

## عنوان مقاله:

Fabrication of Highly Stable Platinum Nanoparticle via Microemulsions

## محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

تعداد صفحات اصل مقاله: 5

## نویسندگان:

M . G Hosseini - *Electrochemical Research Laboratory, Faculty of Chemistry, University of Tabriz, Tabriz*

(R Najjar - *Polymer Research Laboratory, Faculty of Chemistry, University of Tabriz, Tabriz, c*

M Shokri - *Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, P.O.Box ۱۶۵۵, Tabriz, Iran*

S Sheikhy - *Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, P.O.Box ۱۶۵۵, Tabriz, Iran*

## خلاصه مقاله:

The present paper will introduce the synthesis of platinum nanoparticles by the reduction of  $H_2PtCl_6$  with  $NaBH_4$  in sodium bis(2-ethylhexyl) sulphosuccinate (AOT)/nheptane/ water/metal salt or reducing agent reversed micellar solutions. The effect of metal precursor concentration in aqueous phase ( $[H_2PtCl_6] = 0.4, 0.8$  and  $1.2$  wt% as metallic Pt), water to AOT molar ratio ( $\omega_0 = 4, 8$  and  $12$ ) and reducing agent to metal salt molar ratio ( $[NaBH_4]/[H_2PtCl_6] = 5, 7.5$  and  $10$ ) on the reaction were investigated. The reaction progress was monitored by time resolved UV-Vis absorption spectroscopy. The dispersions of the platinum nanoparticles obtained with  $0.4$  and  $0.8$  wt% of metallic Pt in aqueous phase were very stable and no precipitated particles were observed in three months time scale.

## کلمات کلیدی:

platinum Nanoparticles, sodium bis(2-ethylhexyl) sulphosuccinate AOT, stable platinum dispersions, reversed micelles, microemulsions

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/77729>

