

# THE JOURNAL OF Organic Chemistry

*Published monthly by the American Chemical Society at 20th and Northampton Streets, Easton, Pennsylvania*

---

## EDITOR-IN-CHIEF: FREDERICK D. GREENE

*Department of Chemistry, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139*

### SENIOR EDITORS

GLENN A. BERCHTOLD  
*Massachusetts Institute of Technology  
Cambridge, Massachusetts*

WERNER HERZ  
*Florida State University  
Tallahassee, Florida*

JAMES A. MOORE  
*University of Delaware  
Newark, Delaware*

ALEX NICKON  
*Johns Hopkins University  
Baltimore, Maryland*

### ASSISTANT EDITOR: THEODORA W. GREENE

### BOARD OF EDITORS

DOUGLAS E. APPLEQUIST

ALEXANDER D. CROSS

JACK HINE

GEORGE A. OLAH

MYRON L. BENDER

CHARLES H. DEPUY

RICHARD L. HINMAN

S. WILLIAM PELLETIER

RONALD C. D. BRESLOW

WILLIAM D. EMMONS

ROBERT E. IRELAND

PETER A. S. SMITH

ARNOLD BROSSI

JACK J. FOX

FREDERICK R. JENSEN

DAVID J. TRECKER

THEODORE L. CAIRNS

HAROLD HART

WILLIAM E. MCEWEN

KENNETH B. WIBERG

GERHARD L. CLOSS

EARL S. HUYSER

KURT M. MISLOW

HOWARD E. ZIMMERMAN

### EX-OFFICIO MEMBERS: GEORGE H. COLEMAN, *Wayne State University*

NORMAN A. LEBEL, *Wayne State University (Secretary of the Division of Organic Chemistry of the American Chemical Society)*

### FOREIGN EDITORS: ROBERT ROBINSON, *170 Piccadilly, London, W.1.*

P. KARRER, *Zurich*

---

### MANAGER, EDITORIAL PRODUCTION: CHARLES R. BERTSCH

*Editorial Production Office, American Chemical Society, 20th and Northampton Sts., Easton, Pennsylvania 18042*

© Copyright, 1969, by the American Chemical Society.  
Published monthly by the American Chemical Society at 20th and Northampton Sts., Easton, Pa. 18042. Second-class postage paid at Easton, Pa.

Production Staff: Manager, Editorial Production, CHARLES R. BERTSCH; Assistant Senior Production Editor, MARIANNE C. BROGAN; Assistant Editor, FERN S. JACKSON; Editorial Assistant, ANDREW J. D'AMELIO.

Advertising Office: Reinhold Publishing Corporation, 600 Summer St., Stamford, Conn. 06904

The American Chemical Society and the Editors of *The Journal of Organic Chemistry* assume no responsibility for the statements and opinions advanced by contributors.

### Business and Subscription Information

Correspondence concerning business matters should be sent to the Subscription Service Department, American Chemical Society, 1155 Sixteenth St., N.W., Washington, D. C. 20036.

Claims for missing numbers will not be allowed (1) if received more than 60 days from date of issue plus time normally required for postal delivery of journal and claim; (2) if loss was due to failure to notify the Subscription Service Department of a change of address; or (3) if the reason for the claim is that a copy is "missing from files."

Change of address: Notify Subscription Service Department, American Chemical Society, 1155 Sixteenth St.

N.W., Washington, D. C. 20036. Such notification should include both old and new addresses and postal ZIP number, if any. Please send an old address label, if possible. Allow 4 weeks for change.

New subscriptions and renewals are entered to begin with the first issue of the current volume. Should issues of the current volume be out of print at the time the subscription order is received, the pro rata value of such issues will be refunded to the subscriber.

Subscriptions should be renewed promptly, to avoid a break in your series. Orders should be sent to the Subscription Service Department, American Chemical Society, 1155 Sixteenth St., N.W., Washington, D. C. 20036.

Subscription rates for 1969: \$16.00 per volume to members of the ACS and \$32.00 per volume to all others. Add \$2.50 per subscription for Canada and countries belonging to the Postal Union, and \$3.50 for all other countries.

Single copies for current year: \$4.00. Postage, single copies: to Canada and countries in the Pan-American Union, \$0.15; all other countries, \$0.20. Rates for back issues from Volume 20 to date are available from the Special Issues Sales Department, 1155 Sixteenth St., N.W., Washington, D. C. 20036.

This publication and the other ACS periodical publications are now available on microfilm. For information write to: MICROFILM, Special Issues Sales Department, 1155 Sixteenth St., N.W., Washington, D. C. 20036.

*Notice to Authors appears in January, April, July, and October issues*

---

### AMERICAN CHEMICAL SOCIETY PUBLICATIONS

*1155 Sixteenth St., N.W., Washington, D. C. 20036*

RICHARD L. KENYON  
*Director of Publications*

JOSEPH H. KUNEY  
*Director of Business Operations  
Director of Publications Research*

DAVID E. GUSHEE  
*Publication Manager, Journals*