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锌酸钙的共沉淀制备法

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摘要：以不同原材料，采用共沉淀法制备了锌酸钙。XRD 分析显示：合成的锌酸钙与标准样品的结构一致，化学组成为 $Ca[Zn(OH)_3]_2 \cdot 2H_2O$。对电池进行 100 周充放电后，电极材料的晶体结构并未发生变化，但晶体尺寸变大。实验表明以硝酸锌和硝酸钙为原料制得的样品具有较小的粒径而显示出较好的充放电性能。

关键词：锌酸钙；共沉淀；二次锌电极；锌镍电池

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Preparation of calcium zincate by coprecipitation method

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Abstract: Calcium zincate was prepared from various materials by coprecipitation method. The XRD analysis showed that the sample had the same structure as the criterion and the composition was $Ca[Zn(OH)_3]_2 \cdot 2H_2O$. The structure of material didn't charge after 100 cycles, but the particle size was bigger. The result showed that the material prepared from $Zn(NO_3)_2 \cdot 6H_2O$, $Ca(NO_3)_2 \cdot 4H_2O$ had the best cyclic performance due to the least particle size.

Key words: calcium zincate; coprecipitation; secondary zinc electrode; zinc/nickel battery