局部電化學沉積之銅微柱陣列結構製作研究

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摘 要

在局部電化學沉積方法所製作的微結構，其機械的結構以及結構本身的材料係數，都會深受製程的方式所影響。在本研究中我們以水平式局部電化學沉積的方式，採用玻璃管做包覆的白金線作為陽極，以各種不同的偏壓、間隙實驗條件下，來量化分析沉積微柱的表面形貌，以找出最佳化的沉積效果及條件，提高微結構之品質。在最佳的實驗控制參數情況下，進而往我們控制直徑以及製作螺旋微結構等等。最後製作出陣列型的尖端陽極後，以陣列方式沉積出微銅柱結構，以提高局部電化學沈積製程之效率。

關鍵詞 : 銅微柱、陣列、化學、懸臂樑

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