

Chicago Section
AMERICAN CHEMICAL SOCIETY

WILLARD GIBBS MEDAL AWARD

Founded by William A. Converse

111th
PRESENTATION

Friday, May 20, 2022

Meridian Banquets
1701 Algonquin Road
Rolling Meadows, IL 60008

The Jury

Zhenan Bao
Stanford University

Robert Bergman
UC Berkeley

Cynthia Burrows
University of Utah

William Carroll
Indiana University

Scott Denmark
University of Illinois

Anne Gaffney
Idaho National Laboratory

Sam Gellman
University Wisconsin

Jennifer Holmgren
Lanzatech

Laura Kiessling
Massachusetts Institute of Technology

Charles Lieber
Harvard University

Susan Olesik
The Ohio State University

George Schatz
Northwestern University

The Willard Gibbs Medal

Mark Cesa
Chair, Chicago Section
American Chemical Society

Introduction of the Medalist

Chad Mirkin
Northwestern University

Presentation of the Medal

Tobin Marks
2001 Willard Gibbs Medalist
Northwestern University

2022 Willard Gibbs Medalist

Joseph S. Francisco
President's Distinguished Professor
of Earth and Environmental
Sciences and of Chemistry
University of Pennsylvania

Acceptance Address

*From Melting Nylon to Global
Warming*

PROGRAM

The Citation

For lifelong accomplishments in
chemistry, including:

- For pioneering work to apply computational chemistry to determine the atmospheric fate of chlorofluorocarbons and their alternatives.
- For discovery of a new class of radical-molecule complexes and their relation to association species in the atmosphere that lead to shutting down chemistry at night.
- For illustrating how computational studies can be used to drive the discovery of new mechanistic principles governing atmospheric chemical processes.

THE WILLARD GIBBS MEDALISTS

Svante Arrhenius.....	1911	Robert Burns Woodward.....	1967
Theodore W. Richard.....	1912	Henry Eyring.....	1968
Leo H. Baekeland.....	1913	Gerhard Herzberg.....	1969
Ira Remsen.....	1914	Frank H. Westheimer.....	1970
Arthur A. Noyes.....	1915	Henry Taube.....	1971
Willis R. Whitney.....	1916	John T. Edsall.....	1972
Edward W. Morley.....	1917	Paul John Flory.....	1973
William M. Burton.....	1918	Har Gobind Khorana.....	1974
William A. Noyes.....	1919	Herman F. Mark.....	1975
F.G. Cottrell.....	1920	Kenneth S. Pitzer.....	1976
Mme. Marie Curie.....	1921	Melvin Calvin.....	1977
Julius Stieglitz.....	1923	W.O. Baker.....	1978
Gilbert N. Lewis.....	1924	E. Bright Wilson.....	1979
Moses Gomberg.....	1925	Frank Albert Cotton.....	1980
Sir James Colquhoun Irvine.....	1926	Bert Lester Vallee.....	1981
John Jacob Abel.....	1927	Gilbert Stork.....	1982
William Draper Harkins.....	1928	John D. Roberts.....	1983
Claude Silbert Hudson.....	1929	Elias J. Corey.....	1984
Irving Langmuir.....	1930	Donald J. Cram.....	1985
Phoebus A. Levene.....	1931	Jack Halpern.....	1986
Edward Curtis Franklin.....	1932	Allen J. Bard.....	1987
Richard Willstätter.....	1933	Rudolph A. Marcus.....	1988
Harold Clayton Urey.....	1934	Richard Bernstein.....	1989
Charles August Kraus.....	1935	Richard N. Zare.....	1990
Roger Adams.....	1936	Gunther Wilke.....	1991
Herbert Newby McCoy.....	1937	Harry B. Gray.....	1992
Robert R. Williams.....	1938	Peter B. Dervan.....	1993
Donald Dexter Van Slyke.....	1939	M. Frederick Hawthorne.....	1994
Vladimir Ipatieff.....	1940	Sir John Meurig Thomas.....	1995
Edward A. Doisy.....	1941	Fred Basolo.....	1996
Thomas Midgley, Jr.....	1942	Carl Djerassi.....	1997
Conrad A. Elvehjem.....	1943	Mario Molina.....	1998
George O. Curme, Jr.....	1944	Lawrence F. Dahl.....	1999
Frank C. Whitmore.....	1945	Nicholas J. Turro.....	2000
Linus Pauling.....	1946	Tobin J. Marks.....	2001
Wendell M. Stanley.....	1947	Ralph E. Hirschmann.....	2002
Carl F. Cori.....	1948	John I. Brauman.....	2003
Peter J.W. Debye.....	1949	Ronald Breslow.....	2004
Carl S. Marvel.....	1950	David A. Evans.....	2005
William Francis Glauque.....	1951	Jacqueline K. Barton.....	2006
William C. Rose.....	1952	Sylvia T. Ceyer.....	2007
Joel H. Hildebrand.....	1953	Carolyn R. Bertozzi.....	2008
Elmer K. Bolton.....	1954	Louis E. Brus.....	2009
Farrington Daniels.....	1955	Maurice Brookhart.....	2010
Vincent du Vigneaud.....	1956	Robert G. Bergman.....	2011
W. Albert Noyes, Jr.....	1957	Mark A. Ratner.....	2012
Willard F. Libby.....	1958	Charles M. Lieber.....	2013
Hermann I. Schlesinger.....	1959	John E. Bercaw.....	2014
George B. Kistiakowsky.....	1960	John E. Hartwig.....	2015
Louis Plack Hammett.....	1961	Laura L. Kiessling.....	2016
Lars Onsager.....	1962	Judith L. Klinman.....	2017
Paul D. Bartlett.....	1963	Cynthia Burrows.....	2018
Izaak M. Kolthoff.....	1964	Marcetta Darensbourg.....	2019
Robert S. Mulliken.....	1965	Zhenan Bao.....	2020
Glenn T. Seaborg.....	1966	Sharon Hammes-Schiffer.....	2021