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Catalytic oxidation in micro-photo-reactor system

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Abstract

Micro-reactor technology is actually used as a trend in the area of chemical, especially in the pharmaceutical industry for high quality and the cleanness of products. The main advantage of this method is the safety of chemical processes, the assurance of the temperature stability and the significantly low environmental impact. Micro-reactor system as the continual process seems to be promising as an alternative to the large batch reactors. Time saving, lower cost, the wide applicability easier scale-up are another advantages of micro-reactors. Catalytic photo oxidation processes have been studied in the micro-photo-reactor system (Ehrfeld Mikrotechnik BTS). This work is focused on the partial oxidation of benzaldehyde to benzoic acid as a model reaction.

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