

论文摘要

中国有色金属学报

ZHONGGUO YOUSEJINSHUXUEBAO XUEBAO

第18卷 专辑1 2008年6月

 [PDF全文下载]  [全文在线阅读]

文章编号: 1004-0609(2008)S1-0027-05

湿法炼锌浸出液针铁矿法除铁晶种的制备

邓永贵, 陈启元, 尹周澜, 张平民

(中南大学 化学化工学院, 长沙 410083)

摘要: 利用水热法在酸性条件下制备针铁矿晶种, 经TG-DTG和XRD分析, 结果表明: 前驱体经80~110 °C水热, 可以制得针铁矿, 且在110 °C水热条件下, 水热反应6 h所得产物结晶最好。受水热反应器限制, 水热法制备的针铁矿的产量有限, 若改用准均相成核法制备针铁矿晶种, 可以满足湿法炼锌浸出液针铁矿法除铁所需大量晶种的要求。

关键字: 针铁矿; 水热法; 准均相成核法; 晶种

Preparation of goethite seeds for removal of ferrous/ferric ions from leaching solution of zinc in hydrometallurgy process

DENG Yong-gui, CHEN Qi-yuan, YIN Zhou-lan, ZHANG Ping-min

(School of Chemistry and Chemical Engineering, Central South University, Changsha 410083, China)

Abstract: Goethite (α -FeOOH) was successfully prepared via hydrothermal method in acidic solutions. Thermogravimetry-differential thermogravimetry (TG-DTG) and X-ray diffraction (XRD) pattern indicate that the goethite crystal seed is successfully prepared from precursor via hydrothermal method in acidic solutions by hydrothermal synthesis at 80–110 °C, and the pure goethite with good crystal structure was prepared by hydrothermal process at 110 °C for 6 h. Larger amount of goethite seeds could be produced by pseudo-homogeneous nucleation method to meet the mass demand of industry to remove ferrous/ferric ions from the leaching solution in zinc hydrometallurgy.

Key words: goethite; hydrothermal process; pseudo-homogeneous nucleation method; crystal seeds

地 址：湖南省长沙市岳麓山中南大学内 邮编： 410083

电 话： 0731-8876765, 8877197, 8830410 传真： 0731-8877197

电子邮箱： f-ysxb@mail.csu.edu.cn