

## 电镀废水中有机多元LDHs 的原位合成

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## In Situ Formation of Organic Multivariate Layer Double Hydroxides in Electroplating Wastewater

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**摘要** 利用层状双金属氢氧化物(layered double hydroxides, LDHs)的合成原理,提出原位合成LDH处理电镀废水去除重金属的方法.以十二烷基苯磺酸钠(sodium dodecyl benzene sulfonate, SDBS)和十二烷基硫酸钠(sodium dodecyl sulfate, SDS)作为有机阴离子插层剂,原位合成有机多元LDH,同时高效去除水体中的重金属,其中 $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Ni}^{2+}$ 和 $\text{Cu}^{2+}$ 的去除率可达到94.9%.

**关键词:** 层状双金属氢氧化物 电镀废水 重金属 有机阴离子

**Abstract:** This paper proposes a method of removing heavy metal ions from electroplating wastewater by layer double hydroxides (LDHs) synthesized in situ. The addition of sodium dodecyl benzene sulfonate (SDBS) and sodium dodecyl sulfate (SDS) as intercalated anions results in a good removal effect of the heavy metals. The rate of removal of  $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Ni}^{2+}$  and  $\text{Cu}^{2+}$  can reach 94.9%.

**Keywords:** layered double hydroxides (LDHs), electroplating wastewater, heavy metals, organic anions

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