

## عنوان مقاله:

Comparison between Backstepping and Input-Output Linearization Techniques for pH Process Control

## محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

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## خلاصه مقاله:

pH control is a challenging problem due to its highly nonlinear nature. In this paper the performances of an adaptive backstepping controller (BSC) scheme and a global linearizing controller (GLC) are compared for pH control. First, based on the pH full order model a GLC is designed and shown to be identical with BSC proposed in the literature. Next in order to avoid state estimator design, BSC and GLC are designed based on pH reduced order model and again identity of two controllers have been established. Through computer simulations, it has been shown that the performance of GLC based on reduced state model is better than that of GLC designed based on pH full order model.

## کلمات کلیدی:

pH control, Exact linearization, Backstepping technique

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