

钴(II)-丁二酮肟体系极谱催化波的机理研究

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摘要 本文研究了钴(II)-丁二酮肟(DMG)在氨性底液(pH9)中极谱催化波的机理.用线性扫描伏安法,循环伏安法和阳极溶出法等方法证明,这催化波的形成是由于吸附在汞电极上的钴(II)-

丁二酮肟螯合物不可逆地还原到零价的"活性钴",同时在电极表面的"活性钴"又催化了丁二酮肟的还原.

关键词 [阳极溶出伏安法](#) [极谱分析](#) [钴络合物](#) [二甲基乙二肟](#) [电化学分析](#) [催化波](#) [循环伏安法](#)

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Study on the polarographic catalytic wave of the system cobalt(II)-dimethylglyoxime

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Abstract In the Co(II)-dimethylglyoxime (HDMG)-NH₃-NH₄Cl (pH 9) system, Co(II)(DMG)₂ in the solution is adsorbed on the Hg electrode surface and exhibited a highly sensitive polarog. catalytic peak. The characteristics of this catalytic current was investigated by linear potential sweep voltammetry, cyclic voltammetry and stripping anal. The experimental evidences showed that a 0-valence "active cobalt" was formed during the irreversible reduction of Co(II)(DMG)₂ and simultaneously DMG is catalytically reduced by the "active cobalt". The mechanism of this system with the conflicting explanations of a catalytic H wave or only an adsorptive complex wave is discussed.

Key words [ANODIC-STRIPPING VOLTAMMETRID METHOD](#) [POLAROGRAPHIC ANALYSIS](#) [COBALT COMPLEX](#) [DIMETHYL GLYOXINE](#) [ELECTROCHEMICAL ANALYSIS](#) [CATALYTIC WAVE](#) [CYCLOVOLTAMGRAPH](#)

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