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論文名稱: 直接甲醇燃料電池應用於3C便攜式設備效益研究

英文論文名稱: Performance Analysis of Direct Methanol Fuel Cell (DMFC) on 3C Protable Equipm

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[摘要]

3C可攜式電子產品快速發展，隨著產品功能增強，系統電力需求提高，因此需要重量輕且續電時間長的電池。目前
電地點受限等缺點，對於便攜式設備而言，無疑是極大的限制。
燃料電池能量密度比鋰電池高。此外燃料電池無須充電器，完全擺脫充電限制，取而代之的燃料補充僅需數秒鐘，
燃料電池(DMFC)具有體積小、重量輕等小型化特質，故DMFC燃料電池將非常適用於3C便攜式設備上。
故本論文係針對DMFC系統爲研究主題，藉以解析電解膜種類、陽/陰極觸媒、擴散層材質及流場設計等電池性能參
性，將其應用於3C便攜式設備上，以期進一步發展出最佳小型化系統規劃設計。

[英文摘要]

A portable 3C electronic product is quietly developed and has an increased its performance. The power consump
sustainable. At present stage, the Li-ion battery comes across the disadvantages of inadequate energy density, l
etc. It is the significant limitation of portable equipment.
Fuel cell energy density is higher than Li-ion battery. By the way, the charged equipment is not required for fuel c
supply is only a few second that provides the user more convenient. The DMFC has small volume, light and sma
fuel cell is suitable for 3C portable equipment.
The thesis concentrates on DMFC system as a research topic. It analysis the type of membrane, anode/cathode
foe cell performance factors and μ-DMFC process with performance characteristic. It can supply to 3C equipmen
system.

[論文目次]

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