

## عنوان مقاله:

Kinetics of catalyst deactivation in dehydrogenation of higher normal paraffins over Pt-Sn/Al<sub>2</sub>O<sub>3</sub> catalysts

## محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 10

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## خلاصه مقاله:

The kinetics of the main reaction and deactivation of the catalyst in dehydrogenation of higher (C<sub>10</sub>-C<sub>14</sub>) normal paraffins over Pt-based catalyst was studied. A simple mathematical model for catalyst decay based on a reversible main reaction and concentration-independent, nth-order decay law was presented. The model was checked both through integral analysis of experimental data and nonlinear estimation functions of temperature-time data of a commercial plant, and model parameters were evaluated. The results of both approaches were consistent, that is, the deactivation rate law was found to be of second order. The activation energies of the dehydrogenation and catalyst decay were found to be 90 KJ/mol and 140 KJ/mol, respectively.

## کلمات کلیدی:

Dehydrogenation of paraffins; Pt/Al<sub>2</sub>O<sub>3</sub> catalyst; Kinetics; Catalyst deactivation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/46159>

