V. After the reaction, it has been found that the corrosion of aluminum into Al_2O_3 occurred on the aluminum foil anode.