微構行鎳磷合金電鍍及其於硫酸溶液中電催化活性研究

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摘 要

氫氣一般採用電解水方式製備，鎳硫與鎳磷合金均具有較高 的電催化活性，由於鎳磷合金良好機械性質、耐蝕性及電催化活 性，故此篇論文以田口實驗規劃法探討電鍍鎳磷合金鍍層沉積 時，電流密度、負載率與亞磷酸濃度對鎳磷合金鍍層性質之影響， 並找出其於0.5M 硫酸水溶液環境下，電催化活性之最佳化條件。 將具有最佳電催化活性之鍍層條件，運用電化學沉積法，電鍍於 黃光微影製程所得到微構形光阻模板中，洗除光阻後，可獲得高 密度微構形鎳磷合金陣列。此法能有效控制鍍層比表面積，以提 升析氫效率。

關鍵詞 : 微構形鎳磷合金、析氫效率、電催化活性

目錄

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