

## عنوان مقاله:

Effects of electroplating parameters on the properties of Fe-P coating

## محل انتشار:

دهمین کنفرانس بین المللی مهندسی مواد و متالورژی (iMat2021) (سال: 1400)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

Electrodeposition of Fe-P coatings have been recently attracted many attentions for applications such as temporary biodegradable bone replacement material, Li-ion storage anode and environmentally friendly alternative to hard chrome plating. In this study, the effects of bath temperature (۳۰ and ۶۰) and bath chemical composition (concentration of glycine and sodium hypophosphate) on the microstructure of electrodeposited Fe-P coating has been investigated. Electrodeposition was carried out galvanostatically at the current density of ۵۰mA for ۱h. Scanning electron microscope (SEM) equipped with Energy dispersive spectrometer (EDS) were used to characterize the coatings. Results showed that the P content and the morphology of the coating is affected by the concentration of glycine and sodium hypophosphite. Low phosphorus (۹ - ۱۲ Wt %) coatings showed a heterogeneous rough deposits while high P deposits were cracked. Coating deposited at higher temperature were microstructurally intact while coatings obtained at lower temperatures had micro-cracks.

## کلمات کلیدی:

Fe-P coating, Electroplating, Phosphorus content, Microstructure

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1388808>

