

贮氢合金表面分析和金属氢化物电极电催化活性

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摘要 贮氢合金表面状态和组成是影响金属氢化物(MH)电极电催化活性的重要因素, MH电极的表面改性处理是改善电极性能的有效方法。用XPS, ICP, BET方法分析了处理后贮氢合金表面组成和状态的变化。讨论了化学还原处理对MH电极电催化活性的影响, 结果表明: 化学还原处理大大提高了MH电极反应的交换电流密度和减低了电极反应活化能。

关键词 [氢化物](#) [活化能](#) [电催化](#) [电极反应](#) [催化性能](#) [储氢合金](#)

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Surface analysis for the hydrogen storage alloy and electrocatalytic activity of MH electrodes

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Abstract The morphology and surface composition of the hydrogen storage alloy are important factors that affect the performances of metal hydride (MH) electrodes. The performances of MH electrodes are effectively improved by the surface modification. The morphology and composition of the treated alloys were analyzed by XPS, ICP and BET. The effect of the chemical reducing treatment on the electrocatalytic activity of MH electrodes was discussed. It was found that the exchange current density of MH electrode increased markedly and the activation energy of electrode reaction decreased.

Key words [HYDRIDES](#) [ACTIVATION ENERGY](#) [ELECTRO-CATALYSIS](#) [ELECTRODE REACTION](#) [CATALYTIC BEHAVIOUR](#) [ADJUSTER](#)

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