

LETTERS TO THE EDITOR

TO THE EDITOR

With my background information on the Journal, I was interested to see the July issue. I have read the first four articles published in the new format and would like to offer my personal comments. These articles were not in areas of my personal research interests, so I feel that I can evaluate the new format from the view of the general reader.

I found the Scope and Summary sections very readable and very helpful. I think this change is a definite improvement and should result in the Journal having wider readership if we can get enough people to examine it.

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TO THE EDITOR

The New Journal Format is an excellent idea. A few improvements in the implementation come to mind:

1. The Authors' Abstracts should be printed with clearer type so that the intended user, the technical manager, can scan them effectively and without eyestrain. It might also be advantageous to have them assembled in the front of the *Journal* and, if possible, on yellow paper as practiced by the journal *Chemie-Ingenieur-Technik*.

2. Accepting the premise recognized by all realistic editors of technical journals that the papers therein have been written as modes of self expression (just like poems or novels) rather than as service to the reader, the Scope and Summary sections should be clearly understood as an exception, namely, service-to-the-reader only. With that in mind, you may want to point out to your authors that "Scope" really means "Purpose and Scope". If that title conjures up the wartime windshield sticker "Is this trip really necessary?," that's fine.

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TO THE EDITOR

I read with interest the letter from J. J. Martin to W. D. McElroy in the May 1971 issue of the Journal. Having been made redundant because of shrinking investment programs and having decided to retire for at least a year or so from all paid employment, I have had time to think about the letter.

Frankly, I feel most unhappy about it because in some paragraphs it seems to be self-justifying and not logical. It tries to justify research on the basis of cost benefit and, like many business activities, it ignores the fact that faith and curiosity cannot be fed into a computer.

As the letter says, basic research is relatively cheap. But how much of government-sponsored research in the U.S.A. and in the U.K. in research establishments and places of education is basic research and how much is futile work done by the growing number of second degree students? Judging by the quality of second science degree men a great lump is futile.

I also feel that J. J. Martin's advisors have been bemused by the Table of Distribution of Innovation Costs, which is in fact quite wrong. The proportion allocated to research, etc., 5 to 10%, is much too low compared with engineering and product design. I am sure the 5 to 10% does not include government and university research—which is what the letter is about.

Having worked in a go-ahead unit I know that when one has separated out the service work to production and sales costs from the research and engineering department costs, they are roughly equal; this comparison ignores completely the external research costs.

The table is therefore incorrect if one is considering the national effort and argument based on it is unsound.

However, I agree that basic research is inexpensive—but are the dependent activities really justified? Should nations be devoting so much effort to more and more innovation when they can hardly digest what is produced and the effort adds to increasing unreliability? Should not the same effort be directed to improving the long term quality of life of the world—birth control, better food, better effluent management?

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In "Thermal Conductivity of Porous Catalyst" by John B. Butt [11, 106 (1955)], the quantity ϵ_a^2 appearing in the denominator of the second term of Equations (15) and (16) should be deleted.

John B. Butt

In "An Experimental Study of the Validity of Fourier's Law" by R. W. Flumerfelt and J. C. Slaterry [15, No. 2, 291 (1969)], the ordinate in Figures 3 and 4 should read $k \times 10^3$.

R. W. Flumerfelt

In "Temperature Gradients in Turbulent Gas Streams" by Wu-Sun Chia and B. H. Sage [16, No. 1, 37 (1970)], Equations (2), (4), (6), and (9) should be corrected as shown below.

$$\epsilon_m = \epsilon_m + \nu = \frac{\tau g}{\sigma \frac{du}{dy}} \quad (2)$$

$$\epsilon_m = \epsilon_m - \nu = \frac{g \frac{dP}{dx}}{\sigma \frac{d^2u}{dy^2}} - \nu \quad (4)$$

$$\epsilon_c = \epsilon_c + K = \frac{\overset{\circ}{q}}{C_p \sigma} \frac{dy}{dt} \quad (6)$$

$$N_{Pr} = \frac{\epsilon_m}{\epsilon_c} = \frac{C_p \tau \sigma}{\overset{\circ}{q}} \frac{dt}{du} \quad (9)$$

B. H. Sage

In "Distillation Decoupling" by W. L. Luyben [16, No. 2, 198 (1970)], the following corrections should be made: The caption for Figure 3a should read "... x_B^{set} ...". The caption for Figure 3c should read "... x_D^{set} ...". The numerators of the diagonal elements in Equation (12) should be $P_{13}P_{24}$.

W. L. Luyben

In "Evaporation and Drying of Drops in Superheated Vapors" by A. M. Trommel and E. J. Crosby [16, No. 5, 857 (1970)], the dimensions for the abscissa of Figure 12, page 864, should be in cm. not mm.; the abscissa should read "Drop Diameter (cm)."

E. J. Crosby

In "Multicomponent Mixtures by Solid Adsorbents" by A. J. Gonzalez and C. D. Holland [16, No. 5, 718 (1970)], the following statement should be inserted at the end of the sentence containing Equation (9):

"Equation (9) contains the assump-

(Continued on page 1520)

tion that the adsorption of A and B in the second layer is small relative to the adsorption of A and B in the first layer; that is, $C_{S1} = C_{1A} + C_{1B} - C_{2A} - C_{2B} \cong C_{1A} + C_{1B}$." The solutions for the more general case where this assumption is not made are presented in the subsequent paper "Adsorption Equilibria of the Light Hydrocarbon Gases on Activated Carbon and Silica Gel" by the same authors.

P. Schneider

In "Catalytic Reduction of Nitric Oxide with Various Hydrocarbons" by J. W. Ault and R. J. Ayen [17, No. 2, 265 (1971)], the heading under the standard deviation S in Table 5 should read "Standard deviation of X_{NO} ."

Joseph W. Ault

In "Entry Region Mass Transfer in Turbulent Pipe Flow" by D. T. Wasan, W. O. Jones and G. L. Von Behren [17, No. 2, 301 (1971)], Equation (5) should read:

$$U^+ = y^+ - 1.098 \times 10^{-4} y^{+4} + 3.3 \times 10^{-6} y^{+5} y^+ < 20$$

Equation (6) should read:

$$E = \frac{\epsilon}{\nu} = \frac{4.39 \times 10^{-4} y^{+3} - 1.65 \times 10^{-5} y^{+4}}{1 - 4.39 \times 10^{-4} y^{+3} - 1.65 \times 10^{-5} y^{+4}}$$

D. T. Wasan

In "Optimal Control Policies for Tubular Reactors Experiencing Catalyst Decay: II. Multiple Bed Semi-Regenerative Reactors" by A. F. Ogunye and W. H. Ray [17, No. 2, p. 365 (1971)], the symbol τ_k should replace u_k in Equations (27) to (29) and in the third line from the bottom in the left column on page 368. Also on page 367 third line from the bottom in the left column Equation (27) should read Equation (26).

W. Harmon Ray

In "Induced Transport in Pulsating Flow" by F. J. M. Horn and K. L. Kipp, Jr. [17, No. 3, 621 (1970)], the second author's name should read K. L. Kipp, Jr.

K. L. Kipp, Jr.

The communication "Comments on Hybrid Computing Time of ADI Method" was originally received by the *Journal* as a Letter to the Editor in April of 1970.

Thomas J. McAvoy

The Condensed Chemical Dictionary, Eighth edition, Rev. by Gessner G. Hawley, Van Nostrand Reinhold, New York (1971). 971 pages. \$27.50.

The new edition of this standard reference work is no larger physically than the previous edition, but the scope has been enlarged. Emphasis has been placed on the growing interdisciplinary aspects of chemistry and chemical technology. To this end, definitions can be found for such general terms as "biogeochemistry" and "molecular biology," as well as for more specific items like "flocculant" and "biopolymer."

The strength of the *Dictionary* continues to be in the abundant information given for chemicals and raw materials. The format aids the user in quickly locating the data he seeks—whether it be synonyms, molecular formulas, properties, sources, derivations, grades, containers, shipping regulations, or hazards. A welcomed expansion is in the hazard category where more detailed information is given

about possible dangers under varying conditions.

Several thousand trademarked products are again included, which is helpful for librarians and others in identifying proprietary products used in the chemical industries. Other entries deal with chemical processes, phenomena, and short biographies of noted chemical scientists.

The Condensed Chemical Dictionary can be recommended to those related to the chemical and process industries who need ready access to pertinent chemical facts; chemical science libraries will find it an indispensable tool. The price may, however, deter those already owning the seventh edition.

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