

## عنوان مقاله:

Electrolyte and Temperature Optimization of Electrochemical Cells Using Design of Experiments(DOE)

## محل انتشار:

چهاردهمین کنگره ملی مهندسی شیمی ایران (سال: 1391)

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## خلاصه مقاله:

In this paper, initially, experiments were designed and performed by using experimental design methods and response surface methodology. Then, a model was obtained for the relationship between variables and objective function using software. The linear and nonlinear effects, especially the interaction effects of variables on the objective function, were investigated according to this model and the effects were plotted. In the experiments, the voltage produced by the electrochemical cell was considered as the objective function; and the type of cathode, the kind of acid that used as the electrolyte of the cell, and the temperature of the system were the variables. Finally, an optimum electrochemical cell was introduced by considering the effect of each factor and their optimal amount. According to the performed analysis and the effect of each factor, the behaviour of similar systems with the same parameter changes in a predictable manner

## کلمات کلیدی:

Electrochemical cell, Response Surface Methodology, Design of Experiments

## لینک ثابت مقاله در پایگاه سیویلیکا:

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