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Success Story

NATIONAL ACS HONORS PROPELLANT CHEMIST



American Chemical Society President Elect, Charles P. Casey (left); Dr. Karl O. Christie, recipient of the 2003 ACS Inorganic Chemistry Award (center); and Mike Willis, Aldrich Chemical, award sponsor representative.

The American Chemical Society (ACS) recently presented Dr. Karl O. Christie with their 2003 Inorganic Chemistry Award. ACS awards recognize individual accomplishments in diverse fields of chemistry and are valued as prestigious awards. Dr. Christie is a research chemist and senior staff advisor at the Propulsion Directorate's Edwards Research Site.



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Accomplishment

ACS selected Dr. Christe for the 2003 Inorganic Chemistry Award based on his lifetime achievements in chemistry. Described by his colleagues as an unusually creative, imaginative, and highly skilled chemist, he has tackled some of the most difficult and challenging synthesis problems in chemistry.

The Defense Advanced Research Projects Agency (DARPA) and the Air Force Office of Scientific Research (AFOSR) currently fund Dr. Christe's studies, identified as high energy density matter. He has earned a reputation for finding answers to chemical problems unsolvable by others. He has published more than 300 peer-reviewed papers and holds more than 60 patents.

Background

Dr. Christe and his coworkers are best known for their discovery in 1999 of the N₅⁺ cation. This was the first demonstration of a stable and energetic nitrogen species in 110 years and only the second ever discovered. The *Chemical & Engineering News* magazine recognized Dr. Christe's discovery as one of the top five chemistry achievements for the year. Dr. Christe is also active as a research professor at the Loker Hydrocarbon Research Institute at the University of Southern California, with funding from the National Science Foundation, AFOSR, and DARPA.

In 1986, Dr. Christe was also responsible for a process thought impossible—the preparation of elemental fluorine by chemical means. For almost 200 years, researchers unsuccessfully attempted this chemical process.

Dr. Christe won numerous honors for his scientific work including the 2000 Prix Moissan—an international chemistry prize named in honor of Henri Moissan, the winner of the Nobel Prize in Chemistry for 1906 and discoverer of the element “fluorine” by electrochemical means. The ACS also awarded Dr. Christe the 1986 ACS Award for Creative Work in Fluorine Chemistry.

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-PR-21)

Propulsion
Awards and Recognition