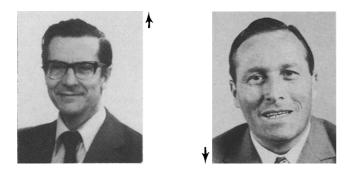
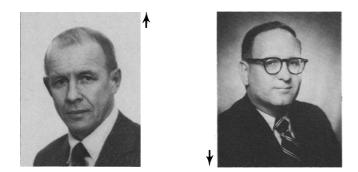
Speakers

J.S. Alabaster joined the Water Pollution Research Laboratory, now a part of the Water Research Centre, in 1968. He has published widely on field and laboratory investigation of the effect of water quality on aquatic life and the development of appropriate mathematical models and is closely involved in the environmental research and regulatory programs of the European Economic Community and related work by the World Health Organization and the United Nations Food and Agriculture Organization. Mr. Alabaster is a graduate of the University College of Wales, Aberystwyth. His topic: Aquatic Toxicology: A New Element in the Safety Testing of Detergents.



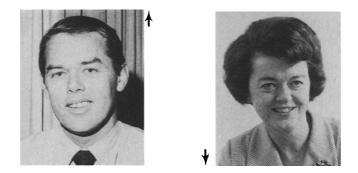
Dr. Peter Berth has worked in research and development with Henkel, Dusseldorf, for 20 years with current responsibilities for long-range development and environmental protection. Dr. Berth did his graduate work at Technische Hochschule, Darmstadt. His topic: New Developments in the Field of Inorganic Builders.

Dr. Hans O. Bouveng is environmental coordinator at the Association of Swedish Chemical Industries. Dr. Bouveng's main area of research from 1955-1964 was the structural chemical of polysaccharides from wood, fungi, and bacteria. In 1965 he joined the Swedish Water and Air Pollution Research Laboratory where he studied, among other things, environmental problems related to detergent constituents and mercury. He has been at his present post since 1975. Dr. Bouveng received his doctorate in 1961 from the Royal Institute of Technology. His topic: Management of Man-Made Eutrophication: the Swedish Concept.



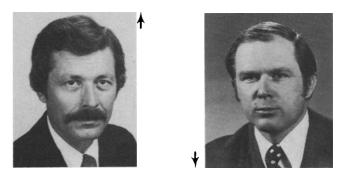
Theodore E. Brenner is president of The Soap and Detergent Association (USA). The organization represents 128 U.S. member companies that either manufacture cleaning products or supply raw materials to the industry. Mr. Brenner joined the SDA in 1963 as research director, later serving as technical director and as vice-president and government affairs director before being named to his present post. He is a graduate of Manhattan College and The Johns Hopkins University. Since 1976 he has served on the U.S. Environmental Protection Agency Ad Hoc Toxic Substances Advisory Committee. Mr. Brenner is a registered professional engineer, a Fellow of the American Public Health Association, and a member of the American Society of Civil Engineers and the American Institute of Chemical Engineers. He has written numerous technical papers and articles on environmental subjects. His topic: North America – World Trends in the Soap and Detergent Industry.

Poul N. Christensen is section head in the Application Technology Department of NOVO Industri A/S of Copenhagen. He is currently product manager for the detergent industry and various other industries. Before joining NOVO in 1968, Mr. Christensen was employed three years by Allied Chemical in Virginia. He is a graduate of the Technical University of Denmark. His topic: *Enzymes in Liquid Detergents*.



Eileen Cole, a Cambridge economist by training, has spent some 27 years in market research. Her business career has been spent with Unilever, both as a buyer of research in marketing companies and as a creator and seller of research with the Unilever research units. She joined the Board of Research Bureau (Research International) Ltd. in 1964, was chairman from 1967 to 1973, and is now chief executive of the Research International Group, based in Rotterdam, and responsible for coordinating the activities of research units in nine European nations (Belgium, Denmark, Finland, France, Germany, Italy, The Netherlands, Sweden, and the United Kingdom). Her topic: Understanding the Consumer Through Market Research.

Dean M. Coons is associate director of Research and Development with The Clorox Company in Oakland, CA. Before joining Clorox in 1968, Mr. Coons had been with Procter & Gamble Co. in Cincinnati. His entire career has been with the consumer products industry, involving primarily development activities on a variety of food and household cleaning products. Mr. Coons is a graduate of Iowa State University. His topic: *Bleaches in the Washing Process.*



Dr. Marvin M. Crutchfield leads a research group in the Detergents and Phosphates Division of Monsanto Industrial Chemical Co., St. Louis, MO, concerned primarily with exploratory research on new detergent raw materials. He has been in research and development work with Monsanto since 1960. Dr. Crutchfield is a graduate of Duke University and Brown University. He has more than 25 technical papers and patents to his credit. Professional affiliations include the American Chemical Society (Councilor): AAAS, Sigma Xi Phi Lamda Upsilon; and Phi Beta Kappa. His topic: Organic Builders – A Review of Worldwide Efforts to Find Replacements for Detergent Phosphates.

Dr. A.L. de Jong is a technical member of Unilever's detergents product group for matters concerning the environment, consumer questions, and related legislation internationally. Dr. de Jong joined Unilever in 1954 as a research scientist and has held several positions concerning product and process development of detergents. He is chairman of the AIS working group on Appraisal Methods and in June became president of the AIS Social/Economic Commission. His topic: *Guidelines for the Comparative Testing of Detergent Products*.



A.S. Davidsohn is a native of Berlin and received his degree in chemistry at the Berlin University. He left Germany in 1935 after Hitler came to power and worked exclusively in soaps, detergents, and fats and oils. During the 3rd Congress on Surface Activity, held during 1960, he introduced with Mario Ballestra a new sulfonation process with converter gas, later to be known as the Sulphurex Process. He has been a regular consultant with the Ballestra Group since 1960. Mr. Davidsohn is the author of several technical articles, a co-author of books on soaps and detergents, and the inventor of several patents owned by the Ballestra Group. His topic: Spray Drying and Dry Neutralization of Powdered Detergents.

G.W. Fernley has worked in the research department with Shell, United Kingdom, since 1964 working primarily with application of surfactants. A native of England, Dr. Fernley is a member of the Royal Institute of Chemistry. He has been with Shell since 1955, spending his first nine years in quality control at a chemical plant. His topic: Zwitterionic Surfactants – Structure and Performance.



Dr. Leon Golberg is president of the Chemical Industry Institute of Toxicology, a research organization established in April 1975 to test large volume chemicals. Before joining CIIT in 1976, Dr. Goldberg had been Research Professor of Pathology and Scientific Director of the Institute of Com-

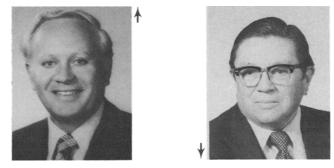
parative and Human Toxicology. Previous to that he was director of the British Industrial Biological Research Association. Dr. Golberg received his Ph.D. from Oxford University, a D.Sc. degree in biochemistry from South Africa's Witwatersrand University and is a medical graduate of the University of Cambridge. He is a member of the Royal Society of Medicine and a Fellow of the Royal Institute of Chemistry and the Royal College of Pathologists. His topic: Human Health Effects: The Importance of Chronic and Genetic Evaluations on New Large Volume Chemicals Disposed into the Environment with Potential Entry into the Food Chain.

George K. Greminger is an associate scientist with the Dow Chemical Company in Midland, MI. His 39 years with Dow have included production, research, patent liaison, and product development experience with ethylcellulose, carboxymethylcellulose, methylcellulose, and methylcellulose derivatives. He has worked on projects in Europe, Latin America, and Canada. Mr. Greminger holds 33 patents in the area of cellulose ethyl technology. He is a graduate of Syracuse University. His topic: Antiredeposition Additives Face New Challenges.



Dr. R.E. Hall is head of Professional and Regulatory Services for Packaged Soaps and Detergents for The Procter & Gamble Company, managing human and environmental safety assessment and relations with regulatory agencies. Dr. Hall has been with P&G for 30 years in a variety of research and development positions. He is a graduate of Purdue University. Dr. Hall serves as chairman of the biomedical research committee for the Soap and Detergent Association (USA). His topic: Wrap Up: Philosophy of Safety Testing and Benefit/Risk Evaluation.

D.E. Haupt is manager of the Detergent and Ethylene Oxide Products businesses of Shell Chemical Company, U.S.A. He has served in a variety of manufacturing, marketing, research and development, and business assignments throughout Shell since joining the firm in 1952. He spent two years with Shell International Chemie Maatschappij BV in The Hague, The Netherlands. Mr. Haupt is a graduate of The Ohio State University and serves as chairman of the Technical & Materials Steering Committee of The Soap and Detergent Association (U.S.A.). He is a member of the SDA Board of Directors. His topic: Petrochemicals – Viable Raw Materials for Tomorrow's Soap and Detergent Industry?



Dr. Aaron B. Herrick is manager of bar soap and house-

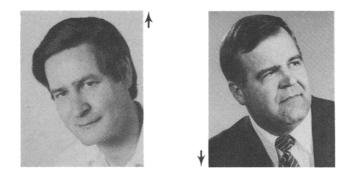
hold products research for Armour-Dial Company. For the past 17 years he has been responsible for bar soap formulation and processing programs at Armour-Dial. He has authored several publications and patents on soaps and detergents. Before joining Armour-Dial, he worked for eight years with Colgate-Palmolive Company as a researcher on essential oils, detergents, and aerosol products. Dr. Herrick received his doctorate in organic chemistry from the University of Illinois and a bachelors degree in chemistry from Princeton. He is a member of the American Oil Chemists' Society. His topic: Bar Soap Finishing: New Trends in Soap Processing Line Designs and Layouts.

Dr. D.R. Hildebrand has been with Bayer AG, Leverkusen, Dyestuffs Division, working on dyeing mechanisms and dyeing technology of synthetic and natural fibers. Before joining Bayer, Dr. Hildebrand was at the Wool and Polymer Research Institute of the University of Aachen. He is a graduate of the University of Heidelberg. His topic: *Trends in Coloration and Finishing of Textile Fabrics*.



M.W. Hollingsworth has been a staff member at Unilever Research Labs Port Sunlight Laboratory in the United Kingdom for the past eight years. His earlier work there was concerned with detergency mechanisms but he now works primarily with builders. His topic: *The Role of Detergent Builders in Fabric Washing Formulations.*

Dr. H. Krussmann is director of the Waschereiforschung, Krefeld e.V. His main fields of study are surface physics and chemistry of textiles, fundamental research on washing processes, and operation and method of washing and cleaning systems. He is a graduate of Cologne University. His topic: *Evaluation of Detergents for Washing Fabrics*.



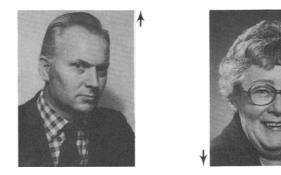
Stephen A. Kuti is manager of the Patterson-Kelley Continuous Testing Laboratory. A native of Hungary, Mr. Kuti is a graduate of the Military Academy of Hungary where he served as an instructor until 1956. In 1957 he became associated with Warner-Lambert Company and later with Sandoz Pharmaceuticals Co., both in New Jersey. He joined Patterson-Kelley in 1965 as a process engineer, later being named to his present position. His topic: Agglomeration – The Practical Alternative.

Agostino Lanteri has been a technical consultant and researcher in the field of soap and detergent processing with G. Mazzoni S.p.A., Busto Arsizio, Italy, since 1952. He has developed two processes for continuous neutralization of fatty acids and a process for continuous SO_3 sulfonation. Previously he worked in a variety of assignments ranging from laboratory research to supervisor of plant and production in a soap factory. In 1939 he received the "Diplome d'Ingénieur Spécialiste-Chimie Industrielle" at the "Institute Technique Supérieur" in Freiburg, Switzerland. His topic: Sulfonation/Sulfation Technology.



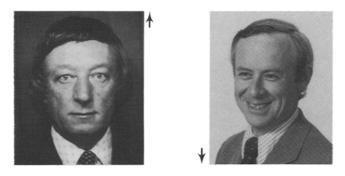
Dr. Warner Linfield is a research leader for surfactants and applicants research at the Eastern Regional Research Center, U.S. Department of Agriculture, in Philadelphia, PA. Dr. Linfield was research director for Armour and Co. Soap Division from 1955 to 1963, and manager of the Organic Chemistry Research at IIT Research Institute from 1965 to 1971. He assumed his present position in 1971. A native of Germany, Dr. Linfield received his doctorate from the University of Michigan in 1943 and held a postdoctoral fellowship in cancer research at Northwestern University in 1943-44. He is the author of more than 70 scientific publications, editor of a book, "Anionic Surfactants," and is an associate editor for the Journal of the American Oil Chemists' Society. His topic: Soap and Lime Soap Dispersants.

E.J. Lowe is technical manager for the phosphates section of the Detergents and Chemicals Groups of Albright & Wilson Ltd. He has been with the firm more than 30 years and is the author of about 30 patents in the area of industrial phosphorous technology, the result of many years in research and development connected with phosphate applications and phosphorus chemicals. His topic: Soaps and Detergents – The Inorganic Components.



Anne Lyng is director of Home Economics, Laundry and Home Care Products with Procter & Gamble Co. in Cincinnati, OH. She coordinates home economics activities related to P&G's laundry, dishwashing, and home care products, serves as technical advisor in the development of educational materials, and maintains technical liaison with related industries. She is a member of technical panels and other committees of the American Apparel Manufacturer's Association, American Association of Textile Chemists and Colorists, American Society for Testing and Materials (SC D-12, SC D-13); Association of Home Appliance Manufacturers, Information Council on Fabric Flammability, International Standards Organization TC-91; and The Soap and Detergent Association. She is a graduate of Syracuse University. Her topic: Consumers Are the Final Product Judges.

Arthur Lysons is head of the raw material section of the Economics and Statistics Department of Unilever Ltd. in the United Kingdom. For the past 17 years he has been responsible for preparing analyses, advice and forecasts of supply, demand, and price developments in the world commodity markets for fats and oils, oil cakes, and oilseeds. His topic: Natural Oils and Fats – Prospects for the '80s.



Dr. D.A. McKenzie is Technology Manager for programs and products supported by Union Carbide in the detergents, household specialities, personal care products, and biochemical intermediates business segments. Dr. McKenzie has worked in the Research and Development Department of Union Carbide at Tarrytown, NY, Technical Center since 1962. He has been involved in a number of different technological areas, including basic organic chemical research, function fluid research, mining chemicals studies, and surfactant oriented development R/D. He holds degrees from the University of Rhode Island and the University of Maryland. His topic: Nonionic Surfactants.

Dr. Helga Milster is director of the Detergent, Laundry Technology, and Dry Cleaning Laboratory at the Federal Institute for Testing of Industrial Materials in Berlin. Her laboratory is responsible for the testing and evaluation of washing machines. In the scope of professional activities, Dr. Milster serves as an active member of committees of the ISO and of the DIN (German Bureau of Standards). She has written more than 30 technical publications on testing of washing procedures, detergents, and laundry equipment. She received her doctorate in chemistry at the Technical University of Berlin. Her topic: *Evaluation of Washing Machines*.



E.A. Morris is chief buyer and business unit executive with Busch Boake Allen. Mr. Morris began his career in the field more than 30 years ago with A. Boake Roberts Ltd., a forerunner of the present firm. Mr. Morris is a Fellow of the

Institute of Purchasing and Supply. He is widely traveled and has extensive experience in naval stores, essential oils, and chemicals markets. His topic: Soaps and Detergents – Fragrances, Natural versus Synthetic.

Dr. H. Puderbach is a department manager for Henkel & Cie GmbH with present responsibilities for transmission and scanning electron microscopy, light microscopy, X-ray microanalysis, X-ray diffraction, thermal analysis, particle size analysis, and new methods in surface analysis. He also has been a group leader for fiber development with an English-German engineering firm. Dr. Puderbach is a graduate of Johannes Gutenberg University in Mainz. His topic: Use of Scanning Electron Microscopy for Evaluating the Ouality of Washing Products.



Dr. Otto Schraut has been with 4P Verpackungen of West Germany for the past 10 years, presently working in market development. He studied economics at the University of Munich, specializing in marketing with a strong technical background. His topic: *Packaging of Powdered* and Liquid Detergents.

Dr. George C. Schweiker has been director of research and development for Philadelphia Quartz Company since 1973. Dr. Schweiker has worked in the chemical and related industries for more than 20 years in various technical and managerial positions. He is the author or co-author of more than 70 patents and publications. Dr. Schweiker also has taught chemistry at Drexel University. He holds three degrees from Temple University. His professional affiliations include Corporation Associates Committee, American Chemical Society; The Chemical Society (London); Fellow of the American Association for the Advancement of Science; the New York Academy of Sciences, Sigma Xi; president, Research Management Group of Philadelphia, and The Pennsylvania Society. His topic: Sodium Silicates and Sodium Aluminosilicates.



Dr. A.E. Siegrist has been with the Ciba-Geigy organization since 1948 and for the past 26 years has worked chiefly in the field of fluorescent whitening agents. He has been a lecturer at the University of Fribourg and since 1970 a professor of color chemistry at the universities of Fribourg and Lausanne. He received his doctorate in chemistry in 1948 from the University of Geneva. His topic: *The Requirements of Present-Day Fluorescent Whitening Agents.* Luis Spitz is sales and technical representative in the United States and Canada for G. Mazzoni S.p.A. (since 1965) for ACMA S.p.A. (since 1975). He has worked in the soap research and development department of Armour-Dial Inc., in Chicago and for Shell Oil Company in Venezuela. Mr. Spitz attended the University of Illinois and Wayne State University, receiving a chemical engineering degree in 1960. His topic: Bar Soap Packaging.

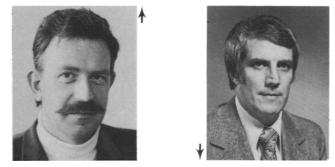


Dr. Fumikatsu Tokiwa, assistant general director of the Research and Development Division of Kao Soap Company since 1976, joined that firm in 1957 as a research chemist. In 1968 he was named research manager for the surfactant research and development department. In 1971 he was named director of the Household Products Research Laboratories. Dr. Tokiwa recently received the 1977 Literature Award of the Japan Oil Chemists' Society for his pioneering work on surfactants and detergency. He is a graduate of the Science University of Tokyo (1957) and received his doctorate in chemistry from Osaka University in 1965. His topic: Asia/Japan - World Trends in the Soap and Detergent Industry.

M.E. Tuvell is the supervisor for Ethyl Corporation's laboratory programs involving surfactants, detergents, and plasticizer intermediate products developed by Ethyl. Since 1953 he has been involved with detergent systems and detergent formulation and evaluation. Mr. Tuvell has been with Ethyl Corporation since May 1967. He holds a number of patents relating to both liquid and solid detergent formulations, and has written or been a co-author of numerous papers in the area of detergent and builder functions. He holds degrees from The Ohio State University and the University of Southern California. His topic: AOS - An Anionic Surfactant System.



Peter A. Vening is product manager, Nitrogen Derivatives Group, for Akzo Chemie in Holland. He is responsible for the technical marketing development of amine oxides and fatty quaternary ammonium salts for the retail softener, detergent, and cosmetic industry. His topic: *Physical, Chemical Properties of Amine Oxides.* **Dr. J.H.M. Weenen** is product area manager for Unilever Research, responsible for work on machine dishwashing. His title is product area manager. He joined Unilever to work on enzymatic detergents for a post with IFF as a microbiologist. Dr. Weenen is a graduate of the University of Amsterdam. His topic: *Trends in Dishwashing Appli*cances.



Roger L. Wilson is a consultant with Kurt Salmon Associates, management consultant to the apparel, textile, and retail industries, and is director of the firm's activities in flammability related services. Mr. Wilson is a member of the Executive Committee of the Information Council on Fabric Flammability. He has served as chairman of the Apparel Products Flammability Committee of the American Apparel Manufacturers Association. Mr. Wilson is a graduate of the University of Colorado. His topic: Development and Trends in Launderable Apparel.

Dr. Yasuo Yamaji is a manager in the Research and Development Department of Procter & Gamble, Co., Ltd. Dr. Yamaji joined Daiichi Kogyo Seiyaku Co., Ltd., in 1948, holding management positions in the company's manufacturing organization before being named manager for research and development in detergents and toiletry goods. When that firm joined with Procter & Gamble and two other firms to form Procter & Gamble Co., Ltd., in 1973, Dr. Yamaji joined the new firm. He is a graduate of Kyoto University. He is a member of the Chemical Society of Japan, a member of the council of the Japan Oil Chemists' Society, the Synthetic Detergents Experts Subcommittee of the Japanese Industrial Standards Committee, and a member of the technical committees of the Japan Soaps and Detergents Association. His topic: Total Hardness Ions in Laundry Washing Solutions.



Izumi Yamane is director of the Corporate Planning Department for Lion Fat and Oil Co. Mr. Yamane has been with Lion Fat and Oil Co. since 1946, initially working on research and development for soaps, helping commercialize various manufacturing processing during 1956-1960. Mr. Yamane was project leader in Lion's pioneering research and development of a new powder detergent containing AOS in 1967. Mr. Yamane is a graduate of the University of Tokyo and has published extensively and obtained several patents particularly in the composition of soaps and detergents including AOS. He is a vice-chairman of the Japan Oil Chemists' Society and a member of the CID committee of Japan. His topic: Recent Findings and Experiences with Alpha-Olefin Sulfonates.