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化学镀镍诱发过程催化活性的电化学本质

胡茂圃[1] 王宝珏[1] 沈卓身[1] 潘金星[1] 沈荣富[1]黄子勋[2]

(1.北京科技大学化学系， 北京 100083;
2.北京航空航天大学材料科学系，北京 100083)

摘 要： XPS电子能谱技术的测定表明，化学镀诱发伊始，先只有镍的沉积， 然后才有Ni-P的共沉积出现。结合铜基试样在所设计的4种溶液体系中动电位扫描伏安曲线的结果，初步显示，对化学镀镍具有催化特性的金属，从电化学本质上来说，就是一种自身能提供到达或超过镍的析出电位的金属。 通过电极电位的理论计算及混合电位的测定，说明了化学镀镍首先是镍析出， 然后再发生Ni-P共沉的机理。

关键字： 化学镀镍 诱发过程 催化活性

INVESTIGATION OF ELECTROCHEMICAL NATURE OF INDUCTION PROCESS OF ELECTROLESS NICKEL PLATING

Hu Maopu, Wang Baojue, Shen Zhuoshen, Pan Jinxing and Shen Rongfu[1] Huang Zixun[2]

（1.Department of Chemistry,University of Science and Technology Beijing, Beijing 100083, P. R. China;
2.University of Aeronautics and Astronautics Beijing, Beijing 100083, P. R. China）

Abstract: The XPS experimental results of the authors' study indicate d that the Ni deposits first, then the Ni-P co-deposits at the beginning of electroless nickel plating process induced on the Cu substrate. Combined with the electrochemical behaviours of Cu substrate in the four intentionally designed solution systems investigated by linear sweep voltammetry, it was tentatively shown that a metal with the catalytical characteristic for electroless nickel plating is the metal whose potential in the electroless plating bath can reach or surpass the potential of Ni deposition. In addition, based on the calculation of electrical potentials and the measurement of mixed potentials, it has also been proved that the deposition of nickel happens first, then the co-deposition of Ni-P is followed.

Key words: electroless nickel plating induction process catalytic activity

地 址：湖南省长沙市岳麓山中南大学内 邮编： 410083

电 话： 0731-88876765，88877197, 88830410 传真： 0731-88877197

电子邮箱： f-ysxb@mail.csu.edu.cn