and problems. The potentially interesting paper on dehydration by heat of crystallization is, unfortunately, too brief to be of any value. In addition, A. I. Morgan, Jr., the chairman of this session, should have included the work of his own laboratory on dehydrofreezing.

The session dealing with membrane processes has excellent papers by A. S. Michaels, "Tailored Membranes," and R. F. Madsen, "Membrane Concentration." Again, the other papers are of questionable value. This is unfortunate since good papers on membrane deposition and on equipment would have completed an excellent grouping.

The session on spray drying is well balanced between equipment description and theory. The last session on novel dehydration methods contains a good summary of recent freeze-drying literature by Lorentzen and an excellent paper by C. J. King presenting and unifying novel dehydration techniques.

This collection of papers is very uneven. In addition, the discussions following each paper add little to the value of the papers and contain many errors. The better papers would form an incomplete but good treatise on preconcentration and dehydration for any area of application.

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Spouted Beds, Kishan B. Mathur and Norman Epstein, Academic Press, Inc., New York (1974). 304 pages.

Spouting has been called *Canadian Fluidization*, and it is fitting that this comprehensive work should have been prepared in Canada by two of the earliest workers in the field. The authors amply justify their claim that the operation of solid-fluid contacting by formation of a controlled jet (or of jets) deserves a separate name and literature.

Perhaps the most important advantage of spouting over fluidization is the smoothness and ease of control with which large, monodisperse materials like wheat can be contacted. Since conception of the idea in the mid 1950's, a literature of over two-hundred papers has appeared. Many of these have come from the relatively inaccessible literature of Eastern Europe and the Soviet Union. The references appear to have been translated with meticulous care. The discussion proceeds in a logical and orderly sequence through bed dynamics, transfer operations, chemical reactions, applications, and design suggestions.

A particularly helpful feature of the book rests on the critical assessment of the many design equations available. Additional previous unpublished data have sometimes been included to assist in the evaluation.

The text is relatively free of typographical errors, and the style is lucid and concise.

Spouted Beds should be of use to anyone designing, developing or assessing a fluid-solid contactor and to teachers of contacting operations.

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ERRATA

In "Synthesis of Fault Tolerant Reaction Paths" [21, 90 (1974)] by Gary J. Powers et al., the following corrections should be made:

1. The second part of Equation (6) should read

$$+\left(\prod_{[jk,l]} P_{m,n}\right)\left[\operatorname{Min}_{[j,k]}\{\overline{RC}^{*}_{j,k} + \overline{C}^{*}_{j} + \overline{C}^{*}_{k}\}\right]$$

2. Equation (11) should read

$$P = 1 - (1 - p_x)(1 - p_y)(1 - p_z)$$

3. Figure 2 should read

$$p_{ABCD} = 1 - (1 - p_3)(1 - p_2)(1 - p_1)(1 - p_A)(1 - p_B)(1 - p_C)(1 - p_D)$$

and

$$p_{ABCD} = 1 - (1 - p_6)(1 - p_5)(1 - p_4)(1 - p_A)(1 - p_B)(1 - p_C)(1 - p_D)$$

GARY J. POWERS

In "Optimal Temperature Policy for Reversible Reactions with Deactivation: Applied to Enzyme Reactors," by W. R. Haas, L. L. Tavlarides, W. J. Wnek [20, 707 (1974)], the following corrections should be made:

On page 710, the fourth line before Equation (27) should read . . . min^{-1} and 15,500 cal/g mol, . . .

On page 711, the second line should read, . . . to be $k_{-10} = 7.9 \times 10^5\ \text{min}^{-1}$ and . . .

On page 711, the second line following Equation (28) should read

$$\kappa_0 = 2 \times 10^{17}\ \text{min}^{-1}$$

L. L. TAVLARIDES