

THE ROLE OF FLUORINE-CONTAINING GASES IN MICROELECTRONICS PROCESSING

Andrew J. Woytek

Air Products and Chemicals, Inc., P.O. Box 538, Allentown, PA 18105 (U.S.A.)

The microelectronics industry with its continuing advances in the manufacture of more sophisticated integrated circuits has created new commercial opportunities for fluorine-containing gases. The use of CF_4 , NF_3 , SF_6 , WF_6 , and SiF_4 in important new process technologies, such as dry plasma processing and thin film deposition will be reviewed. These applications have led to the development of new manufacturing technologies utilizing fluorine to meet the stringent purity requirements of the electronics industry.

Other opportunities for fluorine compounds in processing technologies, photovoltaics, fiber optics, printed circuit boards, and component testing and assembly will be reviewed.