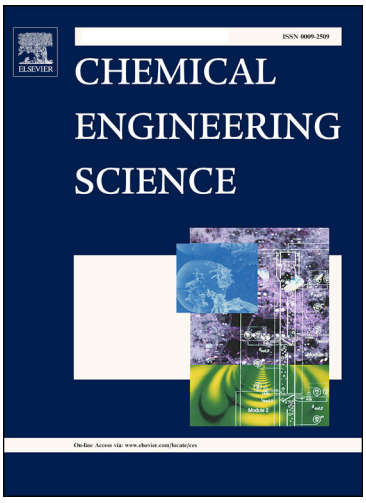

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Characterization of the flow in a gas-solid bubbling fluidized bed by pressure fluctuation

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Abstract

Statistical, power spectral and chaos analysis methods were used to analyze pressure fluctuations in a bubbling fluidized bed. Effects of superficial gas velocity, static bed height, particle size and position of pressure probe on the flow behavior were investigated. It was shown that the flow behavior in terms of Kolmogorov entropy at the bottom of the bed was more complex than that at the upper part of the bed. Kolmogorov entropy decreased with increasing static bed height or particle size. In the range of $1.05 < U_g/U_{mf} < 4.37$, Kolmogorov entropy had a strong linear relationship with the average cycle frequency. The amplitude of pressure fluctuations

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