第 34 卷　第 1 期　电　池　Vol.34, No.1
2004 年　2 月　BATTERY　BIMONTHLY　Feb., 2004

影响 MH/Ni 电池正极放电容量的因素

王殿龙，刘　颖，戴长松，张　勇，姜兆华

（哈尔滨工业大学应用化学系，黑龙江 哈尔滨　150001）

摘要：综述了影响 MH/Ni 电池正极放电容量的各种因素，如集流体、电解液、隔膜、活性物质、添加剂、导电剂、粘结剂、成型压力、化成工艺等。各种因素中，正极性能好坏的决定因素是氢氧化镍的性质。现已普遍采用高活性的球形氢氧化镍；其次是添加剂，钴、稀土、锌、锰等元素的合理添加，能够有效提高氢氧化镍比容量，增大电极反应的可逆性和电池的其它性能，其中钴元素的掺杂方式对正极放电容量的影响极大。此外，集流体、隔膜、导电剂、粘结剂、制片工艺和化成制度也影响 MH/Ni 电池正极的放电容量。

关键词：MH/Ni 电池;　氢氧化镍;　正极;　放电容量

中图分类号：TM912.2　　文献标识码：A　　文章编号：1001-1579(2004)01-0064-03

Factors affecting discharge capacity of Ni/MH battery positive electrode

WANG Dian-long，LIU Ying，DAI Chang-song，ZHANG Yong，JIANG Zhao-hua

（Department of Applied Chemistry，Harbin Institute of Technology，Harbin，Heilongjiang 150001，China）

Abstract：The factors affecting discharge capacity of nickel hydroxide positive electrode of Ni/MH battery，such as electrode substrate，electrolyte，separator，active material，additive，conductor，binder，shaping pressure and formation process were reviewed. The most important factor was the characteristics of nickel hydroxide. And spherical nickel hydroxide of high activity had been employed. The appropriate addition of cobalt，rare-earth，zinc and manganese could effectively improve the specific capacity of nickel hydroxide and enhance the reversibility of electrode reaction and other performance of battery. Further more，the adding mode of cobalt significantly affected the discharge capacity of positive electrode. Besides，substrate，separator，conductor，binder，technological design of preparing electrode and formation influenced discharge capacity of positive electrode of Ni/MH battery.

Key words：Ni/MH battery；　nickel hydroxide；　positive electrode；　discharge capacity