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# Modeling of the Maleic Anhydride Circulating Fluidized Bed Reactor

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## Highlights:

- A simple model is proposed for the maleic anhydride circulating fluidized bed.
- A dispersion model with variable gas density is used in the hydrodynamics model.
- Configurational complexities of the reactors are considered in the proposed model.
- The tuned reactor models are obtained by the data fitting exercise.
- A multi-objective model tuning is proposed for the multi component reactor system.

## Abstract:

Maleic Anhydride (MA) production by selective oxidation of n-butane in a Multi-Tubular Fixed Bed reactor is constrained by the flammability limits. The use of Fluidized Bed circumvents this constraint but suffers from high back mixing. The Circulating Fluidized Bed (CFB) reduces the back mixing of the

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