# AICHE JOURNAL SEPTEMBER, 1969 • VOL. 15, NO. 5

The AIChE Journal, an official publication of the American Institute of Chemical Engineers, is devoted in the main to theoretical developments and research in chemical engineering and allied branches of engineering and science.

### **PUBLISHER**

F. J. Van Antwerpen

#### **EDITOR**

**Harding Bliss** 

#### MANAGING EDITOR

Sylvia Fourdrinier

## MANUSCRIPT EDITOR

Barbara Ricciotti

Publication Office, 215 Canal Street, Manchester, New Hampshire. Published in January, March, May, July, September, and November by the American Institute of Chemical Engineers, 345 East 47 Street, New York, New York, 10017. All manuscripts should be submitted only to the New York Office. Correspondence with the editor may be addressed to him at Yale University, 225 Prospect Street, New Haven, Connecticut 06520. Statements and opinions in the AIChE Journal are those of the contributors, and the American Institute of Chemical Engineers assumes no responsibility for them. Subscription: one year, member \$8.00; non-member \$35.00; additional yearly postage, Canada \$1.00, Pan American Union \$1.50, other foreign \$2.00 (foreign subscriptions payable in advance). Single copies: \$10.00. Second-class mail. Postage paid at Manchester, New Hampshire. Copyright 1969 by the American Institute of Chemical Engineers. National headquarters of AIChE is concerned about nondelivery of copies of the AIChE Journal and urgently requests subscribers to give prompt notification of any change of address. Sixty days must be allowed for changes to be made in the records.

Postmaster: Please send form 3579 to AIChE Journal, 345 East 47 Street, New York, N. Y. 10017.

Books	642
Prediction of the First Normal Stress Difference in Polymer Solutions  Bernard J. Meister and R. Dale Biggs	643
Effect of Liquid-Packing Surface Interaction on Gas Absorption and Flooding in a Packed Column	654
Model Simulation of Adiabatic Continuous-Flow-Stirred-Tank Reactors D. L. Keairns and F. S. Manning	660
Foaming and Frothing Related to System Physical Properties in a Small Perforated Plate Distillation Column	665
An Experimental Study of Steady State Multiplicity in a Loop Reactor R. B. Root and R. A. Schmitz	670
Thermally Induced Solid State Polycondensation of Nylon 66, Nylon 6-10, and Polyethylene Terephthalate F. C. Chen, Richard G. Griskey, and G. H. Beyer	680
On the Structure of Dissolving Thin Liquid Films D. G. Suciu, O. Smigelschi, and Eli Ruckenstein	686
Prediction of Jet Length in Immiscible Liquid Systems  Bernard J. Meister and George F. Scheele	689
Drop Formation from Cylindrical Jets in Immiscible Liquid Systems  Bernard J. Meister and George F. Scheele	700
Physical Effects in Red Blood Cell Trauma C. G. Nevaril, J. D. Hellums, C. P. Alfrey, Jr., and E. C. Lynch	707
Base Film over which Roll Waves Propagate  Donald E. Woodmansee and Thomas J. Hanratty	712
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	715
Mass Transfer at the Solid-Liquid Interface for Climbing Film Flow in an Annular Duct	719
Transport of Heat and Mass between Liquids and Spherical Particles in an Agitated Tank	727
A Method for Measuring Particle Diffusivity in Two-Phase Flow in the Core of a Duct	733

(Continued on page 642)