

a flat plate, where there is no boundary layer separation the omission of the normal convective term in Eq. (A) leads to only 18% to 20% overestimation of the Sherwood number in the range of flow indices between 1.6 to 0.3.

Having this in mind, it comes as no surprise that the model of Mixon and Carberry (cited in our note) does such a good job for the mass transfer in a bed of fixed spheres where the flow pattern is made very complex by the existence of wakes and interparticle interactions.

Finally, we would like to use this opportunity to point to a misprint in the  $A_1(n)$  term of our note. The exponent in the square bracket should be  $(2-n)(n+1)$  rather than  $(2-n)(m+1)$ .

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#### To the editor:

On "Degree of Segregation and Coalescence Rate Parameter in the Random Coalescence Model for a Stirred Reactor" [*AIChE J.*, 29, 513 (1983)]

We appreciate Professor Curl's interest [*AIChE J.*, 29, 878 (1983)] in our note, where Dankwerts' degree of segregation,  $J$ , for the random coalescence model of mixing has been calculated by Monte Carlo simulation as a function of the coalescence rate parameter.

We must remark, however, that the analytical derivations quoted by Professor Curl in his letter (Verhoff, 1969; Komasaawa *et al.*, 1971; Ross *et al.*, 1978) all refer to variance of concentration rather than to variance of age. Hence the result of these authors should be identified as the intensity of segregation (component segregation),  $I_s$ , based on component fraction, and not as the degree of segregation,  $J$ , based on age. The same analytical result was obtained by Evangelista *et al.* (1969) and discussed in our note.

Dankwerts (1958), Brodkey (1966, 1967) Rao and Edwards (1973), Takao and Murakami (1976), Takao *et al.* (1979), Nauman (1981) are among the authors who clearly distinguished between component segregation and degree of segregation based on age, although "the use of the same general terminology for the very different physical process of mixing and self-mixing (or back-mixing) has led to some confusion" (Brodkey).

Takao and Murakami (1976) derived analytical expressions for  $I_s$  and  $J$  for several models of micromixing and concluded that they may or may not coincide depending on the model.

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#### ERRATUM

In "Bubble Formation at Vibrated Orifices: Medium-Chamber-Volume Region" [*AIChE J.*, 30, 37 (1984)] the author's names should read C. T. Barker and Noel de Nevers.

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