

AMERICAN CHEMICAL SOCIETY

Division of Environmental Chemistry

Preprints of Extended Abstracts

Presented at the

218th ACS National Meeting New Orleans, LA

August 22-26, 1999
Vol. 39 No.2

■ SYMPOSIA

▶ Organizers

■ General Papers

▶ A.M. Ford

■ Perchlorate in the Environment

▶ E.T. Urbansky and M.R. Schock

■ Analytical Challenges for Assessing Environmental Exposures to Children (Cosponsored with the ACS Committee for Environmental Improvement)

▶ L.L. Needham

■ Environmental Chemistry Awards (Cosponsored with the ACS Younger Chemists Committee)

▶ T.A. Anderson

■ Environmental Issues on the Gulf Coast

▶ D.D. Reible

■ Chiral Chemistry in the Environment

▶ A.W. Garrison, R.L. Falconer, M.D. Müller

■ Waste: Remediation and Related Issues

▶ A.M. Ford

■ Computer Software for Environmental Chemistry Education (Cosponsored with the Division of Chemical Education and the Division of Computers in Chemistry)

▶ F. Dunnivant and M. Newman



Chair:

Robert W. Paddock

Treasurer:

Kenneth E. Smith

Chair Elect:

Martha J.M. Wells

Program Chair:

Allan M. Ford

Secretary:

Larry LaFleur

Preprints of Extended Abstracts

Presented
at the
218th ACS National Meeting

New Orleans, LA
August 22-26, 1999

Volume 39 No. 2

Division of Environmental Chemistry, Inc.
American Chemical Society

**Division of Environmental Chemistry
American Chemical Society**

The Division of Environmental Chemistry was established as a Division of the American Chemical Society in 1913, as the Division of Water, Sewage, and Sanitation Chemistry. (The name was changed in 1959). The objectives of the Division are to promote research, disseminate information and improve education and public awareness regarding the chemistry of the environment, in all of its aspects. In addition, the Division provides assistance to the American Chemical Society and its committees and divisions in matters regarding the environment.

In fulfillment of the above objectives, the Division sponsors symposia at the two annual meetings of the American Chemical Society. These symposia are organized by volunteers from the Division under the guidance of the program chair. For information on upcoming symposia at national meetings or to volunteer to organize a symposia, contact the **Program Chair**:

Allan M. Ford
1050 Edgewater Lane
Gulf Breeze, FL 32561
850-934-1790

Extended abstracts of papers presented in symposia sponsored by the Division of Environmental Chemistry are published twice each year by the Division. These extended abstracts generally are two to four pages in length and contain data, figures and references. The extended abstracts appear in "Preprints of Extended Abstracts...", which are sent to all members of the Division as part of their benefits of membership. Copies of this volume and previous volumes are available from the **Publication Chair**:

Ruth A. Hathaway
1810 Georgia St.
Cape Girardeau, MO 63701-3816
573-334-3827

Membership in the Division of Environmental Chemistry is open to all members and National Affiliates of the American Chemical Society upon request of to the Secretary of the Division and payment of dues. A person who is not a member or National Affiliate but wishes to participate in the activities of the Division may become a Division Affiliate provided that person is not a chemist or chemical engineer, resides in the United States, and pays all dues. For information regarding membership in the Division or the American Chemical Society, contact the **Business Office**:

Ruth A. Hathaway
1810 Georgia St.
Cape Girardeau, MO 63701-3816
573-334-3827

Copyright© 1999 American Chemical Society, Division of Environmental Chemistry, Inc.

For information on copying the entire book or sections of this book, contact the **Publications Chair**, at the address listed above. For permission to reproduce individual papers, contact the respective authors.

Copies of this volume are available for \$25.00 each. Remittance payable to **ACS Division of Environmental Chemistry** must accompany your order. Send payment and order to the **Publications Chair**, at the address listed above.

ISSN # 1520-0507
August 1999
Printed in the United States of America

TABLE OF CONTENTS

Volume 39 No. 2

Division Executive Committee	iv
Division Activities at the National Meeting	vi
Schedule of Upcoming Symposia and Abstract Deadlines	viii
Awards	x
Distinguished Service Awards	xiii
Graduate Student Awards for 1999	xiv
Graduate Student Awards for 1998	xiv
Graduate Student Paper Awards for 1998	xv
Graduate Student Paper Awards for 1997	xv
Books Available from ACS Books, Based on Division Symposia	xvi
Books Available from Ann Arbor Press, Based on Division Symposia	xvii
Back Volumes of Preprints	xviii

Symposia

Organizers and Symposia Introductions	xxi
Table of Contents for Extended Abstracts	xxiv
General Papers	1
Perchlorate in the Environment	56
Analytical Challenges for Assessing Environmental Exposures to Children (cosponsored with the ACS Committee for Environmental Improvement)	118
Environmental Chemistry Awards (cosponsored with the ACS Younger Chemists Committee)	149
Environmental Issues on the Gulf Coast	161
Chiral Chemistry in the Environment	185
Waste: Remediation and Related Issues	215
Computer Software for Environmental Chemistry Education (cosponsored with the Division of Chemical Education and the Division of Computers in Chemistry)	231
Author Index	245