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MEMORANDUM FOR PRS (Contractor/In-House Publication)

FROM: PROI (TI) (STINFO) 26 September 2000


Vij, Vandana; Vij, Ashwani (USC); Wilson, W.; Christe, K.O. (ERC); “Recent Progress in Nitrogen Fluoride Chemistry”

15th Winter Fluorine Conference (St. Petersburg, FL, 14 Jan 2001) (Statement A)
(Past Deadline: 14 Sep 2000)

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PHILIP A. KESSEL Date
Technical Advisor
Propulsion Science and Advanced Concepts Division

Cleared (PA) ______________________________________________________
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This original is for PA files
RECENT PROGRESS IN NITROGEN FLUORIDE CHEMISTRY. Vandana Vij, Ashwani Vij, William W. Wilson, Karl O. Christe, Air Force Research Laboratory, Edwards AFB, CA 93524 and University of Southern California, Los Angeles, CA 90089.

For the preparation of N5+ salts on a larger scale, it was necessary to prepare the corresponding precursors in an efficient manner and in large quantities. In this paper, process improvements in this direction are described. Furthermore, the catalytic conversion of trans-N2F2 to its cis-isomer is discussed. Also discovered during the isomerization studies was a novel synthetic route to NF4+ salts at relatively low temperature and pressure. A structural analysis of the N2F+ cation was also carried out for N2F+SbF6- and N2F+Sb2F11-.

ABSTRACT. Please be BRIEF—150 words maximum if possible. Title of paper should be ALL CAPS; author(s) listed by first name, middle initial, last name; indicate address with zip code.

A. DIVISION OF FLUO  Division Member ☑ Yes ☐ No

B. ACS MEMBER ☑ Yes ☐ No

C. TITLE OF PAPER  Method for solving some disordered crystal structures and its application to the structures of NF2O+ and SO2F-.

Please indicate preference: ☑ Oral ☐ Poster ☐ withdraw if oral/poster format cannot be met

D. AUTHORS

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G. For contributed papers, do authors meet criteria outlined in ACS Bylaw VI, Section 6(3)? See instructions.

☐ Yes ☑ No

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