

lieve that our parameter τ in Figure 2 is valuable as a tool for confirming exactly when surface tension can be ignored in any particular application. Although we included surface shear in our theory, our numerical computations were restricted to the special case of negligible shear stress relative to normal stress, in order to concentrate attention on the role of surface tension. Ellen and Tu have now carried out such computations, for cases of relevance to their industry, in

which the effects of shear stress appear to be comparable with those of normal stress, and their work can be considered as complementary to ours.

The final paragraph of the Letter is a matter of opinion, with which we do not agree. Our reason for using two different idealized mathematical forms for the pressure distribution is precisely to show that there is little influence of this shape on the final coating thickness, providing that the

maximum pressure and maximum pressure gradient are fixed. Having established that this is true, we can then be confident that essentially the same results would hold if (for example) actual experimental data were used for the jet's pressure distribution.

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BOOKS

Mass Transfer with Chemical Reaction in Multiphase Systems, Volume II: Three-Phase Systems, Edited by Erdogan Alper, Martinus Nijhoff Publishers, Boston, 1983. 1078 pages, \$140.00

This two-volume set is comprised of the invited reviews and original contributions presented at a NATO Advanced Study Institute held in Turkey in 1981. There are 30 papers by 12 invited lecturers including E. Alper, J. C. Charpentier, W. D. Deckwer, H. Sawistowski, Y. T. Shah, and others, and nine other contributions. The collection includes several papers addressing the narrow subject of mass transfer enhanced by chemical reaction. However, it also includes reviews and

contributions to the general problems of multiphase contacting and reactor design in multiphase systems. There are several reviews that attempt to scope these general problems and other excellent reviews of mass transfer parameters for gas-liquid, liquid-liquid, solid-liquid, and 3-phase contactors. Other specific reviews cover facilitated transport, coal technology, trickle-bed reactors, slurry reactors, and biochemical reactors. The level of presentation varies from very general wordy reviews to highly specific mathematical derivations. The volumes should be of interest to chemical engineers involved in R&D with interphase mass transfer with or without chemical reactors.

The books are printed from camera-ready papers. At times the tables and figures are poorly labeled and the nomenclature is difficult to follow. There are only two English-speaking authors and the balance of the papers generally reflect the poor sentence structure and odd choice of English vocabulary by European authors. Most of the reviews however, have a wealth of references and data which make the English tolerable.

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