

**THE  
JACOB F. SCHOELLKOPF  
Medal  
1931 -- 2015**

A TESTIMONY OF ACHIEVEMENT IN CHEMICAL TECHNOLOGY ON  
THE  
NIAGARA FRONTIER

The first Jacob F. Schoellkopf Medal was awarded in 1931. For 85 consecutive years the Western New York Section of the American Chemical Society has recognized the work of its peers with a citation of their accomplishments.

In recognition of Jacob F. Schoellkopf, Sr., whose insight fostered our growth in manufacturing, teaching, and research, this award is rededicated to the continuing achievements of our men and women of science.

**SCHOELLKOPF MEDAL WINNERS**

**1931 FRANK J. TONE**

Carborundum Co., Niagara Falls, NY, for outstanding work on properties and commercial applications of silicon carbide and production of metallic silicon.

**1932 WILLIAM HALE CHARCH**

du Pont Cellophane Co., Buffalo, NY, for contributions to the chemistry of cellulose and, in particular, to the development of moisture proof cellophane.

**1933 FRANK A. HARTMAN**

University of Buffalo, Buffalo, NY, for isolation of Cortin and its use as a cure for Addison's disease.

**1934 JAMES CLOYD DOWNS**

R&M Chemicals Dept. (Electrochemicals Dept.), E. I. du Pont de Nemours & Co., Inc., Niagara Falls, NY, for development of the Downs Cell for production of metallic sodium.

**1935 F. AUSTIN LIDBURY**

Oldbury Electrochemical Co., Niagara Falls, NY, for contributions to electrochemistry and industrial chemistry.

**1936 ALBERT H. HOOKER, SR.**

Hooker Electrochemical Co., Niagara Falls, NY, for contributions to the manufacture of electrolytic caustic soda and chlorine.

**1937 JAMES G. MARSHALL**

Union Carbide & Carbon, Electrometallurgical Company, Niagara Falls, NY, for technical and administrative contributions to the carbide and ferro-alloy industries.

**1938 STERLING TEMPLE**

R&M Chemicals Dept. (Electrochemicals Dept.), E. I. du Pont de Nemours & Co., Inc., Niagara Falls, NY, for many contributions to the chemical industry as a Director of Research.

**1939 CHARLES F. VAUGHN**

The Mathieson Alkali Works, Inc. (Olin Mathieson Chemical Corp.), Niagara Falls, NY, for pioneer work in the graphitization of carbon and development of the Castner Mercury Cell.

**1940 W. H. BRADSHAW**

Rayon Dept., E. I. du Pont de Nemours & Co., Inc., Buffalo, NY, for development of "cordura" high strength rayon yarn.

**1941 ARTHUR W. BURRELL**

Alox Corporation, Niagara Falls, NY, for production of fatty acids, lactones, and other chemicals from petroleum.

**1942 LAWRENCE H. FLETT**

National Aniline Division, Allied Chemical and Dye Corp., Buffalo, NY, for development and commercialization of detergents of the alkyl arylsulfonate type, dyestuffs, intermediates, and contributions to the W.N.Y. Section of the American Chemical Society.

**1943 RAYMOND R. RIDGEWAY**

Norton Company, Niagara Falls, Ontario, for discovery and commercial production of boron carbide, and improvements in other electric furnace products.

**1944 GLEN D. BAGLEY**

Union Carbide and Carbon Research Laboratories, Niagara Falls, NY, for production of metallic magnesium in high temperature vacuum furnaces.

**1945 ALEXANDER SCHWARCMAN**

Spencer Kellogg & Sons, Inc., Buffalo, NY, for development of new drying oils to replace China wood oil.

**1946 HARVEY N. GILBERT**

Electrochemicals Dept., E. I. du Pont de Nemours & Co., Inc., Niagara Falls, NY, for research on production, handling, and utilization of metallic sodium.

**1947 LEO I. DANA**

The Linde Air Products Co. and its associated units of the Union Carbide & Carbon Corp., Buffalo, NY, for development of methods for shipping and making available to industry large amounts of liquid oxygen and nitrogen.

**1948 MARVIN J. UDY**

Consultant in Chemistry and Metallurgy, Niagara Falls, NY, for the first commercial process for cadmium plating, electro deposition of chromium, and electrothermic extraction of chromium from ores.

**1949 R. LINDLEY MURRAY**

Hooker Electrochemical Co., Niagara Falls, NY for exceptional direction of chemical research in the chlorine and alkali industry.

**1950 JOSEPH H. BRENNAN**

Electrometallurgical Div., Union Carbide and Carbon Corp., Buffalo, NY, for contributions to metallurgical practices of the ferro-alloy industry.

**1951 CORNEILLE O. STROTHER**

Linde Air Products Co., Buffalo, NY, for research on reactions under high pressure and development of superior polyethylene plastic.

**1952 HENRY N. BAUMANN, JR.**

The Carborundum Co., Niagara Falls, NY, for development of techniques for studying electric furnace reactions through the microscope, as they occur.

**1953 EMMETT F. IZARD**

Yerkes Research Lab., Film Dept., E. I. du Pont de Nemours & Co., Inc., Buffalo, NY, for high molecular weight condensation polymers and polyester fibers and films.

**1954 OLIVER W. CASS**

Electrochemicals Dept., E. I. du Pont de Nemours & Co., Inc., Niagara Falls, NY, for chlorinated hydrocarbons, commercial possibilities for furfural, and process for adiponitrile.

**1955 HENDRICK D. ERASMUS**

Electrometallurgical Co., Division of Union Carbide and Carbon Corp., Niagara Falls, NY, for application of high vacuum techniques to the decarburation of carbide forming elements in the solid state and at relatively low temperatures.

**1956 RAYMOND W. HESS**

National Aniline Division, Allied Chemical Corp., Buffalo, NY, for contributions to the solution of chemical, social, and economic problems associated with the control of pollution.

**1957 J. FREDERICK WALKER**

Electrochemical Dept., E. I. du Pont de Nemours & Co., Inc., Niagara Falls, NY, for contributions in basic chemistry involved in the production and application of formaldehyde.

**1958 ROBERT B. MAC MULLIN**

R. B. Mac Mullin Associates, Niagara Falls, NY, for his contributions to the science of chemical engineering and technology of industrial electrolytic processes.

**1959 MAX E. BRETSCHGER**

Buffalo Electrochemical Company, Buffalo, NY, for a more economical process to produce hydrogen peroxide.

**1960 GEORGE H. WAGNER**

Union Carbide Corp., Buffalo, NY, for work with propylene oxide polymers, and other polymers and stabilizers used as superior lubricants.

**1961 ROLLAND J. GLADIEUX**

Kenmore Public Schools, Kenmore, NY, for innovative improvements in the teaching of science at the secondary school level.

**1962 CLIFFORD C. FURNAS**

University of Buffalo, Buffalo, NY, for fostering the growth of university education and research.

**1963 ROBERT M. MILTON**

Linde Division, Union Carbide Chemicals & Plastics, Buffalo, NY, for contributions to the development, manufacture, and application of molecular sieves.

**1964 WALTER H. PRAHL**

Durez Div. of Hooker Chemical Corp., Niagara Falls, NY, for development of a superior process for the manufacture of phenol, bisphenols, and chlorobenzene.

**1965 DAVID PRESSMAN**

Roswell Park Memorial Institute, Buffalo, NY, for work on the properties of large molecules, antibodies, and radio-immunochemical studies of normal and tumorous tissue.

**1966 LEON O. WINSTROM**

National Aniline Div., Allied Chemical Corp., Buffalo, NY, for an improved catalytic hydrogenation process for the production of aniline.

**1967 GORDON M. HARRIS**

State University of New York at Buffalo, Buffalo, NY, for outstanding leadership in developing the Chemistry Department and the teaching of this science at both the graduate and undergraduate university level.

**1968 DONALD L. BAILEY**

Union Carbide Chemicals and Plastics, Buffalo, NY, for contributions to the technology for production and application of silicones.

**1969 DAVID HARKER**

Roswell Park Memorial Institute, Buffalo, NY, for fundamental investigations into the shape of molecules and the arrangement of atoms within complex natural products.

**1970 CALVIN D. RITCHIE**

State University of New York at Buffalo, Buffalo, NY, for dedication to research and teaching at the

university level and his investigations on the influence of reaction media on the progress of chemical reactions.

**1971 WARREN B. BLUMENTHAL**

TAM Division of National Lead Company, Niagara Falls, NY, for creative contributions to the chemistry and application of zirconium.

**1972 JAMES ECONOMY**

The Carborundum Company, Niagara Falls, NY, for work on organic and inorganic fire resistant fibers.

**1973 MICHAEL LASKOWSKI**

Roswell Park Memorial Institute, Buffalo, NY, for fundamental research on enzyme inhibition and on the determination of the structure of genetic materials.

**1974 THOMAS BARDOS**

State University of New York at Buffalo, Buffalo, NY, for theoretical studies in cancer chemotherapy resulting in the dual antagonist concept of medication and cancer control.

**1975 JOHN E. BRISTOL**

E. I. du Pont de Nemours & Co., Niagara Falls, NY, for a superior process for the manufacture of polyvinyl alcohol.

**1976 JOHN R. McWHIRTER**

Linde Division of Union Carbide, Buffalo, NY, for development of the UNOX process for waste water treatment.

**1977 GEORGE H. NANCOLLAS**

State University of New York at Buffalo, Buffalo, NY, for contributions to the understanding of inorganic ion nucleation and crystal growth phenomena.

**1978 OM P. BAHL**

State University of New York at Buffalo, Buffalo, NY, for biochemical research in the isolation and characterization of the components of human glycoprotein molecules and the development of a low cost pregnancy test.

**1979 ROBERT F. GOOD**

State University of New York at Buffalo, Buffalo, NY, for research in surface thermodynamics and the theoretical chemistry of adhesion, and the factors controlling the penetration of liquids into porous solids.

**1980 EDWARD A. HEINTZ**

Airco Carbon Division of Airco Inc., Niagara Falls, NY for contributions to the understanding of the graphitization process and application to the manufacture of artificial graphite.

**1981 GABOR MARKUS**

Roswell Park Memorial Institute, Buffalo, NY, for investigations into the molecular structure of proteins and description of plasminogen activation, as the basis for enzymatic therapeutic

dissolution of blood clots.

**1982 RAYMOND R. HINDERSINN**

Durez Div. of Hooker Chemicals & Plastics Corp., Grand Island, NY, for contributions to the technology of fire retardant polyesters, thermoplastic polymers, foams, and his leadership in making their production a key facet of the economic growth of the Niagara Frontier chemical industry.

**1983 RAYMOND ANNINO**

Canisius College, Buffalo, NY, for contributions to the technology of gas chromatography, the development of the Pneumatic Gas Chromatograph, and its use in process control.

**1984 SOL W. WELLER**

State University of New York at Buffalo, Buffalo, NY, for research into catalytic liquefaction of coal and technology for the mechanism and evaluation of other catalytic concepts.

**1985 PETER T. LANSBURY**

State University of New York at Buffalo, Buffalo, NY, for developing unique routes for the preparation of complex natural products, for his inspired leadership of students, and for his role in the community of professional chemistry on the Niagara Frontier.

**1986 HERBERT A. HAUPTMAN**

Medical Foundation of Buffalo, Buffalo, NY, for pioneering creativity in the application of mathematics in crystallography to systematically determine molecular structure of materials. Dr. Hauptman is a Nobel Prize laureate.

**1987 STANLEY BRUCKENSTEIN**

State University of New York at Buffalo, Buffalo, NY, for development of rotating-ring disk and porous metal electrodes and their utilization in diverse technological applications and for improved electrochemical and analytical techniques.

**1988 THOMAS J. DOUGHERTY**

Roswell Park Memorial Institute, Buffalo, NY, for pioneering research in photodynamic cancer therapy and application of photosensitive drugs for selective destruction of malignant tumors.

**1989 ABRAM DAVIS**

Occidental Chemical Corporation, Grand Island, NY, for contributions to Analytical Chemistry and dynamic leadership in local and national professional scientific organizations.

**1990 ROBERT A. OSTERYOUNG**

State University of New York at Buffalo, Buffalo NY, for contributions to Electroanalytical Chemistry and Instrumentation, for exploration and utilization of molten salt chemical phenomena, and for management and administration of the chemical sciences.

**1991 ELI RUCKENSTEIN**

State University of New York at Buffalo, Buffalo, NY, for pioneering work in the chemistry of supported metallic catalysts and support media in gas atmosphere, micro emulsions and structures in colloidal dispersions of complex fluids, and the development of improved composite polymers.

**1992 JANET G. OSTERYOUNG**

North Carolina State University, Raleigh, NC, for insight into Analytical Technology in application of Square Wave Voltammetry and other Electrochemistry.

**1993 JOSEPH F. BIERON**

Canisius College, Buffalo, NY, for his innovative contributions to improve the technology of education in Chemistry, his dynamic leadership in establishing a more effective liaison between the academic and industrial communities, and his tireless dedication to implement the fundamental objectives of this Society.

**1994 FRANCIS E. EVANS**

Allied Signal, Inc., Buffalo, NY, (retired), for the development of novel liquid fluoroanhydrides to improve epoxy resin formation, the creation of superior flame retardants for nylon carpeting, his expertise in the manufacture and application of boron trifluoride and its compounds, and his eloquent ability to communicate the technology to his peers.

**1995 CHARLES G. RADER**

Occidental Chemical Corporation, Grand Island, NY, for his innovative contributions to chemical engineering technology and his dynamic leadership in fostering more productive relationships between industry and the educational community.

**1996 PHILIP COPPENS**

State University of New York at Buffalo, Buffalo, NY, for his creative contributions to the science and methodology of crystallography.

**1997 T. MING CHU**

Roswell Park Cancer Institute, Buffalo, NY, for his pioneering research in Prostate Specific Antigen (PSA) and his contributions to cancer research.

**1998 ESTHER SANS TAKEUCHI**

Wilson Greatbatch Ltd., Clarence, NY, for the development of a silver/vanadium oxide battery approved by the FDA for use in cardiac defibrillators.

**1999 PARAS N. PRASAD**

State University of New York at Buffalo, Buffalo, NY, for his outstanding achievements in spectroscopy and materials science specifically focused on photonics technology and development of a 3-dimensional optical data storage system for medical application.

**2000 MELVYN ROWEN CHURCHILL**

State University of New York at Buffalo, Buffalo, NY, for his scientific productivity, contributions to joint research problems with faculty in Western New York, and contributions to the education and training of chemistry students.

**2001 EDITH MARIE FLANIGEN**

UOP, Tarrytown, NY, (retired), for her outstanding achievements in applied chemistry, especially for her pioneering work in the synthesis of aluminophosphate and silicoaluminophosphate molecular

sieves, and for her development of the hydrothermal process for the manufacture of synthetic emeralds.

**2002 JOSEPH A. GARDELLA, JR.**

State University of New York at Buffalo, Buffalo, NY, for professional contributions that have impacted the lives of many in the WNY community by facilitating interactions between citizen organizations, local businesses, industry, and government, and providing environmental expertise, for innovations in polymer surface science research with various biomedical applications, and for excellence in the teaching of chemistry and outstanding mentorship.

**2003 DAVID NALEWAJEK**

Honeywell Chemicals, Buffalo Research Laboratory, Buffalo, NY, for his extensive efforts in promoting increased science awareness to the public through tireless, nationally recognized efforts by the national organization of the American Chemical Society, and for his inventive creativity, particularly in the field of fluorocarbon synthesis.

**2004 WILSON GREATBATCH**

Wilson Greatbatch Ltd., Clarence, NY, for the invention of the implantable pacemaker and the development of the lithium/iodine battery system to power it, impacting and enabling worldwide an improved quality of life for millions of individuals with heart disease.

**2005 JIM D. ATWOOD**

State University of New York at Buffalo, Buffalo, NY, for his innovative research on ligand effects in organometallic reactions, studies on metal-metal bond cleavage, metal centered C-O, Si-O, and Si-C bond formation, electron group transfer reactions in aqueous solution; his leadership as administrator and editor, mentor to many students, and an exemplary classroom instructor.

**2006 FRANK V. BRIGHT**

State University of New York at Buffalo, Buffalo, NY, for his innovative research on xerogel based sensors, tailored materials for medical and antifouling applications, environmentally friendly chemistries based on supercritical fluids and ionic liquids, nondestructive chemical analysis using ultrafast lasers, and designing and constructing specialized instrumentation, and for his leadership as a prolific scientific author, a mentor to many students, and an exemplary classroom instructor.

**2007 DAVID A. KOFKE**

State University of New York at Buffalo, Buffalo, NY for his significant and lasting contributions to the field of applied thermo-dynamics, and for his creative insight and advancement of applied thermodynamic theory through the development and application of molecular simulation methods that yield both qualitative and quantitative understanding of complex behaviors, and for his innovative and important pedagogical contributions to the undergraduate chemical engineering curriculum, especially in the field of thermodynamics, and for his accomplishments as both an outstanding teacher and mentor to undergraduate and graduate students alike.

**2008 RAJIV R. SINGH**



Honeywell Specialty Materials, Buffalo Research Laboratory, Buffalo, NY for his innovative research on the development of environmentally safe non-ozone depleting, non-greenhouse warming products for the automotive, refrigeration and foam blowing industries resulting in the protection of the earth's ecosystem, his leadership roles on national and international committees establishing global policies for ozone depleting and greenhouse warming chemicals and his mentorship of young investigators.

**2009 JOHN P. RICHARD**

State University of New York at Buffalo, Buffalo, NY, for his outstanding research in the field of physical organic and bioorganic chemistry, specifically the study of reaction mechanisms of biologically significant enzymatic and non-enzymatic reactions.

**2010 PASCHALIS ALEXANDRIDIS**

State University of New York at Buffalo, Buffalo, NY, for fundamental discoveries on block copolymer thermodynamics, structure, and dynamics, and for development of functional products utilizing self-assembly methodologies.

**2011 RAVINDRA K. PANDEY**

Roswell Park Cancer Institute, Buffalo, NY, for his outstanding achievements in porphyrin chemistry and contributions to the advancement of photodynamic therapy (PDT).

**2012 LUIS A. COLÓN**

State University of New York at Buffalo, Buffalo, NY, in recognition of his pioneering contributions to the advancement of separation science, his dedication to mentoring and advancing of diversity in the chemical sciences, and his service and leadership in the profession.

**2013 MARK T. SWIHART**

University at Buffalo, SUNY, Buffalo, NY, in recognition of his pioneering research in the field of inorganic nanoparticle synthesis and processing, and for his outstanding record of accomplishment in scholarship, teaching, and service in the field of chemistry in Western New York.

**2014 JANET R. MORROW**

University at Buffalo, SUNY, Buffalo, NY, in recognition of her pioneering contributions to the development of transition metal MRI agents, her studies of metal ion complex interactions with nucleic acids, and her service and leadership to the profession.

**2015 DANTE P. BONAQUIST**

Praxair, Inc., Tonawanda, NY, in recognition of his pioneering innovations in cryogenic air separation process technologies and for his leadership in driving their commercialization