

## عنوان مقاله:

Introduction of New Cell of Graphite –Mg with HCl –KMnO<sub>4</sub> Electrolyte and Analyzing Effective Experimental Factors on the Cell

## محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 6

## نویسندگان:

a edrisi - Chemical Engineering Department, Amirkabir University of Technology, Tehran, Iran

a bahlake - Chemical Engineering Department, Quchan Institute of Engineering and Technology, Quchan, Iran

b dabir - Chemical Engineering Department, Amirkabir University of Technology, Tehran, Iran Energy Research Center, Amirkabir University of Technology, Tehran, Iran

## خلاصه مقاله:

In this article we are introducing a new cell composed of electrodes of Graphite –Mg and electrolyte of HCl- KMnO<sub>4</sub>. Along this topic we are trying to discuss the effect of concentration changes of the electrolyte and temperature of the cell as well as surface area effect of each one of the electrodes. To estimate the usefulness duration of the cell, all of the reactions have been kinetically analyzed. After making some changes in the structure of the cell and differing the electrode type and replacing some metals like Cu and Zn instead of Mg, the produced powers have been compared. From the experimental observations and theoretical analyses, it is found out that using other metals instead of Mg decreases the produced power. Finally this kind of cell is compared with fuel cell.

## کلمات کلیدی:

Graphite- Mg cell, Fuel cell, HCl electrolyte

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/341500>

